County of San Diego

DEPARTMENT OF GENERAL SERVICES
5560 OVERLAND AVENUE, SAN DIEGO, CA 92123
www.sdcounty.ca.gov/pds

February 9, 2021

CEQA Initial Study - Environmental Checklist Form (Based on the State CEQA Guidelines, Appendix G)

1. **Title; Project Number(s); Environmental Log Number:**

   Casa De Oro Branch Library Project

2. **Lead agency name and address:**
   County of San Diego
   Department of General Services
   5560 Overland Avenue, Suite 2207
   San Diego, CA 92123

3. **a. Contact:** Marc Cass, Project Manager
   b. Phone number: (858) 229-1398
   c. E-mail: Marc.Cass@sdcounty.ca.gov

4. **Project location:**

   The proposed project site is located on Campo Road, between Conrad Drive and Rogers Road, in the community of Spring Valley in southeastern unincorporated San Diego County, California. Assessor Parcel Numbers (APNs): 500-170-10, -11, and -41 (Portions of)

5. **Project Applicant name and address:**
   County of San Diego
   Department of General Services
   5560 Overland Avenue, Suite 2207
   San Diego, CA 92123

6. **General Plan**

   Land Use Designation: Public/Semi-Public Facilities, General Commercial

   Density: N/A

   Floor Area Ratio N/A

7. **Zoning**

   Use Regulation: Rural Residential Single (RS) (APNs 500-170-10 and -11); General Commercial Use (C36) (APN 500-170-41)

   Minimum Lot Size: 10,000 SF

   Special Area Regulation: N/A

8. **Description of Project:**

The Casa de Oro Branch Library Project (proposed project) would result in replacement of the existing County of San Diego (County) Casa de Oro branch library facility in the community of Spring

Valley with a new branch library facility at a different location. The proposed project consists of an approximately 13,000-square-foot (SF) library facility that aims to achieve "zero net energy," with access off Campo Road, 52 parking spaces, landscaping, and fencing. The existing library is currently located at 9805 Campo Road in an existing retail commercial shopping center, just southeast of the proposed project site. The proposed project is intended to enhance the County's regional library system and provide expanded services to its patrons within the Spring Valley community and surrounding areas. The proposed project would be processed through the County's Department of General Services (DGS).

PROJECT LOCATION

The project site is located within the community of Spring Valley, in unincorporated San Diego County; refer to Figure 1, Regional Map. The project area is highly urbanized. The site is located just north of Campo Road which serves as a commercial corridor through the community. The area surrounding the project site is highly developed with a variety of land uses including institutional (school), commercial, general office, multi-family, and (limited) single-family residential uses.

Adjacent to the north and west of the site is the Spring Valley Academy, a middle school serving grades 5 to 8, which is overseen by the La Mesa-Spring Valley School District. To the east is the La Mesa-Spring Valley School District maintenance yard. Sports fields owned and maintained by the school abut the project site to the north and west. An existing modular building located on the La Mesa-Spring Valley School District property (APN 500-170-10) would be removed to accommodate the parking lot for the library. A small-scale restaurant fronting directly onto Campo Road is located in the southern portion of the proposed site; refer to Figure 2, Local Vicinity Map/Project Site. This restaurant would be demolished to provide access to the subject property. Commercial uses are located directly to the south, along with single-family and multi-family uses to the south/southwest of the site. Single-family rural residential uses are present in the distance along the hillsides to the north and south. The Campo Road commercial corridor trends east–west through the community and forms the southern boundary of the proposed site.

The land where the library would be constructed is currently disturbed and/or developed. The majority of the property is currently surfaced with asphaltic pavement. The site would also include a portion of an existing sports field associated with the school and the removal of a modular office structure located on the school site; refer to Figure 2, Local Vicinity Map/Project Site.

The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet above mean sea level (amsl) in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

An existing culvert in the southwestern portion of the site presently accommodates stormwater flows from the north/northeast that sheet flow across the subject property. A 48-inch storm drain collects runoff from north of the site and outlets into this culvert. Under current conditions, well-established vegetation abuts the culvert and generally obscures it from view. Runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the restaurant parcel currently sheet flows to Campo Road.

GENERAL LAND USE AND ZONING

Table 1, Existing General Plan Land Use and Zoning, identifies the existing County General Plan land use designations and zoning classifications for the affected properties. No change in the existing General Plan or zoning is required or proposed with project implementation.

Table 1: Existing General Plan Land Use and Zoning

Assessor Parcel Number	Regional Category	General Plan Land Use	Zoning
500-170-10 (Portion of)	Not Applicable	Public/Semi-Public Facilities	Rural Residential Single (RS)
500-170-11 (Portion of)	Not Applicable	Public/Semi-Public Facilities	Rural Residential Single (RS)
500-170-41 (Portion of)	Village	General Commercial	General Commercial (C36)

ACTIONS

As mentioned, the project would be processed through DGS, which would act as the lead agency under the California Environmental Quality Act (CEQA) for approval of a Mitigated Negative Declaration, which would be required to satisfy CEQA requirements. The proposed project would not be subject to discretionary review by the County. Improvement plans for the proposed project would be subject to review by the California Division of the State Architect (DSA) to ensure design conformance with current Americans with Disabilities Acts (ADA) guidelines, including for such components as parking, stairs, ramps, hazards, restrooms, casework, and signage. The County's Department of Planning and Development Services (PDS) would be responsible for inspecting construction of the library facility. All required permits (i.e., building and grading permits) for the proposed project would be issued by PDS; refer to Table 2, Anticipated Permits and Approvals.

Additional approvals would also be required from other agencies. Table 2 identifies the anticipated permits and approvals required for the proposed improvements. For the purposes of CEQA, the term "responsible agency" includes public agencies other than the lead agency that may have discretionary actions associated with implementation of the proposed project or an aspect of subsequent implementation of the proposed project.

Table 2: Anticipated Permits and Approvals

Permit/Approval	Affected Agency	Lead/Trustee/ Responsible Agency
Mitigated Negative Declaration (MND)	County of San Diego (County)	Lead Agency
Construction Permit	County [in lieu of Division of the State Architect (DSA)]	Lead Agency
Grading Permit	County in lieu of DSA	Lead Agency
Building Permit	County in lieu of DSA	Lead Agency
Improvement Plans	County in lieu of DSA	Lead Agency
Landscape Plan	County in lieu of DSA	Lead Agency
Stormwater Quality Management Plan/ Drainage Plan	County in lieu of DSA	Lead Agency
General Construction Stormwater Permit	San Diego Regional Water Quality Control Board (RWQCB)	Responsible Agency
National Pollution Elimination System Permit (NPDES)	RWQCB	Responsible Agency

PROJECT CHARACTERISTICS

The library building would total approximately 13,000 SF in size and would house a number of rooms in order to accommodate internal library operations, as well as providing a variety of services to the public. The proposed library would consist of the components identified in Table 3. Refer also to Figure 3, Conceptual Site Plan; Figure 4A, Conceptual Layout (Alpine Library); and Figure 4B, Adjacency Diagram. In addition, Figures 5A and 5B provide illustrative examples of other existing County libraries upon which the ultimate architectural style for the Casa de Oro library may be based.

Table 3: Project Components

Proposed Uses	
Entry plaza	Entry lobby
Restroom facilities (including staff-only)	Circulation desk
Public multimedia room (computers/copy machines)	Manager's office/work room/ sorter/storage/break room/staff restroom
Adult (study rooms/seating/book stacks)	Great room (reading area and magazine stacks)
Children (story-time area/discovery zone/book stacks/reading room/study area/crafts and children's restrooms)	Teens (study rooms/seating/book stacks)
Community room	Conference room
Audio/visual storage	Marketplace (popular books/holds and self-checkouts)
Homework center	Friends of Library bookstore
Outdoor patio	

The majority of the lands comprising the project site would be leased from the La Mesa-Spring Valley School District; no lands would be purchased from the school. Additionally, the County would require acquisition of real property from an adjoining private party to the south (existing restaurant fronting onto Campo Road; refer to Figure 2, Local Vicinity Map/Project Site). Refer also to the discussion under Demolition below.

Access

Direct access to the project site would be from Campo Drive. It is anticipated that a minimum 24-foot-wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.

Parking

Table 4, County of San Diego Parking Requirements, shows the minimum required parking for the proposed project based on the County's Parking Ordinance. As shown in Table 4, a total of 39 parking spaces are required based upon the County's requirements for a library use. The proposed library would provide a total of 52 surface parking spaces, which would exceed the County's minimum parking requirements. This would accommodate daily library parking requirements as well as after-hours use of the community room. All employees would park on-site; off-site parking would not be required to accommodate library staff.

Two dedicated parking spaces would be provided on-site for library delivery vans. These parking spaces would be provided directly adjacent to the library staff service entry for ease of loading/unloading.

On-site bike racks to accommodate six bikes (minimum) would also be provided. Additionally, it is anticipated that electric vehicle (EV) charging stations would be provided on-site within the surface parking lot. The number of EV stations provided would be in conformance with CalGreen (Title 24, Part 11 of the California Code of Regulations [CCR]) standards.

Table 4: County of San Diego Parking Requirements

Required Parking per Square Feet (SF)	Proposed Land Use	# Parking Stalls Required	# of Parking Stalls Proposed
3.0 spaces / 1,000 SF (1 space / 333 SF)	Proposed 13,000 SF Library	39	52

Landscaping and Outdoor Seating

All plants and trees would be selected for their appropriateness to the architectural design, local climate tolerance, soil conditions, and level of maintenance intensity. No non-native invasive plant species shall be used. All trees and plant species would be consistent with County landscape guidelines.

Shaded seating for a minimum of 30 people would also be provided. The seating would be provided near the main entry area and at the outdoor patio. Built-in seating is preferred in lieu of portable site furniture.

Signage

The project proposes a monument sign located at the primary entrance on Campo Road as a feature of the landscape and architectural design. It is anticipated that such signage would incorporate materials compatible with the proposed landscape design. Accent lighting would be installed to illuminate the sign, while minimizing uplighting to avoid any adverse nighttime lighting effects.

Lighting

Nighttime lighting would be installed in the surface parking lot, at the entry drive, and on the exterior of the building for public safety purposes and to allow for safe pedestrian and vehicular circulation and access. Limited lighting may also be installed at the monument sign (see Signage, above) on Campo Road for identification purposes. All project lighting would be shielded and directed downward to avoid spillover onto adjacent properties and/or adverse effects on nighttime skies (i.e., sky glow). All nighttime lighting would be designed and installed in conformance with the County's Lighting Ordinance.

Fencing and Gates

A 12-foot-high perimeter fence would be installed along the project's boundary with the school district property for security purposes. Chain-link fencing is likely to be used, but slats or mesh may be added to the chain-link fence, as appropriate, for screening purposes. In addition, it is anticipated that remote-controlled cameras or other security devices may be installed along the perimeter fence for security purposes. The remainder of the property may be secured with a 6-foot-high perimeter fence.

It is anticipated that the fence would include a manually operated gate along the northerly boundary that would provide occupants of the Spring Valley Academy with direct access to the library site during operating hours. The gate would otherwise be locked to prevent access during hours when the library is not in operation. Use of the library by students and faculty of the school will be part of the lease agreement between the County and the La Mesa-Spring Valley School District. A gate with fire department-approved Knox-box entry system would be located at the project entrance off of Campo Road to limit vehicle access to the site after hours.

Pedestrian, Bicycle, and Transit Access

Existing sidewalks are located along both the northern and southern sides of Campo Road, including along the proposed project frontage. These sidewalks would provide pedestrian access to the project vicinity. Additionally, bike lanes are present along both sides of Campo Road within the project vicinity. A pedestrian sidewalk and an ADA-accessible ramp would be constructed from Campo Road to provide access to the library building.

The San Diego Metropolitan Transit System (MTS) provides bus service within the project area. Route 855 runs along Campo Road. An existing bus stop for westbound travel is located

approximately 320 feet to the east of the project site; a bus stop for eastbound travel is located approximately 425 feet to the west of the project site.

Sustainability and Energy-Saving Features

The library building would achieve a minimum Leadership in Energy and Environmental Design (LEED) Gold certification, while also reaching a higher level of sustainability with a zero-net energy certification through the International Living Futures Institute's Zero Energy certification program. Zero net energy means that the project would incorporate energy saving features to offset 100 percent of the building's annual energy use. Energy efficiency performance will surpass the California Energy Code 2019 update (CCR, Title 24, Part 6) by 15 percent. Additionally, the facility would be subject to County of San Diego's Zero Net Waste Guidelines, which address solid waste disposal and recycling.

Anticipated energy-saving features may include low-flow fixtures; energy-efficient LED indoor and outdoor lighting; on-site recycling containers; energy-efficient water heaters; water efficient/drought tolerant landscaping, use of reclaimed water, and limited use of conventional turf; high-efficiency heating, ventilating, and air conditioning (HVAC) systems; and/or other features. Additionally, the installation of solar photovoltaic (PV) panels is proposed with the project. As stated above, it is anticipated that several EV charging stations would be provided on-site to further offset project-related vehicle trip emissions.

PROJECT CONSTRUCTION

Schedule

It is anticipated that project construction would occur over a period of approximately 12 to 14 months from the onset of demolition through final construction. It is anticipated that the work would be completed in 8- or 10-hour shifts, with a total of five shifts per week (Monday to Friday). Overtime and weekend work would occur as necessary to meet scheduled milestones or accelerate the schedule and would comply with all applicable California labor laws and County regulations.

Demolition

An existing modular building located on the La Mesa-Spring Valley School District property would be removed to accommodate the parking lot for the library. Additionally, an existing restaurant fronting onto Campo Road would be demolished to allow for site access. The existing asphaltic surface in the southern portion of the site would also be broken up and removed. Removal of a portion of the existing sports fields abutting the site to the north would also occur with project grading. Refer to Figure 2, Local Vicinity Map/Project Site, which shows the existing on-site and off-site conditions.

All resulting construction debris would be trucked off-site for disposal at an approved landfill and/or diverted consistent with requirements of California Assembly Bill (AB) 939. AB 939 established the California Integrated Waste Management Act of 1989 (Public Resources Code [PRC] Sections 42900-42927), which requires all California cities and counties to reduce the volume of solid waste deposited in landfills by 50 percent by the year 2000. It also requires that cities and counties continue to remain at 50 percent or higher for each subsequent year. The County of San Diego requires a minimum of 65 percent of construction waste to be diverted from local landfills, thereby exceeding the state requirement.

Demolition would be accomplished with dozers and other heavy equipment. Waste materials would be uploaded onto large trucks using small cranes, forklifts, and/or other construction equipment as needed. Demolition equipment would be delivered to the site on low-bed trucks.

Grading and Site Preparation

The site would anticipate minor grading, 4,000 cubic yards (import), to accommodate the proposed library pad, surface parking area, and driveway. This includes preparation of and/or backfilling of the site's retaining walls and ADA and driveway ramping, plus removal and recompaction (12-inch) of foundation and parking areas. Existing on-site vegetation (i.e., on the sports fields) would be removed. Grading would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment.

PROJECT OPERATIONS

Hours of Operation and Staffing

It is anticipated that the library would be staffed by a maximum of 6 to 8 part- and/or full-time employees on a daily basis. Consistent with current operating hours for other libraries within the County's system, it is anticipated that the Casa de Oro library would operate during the following hours:

- Monday and Wednesday: 9:30 a.m. to 6:00 p.m.
- Tuesday and Thursday: 9:30 a.m. to 8:00 p.m.
- Friday and Saturday: 9:30 a.m. to 5:00 p.m.
- Sunday: Closed

Community room hours of operation are anticipated as follows:

- Monday to Saturday: 8:00 a.m. to 8:00 p.m.
- Sunday: 8:00 a.m. to 8:00 p.m. (minimal to no use anticipated)

All project operations would be required to conform to and certified through the Living Building Challenge Net Zero Energy certification. As part of ensuring project conformance with these guidelines, the following project operational activities (in addition to the operating hours identified above) would also be required and would ensure that conformance with such guidelines is achieved :

- Staff to arrive one-half hour early for daily setup (3 additional hours/day)
- Two hours janitorial service, 3 times/week (6 additional hours/week)
- Minimum 2 hours per day for use of community room, lobby, conference room, and restrooms (10 additional hours/week = community room, conference room, lobby, and restrooms would be open an additional 2 hours on Monday/Wednesday and 3 additional hours on Friday/Saturday)

UTILITIES

Water

Public water service would be provided by the Helix Water District. The project would connect to an existing 8-inch water main located in Campo Road. No upgrades to the existing public water system are anticipated to accommodate water demands of the proposed library use. The County would obtain a service availability letter from the Helix Water District as part of the construction process to ensure that adequate water supplies are available to serve the proposed use.

Sewer

The project site is located within the boundaries of the Spring Valley Sanitation District. The project would connect to an existing 8-inch sewer line located in Campo Road. No upgrades to the existing

public sewer system are anticipated to accommodate wastewater flows generated by the proposed project. The County would obtain a service availability letter from the Spring Valley Sanitation District as part of the construction process to ensure that adequate sewer services are available to serve the proposed use.

Stormwater

Stormwater runoff from properties located north of the site is accommodated by an existing 48-inch reinforced concrete pipe storm drain that extends north–south across the property. This pipe collects school district water runoff as well as off-site runoff waters. Additionally, runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the southernmost parcel currently flows to Campo Road.

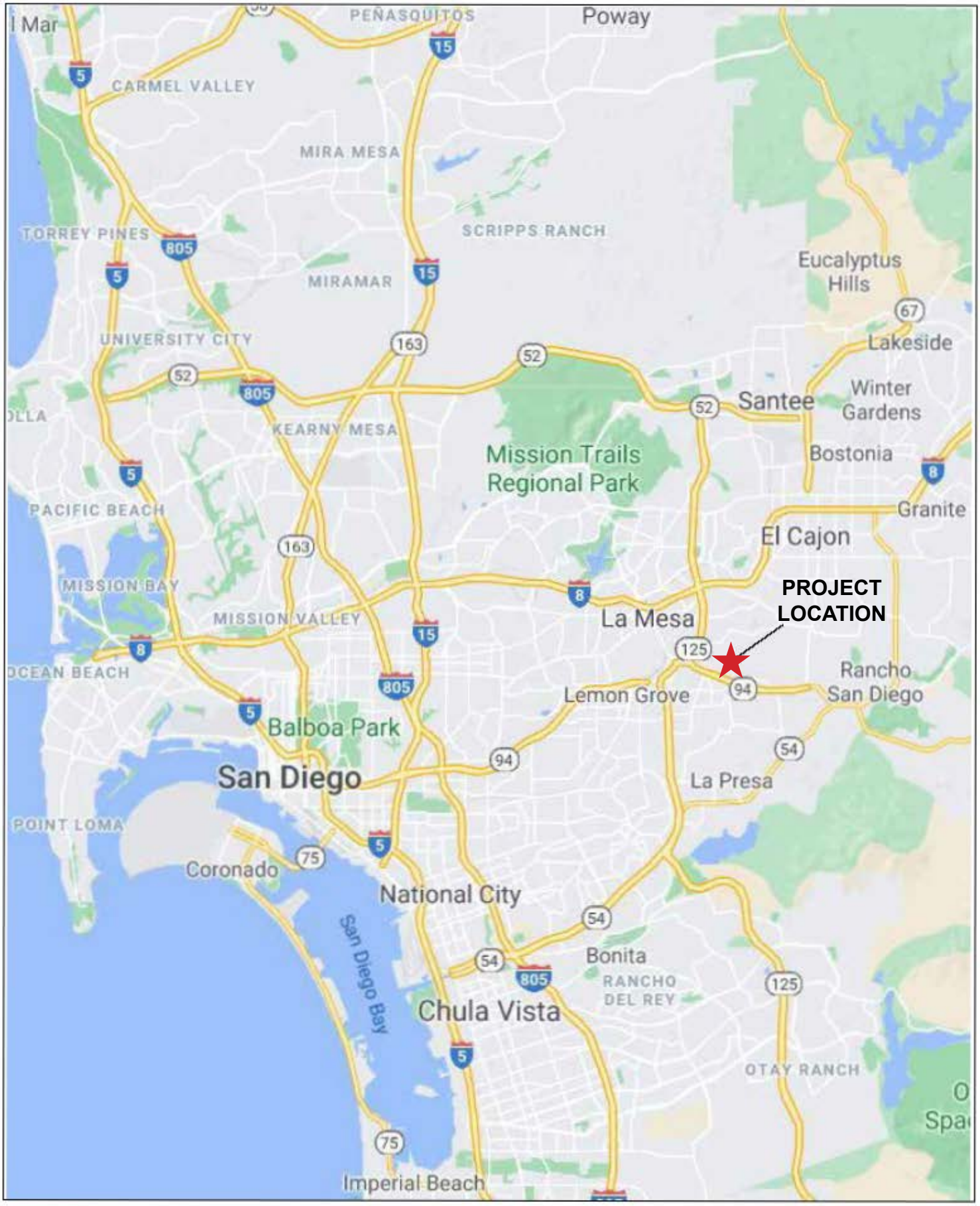
The project design would include a drainage network designed to control and filter stormwater runoff in conformance with requirements of the San Diego Regional Water Quality Control Board and County of San Diego. The proposed stormwater system may include the use of biofilters, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff. It is anticipated that stormwater runoff from the site would connect to the existing public storm drain system in Conrad Drive, as occurs under existing conditions. Water from the proposed driveway would sheet flow onto Campo Road. The project would not comingle stormwater flows from the project site in its improved condition with flows that are currently accommodated by the existing storm drain system serving the site. Further, drainage design for the project would not result in a change in stormwater volume, rate, or direction of flow from the site following project implementation. No upgrades or other improvements to the existing storm drain system are anticipated or proposed as part of the project.

Electricity

Electricity would be provided by San Diego Gas and Electric (SDG&E). Adjoining lands are currently served by SDG&E and the project would connect to the existing system for service.

Fire

The project site is located in the San Miguel Consolidated Fire Protection District. The nearest fire station to the project site is Station No. 14, located at 3255 Helix Street in Spring Valley, approximately 0.6 miles southwest of the project site.



COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Regional Map

Figure 1

Michael Baker INTERNATIONAL

Not to Scale

File: 179854Exhibits.indd



Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

200 400

Source: BING, 2020

COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Local Vicinity Map/Project Site

Figure 2

500-170-11

500-170-10

20' EASEMENT

EX. 48" SD

40' ROAD EASEMENT

EASEMENT FOR
PUBLIC SEWER

PROJECT AREA

RETAINING WALL

LIBRARY
BUILDING

EX. DRAINAGE DITCH

500-170-41

RETAINING WALL

GATE

ADA ACCESS PATH

CAMPO ROAD

COMMERCIAL
DRIVEWAY

EX. WATER METER

EX. 8" WATER

EX. 8" SEWER

PROJECT AREA 2.24 AC

SCHOOL LEASE (2.15 AC)

LIVELY (0.09 AC)

PROJECT AREA

SCALE: NTS

60 120

Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

Source: Michael Baker, September 4, 2020

COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Site Plan

Figure 3

FOR SUBTERRANEAN SDG&E ROOM, REFER TO A 2.1.2

PLUMBING FIXTURE COUNT AREA CALCULATION (ACCESSORY AREAS EXCLUDED)

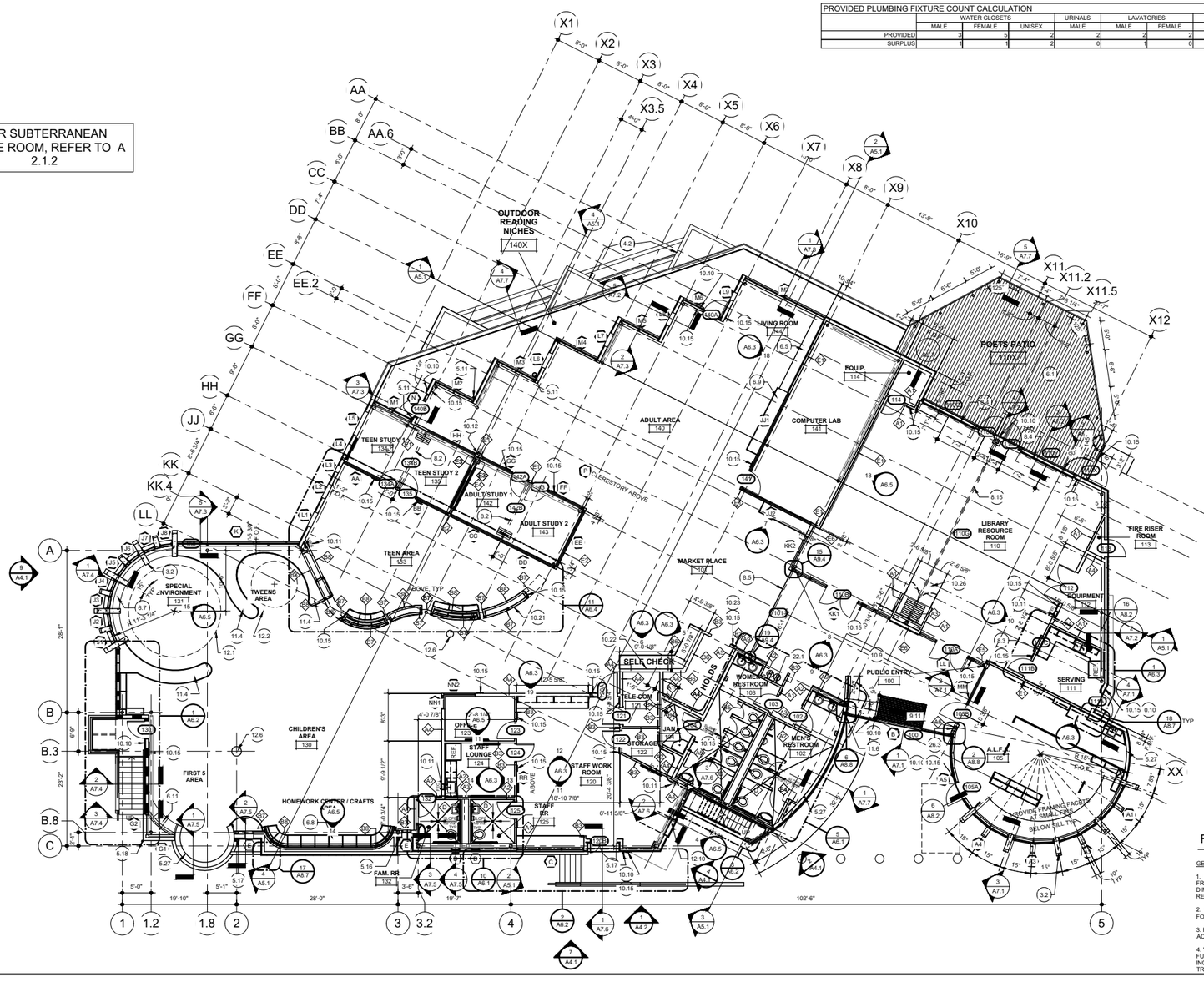
TOTAL AREA PER OCCUPANCY	AREA	OCC. FACTOR	TOTAL OCC.	MALE	FEMALE
A-3 (INC. EXT. READING AREAS)	11, 537 SF	30	384.57	192	192
B	732 SF	200	3.66	2	2
TOTAL				194	194

REQUIRED PLUMBING FIXTURE COUNT CALCULATION

TABLE 422.1 CPC 2013	WATER CLOSETS			URINALS	LAVATORIES		DF
	MALE	FEMALE	UNISEX	MALE	MALE	FEMALE	
A-3	2	4	-	2	1	2	1
B	0	0	-	0	0	0	0
TOTALS	2	4	-	2	1	2	1

PROVIDED PLUMBING FIXTURE COUNT CALCULATION

	WATER CLOSETS			URINALS	LAVATORIES		DF
	MALE	FEMALE	UNISEX	MALE	MALE	FEMALE	
PROVIDED	3	5	2	2	2	2	2
SURPLUS	1	1	2	0	1	0	1



KEYNOTES

3.2	ARCHITECTURAL CONCRETE SHADE FINS PER STRUCTURAL. FINISH PER SPECS.
4.2	SPLIT FACE CONCRETE MASONRY UNIT PLANTER BOXES AND TERRACED SEAT WALL, PER LANDSCAPE.
5.11	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH FIBER CEMENT SIDING, FCS-1.
5.16	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH FIBER CEMENT SIDING, FCS-2.
5.17	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH STUCCO.
5.18	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH STOREFRONT MULLIONS.
5.27	CURVED METAL FRAMING TYP UON
6.1	TREX TRANSCEND, COMPLYING WITH WILDLAND URBAN-INTERFACE (WUI) REQUIREMENTS PER COUNTY AMENDMENT TO THE FIRE CODE CHAPTER 7 92.1.704.A.4.1.
6.5	CUSTOM BUILT-IN MAGAZINE AND NEWSPAPER SHELVING, PER DETAIL 5&6/A9.6
6.7	BUILT-IN UPHOLSTERED WINDOW SEAT, PER DETAIL 4/A9.6.
6.8	BUILT-IN SEATING AT HOMEWORK CENTER, CHILDREN'S HEIGHT, PER DETAIL 3/A9.6.
6.9	BUILT-IN LAPTOP COUNTER
6.11	BUILT-IN SEATING AT FIRST 5, CHILDREN'S HEIGHT, PER DETAIL 7/A9.6
8.2	OPERABLE PARTITION AT STUDY ROOMS, PER DETAIL 14/A9.4
8.3	COUNTER HEIGHT PASS THROUGH WINDOW TO LIBRARY RESOURCE ROOM.
8.4	OVERHEAD SECTIONAL DOOR. PER SPECS.
8.5	AFTER HOURS SECURITY GRILLE.
8.15	OPERABLE PARTITION AT LRR, PER DETAIL 11/A9.4
9.11	WALK-OFF GRILLE INSET IN CONCRETE.
10.9	PROVIDE WALL-MOUNTED ENHANCED DIMENSIONAL LIBRARY MISSION STATEMENT SIGNAGE ABOVE STOREFRONTS ON THIS WALL PER LIBRARY STANDARDS.
10.10	PROVIDE 'NO SMOKING' SIGNAGE POSTED AT EVERY EXTERIOR ENTRY DOOR.
10.11	FULLY RECESSED FIRE EXTINGUISHER CABINET, PER DETAIL 6/A9.2. PROVIDE 2-A:10-B:C FIRE EXTINGUISHER.
10.12	SEMI-RECESSED FIRE EXTINGUISHER CABINET, PER DETAIL 6/A9.2. PROVIDE 2-A:10-B:C FIRE EXTINGUISHER.
10.15	PROVIDE TACTILE ROOM SIGNAGE PER DETAILS 1&3/A2.5 AND ROOM SIGNAGE VERBIAGE LISTED IN DOOR SCHEDULE. SIGNS ON STRIKE SIDE OF DOOR U.O.N.: DOOR 104 JANITOR, DOOR 105A ALFA, DOOR 113 FIRE RISER ROOM, LIVING ROOM (ON WALL BEHIND DOOR 140A).
10.21	WALL-MOUNTED ENHANCED TEEN AREA SIGNAGE PER LIBRARY STANDARDS.
10.22	WALL-MOUNTED ENHANCED SELF-CHECKOUT SIGNAGE PER LIBRARY STANDARDS.
10.23	WALL-MOUNTED ENHANCED HOLDS AREA SIGNAGE PER LIBRARY STANDARDS.
10.26	STORAGE POCKET DOOR FOR FOLDABLE PARTITION PANELS PER SPECIFICATIONS.
11.4	STEEL BOOK SHELVING WITH PLASTIC LAMINATE COUNTERTOP AND MDO END PANELS PROVIDED BY LIBRARY SHELVING VENDOR. EXACT WIDTH OF COUNTERTOP TO BE COORDINATED WITH VENDOR.
11.6	FIRE DEPARTMENT KNOX BOX.
12.1	PROFILE OF LARGE "WOW" ABOVE STORYTELLING CIRCLE, CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS.
12.2	PROFILE OF SMALL "WOW" ABOVE TWEEN AREA, CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS.
12.6	OAK TREE THEMING.
12.10	BOOK SORTER LOCATION WITH BOOK DROP.
22.1	HI-LOW DRINKING FOUNTAIN PER 19/A9.5
26.3	SECURITY SYSTEM ANNUNCIATOR, CARD READER AND KEYPAD PER ELECTRICAL.

WALL TYPE SCHEDULE

REFER TO EXPANSION ANCHOR SCHEDULE FOR POWDER DRIVEN FASTENERS AND WEDGE EXPANSION ANCHOR REQUIREMENTS. SEE DETAIL: 19/A9.1

REFER TO FRAMING NOTES AND REQUIREMENTS SHOWN ON DETAIL: 20/A9.1

WALL TYPE SERIES	DESCRIPTION	DETAIL REF.
A	NON-RATED FULL HEIGHT PARTITION WALL - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	2/A9.1
B	NON-RATED PARTIAL HEIGHT PARTITION WALL - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	6/A9.1
D	NON-RATED PLUMBING PARTITION - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	13/A9.1
E	NON-RATED SOUND ATTENUATION PARTITION - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	3/A9.1

FLOOR PLAN LEGEND

- PARTITION WALL
- 1-HR FIRE RATED WALL PER UL #U419
- INTERIOR STOREFRONT PARTITION WALL
- CMU WALL, SPLITFACE
- CMU WALL, SHOTBLAST
- COMPOSITE WOOD DECK
- DOOR, HARDWARE, AND FRAME
- F.E.C. — FIRE EXTINGUISHER CABINET, REFER TO DETAIL 6/A9.2
- F.D — FLOOR DRAIN PER PLUMBING
- A — GLAZING PER SHEET A2.6-A2.7
- 101 — DOOR PER SCHEDULE ON A2.5

FLOOR PLAN NOTES

GENERAL:

1. LOCATE ALL NEW DOOR FRAMES OR CASED OPENINGS SO HINGED SIDE IS 4-INCHES FROM FACE OF THE DOOR JAMB TO THE FACE OF WALL, EXCEPT WHERE SPECIFICALLY DIMENSIONED OR SHOWN OTHERWISE. FOR LOCATION OF STOREFRONT DOORS, REFER TO WINDOW SCHEDULES.

2. ALL ELECTRONIC SECURITY CARD READER DOOR LOCKS MUST OPERATE MANUALLY FOR EXITING UNDER ANY CIRCUMSTANCES, INCLUDING A POWER OUTAGE.

3. REFER ALSO TO DRAWINGS T1.2 FOR PROJECT REQUIREMENTS, DRAWING T1.3 FOR ACCESSIBILITY REQUIREMENTS AND DRAWING T1.4 FOR EXITING PLAN.

4. "PROVIDE" SHALL MEAN THAT THE CONTRACTOR, AT HIS/HER EXPENSE, SHALL FURNISH AND INSTALL THE WORK, COMPLETE IN PLACE AND READY FOR USE, INCLUDING FURNISHINGS OF NECESSARY LABOR, MATERIALS, TOOLS, EQUIPMENT AND TRANSPORTATION.

Michael Baker INTERNATIONAL

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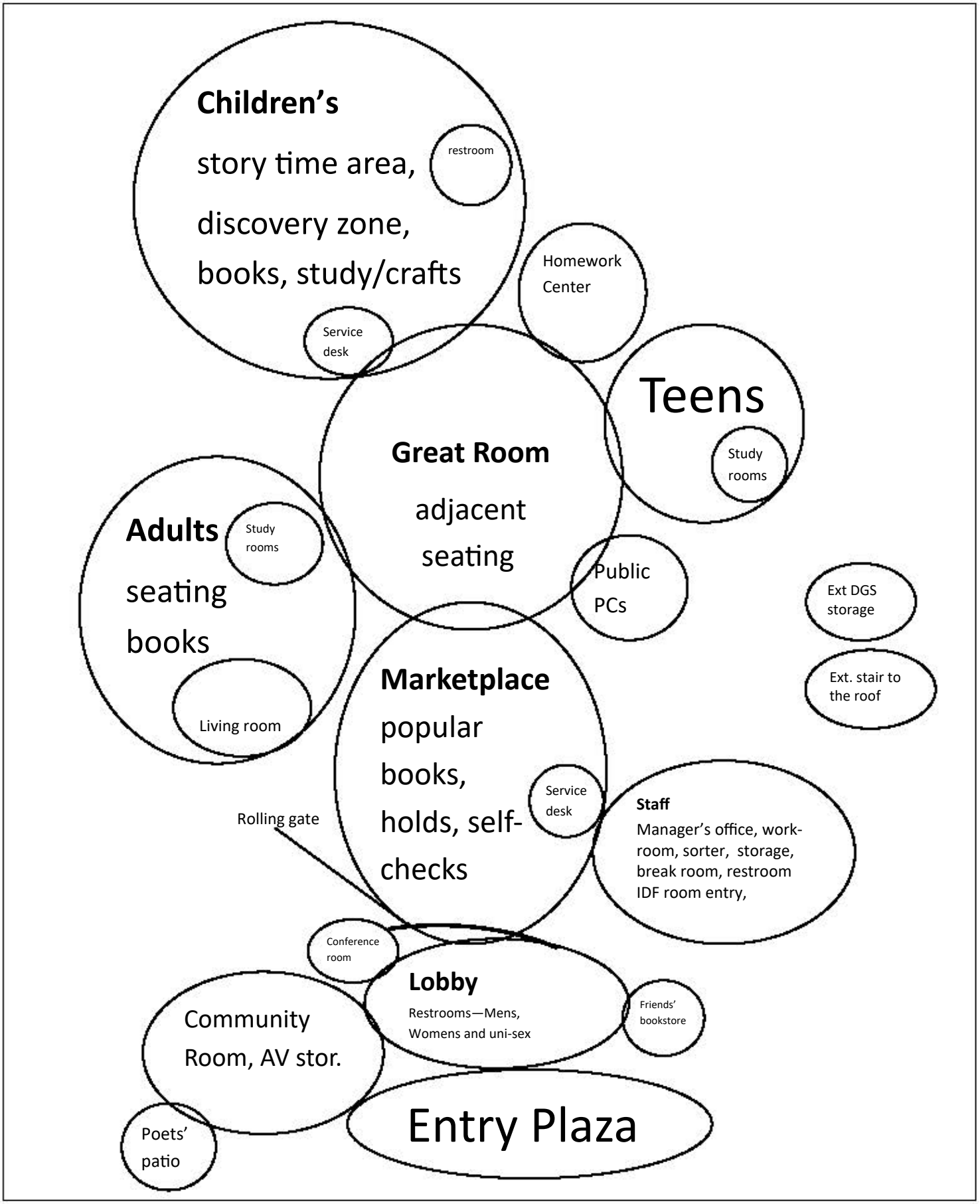
0 8 32 FT

Source: Ferguson Pape Baldwin Architect, 07/15/2016

COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Layout

Figure 4A



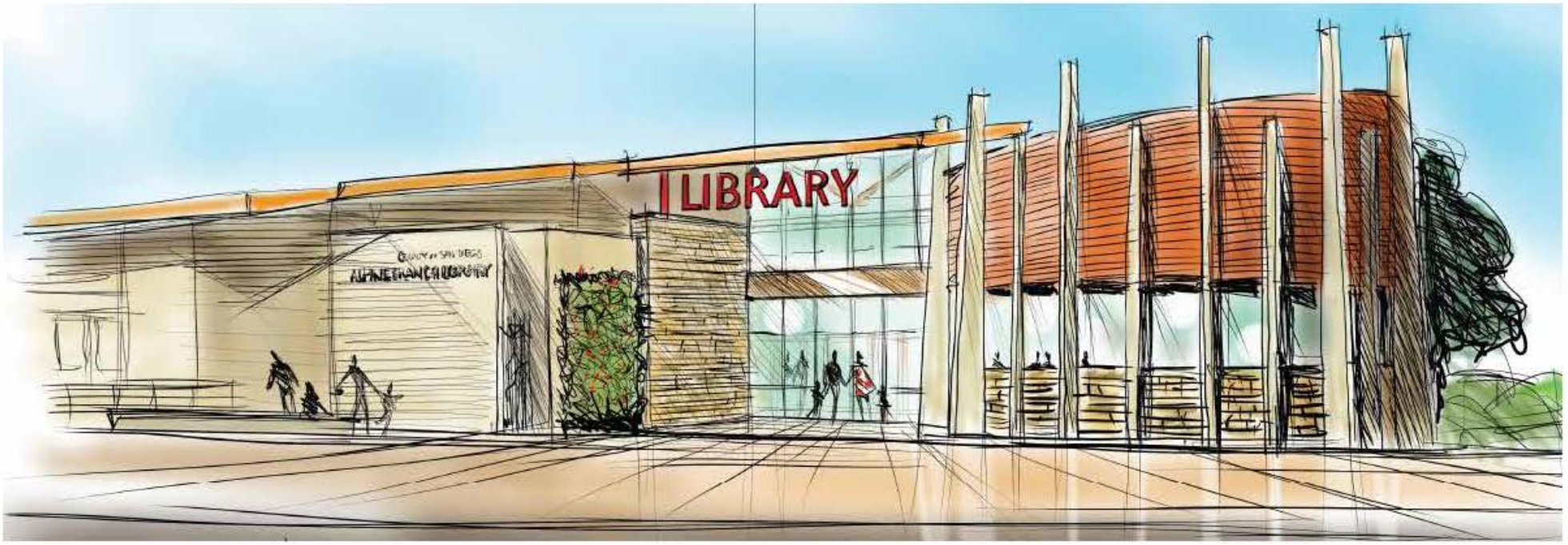
COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

Adjacency Diagram

Figure 4B



COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Rendering (Alpine Library)

Figure 5A

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COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Rendering (Imperial Beach Library)

Figure 5B

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Photo 1: View looking east across the northern portion of the proposed development area.



Photo 2: View looking north across proposed development area from central portion of site.

COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Site Photographs

Figure 6

Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

Source: ECORP Consulting, 2020.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The environmental factors checked below would be potentially affected by this project and involve at least one impact that is a "Potentially Significant Impact" or a "Less Than Significant With Mitigation Incorporated," as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology & Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology & Water Quality	☐ Land Use & Planning	☐ Mineral Resources
☒ Noise	☐ Population & Housing	☒ Public Services
☐ Recreation	☒ Transportation/Traffic	☒ Tribal Cultural Resources
☐ Utilities & Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ On the basis of this Initial Study, the County Department of General Services finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.

☒ On the basis of this Initial Study, the County Department of General Services finds that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION would be prepared.

☐ On the basis of this Initial Study, the County Department of General Services finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Signature	11 FEB 2021 Date
Marko Medved, PE, CEM Printed Name	Director, Dept. of General Services Title

Mitigation Monitoring and Reporting Program

Casa de Oro Branch Library Project
Spring Valley, California
SCH No.: xxxx

Lead Agency:
County of San Diego
Department of General Services
5560 Overland Avenue, Suite 2207
San Diego, California 92123

Preparer:
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San Diego, CA 92121

February 2021

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I. INTRODUCTION

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the Casa de Oro Branch Library Project (proposed project). A MMRP is required for the proposed project because the Mitigated Negative Declaration (MND) prepared for the project identified significant adverse environmental impacts, and measures have been identified to mitigate those impacts. This MMRP has been prepared pursuant to Section 21081.6 of the California Public Resources Code, which requires public agencies to "adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment."

II. MITIGATION MONITORING AND REPORTING PROGRAM

As the lead agency, the County of San Diego (County) will be responsible for monitoring compliance with all mitigation measures. Different County departments may be responsible for various aspects of the project. The MMRP identifies the department with the responsibility for ensuring that each individual mitigation measure is completed; however, it is expected that one or more departments will coordinate efforts to ensure such compliance.

The MMRP is presented in tabular form on the following pages. The components of the MMRP are described briefly below.

- **Potential Significant Impact**: The significance threshold is restated to describe the potentially significant impact.
- **Mitigation Measure**: The mitigation measures to be adopted (as identified in the MND) are restated.
- **Timeframe of Mitigation**: Identifies at which stage of the project the mitigation measure shall be completed.
- **Monitoring, Enforcement, and Reporting Responsibility**: Identifies the department within the County with responsibility for mitigation monitoring.

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Mitigation Monitoring and Reporting Program
Casa de Oro Branch Library Project

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
Biological Resources			
Impact IV.a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	**BIO-1** **Compliance with Migratory Bird Treaty Act.** If construction occurs within the nesting season (January 16th through August 31st), surveys for migratory bird and raptor nests shall be conducted. These surveys shall be performed by a qualified biologist within 72 hours prior to the commencement of construction activities or if construction activities are ongoing, within 72 hours prior to January 16th. Surveys shall include the construction area plus a 500-foot buffer. Survey findings shall be documented prior to initiating any construction activities. If active nests are found during nesting bird survey, appropriately sized no-work buffers (generally 50 to 300 feet, depending on species sensitivity) shall be established around the active nests identified within and adjacent to the project site. The qualified biologist shall determine the appropriate buffer size and level of nest monitoring necessary for species not listed under the federal or California ESAs based on the species' life history, the species' sensitivity to disturbances (e.g., noise, vibration, human activity), individual behavior, status of nest, location of nest and site conditions, presence of screening vegetation, anticipated project activities, ambient noise levels compared to project-related noise levels, existing non-project-related disturbances in vicinity, and ambient levels of human activity. Buffers shall be marked (flagged or fenced with environmentally sensitive area fencing) around any active nests and periodic monitoring by the qualified biologist will occur to ensure the project does not result in the failure of the nest. The buffer(s) will be maintained around each nest until the nest becomes inactive as determined by the qualified biologist. At the discretion of the qualified biologist, if a nesting bird appears to be stressed as a result of project activities and the buffer does not appear to provide	Prior to and during project construction activities	County of San Diego Department of General Services

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	adequate protection, additional minimization measures may need to be implemented. Construction may continue outside of the no-work buffers. The qualified biologist shall ensure that restricted activities occur outside of the delineated buffers, check nesting birds for any potential indications of stress, and ensure that installed fencing or flagging is properly maintained during nest monitoring and any additional site visits. Buffer sizes may be adjusted (either increased or reduced), or the extent of nest monitoring may be adjusted, at the discretion of the qualified biologist based on the conditions of the surrounding area and/or the behavior of the nesting bird. Any changes to buffer sizes and/or nest monitoring frequency will be documented. If listed species are found to be nesting in the survey area, construction activity should not occur without coordination with regulating agencies and may require an agency-approved bird management plan. **BIO-2 Compliance with Section 4150 of California Fish and Game Code.** The palm trees within the development area could support roosting bat species (including sensitive species) and may provide maternity roosts. Palm tree removal should occur between October 1st and February 28th if possible, to avoid the bat maternity season and direct mortality of non-volant young. If palm trees must be removed from March 1st through September 31st, a qualified bat biologist shall conduct bat surveys which include an appropriate combination of sampling, exit counts, and acoustic surveys to determine if bats are using these resources in the development area. If bat surveys are negative, palm trees should be removed the next day. If bat surveys are positive, palm tree removal shall be postponed until October 1st. If palm trees are removed October 1st through February 28th, then no survey by a qualified bat biologist is necessary.		

Potential Significant Impact	Mitigation Measure		Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
		Because bat roosting within palm trees occurs throughout the year, palm-tree removal at any time of year shall occur using a two-step process conducted over two consecutive days in order to minimize direct injury or mortality to any roosting bats. This process shall be monitored by a qualified biologist. Permittee shall only trim the outermost fronds of each individual tree on the first day; innermost fronds shall not be trimmed. No more than 50% of the palm fronds shall be removed from each tree during day 1. On the second day the remaining fronds shall be removed. All fronds must be removed/trimmed using chainsaws. No use of bulldozers, backhoes, cranes, or other heavy equipment shall be permitted. If bats emerge during the tree trimming, trimming activities shall cease at the individual tree for the remainder of the day to allow for any additional bats roosting in the tree to emerge during evening hours when it is safe and appropriate for them to do so. Trimming of the tree may resume the following morning.		
Impact IV.c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	**BIO-3**	**Standard Best Management Practices (BMPs).** The project shall comply with standards outlined in the County of San Diego Watershed Protection, Stormwater Management and Discharge Control Ordinance (WPO). Limits of work shall be designated and clearly demarcated, and specifications should provide a stringent level of BMPs to control dust, runoff, and spills and prevent indirect effects to the adjacent habitats. To reduce potential impacts related to erosion, BMPs including slope stabilization and control of runoff shall be implemented during construction. To prevent potential impacts related to waters, straw wattles and other Stormwater Pollution Prevention Plan (SWPPP) measures shall be implemented during construction.	Prior to and during project construction activities	County of San Diego Department of General Services
Cultural Resources				
Impact V.b) Would the project cause a substantial adverse change in the significance of an archaeological resource	**CR-1**	**Archaeological Grading Monitoring and Data Recovery Program**. An Archaeological Grading Monitoring and Data Recovery Program shall be conducted to provide for the identification, evaluation, treatment, and protection of any cultural resources that are affected	Prior to and during project construction activities	County of San Diego Department of General Services

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
pursuant to CEQA Guidelines Section 15064.5?	by or may be discovered during the construction of the proposed project. The monitoring shall consist of the full-time presence of a qualified archaeologist and a traditionally and culturally affiliated (TCA) Native American monitor (Kumeyaay Cultural Monitor) shall be retained to monitor all initial ground-disturbing activities associated with project construction, including vegetation removal, clearing, grading, trenching, excavation, or other activities that may disturb original (pre-project) ground, including the placement of imported fill materials and/or related access improvements (i.e., for access along Campo Road). • The requirement for cultural resource mitigation monitoring shall be noted on all applicable construction documents, including demolition plans, grading plans, etc. • The qualified archaeologist and TCA Native American monitor shall attend all applicable pre-construction meetings with the contractor and/or associated subcontractors. • The qualified archaeologist shall maintain ongoing collaborative consultation with the TCA Native American monitor during all ground disturbing or altering activities, as identified above. • The qualified archaeologist and/or TCA Native American monitor may halt ground disturbing activities if archaeological artifact deposits or cultural features are discovered. In general, ground disturbing activities shall be directed away from these deposits for a short time to allow a determination of potential significance, the subject of which shall be determined by the qualified archaeologist and the TCA Native American monitor. Ground disturbing activities shall not resume until the qualified archaeologist, in consultation with the TCA Native American monitor, deems the cultural resource or feature has been appropriately documented and/or protected. At the qualified archaeologist's discretion, the location of ground disturbing activities may be relocated elsewhere on the project site to avoid further disturbance of cultural resources.		

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	• The avoidance and protection of discovered unknown and significant cultural resources and/or unique archaeological resources is the preferable mitigation for the project. If avoidance is not feasible a Data Recovery Plan may be authorized by the County as the lead agency under CEQA. If a data recovery is required, then the appropriate tribe shall be notified and consulted in drafting and finalizing any such recovery plan. • The qualified archaeologist and/or TCA Native American monitor may also halt ground disturbing activities around known archaeological artifact deposits or cultural features if, in their respective opinions, there is the possibility that they could be damaged or destroyed. • The landowner shall relinquish ownership of all tribal cultural resources collected during the cultural resource mitigation monitoring conducted during all ground disturbing activities, and from any previous archaeological studies or excavations on the project site to the appropriate tribe for respectful and dignified treatment and disposition, including reburial, in accordance with the tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the most likely descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. **CR-2** **Prepare Monitoring Report and/or Evaluation Report.** Prior to the release of the grading bond, a Monitoring Report and/or Evaluation Report, which describes the results, analysis and conclusions of the cultural resource mitigation monitoring efforts (such as, but not limited to, the Research Design and Data Recovery Program), shall be submitted by the qualified archaeologist, along with the TCA Native American monitor's notes and comments, to the County Department of Planning and Development Services Director for approval.		

Potential Significant Impact	Mitigation Measure		Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
Impact V.c) Would the project disturb any human remains, including those interred outside of formal cemeteries?	**CR-3**	As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Coroner's office by telephone. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie adjacent remains [as determined by the qualified archaeologist and/or the traditionally and culturally affiliated (TCA) Native American monitor] shall occur until the coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected (as determined by the qualified archaeologist and/or the TCA Native American monitor), and consultation and treatment could occur as prescribed by law. As further defined by state law, the coroner would determine within two working days of being notified if the remains are subject to his or her authority. If the coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would make a determination as to the most likely descendent. If Native American remains are discovered, the remains shall be kept in situ ("in place"), or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of the TCA Native American monitor.	During project construction activities	County of San Diego Department of General Services
Geology and Soils				
Impact VII.f) Would the project directly or indirectly destroy a unique paleontological resource or site?	**PAL-1**	Upon discovery of an unearthed fossil, earthwork in the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on	During project construction activities	County of San Diego Department of General Services

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered, and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist. **PAL-2** Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository along with associated field notes, photographs, and compiled fossil locality data. For projects in San Diego County, the recommended designated repository is the San Diego Natural History Museum. Donation of the fossils should be accompanied by financial support for specimen storage. A final summary report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.		
Noise			
Impact XII.a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**NOI-1** In order to reduce construction noise during the demolition, site preparation, grading, building construction and paving phases, a temporary noise barrier or enclosure shall be positioned between the construction site and the neighboring residences to the southwest of the site in a manner that breaks the line of sight between the construction equipment and these residences. The temporary noise barrier shall have a sound transmission class (STC) of 10 or greater in accordance with ASTM Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. The temporary noise barrier can consist of a solid plywood fence at least 7/16-inch in thickness and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket, attached to chain link fencing. The length, height, and	Prior to and during project construction activities	County of San Diego Department of General Services

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	location of the temporary noise barrier shall be adequate to ensure proper acoustical performance. Specifically, the barrier must completely break the line of sight between the construction site and the residences to the southwest, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. The temporary noise barrier must span the entire length of the western boundary of the project site. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion. OR In the case that a retaining wall (or walls) is constructed along the southern and western property boundaries, is constructed to a height that breaks the line of sight between the construction site and neighboring residences to the southwest, and is constructed prior to any other construction taking place, no temporary construction noise barrier shall be required along these site perimeters. Otherwise, provision of temporary noise barriers as described above in NOI-1 shall be required, prior to commencement of any project construction activities. **NOI-2** The project improvement and building plans shall include the following requirements for construction activities: • Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices. • A sign, legible at a distance of 50 feet, shall be posted at the project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise		

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the County within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the County. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator. • Identification of construction noise reduction methods. These reduction methods may include shutting off idling equipment (5 minutes), installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and using electric air compressors and similar power tools. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • Per Section 36.409 of the County code, construction shall be prohibited between the hours of 7:00 p.m. to 7:00 a.m. as well as on Sundays and all major holidays.		
Public Services			
Impact XIV.a)v) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios,	**PS-1** Implement mitigation measures BIO-1 to BIO-3, CR-1 to CR-3, NOI-1 to NOI-2, and TR-1.	Prior to and during project construction activities	County of San Diego Department of General Services

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
response times or other performance service ratios, response times or other performance objectives for any of the public services: v) Other public facilities?			
Transportation and Traffic			
Impact XVI.d) Would the project result in inadequate emergency access?	**TR-1** Prior to the start of construction, the County shall require the construction contractor to prepare and implement a traffic control plan to show specific methods for maintaining traffic flows. Traffic control measures could include but are not limited to the following tasks: • Develop circulation and detour plans to minimize impacts to local street circulation, including the use of signage and flagging to guide vehicles through or around the construction zone. • Schedule truck trips outside the range of peak morning (7:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) commute hours. • Limit lane closures during peak hours to the extent possible. • Use haul routes that minimize truck traffic on local roadways to the extent possible. • Include accommodations for bicycle and pedestrians in all areas potentially affected by project construction, including detours and signage to maintain connectivity for bikeways and sidewalks. • Store construction materials only in designated areas. • Coordinate signage for temporarily eliminated on-street parking, with instructions including timing and duration, and nearby areas where parking is currently available, as necessary. • Coordinate with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary.	Prior to and during project construction activities	County of San Diego Department of General Services; County of San Diego Department of Public Works

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	• Develop comprehensive strategies for maintaining emergency flows. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches and identification of alternate routing around construction zones. Police, fire, and other emergency service providers shall be notified of the timing, location and duration of the construction activities and the location of detours and lane closures.		
Tribal Cultural Resources			
Impact XVII.i) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	Implement mitigation measures **CR-1** to **CR-3.**	Prior to and during project construction activities	County of San Diego Department of General Services
Impact XVII.ii) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with	Implement mitigation measures **CR-1** to **CR-3.**	Prior to and during project construction activities	County of San Diego Department of General Services

Potential Significant Impact	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
cultural value to a California Native American tribe, and that is: ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code §5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.			

INSTRUCTIONS ON EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, Less Than Significant With Mitigation Incorporated, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significance.

I. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

a) Have a substantial adverse effect on a scenic vista?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

A vista is a view from a particular location or composite views along a roadway or trail. Scenic vistas often refer to views of natural lands, but may also be compositions of natural and developed areas, or even entirely of developed and disturbed areas, such as a scenic vista of a rural town and surrounding agricultural lands. What is scenic to one person may not be scenic to another, so the assessment of what constitutes a scenic vista must consider the perceptions of a variety of viewer groups.

The items that can be seen within a vista are visual resources. Adverse impacts to individual visual resources or the addition of structures or developed areas may or may not adversely affect the vista. Determining the level of impact to a scenic vista requires analyzing the changes to the vista as a whole and also to individual visual resources.

No Impact: The project site is located within an urbanized area in the community of Spring Valley, adjacent to the commercial corridor of Campo Road. The area surrounding the project site is highly developed with a variety of land uses including commercial, general office, and multi-family and (limited) single-family residential uses. The proposed project is not located near or within, or visible from, a scenic vista, including large expanses of open space, County parks, habitat preserves, reservoirs, and historic structures. The proposed project would not substantially change the composition of an existing scenic vista in a way that would adversely alter the visual quality or character of the view.

Furthermore, the project is compatible with the existing visual environment in terms of visual character and quality, as the project site is surrounded by an urbanized setting. In addition, the proposed project would be constructed in compliance with the Spring Valley Design Guidelines and County of San Diego's Landscape Ordinance and Water Efficient Landscape Design Manual. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

State scenic highways refer to those highways that are officially designated by the California Department of Transportation (Caltrans) as scenic. Generally, the area defined within a State scenic highway is the land adjacent to and visible from the vehicular right-of-way. The dimension of a scenic highway is usually identified using a motorist's line of vision, but a reasonable boundary is selected when the view extends to the distant horizon. The scenic highway corridor extends to the visual limits of the landscape abutting the scenic highway.

Less than Significant Impact: The nearest designated State scenic highway is State Route (SR) 125, between SR 94 and I-8, located approximately 1.5 miles west of the project site (County of San

Diego 2011, Figure C-5). Due to distance and intervening buildings and topography, the project site would not be visible within the viewshed of SR 125.

According to the County General Plan Conservation and Open Space Element (see Figure C-5, Scenic Highways), SR 94 between SR 125 and I-8 is designated as a County scenic highway (County of San Diego 2011). SR 94 is located approximately 480 feet to the south/southwest of the site at its closest point; refer to Figure 1, Regional Map. While the proposed project may be briefly or intermittently visible from SR 94, the project would be consistent with existing land uses in the project vicinity as the site is located in a highly urbanized area. In addition, the project would be constructed in compliance with the Spring Valley Design Guidelines to ensure that the library would respect the existing character of the surrounding neighborhood. Impacts would be less than significant.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Visual character is the objective composition of the visible landscape within a viewshed. Pattern elements such as line, form, color, and texture are attributes that help characterize visual quality. Visual character is commonly discussed in terms of dominance, scale, diversity, and continuity. Visual quality is the viewer's perception of the visual environment and varies based on exposure, sensitivity, and expectation of the viewers.

Less Than Significant Impact: A small-scale restaurant fronting directly onto Campo Road is located in the southern portion of the proposed site; refer to Figure 2, Local Vicinity Map/Project Site. This restaurant would be demolished to provide access to the subject property. Commercial uses are located directly to the south, along with single-family and multi-family uses to the south/southwest of the site. Single-family rural residential uses are present in the distance along the hillsides to the north and south. The Campo Road commercial corridor trends east–west through the community and forms the southern boundary of the proposed site.

The land where the library would be constructed is currently disturbed and/or developed. The majority of the property is currently surfaced with asphaltic pavement. The site would also include a portion of an existing sports field associated with the school and the removal of a modular office structure located on the school site; refer to Figure 2, Local Vicinity Map/Project Site.

The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet amsl in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

As noted in Table 1, Existing General Plan Land Use and Zoning, no change in the existing General Plan or zoning is required or proposed with project implementation. The proposed project would not be subject to discretionary review by the County. Improvement plans for the proposed project would be subject to review by the California DSA to ensure design conformance with current ADA guidelines, including for such components as parking, stairs, ramps, hazards, restrooms, casework, and signage. PDS would be responsible for inspecting construction of the library facility. All required permits (i.e., building and grading permits) for the proposed project would be issued by PDS; refer to Table 2, Anticipated Permits and Approvals. The proposed project would be constructed in compliance with the Spring Valley Design Guidelines and the County of San Diego's Landscape

Ordinance and Water Efficient Landscape Design Manual. Therefore, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality and impacts would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Artificial light during evening and nighttime hours emanates from building interiors and passes through windows, from street lighting for purposes of vehicular circulation and bike and pedestrian safety, and from other exterior sources (e.g., building illumination, security lighting, parking lot lighting, landscape lighting, and signage). The degree of illumination may vary widely depending on the amount of light generated, height of the light source, shielding by barriers or obstructions, type of light source, and weather conditions. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. Artificial light can be a nuisance to adjacent residential areas and diminish the view of the clear night sky. Residences and hotels are considered light sensitive, since occupants have expectations of privacy during evening hours and may be disturbed by bright light sources.

Glare is caused by the reflection of sunlight or artificial light on highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Daytime glare is common in urban areas and is typically associated with exterior facades largely or entirely comprising highly reflective glass. Glare can also occur during evening and nighttime hours with the reflection of artificial light sources such as automobile headlights. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors.

Less Than Significant Impact: Nighttime lighting would be installed in the surface parking lot, at the entry drive, and on the exterior of the building for public safety purposes and to allow for safe pedestrian and vehicular circulation and access. Limited lighting may also be installed at the monument sign on Campo Road for identification purposes. The proposed project would use outdoor lighting for security, safety, and aesthetic purposes. All project lighting would be shielded and directed downward to avoid spillover onto adjacent properties and/or adverse effects on nighttime skies (i.e., sky glow). All nighttime lighting would be designed and installed in conformance with the County's Lighting Ordinance. The project site is not located within a restricted zone by the Outdoor Light Control Ordinance, as the Mount Laguna Observatory is located 32 miles east of the project site.

The library building would achieve a minimum LEED Gold certification, while also reaching a higher level of sustainability with a zero-net energy certification through the International Living Futures Institute's Zero Energy certification program. As such, the project would include the installation of solar PV panels on the roof of the library. Rooftop PV panels would generally not be visible in views toward the proposed project. Further, solar PV panels are designed to be highly absorptive of incoming sunlight and are not anticipated to create substantial glare that would affect motorists or on- and off-site receptors. The installation of PV panels is required to achieve building code standards and to generate adequate energy for continued operational needs, while the duration of received glare and exposure of receptors at specific on- or off-site locations to any glare generated by the proposed project would be temporary. As such, the solar PV panels are not expected to result in glare.

Since the project would conform to the Light Pollution Code (Section 51.201-51.209), the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts would be less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation (DOC) as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forestland, including the Forest and Range Assessment Project and the Forest Legacy Assessment project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB). Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance (Important Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, or other agricultural resources, to non-agricultural use?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

DOC operates a Farmland Mapping and Monitoring Program that maps and collects statistical data on the state's agricultural resources. Agricultural land is rated according to soil quality and irrigation status, with the best quality land called Prime Farmland. Maps are updated every two years, with current land use information gathered from aerial photographs, a computer mapping system, public review, and field reconnaissance. The DOC Prime Farmlands, Farmlands of Statewide Importance, and Unique Farmlands are referenced in CEQA Guidelines Appendix G as resources to consider in an evaluation of agricultural impacts.

No Impact: The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The surrounding land uses include commercial, general office, and multi-family and (limited) single-family residential uses. The land where the library would be constructed is currently disturbed and/or developed. The majority of the property is currently surfaced with asphaltic pavement. The site currently supports a small-scale restaurant, sports field associated with the school, and a modular office structure; refer to Figure 2, Local Vicinity Map/Project Site, and Figure 6, Site Photographs.

The project site does not contain any agricultural resources or lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (CDC 2020). Therefore, no agricultural resources including Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance would be converted to a non-agricultural use. No impact would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response II (a), above. The project site is zoned Rural Residential Single (RS) and General Commercial Use (C36), which are not considered agricultural zones. Additionally, the project site's land is not under a Williamson Act Contract. Therefore, the project does not conflict with existing zoning for agricultural use, or a Williamson Act Contract. No impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), or timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response II (a), above. The project site does not contain forestlands or timberland. The County of San Diego does not have any existing Timberland Production Zones. Therefore, project implementation would not conflict with existing zoning for, or cause rezoning of, forestland, timberland, or timberland production zones. No impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response II (a), above. The project site does not contain any forestlands as defined in PRC Section 12220(g); therefore, project implementation would not result in the loss or conversion of forestland to a non-forest use. In addition, the project is not located in the vicinity of off-site forest resources. No impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response II (a), above. The project site and surrounding area within a radius of a quarter mile do not contain any active agricultural operations or lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program. Therefore, the proposed project would not involve changes in the existing environment that would result in conversion of farmland to nonagricultural use or conversion of forestland to non-forest use. No impact would occur.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

As part of its enforcement responsibilities, the U.S. Environmental Protection Agency (USEPA) requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal air quality standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in federal nonattainment areas, using a combination of performance standards and market-based programs.

The San Diego Air Pollution Control District (SDAPCD) is the local agency responsible for the administration and enforcement of air quality regulations in San Diego County. The SDAPCD currently monitors implementation of the SIP in the San Diego Air Basin (SDAB) through the Regional Air Quality Strategy (RAQS), which contains strategies to be applied in order to attain and maintain acceptable air quality in the SDAB. The RAQS is the applicable air quality plan for the project. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

Consistency with the RAQS is determined by two standards: (1) whether the project would increase the frequency or severity of violations of existing air quality standards, contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as contained in the RAQS; and (2) whether the project would exceed assumptions contained in the RAQS. The air quality emission projections and emission reduction strategies in the RAQS are based on information from CARB and San Diego Association of Governments (SANDAG) regarding mobile and area source emissions, as well as growth in unincorporated Spring Valley. CARB mobile source emissions projections and SANDAG growth projections are derived from population and vehicle use trends, and land use plans developed by the cities and the County of San Diego as part of their general plans. A project that proposes development consistent with the growth anticipated in a general plan would be consistent with the RAQS. Projects that propose development that is greater than the population growth projections and land use intensity of the adopted local general plan warrant further analysis to determine consistency with the RAQS and the SIP.

Less Than Significant Impact: An emissions memorandum prepared by ECORP Consulting (2020a; see Appendix A) determined that the project would not exceed the SDAPCD's significance thresholds under the short-term construction or long-term operational scenarios (see Table III-2 and Table III-3, below, under Response III [b]) nor violate any air quality standards. Therefore, the project would not contribute to new violations or delay the timely attainment of air quality standards or interim reductions as contained in the RAQS. The project would be consistent with the first criterion.

For the second criterion, the project involves the replacement of the existing Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The new library would be constructed on land that is currently disturbed and developed. The project would therefore not represent a new type of land use in Spring Valley or an expanded source of air pollutant emissions (i.e., traffic from a new use not already located within the Spring

Valley area). Additionally, the project would not directly or indirectly result in area population growth due to the proposed land use type. Therefore, the project would not affect County-wide plans for population growth within the Spring Valley area and would be consistent with the second criterion.

The project is consistent with the designated land use identified in the County General Plan, and would not exceed the growth projections anticipated in the County General Plan. Therefore, the project would not conflict with or obstruct implementation of the RAQS or the SIP. Impacts would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Both the USEPA and CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are: ozone (O_3); precursor emissions include nitrogen oxide (NO_x) and reactive organic gases (ROG), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The portion of the SDAB that encompasses the project area is designated as a nonattainment area for the federal and state O_3 standards and for the state PM_{10} and $PM_{2.5}$ standards.

In general, air quality impacts from land use projects are the result of emissions from motor vehicles and from short-term construction activities associated with such projects. The significance criteria established by the applicable air quality management or air pollution control district (SDAPCD) may be relied upon to make impact determinations. According to the SDAPCD, an air quality impact is considered significant if the proposed project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SDAPCD has established thresholds of significance for air quality resulting with construction and operational activities of land use development projects, as provided in Table III-1.

Table III-1. SDAPCD Significance Thresholds – Pounds per Day

Air Pollutant	Construction Activities	Operations
Reactive Organic Gas (ROG)	75	75
Nitrogen Oxide (NO_2)	250	250
Carbon Monoxide (CO)	550	550
Sulfur Oxide (SO_2)	250	250
Coarse Particulate Matter (PM_{10})	100	100
Fine Particulate Matter ($PM_{2.5}$)	55	55

Source: ECORP Consulting 2020a (Appendix A).

By nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual

emissions exceed its identified significance thresholds, the project would be cumulatively considerable.

Projects that do not exceed significance thresholds are not considered to be cumulatively considerable. A portion of the proposed project's air quality impacts are attributable to construction activities. The majority of the long-term air quality impacts would be generated by the operation of motor vehicles traveling to and from the site.

Less Than Significant Impact:

Construction Impacts

Construction-generated emissions are temporary and short term but have the potential to represent a significant air quality impact. Short-term emissions will be generated through construction of the proposed project from the following: 1) operation of construction vehicles (i.e., graders, scrapers, haul trucks); 2) creation of fugitive dust during clearing and grading; and 3) use of asphalt or other oil-based substances during paving activities. Construction activities such as demolition and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SDAPCD Rule 55, the Fugitive Dust Rule.

Construction-generated emissions associated with the proposed project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements; refer to Attachment A1 of Appendix A for information regarding construction assumptions, including construction equipment and duration.

Predicted maximum daily construction-generated emissions for the project are summarized in Table III-2. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeded the SDAPCD's thresholds of significance.

Table III-2. Construction-Related Emissions

Construction Year	Maximum Pollutants (pounds per day)[2]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction in Year 2021	4.48	53.22	26.73	0.07	7.16	4.07
Construction in Year 2022	34.7	20.52	22.93	0.04	1.39	1.01
SDAPCD Potentially Significant Impact Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Exceed SDAPCD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

1) The emission reduction of watering the construction site is applied based on the required implementation of SDAPCD Rule 55.

2) Coarse particulate matter (PM_{10}); fine particulate matter ($PM_{2.5}$); carbon monoxide (CO); sulfur oxide (SO_2); reactive organic gas (ROG); nitrogen oxide (NO_X).

Source: ECORP Consulting 2020a (Appendix A); CalEEMod Version 2016.3.2. Refer to Attachment A1 of Appendix A for Model Data Outputs.

As shown in Table III-2, construction-generated emissions would not exceed SDAPCD significance thresholds. As project emissions would not exceed SDAPCD thresholds, no exceedance of the ambient air quality standards would occur, and no health effects from project criteria pollutants would result. Impacts would be less than significant.

Operation Impacts

Implementation of the proposed project would result in long-term operational emissions of criteria air pollutants and ozone precursors associated with area sources, such as landscaping, applications of

architectural coatings, and consumer products; energy consumption, including electricity and natural gas consumption; and operational mobile emissions from vehicle trips made by patrons and employees of the proposed library.

Implementation of the project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2, as well as O_3 precursors such as ROG and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Operational air pollutant emissions were based on the project site plans and estimated traffic trip generation rates (Michael Baker International 2020c; Appendix H). According to the traffic study prepared for the project, development of the proposed library is anticipated to generate 937 average daily trips (ADT), which represents an increase of 527 ADT over existing conditions (937 project trips – 410 existing high turnover restaurant trips = 527).

Long-term operational emissions attributable to the project are identified in Table III-3 and compared to the existing baseline, which includes a high-turnover restaurant operating out of a 2,310 SF building. The difference is assessed against the regional operational significance thresholds promulgated by the SDAPCD.

Table III-3. Operational-Related Emissions (Regional Significance Analysis)

	Maximum Pollutants (tons per year)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Proposed Project – 13,000 SF Library						
Area Source	0.39	0.00	0.00	0.00	0.00	0.00
Energy Use	0.00	0.04	0.03	0.00	0.00	0.00
Mobile Source	1.26	4.98	12.39	0.04	3.40	0.93
Total[1]	**1.68**	**5.02**	**12.43**	**0.04**	**3.40**	**0.93**
Existing Baseline – 2,310 SF High-Turnover Restaurant						
Area Source	0.06	0.00	0.00	0.00	0.00	0.00
Energy Use	0.02	0.11	0.09	0.00	0.00	0.00
Mobile Source	0.58	2.08	5.00	0.01	1.03	0.29
Total[1]	**0.66**	**2.19**	**5.09**	**0.01**	**1.03**	**0.29**
Difference						
Area Source	+0.33	0.00	0.00	0.00	0.00	0.00
Energy Use	-0.02	-0.07	-0.06	0.00	0.00	0.00
Mobile Source	+0.68	+2.90	+7.39	+0.03	+2.37	+0.64
Total[1]	**+1.02**	**+2.83**	**+7.34**	**+0.03**	**+2.37**	**+0.64**
SDAPCD Significance Threshold	**75**	**250**	**550**	**250**	**100**	**55**
SDAPCD Significance Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

1. Numbers have been rounded.

Notes: Proposed project emissions projections account for 937 vehicle trips per day and existing baseline emissions projections account for 410 vehicle trips per day, per the traffic trip generation rates from Michael Baker International (2020c; Appendix H).

Construction emissions taken from the season (summer or winter) with the highest output.

Source: ECORP Consulting 2020a (Appendix A); CalEEMod version 2016.3.2. Refer to Attachment A1 of Appendix A for Model Data Outputs.

As indicated in Table III-3, project operational-generated emissions would not exceed SDAPCD significance thresholds. Impacts would be less than significant.

Therefore, project construction and operations would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive receptors to the project site are existing residences directly adjacent to the site's southwestern boundary. Additionally, the Spring Valley Academy campus lies just north of the project site.

Construction-related activities would result in temporary, short-term, project-generated emissions of $PM_{2.5}$, ROG, NO_x, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. As shown in Table III-2, the project would not exceed the SDAPCD emission thresholds during project construction.

Less Than Significant Impact:

Construction Impacts

As discussed under Response III (b), construction activities associated with the project would not exceed the SDAPCD criteria air pollutant emissions thresholds.

Construction equipment emissions were estimated using emission factors for exhaust fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and exhaust coarse particulate matter spanning between 2.5 and 10 microns in diameter (PM_{10}) combined, as generated by the CARB-approved CalEEMod, version 2016.3.2; refer to Appendix A for additional discussion on methodologies. The model was run to obtain the peak one-hour and annual average concentration in micrograms per cubic meter (µg/m3) at nearby sensitive receptors. Note that the concentration estimates developed using the methodology used is considered conservative and is not a specific prediction of the actual concentrations that would occur as a result of the project any one point in time. Actual one-hour and annual average concentrations are dependent on many variables, particularly the number and type of equipment working at specific distances during adverse weather conditions.

A health risk computation was performed to determine the risk of developing an excess cancer risk as a result of the full span of construction. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the Office of Environmental Health Hazard (OEHHA) Guidance Manual (2015).

Based on the AERMOD outputs,[1] the expected annual average diesel particulate matter (DPM) emission concentrations at the most exposed sensitive receptor resulting from project construction would be 0.067 µg/m3 at the greatest level; this would occur just to the east of the northeastern boundary of the site, at the location of the school district corporation yard. The calculated carcinogenic risk at this location as well as several other locations in the vicinity as a result of project

1 USEPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height.

construction is depicted in Table III-4. As shown, potential cancer risk from project construction would be below the 10-in-one-million threshold.

Table III-4. Maximum Cancer Risk for Project Construction

Exposure Scenario	Location	Maximum Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds SDAPCD Significance Threshold?
Construction	Adjacent to northeastern boundary of site; school corporation yard	8.00	10	No
Construction	Spring Valley Middle School ballfield	2.86	10	No
Construction	Residences adjacent to the southwestern project boundary	1.79	10	No
Construction	Tennis courts across Campo Road	1.09	10	No
Construction	Residences to the west of the site	1.52	10	No
Construction	Grass field to northwest of site	2.18	10	No

Source: ECORP Consulting 2020a (Appendix A). Refer to Attachment A2 of Appendix A for Model Data Outputs.

The significance thresholds for construction-generated DPM exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the chronic reference exposure level (REL) for that substance. RELs are designed to protect sensitive individuals within the population and are defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The highest maximum chronic and acute hazard index would occur just to the east of the northeastern boundary of the site, at the location of the school district corporation yard. Specifically, the highest maximum chronic and acute hazard index would be 0.01 and 0.35, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits for the project.

In summary, the project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Impacts would be less than significant.

Operation Impacts

Operation of the project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the project; nor would the project attract mobile sources that would spend long periods queuing and idling at the site. Thus, by its very nature, the project would not be a source of toxic air contaminants concentrations during project operations.

Carbon Monoxide Hot Spots

It is recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or “hot spots,” are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours.

However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. In 1993, much of the state was designated nonattainment under the California Ambient Air Quality Standards and National Ambient Air Quality Standards for CO. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration across the entire state is now designated as attainment. Detailed modeling of project-specific CO hot spots is not necessary and thus this potential impact is addressed qualitatively.

A CO hot spot would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. According to the Traffic Impact Study prepared for the project (Michael Baker International 2020c; Appendix H), the project is anticipated to generate 937 ADT, which is an increase of 527 ADT over existing conditions (937 project trips – 410 existing restaurant trips = 527). Because the project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, there is no likelihood of project traffic exceeding CO values, based on available modeling for other representative scenarios (Los Angeles County) where congestion far exceeded the conditions that would be experienced in the project vicinity; refer to Appendix A for a case study. Therefore, CO hot spots are not an environmental issue of concern for the project.

Based on the findings of the analyses, the project would not expose sensitive receptors to substantial pollutant concentrations during project construction or operations. Impacts would be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact:

Construction Impacts

During construction, the project would have the potential to generate emissions that may result in objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions would be short term in nature, and would rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Such intermittent odors could be a temporary source of nuisance to adjacent uses, but would not affect a substantial number of people. Odors associated with project construction would be intermittent over the construction period and would vary with intensity of construction activity during any given time. As such, project construction would not result in emissions, such as odors, that would adversely affect substantial number of people. Impacts would be less than significant.

Operational Impacts

Land uses that are associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed library use does not include any such uses identified as being associated with objectionable odors. Although residential uses are located just south of the site, due to the nature of the proposed use, the project would not place new odor sources near any existing

residential receptors. Therefore, the proposed project would not expose a considerable number of persons to objectionable odors. Impacts would be less than significant.

IV. BIOLOGICAL RESOURCES

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

☐ Potentially Significant Impact
☐ Less than Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ No Impact

Discussion/Explanation:

A Biological Resources Letter Report was prepared for the project site by ECORP Consulting, Inc. in October 2020 (ECORP 2020b; Appendix B). ECORP conducted background research and a field survey of the project site to determine the presence of candidate, sensitive, or special-status species that could potentially be directly or indirectly impacted by the project. The field survey confirmed that the proposed project and the entirety of the development area will be constructed within previously developed grounds of the Spring Valley Academy and restaurant property. Other existing uses within the survey area are the baseball field, soccer field, residential businesses, and private residences.

Using desktop review information and observations in the field, a list of special-status plant and wildlife species that have potential to occur within the study area was generated.

Special-Status Plants

No special-status plants were observed during the assessment. All special-status plants were determined unlikely to occur within the development area and survey area due to the lack of suitable habitat and/or other conditions such as soil or elevation.

Special-Status Wildlife

The special-status wildlife species with occurrence records in the area were assessed for potential to occur within the study area. One sensitive wildlife species, western bluebird (*Sialia mexicana*), was observed within the development area. Five additional species have a moderate to high potential to occur on-site:

- Western red bat (*Lasiurus blossevillii*), California Species of Special Concern (SSC), Group 2 (declining)
- Western yellow bat (*Lasiurus xanthinus*), California SSC
- Yuma myotis (*Myotis yumanensis*), Group 2 (declining)
- Cooper's hawk (*Accipiter cooperii*), Watch List, Group 1 (high sensitivity)
- Red-shouldered hawk (*Buteo lineatus*), Group 1 (high sensitivity)

Additionally, the palm trees in the development area provide roosting habitat for bat species. There are two bat species with the potential to occur in these palm trees that are currently listed as a California SSC: western red bat and western yellow bat. Yuma myotis could also potentially roost within existing structures of the development area. Western red bat and yuma myotis are considered Group 2-sensitive wildlife by the County. There is one recent California Natural Diversity Database (CNDDB) record for western red bat and several recent CNDDB record for Yuma myotis within 5

miles of the site. In addition to western yellow bat, several other Southern California bat species have been documented using palm trees as roosts, including canyon bat (*Parastrellus hesperus*), pallid bat (*Antrozous pallidus*), and big brown bat (*Eptesicus fuscus*).

The gum and pine tree species in the northern portion of the development area west of the baseball diamond are suitable nesting habitat for the Cooper's hawk and red-shouldered hawk. The open field behind the residential housing to the northwest of the development area is suitable for raptor foraging and various additional trees in the survey area are marginally suitable for nesting for raptors and migratory bird species.

Migratory Birds and Raptors

The development area provides limited foraging and nesting habitat for migratory bird species and raptors. The survey area provides much more suitable nesting habitat in the form of gum and pine trees and foraging habitat of the open field behind the residential homes to the northwest. No long-standing nests were observed in the survey area during the field survey.

Less than Significant Impact with Mitigation Incorporated: No native vegetation communities or habitats for special-status species exist on or adjacent to the site based on analysis of the County's geographic information system (GIS) records, County's Comprehensive Matrix of Sensitive Species, site photos, site visit by ECORP biologist Caroline Garcia on January 6, 2017, and the Biological Resources Letter Report dated October 2020, prepared by ECORP (Appendix B).

One special-status wildlife species was observed, western bluebird, and there is potential for five other special-status wildlife species to occur within the development area. As such, the proposed project would implement mitigation measure **BIO-1** to reduce potential impacts to the western bluebird to a less than significant level.

Additionally, two bat species designated as SSC have a high potential to occur within the development area. The palm trees in the development area may support roosting habitats for one or more of these bat species, so direct impacts to bat species roosting within the palm trees are potentially significant. Therefore, the proposed project would implement mitigation measure **BIO-2** to reduce potential impacts to bat species to a less than significant level.

With the implementation of mitigation measures **BIO-1** and **BIO-2**, the project would result in less than significant impacts to candidate, sensitive, or special-status species.

Mitigation Measures

BIO-1: **Compliance with Migratory Bird Treaty Act.** If construction occurs within the nesting season (January 16th through August 31st), surveys for migratory bird and raptor nests shall be conducted. These surveys shall be performed by a qualified biologist within 72 hours prior to the commencement of construction activities or if construction activities are ongoing, within 72 hours prior to January 16th. Surveys shall include the construction area plus a 500-foot buffer. Survey findings shall be documented prior to initiating any construction activities. If active nests are found during nesting bird survey, appropriately sized no-work buffers (generally 50 to 300 feet, depending on species sensitivity) shall be established around the active nests identified within and adjacent to the project site. The qualified biologist shall determine the appropriate buffer size and level of nest monitoring necessary for species not listed under the federal or California ESAs based on the species' life history, the species' sensitivity to disturbances (e.g., noise, vibration, human activity), individual behavior, status of nest, location of nest and site conditions, presence of screening vegetation, anticipated project activities, ambient noise levels compared to project-related noise levels, existing non-project-related disturbances in vicinity, and ambient levels of human activity.

Buffers shall be marked (flagged or fenced with environmentally sensitive area fencing) around any active nests and periodic monitoring by the qualified biologist will occur to ensure the project does not result in the failure of the nest. The buffer(s) will be maintained around each nest until the nest becomes inactive as determined by the qualified biologist. At the discretion of the qualified biologist, if a nesting bird appears to be stressed as a result of project activities and the buffer does not appear to provide adequate protection, additional minimization measures may need to be implemented.

Construction may continue outside of the no-work buffers. The qualified biologist shaill ensure that restricted activities occur outside of the delineated buffers, check nesting birds for any potential indications of stress, and ensure that installed fencing or flagging is properly maintained during nest monitoring and any additional site visits. Buffer sizes may be adjusted (either increased or reduced), or the extent of nest monitoring may be adjusted, at the discretion of the qualified biologist based on the conditions of the surrounding area and/or the behavior of the nesting bird.

Any changes to buffer sizes and/or nest monitoring frequency will be documented.

If listed species are found to be nesting in the survey area, construction activity should not occur without coordination with regulating agencies and may require an agency-approved bird management plan.

BIO-2: **Compliance with Section 4150 of California Fish and Game Code.** The palm trees within the development area could support roosting bat species (including sensitive species) and may provide maternity roosts. Palm tree removal should occur between October 1st and February 28th if possible, to avoid the bat maternity season and direct mortality of non-volant young. If palm trees must be removed from March 1st through September 31st, a qualified bat biologist shall conduct bat surveys which include an appropriate combination of sampling, exit counts, and acoustic surveys to determine if bats are using these resources in the development area. If bat surveys are negative, palm trees should be removed the next day. If bat surveys are positive, palm tree removal shall be postponed until October 1st. If palm trees are removed October 1st through February 28th, then no survey by a qualified bat biologist is necessary.

Because bat roosting within palm trees occurs throughout the year, palm-tree removal at any time of year shall occur using a two-step process conducted over two consecutive days in order to minimize direct injury or mortality to any roosting bats. This process shall be monitored by a qualified biologist. Permittee shall only trim the outermost fronds of each individual tree on the first day; innermost fronds shall not be trimmed. No more than 50% of the palm fronds shall be removed from each tree during day 1. On the second day the remaining fronds shall be removed. All fronds must be removed/trimmed using chainsaws. No use of bulldozers, backhoes, cranes, or other heavy equipment shall be permitted. If bats emerge during the tree trimming, trimming activities shall cease at the individual tree for the remainder of the day to allow for any additional bats roosting in the tree to emerge during evening hours when it is safe and appropriate for them to do so. Trimming of the tree may resume the following morning.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☐ Less than Significant Impact
- ☒ No Impact

Discussion/Explanation:

The project site is identified as Urban/Developed, which is not considered a vegetation classification, but rather a land cover type; refer to Figure 2, Biological Resources Assessment Results, of Appendix B. This land cover is characterized by structures, pavement, and landscaped areas that usually require irrigation; native vegetation is no longer supported. This land cover dominated the entirety of the survey area and included the concrete lot comprising the center of the development area, the landscaped vegetation of adjacent properties, the Spring Valley Academy baseball and soccer fields, residential homes and roads, and structures and areas completely devoid of vegetation with compacted soils.

No Impact: Within the development area, vegetation consists of a mix of landscaped groundcovers, non-native herbs, and ornamental and landscaped trees. No riparian habitat or other sensitive natural community has been identified within or adjacent to the project area. Therefore, the project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. No impacts would occur.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

There is an historical natural channel that flows north and south of the survey area that is classified as an intermittent stream by the USFWS National Wetlands Inventory (refer to Appendix B). Before entering the survey area, water from this channel is directed to a concrete culvert north of the development area (outside the survey area) at Rogers Road and continues underground as a 48-inch storm drainpipe. Another storm drain inlet exists north of the Spring Valley Academy baseball field and exits at a concrete outlet within the development area. From the outlet, water flows through a riprap-lined stormwater drainage to the next inlet, which travels under Campo Road. Water was not actively flowing during the field survey, but stagnant water was present near the mouth of the concrete outlet. Because this drainage is part of an historical drainage feature, it is presumed to be jurisdictional to the US Army Corps of Engineers, California Department of Fish and Wildlife, and State Water Resources Control Board.

There is also a concrete v-ditch that runs east-west along the southern perimeter of the development area that contributes to the aforementioned stormwater drainage. This feature also could be potentially jurisdictional.

Less than Significant Impacts with Mitigation Incorporated: Any direct impacts to the mapped drainage feature within the development area would be considered significant under CEQA, because the drainage would be classified as federal, state, or local jurisdictional waters. If the proposed project cannot avoid this feature, regulatory permitting for the impacts would be needed as well as a compensatory mitigation plan prior to impacts.

The proposed project may also result in indirect impacts to the jurisdictional feature if pollutants from the proposed project enter the drainage during construction activities. As such, the proposed project would implement mitigation measure **BIO-3** to reduce indirect impacts to jurisdictional features to a less than significant level.

Mitigation Measure

BIO-3: **Standard Best Management Practices (BMPs).** The project shall comply with standards outlined in the County of San Diego Watershed Protection, Stormwater Management and Discharge Control Ordinance (WPO). Limits of work shall be designated and clearly demarcated, and specifications should provide a stringent level of BMPs to control dust, runoff, and spills and prevent indirect effects to the adjacent habitats. To reduce potential impacts related to erosion, BMPs including slope stabilization and control of runoff shall be implemented during construction. To prevent potential impacts related to waters, straw wattles and other Stormwater Pollution Prevention Plan (SWPPP) measures shall be implemented during construction.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response IV (a), above. The project site has been completely disturbed and contains no native vegetation or habitats based on analysis of the County's GIS records, County's Comprehensive Matrix of Sensitive Species, site photos, and site visit. Therefore, the project would not interfere with the movement of any native resident or migratory fish or wildlife species, or established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response IV (a), above. The project site has been completely disturbed and contains no native vegetation or habitats based on analysis of the County's GIS records, County's Comprehensive Matrix of Sensitive Species, site photos, and site visit.

Due to the disturbed nature of the site, the proposed project would not involve the removal of mature trees or other sensitive vegetation types. The project site contains ornamental landscape trees and shrubs that are not protected under local policies or ordinances. All plants and trees would be selected for their appropriateness to the architectural design, local climate tolerance, soil conditions, and level of maintenance intensity. No non-native invasive plant species shall be used. All trees and plant species would be consistent with County landscape guidelines. Therefore, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, other approved local, regional or state habitat conservation plan?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response IV (a), above. The project site is located in an urbanized area where surrounding lands are largely built out. The project site is not located within an adopted habitat conservation plan, natural communities conservation plan, or other approved local, regional, or state habitat conservation plan. The proposed project would implement mitigation measures **BIO-1** and **BIO-2** to reduce potential impacts to sensitive species to a less than significant level. Therefore, development of the site as proposed would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. No impacts would occur.

V. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Cultural resources include places, objects, and settlements that reflect group or individual religious, archaeological, architectural, or paleontological activities. Such resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. By statute, CEQA is primarily concerned with two classes of cultural resources: "historical resources," which are defined in PRC Section 21084.1 and CEQA Guidelines Section 15064.5; and "unique archaeological resources," which are defined in PRC Section 21083.2. This section addresses the proposed project's potential impacts in relation to historical and archaeological resources. Project impacts to tribal cultural resources are evaluated under Section XVII, Tribal Cultural Resources.

A cultural resources investigation was conducted for the proposed project by ECORP Consulting, Inc. (2020c; Appendix C). The cultural resources investigation included a California Historical Resources Information System (CHRIS) records search, a search of the Sacred Lands File by the Native American Heritage Commission (NAHC), two field surveys, and an evaluation of two historic-period resources to the California Register of Historical Resources (California Register) and San Diego County Local Register of Historical Resources (County Local Register).

Less Than Significant: According to the cultural resources investigation, CHRIS records search results indicated that no historic-period resources have been previously recorded within the project area. Based on the review of historical aerial photographs, maps, records search results, and literature, the archaeological sensitivity for the project area is considered moderate.

During the field surveys, two historic-period cultural resources were identified within the project area: P-37-039110 (CDO-01), a commercial building located at 9610 Campo Road; and P-37-039111 (CDO-02), a segment of Campo Road. Neither historic-period resource was previously identified in a qualified historic resource survey and neither are currently listed in the County Local Register. Based on archival research and evaluations, it was determined that the two sites are not eligible for inclusion in the California Register or the County Local Register. Additionally, the resources do not meet the definition as a "Significant Prehistoric or Historical Resource" as defined by the San Diego County Resource Protection Ordinance. Therefore, since the two historic-period resources are not considered historical resources under CEQA, impacts to historical resources would be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?

☐ Potentially Significant Impact
☐ Less than Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ No Impact

Discussion/Explanation:

Less Than Significant with Mitigation Incorporated: According to the cultural resources investigation, CHRIS records search results indicated that no archaeological resources have been previously recorded within the project area. Based on the review of historical aerial photographs, maps, records search results, and literature, the archaeological sensitivity for the project area is considered moderate.

Although no archaeological resources were found during the field surveys, a potentially significant impact to unknown archaeological resources may occur from subsurface construction disturbances (i.e., trenching, excavation, grading) associated with the proposed project. To ensure proper protection of any unknown resources, should they be encountered during project-related ground disturbance activities, archaeological and Native American monitoring is required (**CR-1** and **CR-2**). Impacts would be less than significant with mitigation incorporated.

Mitigation Measures

CR-1 **Archaeological Grading Monitoring and Data Recovery Program.** An Archaeological Grading Monitoring and Data Recovery Program shall be conducted to provide for the identification, evaluation, treatment, and protection of any cultural resources that are affected by or may be discovered during the construction of the proposed project. The monitoring shall consist of the full-time presence of a qualified archaeologist and a traditionally and culturally affiliated (TCA) Native American monitor (Kumeyaay Cultural Monitor) shall be retained to monitor all initial ground-disturbing activities associated with project construction, including vegetation removal, clearing, grading, trenching, excavation, or other activities that may disturb original (pre-project) ground, including the placement of imported fill materials and/or related access improvements (i.e., for access along Campo Road).

- The requirement for cultural resource mitigation monitoring shall be noted on all applicable construction documents, including demolition plans, grading plans, etc.
- The qualified archaeologist and TCA Native American monitor shall attend all applicable pre-construction meetings with the contractor and/or associated subcontractors.
- The qualified archaeologist shall maintain ongoing collaborative consultation with the TCA Native American monitor during all ground disturbing or altering activities, as identified above.
- The qualified archaeologist and/or TCA Native American monitor may halt ground disturbing activities if archaeological artifact deposits or cultural features are discovered. In general, ground disturbing activities shall be directed away from these deposits for a short time to allow a determination of potential significance, the subject of which shall be determined by the qualified archaeologist and the TCA Native American monitor. Ground disturbing activities shall not resume until the qualified archaeologist, in consultation with the TCA Native American monitor, deems the cultural resource or feature has been appropriately documented and/or protected. At the qualified archaeologist's discretion, the location of ground

disturbing activities may be relocated elsewhere on the project site to avoid further disturbance of cultural resources.

- The avoidance and protection of discovered unknown and significant cultural resources and/or unique archaeological resources is the preferable mitigation for the project. If avoidance is not feasible a Data Recovery Plan may be authorized by the County as the lead agency under CEQA. If a data recovery is required, then the appropriate tribe shall be notified and consulted in drafting and finalizing any such recovery plan.
- The qualified archaeologist and/or TCA Native American monitor may also halt ground disturbing activities around known archaeological artifact deposits or cultural features if, in their respective opinions, there is the possibility that they could be damaged or destroyed.
- The landowner shall relinquish ownership of all tribal cultural resources collected during the cultural resource mitigation monitoring conducted during all ground disturbing activities, and from any previous archaeological studies or excavations on the project site to the appropriate tribe for respectful and dignified treatment and disposition, including reburial, in accordance with the tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the most likely descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98.

CR-2 **Prepare Monitoring Report and/or Evaluation Report.** Prior to the release of the grading bond, a Monitoring Report and/or Evaluation Report, which describes the results, analysis and conclusions of the cultural resource mitigation monitoring efforts (such as, but not limited to, the Research Design and Data Recovery Program), shall be submitted by the qualified archaeologist, along with the TCA Native American monitor's notes and comments, to the County Department of Planning and Development Services Director for approval.

c) Disturb any human remains, including those interred outside of formal cemeteries?

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant with Mitigation Incorporated: No known cemeteries are located on-site and no such resources were identified during the records searches, consultation efforts, or field survey. While not anticipated, there is possibility, however small, that unknown remains may be discovered during earthwork. Treatment of this type of inadvertent discovery is governed by existing laws. If human remains are encountered during project activities, the contractor would comply with the requirements of California Health and Safety Code Section 7050.5. There would be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the county coroner has determined the manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative.

If the human remains are Native American, determined to not be from the modern era or related to a crime, the coroner is required to notify the NAHC within 24 hours of this determination. The NAHC would then identify a Native American most likely descendant to inspect the site and provide

recommendations for the proper treatment of the remains and associated grave goods within 48 hours of being allowed access to the site.

Mitigation measure **CR-3** would be implemented to ensure that project ground disturbing activities do not adversely affect human remains, if encountered. Impacts on undiscovered human remains would be reduced to less than significant with mitigation incorporated.

Mitigation Measure

CR-3: As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Coroner's office by telephone. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie adjacent remains [as determined by the qualified archaeologist and/or the traditionally and culturally affiliated (TCA) Native American monitor] shall occur until the coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected (as determined by the qualified archaeologist and/or the TCA Native American monitor), and consultation and treatment could occur as prescribed by law. As further defined by state law, the coroner would determine within two working days of being notified if the remains are subject to his or her authority. If the coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would make a determination as to the most likely descendent. If Native American remains are discovered, the remains shall be kept in situ ("in place"), or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of the TCA Native American monitor.

VI. ENERGY

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

☐ Potentially Significant Impact
☒ Less than Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ No Impact

Discussion/Explanation:

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: (1) electricity (including energy required for water delivery, sanitary sewer, and solid waste disposal), (2) natural gas, and (3) transportation fuel for vehicle trips associated with new development, as well as the fuel necessary for project construction.

Less than Significant Impact:

Construction Phase (Short-Term) Energy Use

During construction, the proposed project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels to power construction vehicles and other energy-consuming equipment would be used during site demolition, clearing, grading, and construction. Fuel energy consumed during these activities would be temporary in nature and would not represent a significant demand on energy resources. Project construction equipment would be required to comply with the latest USEPA and CARB engine emissions standards. These standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption.

Additionally, construction building materials would include recycled materials and products originating from nearby sources to reduce the costs of transportation. With increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid the wasteful, inefficient, and unnecessary consumption of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive and that there is a significant cost-savings potential in green building practices and materials.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ reasonable energy conservation practices in the interest of minimizing the cost of doing business.

As such, project construction would not represent a substantial increase in demand for local or regional energy supplies. Construction fuel use would be temporary and would cease upon completion of project construction. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or state. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Operational Phase (Long-Term) Energy Use

As noted above, the library building would achieve a minimum Leadership in Energy and Environmental Design (LEED) Gold certification, while also reaching a higher level of sustainability with a zero-net energy certification through the International Living Futures Institute's Zero Energy certification program. Zero net energy means that the project would incorporate energy saving features to offset 100 percent of the building's annual energy use. Energy efficiency performance will surpass the California Energy Code 2019 update (CCR, Title 24, Part 6) by 15 percent. Additionally, the facility would be subject to County of San Diego's Zero Net Waste Guidelines, which address solid waste disposal and recycling.

Anticipated energy-savings features may include low-flow fixtures; energy-efficient LED indoor and outdoor lighting; on-site recycling containers; energy-efficient water heaters; water efficient/drought tolerant landscaping, use of reclaimed water, and limited use of conventional turf; high-efficiency HVAC systems; and/or other features. Additionally, the installation of solar PV panels is proposed with the project. As stated above, it is anticipated that several EV charging stations would be provided on-site to further offset project-related vehicle trip emissions. Therefore, the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during operation. Impacts would be less than significant.

Conclusion

The proposed project does not involve any unusual characteristics that would result in excessive long-term operational demand for electricity or natural gas. For the reasons described above, the proposed project would not place a substantial new demand on regional energy supply or require significant additional capacity. Therefore, the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Impacts would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Refer to Response VI (a), above. The proposed project would follow applicable energy standards and regulations during the construction and operation phases. As stated above, the project would include the following energy saving features: low-flow fixtures; energy-efficient LED indoor and outdoor lighting; on-site recycling containers; energy-efficient water heaters; water efficient/drought tolerant landscaping, use of reclaimed water, and limited use of conventional turf; high-efficiency HVAC systems; and/or other features. Additionally, the installation of solar PV panels and EV charging stations is anticipated for the project.

The proposed project would be built and operated in accordance with all existing, applicable regulations at the time of construction. For the reasons stated, the proposed project would not obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant.

VII. GEOLOGY AND SOILS

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☐ Less than Significant Impact
- ☒ No Impact

Discussion/Explanation:

No Impact: According to the Preliminary Geotechnical Investigation conducted by Construction Testing & Engineering Inc. (2020; refer to Appendix D-1), the project is not located in a fault rupture hazard zone identified by the Alquist-Priolo Earthquake Fault Zoning Act, Special Publication 42, Revised 1997, Fault-Rupture Hazards Zones in California, or located within any other area with substantial evidence of a known fault). Therefore, there would be no impact from the exposure of people or structures to adverse effects from a known fault-rupture hazard zone as a result of this project.

ii) Strong seismic ground shaking?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Similar to all of Southern California, the project site is susceptible to seismic ground shaking. To ensure the structural integrity of all buildings and structures, the project is required to conform to the Seismic Requirements as outlined in the California Building Code (CBC). The County Code requires a soils compaction report with proposed foundation recommendations to be approved before the issuance of a building permit. Therefore, compliance with the CBC and County Code ensures the project would not result in a potentially significant impact from the exposure of people or structures to potential adverse effects from strong seismic ground shaking. Impacts would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior. Loose granular soils are most susceptible to these effects, with liquefaction generally restricted to saturated or near-saturated soils at depths of less than 50 feet. Liquefaction normally occurs in soils such as sand in which the strength is purely friction. However, liquefaction has occurred in soils other than clean sand. Liquefaction occurs under vibratory conditions such as those induced by a seismic event.

Less Than Significant Impact: According to findings in the Preliminary Geotechnical Investigation, the potential for liquefaction on-site is considered low due to the depth and distribution of the potential liquefiable layers. Liquefaction analysis was based on a conservative high groundwater depth of 5 feet below ground surface (bgs) instead of the 8-9 feet bgs encountered during field explorations.

Project design and construction would incorporate standard design measures to address potential seismic-related liquefaction and related effects such as settlement and lateral spreading, including similar types of measures from the CBC. However, the proposed project would also be required to prepare a comprehensive design-level geotechnical evaluation prior to final design and construction. Completion of this evaluation and adherence to the current CBC and local codes regulating construction would ensure that the proposed project is designed to withstand seismic-related ground failure, including liquefaction. With a site-specific engineering design, impacts due to liquefaction would be less than significant.

iv. Landslides?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Non-seismically induced landslides can be caused by water from rainfall, septic systems, landscaping, or other origins that infiltrate slopes with unstable material.

Less Than Significant Impact: According to findings in the Preliminary Geotechnical Investigation, the site is designated as marginally susceptible to landslides within the County's Multi-Jurisdictional

Hazard Mitigation Plan (County of San Diego 2017b). However, the topography of the project site and surrounding vicinity is relatively flat. The project site does not include slopes greater than 25 percent. Furthermore, signs of landslides were not observed during the field exploration. Therefore, the project would have a less than significant impact from the exposure of people or structures to potential adverse effects from landslides.

b) Result in substantial soil erosion or the loss of topsoil?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: The site is within the Visalia sandy loam soil series map unit. This series is characterized as being well-drained and having low runoff (ECORP 2020b; Appendix B). During construction of the proposed project, grading and excavation activities would expose and disturb surface soils. Soil exposed by construction activities could be subject to erosion if exposed to heavy rain, winds, or other storm events. However, the proposed project would require a National Pollution Discharge Elimination System (NPDES) Construction General Permit, as the project would disturb at least one acre of soil. A project-specific Storm Water Pollution Prevention Plan (SWPPP) would be prepared to identify erosion control and sediment control best management practices (BMPs) that would be implemented to minimize the occurrence of soil erosion or loss of topsoil. In addition, the project is required to comply with the San Diego County Code of Regulations, Title 8, Zoning and Land Use Regulations, Division 7, Sections 87.414 (DRAINAGE - EROSION PREVENTION) and 87.417 (PLANTING). Compliance with these regulations minimizes the potential for water and wind erosion. Once construction is completed, disturbed areas would be paved and/or landscaped. No stockpiles or open soil would remain at the project site. Due to these factors, it is not anticipated that the project would result in substantial soil erosion or the loss of topsoil. Impacts would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Liquefaction and dynamic settlement of soils can be caused by strong vibratory motion due to earthquakes. Both research and historical data indicate that loose, saturated, granular soils are susceptible to liquefaction and dynamic settlement. Liquefaction is typified by a loss of shear strength in the affected soil layer, thereby causing the soil to behave as a viscous liquid. This effect may be manifested by excessive settlements and sand boils at the ground surface.

Less Than Significant Impact: Refer to Response VII (a)iii, above. The potential for liquefaction on-site is considered low due to the depth and distribution of the potential liquefiable layers.

The proposed project involves grading that would result in the creation of areas of cut and areas underlain by fill. To ensure that the proposed building is adequately supported (whether on native soils, cut or fill), a soils engineering report is required as part of the building permit process. This report would evaluate the strength of underlying soils and make recommendations on the design of building foundation systems. The report must also demonstrate that a proposed building meets the structural stability standards required by the CBC. The report must be approved by PDS prior to the issuance of a building permit. With this standard requirement, impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Expansive soils contain significant amounts of clay particles that swell considerably when wetted and shrink when dried.

Less Than Significant Impact: According to the Preliminary Geotechnical Investigation, the loose alluvial deposits found on-site may be potentially compressible in their current condition.

Based on laboratory analysis, geologic observation, and the generally granular nature of site soils, the near-surface materials are generally anticipated to exhibit a low expansion potential (Expansion Index of 50 or less). However, clayey soils are present in the site area and verification of expansion potential should be performed during site excavations and grading.

Refer to Response VII (c), above. A soils engineering report would be prepared as part of the building permit process which would evaluate the strength of underlying soils and make recommendations on the design of building foundation systems. The report would be approved by PDS prior to the issuance of a building permit. Therefore, the soils on-site would not create substantial risks to life or property and impacts would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: The project would rely on public water and sewer for the disposal of wastewater. No septic tanks or alternative wastewater disposal systems are proposed. Therefore, no impact would occur regarding septic tanks or alternative wastewater disposal systems.

f) Directly or indirectly destroy a unique paleontological resource or site?

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

A paleontological resources technical report was prepared for the proposed project by the San Diego Natural History Museum's PaleoServices (2020; refer to Appendix D-2). Published geologic mapping for the project site indicates the site is underlain at the surface by Holocene-age (less than approximately 11,700 years old) young alluvium, which typically transitions downward in the subsurface into older, Pleistocene-age alluvium. The preliminary site-specific geotechnical investigation report prepared for the project (see Appendix D-1) indicates that these deposits are present to depths of 21 to 26 feet bgs, where they are underlain by strata of the middle Eocene-age Mission Valley Formation. Undocumented artificial fill measuring up to 3 feet thick is also locally present overlying the Holocene alluvium.

Less than Significant Impact With Mitigation Incorporated: According to the County of San Diego paleontological sensitivity guidelines (County of San Diego 2009), the sedimentary deposits that are present on the project site are assigned a low paleontological sensitivity at depths of less than 10 feet bgs (where they are assumed to be Holocene in age); a moderate paleontological sensitivity at depths greater than 10 feet bgs (where the strata may have been deposited during the Pleistocene); and a high paleontological sensitivity at depths greater than 21 feet bgs (where strata of the Mission Valley Formation are present). As such, earthwork that would extend greater than 10 feet bgs has the potential to impact paleontological resources.

The results of the paleontological records search and literature review indicate that fossils have not been documented from Holocene-age or Pleistocene-age sedimentary deposits within a 5-mile radius of the project site. However, fossils are known from Pleistocene-age sedimentary deposits at numerous locations in coastal San Diego County (refer to Appendix D-2).

It is anticipated that project earthwork would extend to depths of only 5 feet bgs, which is within the low paleontological sensitivity zone. Therefore, construction of the project is not anticipated to result in impacts to paleontological resources and implementation of a paleontological mitigation program is not recommended.

Nonetheless, in the unlikely event that fossils are unearthed during construction, the County and a qualified paleontologist shall be notified to evaluate the discovery and provide recommendations on mitigation measures as needed. Therefore, impacts would be less than significant with mitigation incorporated.

Mitigation Measures

PAL-1 Upon discovery of an unearthed fossil, earthwork in the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered, and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.

PAL-2 Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository along with associated field notes, photographs, and compiled fossil locality data. For projects in San Diego County, the recommended designated repository is the San Diego Natural History Museum. Donation of the fossils should be accompanied by financial support for specimen storage. A final summary report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Greenhouse gas (GHG) emissions are said to contribute to an increase in the earth's average surface temperature, a process commonly referred to as global warming. This rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the earth's climate system, known as climate change. These changes are now broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels.

GHGs include carbon dioxide, methane, halocarbons, and nitrous oxide, among others. GHG emissions are a result of energy production and consumption, and personal vehicle use, among other sources.

The County of San Diego does not currently have a legally adopted plan for the purpose of reducing GHG emissions.

The Casa de Oro Branch Library - Emissions Memorandum prepared by ECORP Consulting, Inc. (2020a; Appendix A) analyzed the project's potential GHG impacts. The findings of the report are incorporated below.

Less Than Significant Impact:

Construction Emissions

A key source of GHG emissions associated with the project would be the combustion of fossil fuels during construction activities. The construction phase of the project would be temporary but would result in GHG emissions from the use of heavy construction equipment and construction-related vehicle trips.

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table VIII-1 illustrates the specific GHG emissions that would result from construction of the project.

Table VIII-1. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Construction in the Year 2021	407
Construction in the Year 2022	65
CAPCOA's Potentially Significant Impact Threshold	*900*
Exceed Significance Threshold?	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment B of Appendix A for Model Data Outputs.

As shown in Table VIII-1, project construction would not result in the exceedance of 900 metric tons of carbon dioxide equivalent (CO_2e) during any year of construction. Once construction is complete, the generation of these GHG emissions would cease.

Operational Emissions

Area and indirect sources of emissions associated with the operation of the proposed library would primarily result from electricity and natural gas consumption, water transport (the energy used to pump water to and from the project site), and solid waste generation. In addition, the proposed library would generate mobile source emissions from motor vehicle trips generated by library patrons and employees.

Operation of the project would result in GHG emissions predominantly associated with the use of motor vehicles traveling to and from the site. Operational GHG emissions were based on the project site plans and estimated traffic trip generation rates (Traffic Impact Study; see Appendix H). Long-term operational emissions attributable to the project are identified in Table VIII-2 and compared to the existing baseline, which includes a high-turnover restaurant operating out of a 2,310 SF building.

Table VIII-2. Operational-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Proposed Project – 13,000 SF Library	
Area Source Emissions	0
Energy Source Emissions	43
Mobile Source Emissions	649
Solid Waste Emissions	6
Water Emissions	5
Total Emissions	**703**
Baseline – 2,310 High Turnover Restaurant	
Area Source Emissions	0
Energy Source Emissions	54
Mobile Source Emissions	215
Solid Waste Emissions	14
Water Emissions	4
Total Emissions	**287**
Difference	
Area Source Emissions	0
Energy Source Emissions	-11
Mobile Source Emissions	+434
Solid Waste Emissions	-8
Water Emissions	+1
Total Emissions	**+416**
CAPCOA's Potentially Significant Impact Threshold	*900*
Exceed Significance Threshold?	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment B of Appendix A for Model Data Outputs.

As shown in Table VIII-2, project operations would result in an increase of approximately 416 metric tons of CO_2e annually compared with existing conditions and would not exceed CAPCOA's significance threshold of 900 metric tons annually. Therefore, the increase in GHG emissions resulting from project implementation would be less than significant.

The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

As noted above, the County of San Diego does not currently have a legally adopted plan for the purpose of reducing GHG emissions.

The State of California promulgates several mandates and goals to reduce statewide GHG emissions, including the goal to reduce statewide GHG emissions to 40 percent below 1990 levels by the year 2030 (SB 32); refer to Appendix A for a detailed discussion. As shown in Response VIII (a), project-generated GHG emissions would not exceed GHG significance thresholds, which were prepared with the purpose of complying with statewide GHG emission reduction goals. Furthermore, it may be noted the existing Casa de Oro branch library would be replaced by the proposed new library. Thus, the majority of project traffic trips, a predominant source of GHG emissions, would actually not be new. It is additionally noted that the project aims to achieve "zero net energy" consistent with Statewide GHG reduction goals.

Less Than Significant Impact:

The County's General Plan Conservation and Open Space Element (County of San Diego 2011) includes smart growth and land use planning principles designed to result in a reduction in GHG emissions. Table 8, County Greenhouse Gas-Related General Plan Table, of Appendix A provides a detailed discussion of project consistency with applicable General Plan strategies, goals, and policies. Implementing the County of San Diego General Plan Conservation and Open Space Element would reduce the regional GHG emissions. As shown in Table 8 of Appendix A, the proposed project would not conflict with the stated goals of the Conservation and Open Space Element.

Therefore, the project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Impacts would be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Under CCR Title 22, the term hazardous substance refers to both hazardous materials and hazardous wastes, and both are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity (22 CCR Section 66261.30). A hazardous material is defined as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed.

Public health is potentially at risk whenever hazardous materials are or will be used. It is necessary to differentiate between the hazard of these materials and the acceptability of the risk they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure and the inherent toxicity of a material.

Factors that can influence health effects when human beings are exposed to hazardous materials include the dose to which the person is exposed, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (22 CCR Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria. Various agencies maintain hazardous waste and substance lists in planning documents used by state and local agencies to comply with CEQA requirements to provide information about the location of hazardous materials sites. While hazardous substances are regulated by multiple agencies, the cleanup requirements for hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over a project.

Existing Conditions

The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The area surrounding the project site is highly developed with a variety of land uses including commercial, general office, and multi-family and (limited) single-family residential uses.

Adjacent to the north and west of the site is the Spring Valley Academy, a middle school serving grades 5 to 8, which is overseen by the La Mesa-Spring Valley School District. To the east is the La Mesa-Spring Valley School District maintenance yard. Sports fields owned and maintained by the school abut the project site to the north and west. A small-scale restaurant fronting directly onto Campo Road is located in the southern portion of the proposed site; refer to Figure 2, Local Vicinity Map/Project Site. This restaurant would be demolished to provide access to the subject property. Commercial uses are located directly to the south, along with single-family and multi-family uses to the south/southwest of the site. Single-family rural residential uses are present in the distance along the hillsides to the north and south. The Campo Road commercial corridor trends east–west through the community and forms the southern boundary of the proposed site.

The land where the library would be constructed is currently disturbed and/or developed. The majority of the property is currently surfaced with asphaltic pavement. The site would also include a portion of an existing sports field associated with the school and the removal of a modular office structure located on the school site; refer to Figure 2, Local Vicinity Map/Project Site.

The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet amsl in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

An existing culvert in the southwestern portion of the site presently accommodates stormwater flows from the north/northeast that sheet flow across the subject property. A 48-inch storm drain collects runoff from north of the site and outlets into this culvert. Under current conditions, well-established vegetation abuts the culvert and generally obscures it from view. Runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the restaurant parcel currently sheet flows to Campo Road.

Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) is a report that identifies existing and potential environmental contamination liabilities. The analysis in a Phase I ESA typically addresses both the underlying land and physical improvements to the property and includes examination of potential soil contamination, groundwater quality, surface water quality, and indoor air quality. The examination of a site may include a survey of past uses of the property, definition of any chemical residues in structures, identification of possible asbestos-containing building materials and lead paints, inventory of hazardous substances stored or used on the site, assessment of mold and mildew, and evaluation of other indoor air quality parameters. A Phase I ESA is generally considered the first step in the process of environmental due diligence and does not include sampling of soil, air, groundwater, or building materials.

The objective of a Phase I ESA is to evaluate whether recognized environmental conditions (RECs) are present at a property. RECs are defined in ASTM International E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." According to the ASTM Phase I ESA standard, the term recognized environmental condition is not intended to include de minimis conditions (minor things) that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government authorities.

If the Phase I ESA determines that a site may be contaminated, a Phase II ESA may be conducted. A Phase II ESA is a more intensive and detailed investigation involving chemical analysis for hazardous substances and/or petroleum hydrocarbons and may include recommendations for remediation, if necessary.

A Phase I ESA was conducted for the proposed project by Michael Baker International In October 2020 (Appendix E). The Phase I ESA consisted of (1) a reconnaissance of the subject property; (2) a search of regulatory agency records; (3) review of available historical aerial photographs, topographic maps, Sanborn fire insurance maps, and City Directory listings; (4) interviews of property owners; and (5) preparation of the Phase I ESA report detailing the findings of the investigation.

Less Than Significant Impact: The routine transport, use, and disposal of hazardous materials can result in potential hazards to the public through accidental release. Such hazards are typically associated with certain types of land uses, such as chemical manufacturing facilities, industrial processes, waste disposal, and storage and distribution facilities.

Construction of the proposed project may result in temporary hazards related to the transport and use of hazardous materials, including those used for construction vehicle use and maintenance (diesel fuel, motor oil, etc.). During construction activities, hazardous materials could accidentally be spilled or otherwise released into the environment. However, the project would not result in a significant hazard to the public or environment because all storage, handling, transport, emission and disposal of hazardous substances would be in full compliance with local, state, and federal regulations. California Government Code Section 65850.2 requires that no final certificate of occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the Health and Safety Code, Division 20, Chapter 6.95, Article 2, Section 25500-25520. The SWPPP prepared for the proposed project will include standard provisions to avoid significant effects associated with the use of such materials; refer to Section IX, Hydrology and Water Quality.

According to the Phase I ESA, no indicators of potential hazardous materials were noted in relation to the on-site structures and no evidence of other development was noted. No visible or physical

evidence was observed during the field survey that would suggest that a surface release of petroleum-based material occurred. No known corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed at this current on-site property. This commercial property has not been under investigation for violation on any environmental laws, regulations, or standards, as identified in the databases reported by Environmental Data Resources (EDR).

However, since the on-site commercial building was constructed prior to 1966, there is a potential for lead-based paint (LBP) and asbestos-containing materials (ACMs) to be found on-site in association with the on-site commercial structure. As such, the proposed project must comply with federal and state regulations that govern the renovation and demolition of structures where ACMs and LBPs are present. Therefore, with adherence to local, state and federal regulations pertaining to hazardous materials, the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The San Diego County Department of Environmental Health Hazardous Materials Division (DEH HMD) is the Certified Unified Program Agency (CUPA) for San Diego County responsible for enforcing Chapter 6.95 of the Health and Safety Code. As the CUPA, the DEH HMD is required to regulate hazardous materials business plans and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk management plans. A hazardous materials business plan would be required for the project and would contain basic information on the location, type, quantity and health risks of hazardous materials stored, used, or disposed of on-site. The plan also contains an emergency response plan, which describes the procedures for mitigating a hazardous release, procedures and equipment for minimizing the potential damage of a hazardous materials release, and provisions for immediate notification of the HMD, Office of Emergency Services, and other emergency response personnel such as the local fire agency having jurisdiction. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release, thereby reducing potential adverse impacts. Furthermore, the DEH HMD is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release of hazardous substances.

Once operational, the proposed project would not result in the routine transport, use, or disposal of hazardous materials due to the nature of the uses proposed. Project operations would not generate hazardous waste.

Therefore, due to the strict requirements that regulate hazardous substances outlined above and because the initial planning, ongoing monitoring, and inspections would occur in compliance with local, state, and federal regulation, the project would not result in any potentially significant impacts related to the routine transport, use, and disposal of hazardous substances or related to the accidental explosion or release of hazardous substances.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact:

Short-Term Impacts

Project construction activities could result in the transport, use, and disposal of hazardous materials such as gasoline fuels, asphalt, lubricants, paint, and solvents. Although care will be taken to transport, use, and dispose of small quantities of these materials by licensed professionals, there is a possibility that upset or accidental conditions may arise which could release hazardous materials into the environment. Accidental releases of hazardous materials are those releases that are unforeseen or that result from unforeseen circumstances, while reasonably foreseeable upset conditions are those release or exposure events that can be anticipated and planned for.

Project construction activities would occur in accordance with all applicable local standards, as well as state and federal health and safety requirements intended to minimize hazardous materials risk to the public, such as Cal/OSHA requirements, the Hazardous Waste Control Act, the California Accidental Release Protection Program, and the California Health and Safety Code.

Stormwater runoff from the site, under both construction and post-construction development conditions, would be avoided through compliance with NPDES regulations administered by the San Diego Regional Water Quality Control Board (RWQCB). The project is required to prepare and implement a Construction General Storm Water Permit (Order 2012-0006-DWQ) and SWPPP (refer to Section IX, Hydrology and Water Quality). The SWPPP is also required as part of the grading permit submittal package. The contractor would be required to implement such regulations relative to the transport, handling, and disposal of any hazardous materials, including the use of standard construction controls and safety procedures that would avoid or minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local and state laws.

According to the Phase I ESA, no indicators of potential hazardous materials were noted in relation to the on-site structures and no evidence of other development was noted. No visible or physical evidence was observed during the field survey that would suggest that a surface release of petroleum-based material occurred. No known corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed at this current on-site property. This commercial property has not been under investigation for violation on any environmental laws, regulations, or standards, as identified in the databases reported by EDR.

However, since the on-site commercial building was constructed prior to 1966, there is a potential for LBP and ACMs to be found on-site in association with the on-site commercial structure. As such, the proposed project must comply with federal and state regulations that govern the renovation and demolition of structures where ACMs and LBPs are present. Therefore, with adherence to local, state and federal regulations pertaining to hazardous materials, the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant during short-term construction activities.

Long-Term Impacts

The project proposes the construction of a new library, which is not a use that is expected to involve the routine transport, use, or disposal of hazardous materials in substantial quantities. Once the proposed project is operational, hazardous material use associated with landscaping and maintenance would be limited to private use of commercially available cleaning products, landscaping chemicals, and fertilizers. Development of the project site is therefore anticipated to result in limited use of commercially available, potentially hazardous materials or chemicals.

However, the use of these substances is expected to be in relatively small quantities and would be subject to applicable federal, state, and local health and safety laws and regulations intended to minimize health risk to the public associated with hazardous materials.

Adherence to existing regulations would ensure compliance with safety standards related to the use and storage of hazardous materials and with the safety procedures mandated by applicable federal, state, and local laws and regulations. Project conformance with existing local, state, and federal regulations pertaining to the routine transport, use, storage, or disposal of hazardous materials or hazardous wastes would ensure that potential adverse effects are minimized and that such substances are handled appropriately in the event of accidental release. Therefore, operational impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Adjacent to the north and west of the site is the Spring Valley Academy, a middle school serving grades 5 to 8, which is overseen by the La Mesa-Spring Valley School District. To the east is the District maintenance yard. Sports fields owned and maintained by the school abut the project site to the north and west. The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet amsl in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

Refer to Response VIII (b), above. Project construction activities would occur in accordance with all applicable local standards, as well as state and federal health and safety requirements intended to minimize hazardous materials risk to the public. The project proposes the construction of a new library, which is not a use that is expected to involve the routine transport, use, or disposal of hazardous materials in substantial quantities. The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials. Once the proposed project is operational, hazardous material use would be limited to those associated with landscaping and maintenance. Furthermore, due to the topography of the site, which slopes from north to south, potential hazardous spills would flow away from the school.

Due to the strict requirements that regulate hazardous substances outlined above and that the initial planning, ongoing monitoring, and inspections would occur in compliance with local, state, and federal regulation, the project would not result in any potentially significant impacts related to hazardous emissions, materials, substances, or waste within one-quarter mile of an existing school. Impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or is otherwise known to have been subject to a release of hazardous substances and, as a result, would it create a significant hazard to the public or the environment?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ Less than Significant Impact
- ☐ No Impact

Discussion/Explanation:

Less than Significant Impact: As described in Response VIII(a), above, a Phase I ESA was conducted for the proposed project by Michael Baker International in October 2020 (Appendix E).

Based upon evaluation of the documented land use as demonstrated in the resources reviewed as part of the Phase I ESA, the project site appears to have consisted of a rural residential structure since prior to 1901. From 1955 to 1964, all on-site structures were demolished, and the subject site was graded. No indicators of potential hazardous materials were noted in relation to the on-site structures and no evidence of other development was noted. The on-site structures are associated with institutional uses (La Mesa-Spring Valley School District) and commercial uses (Pho & Grill International Restaurant) and are not anticipated to involve the storage/use/handling of hazardous materials or waste.

The Phase I ESA contains a search of governmental sources for sites within the subject site and within an approximate one-mile radius of the subject site boundaries that have been recorded as hazardous sites, pursuant to Government Code Section 65962.5. The lists that were reviewed did not report any regulatory properties within the boundaries of the subject site (refer to Exhibit 4, Overview Map of Appendix E). No known corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed on the subject site. The subject site has not been under investigation for violation of any environmental laws, regulations, or standards, as identified in the databases.

There are four reported sites of concern adjoining the subject site. Refer to Table 3-2, Identified Regulatory Sites of Concern, in Appendix E for further evaluation of the adjoining regulatory property. However, due to the distance and status of the sites, the proposed project would not conflict with or disrupt those sites and those sites do not pose a concern to the proposed project.

The proposed project would disturb greater than one acre and a site-specific SWPPP would be required. The SWPPP would include BMPs to prevent pollutants (including sediment and hazardous materials) from leaving the project site in runoff; refer to Section IX, Hydrology and Water Quality.

As the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, the project would not create a significant hazard to the public or the environment in this regard. Impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

- ☐ Potentially Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☐ Less than Significant Impact
- ☒ No Impact

Discussion/Explanation:

No Impact: The nearest public airport is Gillespie Field Airport, located approximately 5.5 miles to the north of the site. The San Diego International Airport is located approximately 10.9 miles to the southwest of the site. The site is not located within the boundaries of an airport land use plan or within 2 miles of a public airport or public use airport. Implementation of the proposed project would not affect airport operations nor result in a safety hazard or excessive noise for people residing or working in the project area.

Additionally, the project does not propose the construction of any structure equal to or greater than 150 feet in height, thus constituting a potential safety hazard to aircraft and/or operations from an airport or heliport. Therefore, the project would not constitute a safety hazard or excessive noise for people residing or working in the project area.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

☐ Potentially Significant Impact ☒ Less than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Emergency response and evacuation is the responsibility of the San Diego County Fire Department. The County maintains the San Diego County Emergency Operations Plan, which was approved in 2018 (County of San Diego 2018). The Emergency Operations Plan is used by agencies that respond to major emergencies and disasters, including those related to environmental health.

During construction, materials would be placed within the project boundaries adjacent to the current phase of construction to avoid any access conflicts in case of emergency evacuations. Direct access to the project site would be from Campo Drive. It is anticipated that a minimum 24-foot-wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.

Activities associated with the proposed project would not impede the free movement of emergency response vehicles. Existing off-site roadways would be adequate to serve the development for purposes of emergency evacuation in the event of a wildfire. The proposed project would not interfere with the San Diego County Sheriff's Department's ability to safely evacuate the area in the event of an emergency (see Section VIII, Hazards and Hazardous Materials; Section XIV, Public Services and Recreation; and Section XVI, Transportation). Additionally, the proposed project has been designed in compliance with County's Fire Department access and design requirements related to fire prevention and subject to approval by PDS.

Therefore, the proposed project would not substantially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

☐ Potentially Significant Impact ☒ Less than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Refer to Section XIX, Wildfire. The project site is located in a developed urban area surrounded by institutional (school), commercial, and limited multi-family uses. According to CalFire's Hazard Severity Zone Map, the project site is not located in a zone designated as Very High Fire Hazard Severity (CalFire 2020). Similar to existing conditions, the proposed project would be served by the County of San Diego Fire Department. Therefore, the project is not expected to expose people or structures to a significant risk of loss, injury or death involving hazardous wildland fires.

IX. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Stormwater runoff (both dry and wet weather) generally discharges into storm drains and/or flows directly to creeks, rivers, lakes, and the ocean. Polluted runoff can have harmful effects on drinking water, recreational water, and wildlife. Stormwater characteristics depend on site conditions (e.g., land use, impervious cover, pollution prevention, types and amounts of BMPs), rain events (duration, amount of rainfall, intensity, time between events), soil type and particle sizes, multiple chemical conditions, the amount of vehicular traffic, and atmospheric deposition. Major pollutants typically found in runoff include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogens, and bacteria. The majority of stormwater discharges are considered nonpoint sources and are regulated by a National Pollutant Discharge Elimination System (NPDES) Municipal General Permit or Construction General Permit.

A net effect of development can be to increase pollutant export over naturally occurring conditions to adjacent streams and to downstream receiving waters. However, an important consideration in evaluating stormwater quality from a site is to assess whether it impairs the beneficial use of the receiving waters. Receiving waters can assimilate a limited quantity of various constituent elements, but there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact.

A Hydrology and Water Quality Technical Memorandum was prepared for the proposed project by Michael Baker International in 2020 (Appendix F). The technical memorandum assessed whether the project as currently anticipated would result in hydrology or water quality impacts per CEQA. Final project design would meet performance standards including, but not limited to, the Municipal Separate Storm Sewer System (MS4) Permit Requirements, the San Diego County Hydrology Manual, and the County of San Diego Best Management Practices (BMP) Design Manual.

Less Than Significant Impact: The project proposes construction of a public library. The proposed project would disturb greater than one acre of land and requires compliance with the NPDES Construction General Permit. The Construction General Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) in order to obtain grading and building permits. The SWPPP would identify site-specific construction BMPs to reduce or eliminate sediment and other pollutants in stormwater and non-stormwater runoff from the project area. Construction BMPs are anticipated to include, but are not limited to, the following (refer to Attachment D of Appendix F):

- Minimization of disturbed areas to the portion of the project site necessary for construction
- Stabilization of exposed or stockpiled soils and cleared or graded slopes
- Establishment of permanent re-vegetation or landscaping as early as feasible
- Removal of sediment from surface runoff before it leaves the project site by silt fences or other similar devices around the site perimeter
- Diversion of upstream runoff around disturbed areas of the project site

- Protection of all storm drain inlets on site or downstream of the project site to eliminate entry of sediment
- Prevention of tracking of soil through use of a gravel strip or wash facilities at exits from the project area
- Proper storage, use, and disposal of construction materials
- Continual inspection and maintenance of all specified BMPs through the duration of construction

These measures would enable the project to meet waste discharge requirements as required by the Land-Use Planning for New Development and Redevelopment Component of the San Diego Municipal Permit (SDRWQCB Order No. R9-2007-0001), as implemented by the San Diego County Jurisdictional Urban Runoff Management Program (JURMP) and Standard Urban Storm Water Mitigation Plan (SUSMP). The project would be designed in accordance to current MS4 requirements, the San Diego County Hydrology Manual, and the County of San Diego BMP Design Manual. The project would not decrease the quality or increase the quantity of surface or groundwater since BMPs would be designed and implemented to mitigate for the increase in run-off and peak flow and any adverse impacts on water quality.

Therefore, with the implementation of project BMPs and adherence to state and local regulations, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project is not located in one of the three Sustainable Groundwater Management Act (SGMA) mandated basins in San Diego County. The Helix Water District would provide water for the project and the project would not use well water.

Infiltration would be maintained on-site through project design including detention basins and design requirements of the MS4 permit. This includes management practices, control techniques, system design and engineering methods, and other measures as appropriate.

Additionally, the project design would incorporate landscaped areas consistent with the County's landscape design requirements. Such features would allow stormwater to continue to infiltrate through the land surface and contribute to groundwater recharge

The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Impacts would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact:. The proposed project would not alter the course of a stream or river because such features are not present on-site. The project would have the potential to result in additional sources of polluted runoff, including through construction, and operational activities associated with the proposed parking lot and other on-site improvements. However, as described in Response IX (a), above, the proposed project would be required to prepare and implement a project-specific SWPPP, which would include BMPs to reduce potential pollutants in runoff to the maximum extent practicable. The project would be designed in accordance to current MS4 requirements, the San Diego County Hydrology, and the County of San Diego BMP Design Manual to ensure that water quality is maintained and that no adverse effects to downstream waterbodies (i.e., from erosion or siltation) occur with project implementation. The project would not decrease the quality or increase the quantity of run-off discharging from the project site compared to existing conditions. Therefore, the proposed project would not result in a change in drainage patterns that would cause substantial erosion or siltation on- or off-site, nor substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Impacts would be less than significant.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response IX (a), above. Stormwater runoff from properties located to the north of the site are accommodated by an existing 48-inch RCP storm drain that extends north-south across the property. This pipe collects school district water runoff as well as off-site runoff waters. Additionally, runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the southernmost parcel currently flows to Campo Road.

The project design would include a drainage network designed to control and filter stormwater runoff in conformance with requirements of the San Diego Regional Water Quality Control Board and County of San Diego. The proposed stormwater system may include the use of biofilters, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff. It is anticipated that stormwater runoff from the site would connect to the existing public storm drain system in Conrad Drive, as occurs under existing conditions. The project would not comingle stormwater flows from the project site in its improved condition with flows that are currently accommodated by the existing storm drain system serving the site. Further, drainage design for the project would not result in a change in stormwater volume, rate, or direction of flow from the site following project implementation. No upgrades or other improvements to the existing storm drain system are currently anticipated or proposed as part of the project.

The general drainage pattern of the site would remain consistent with existing conditions as a majority of the on-site drainage would be conveyed to the existing storm drainage system. As such, the project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, since BMPs such as bioretention basins, or Significant Site Design BMPs, would be designed and implemented to mitigate for the increase in runoff and peak flow. Therefore, the proposed project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite. Impacts would be less than significant.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Refer to Responses IX(a) and (c)(ii), above. An existing culvert is present in the southwestern portion of the site which presently accommodates stormwater flows from the north/northeast that sheet flow across the subject property. Stormwater runoff from properties located to the north of the site are accommodated by an existing 48-inch RCP storm drain that extends north-south across the property while runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the southernmost parcel currently flows to Campo Road.

As described in Response IX (c)(ii), drainage design for the project would not result in a change in stormwater volume, rate, or direction of flow form the site following project implementation. No upgrades or other improvements to the existing storm drain system are anticipated or proposed as part of the project. As discussed above in Response IX (a), above, the proposed project would require a site-specific SWPPP and would be landscaped in accordance with County standards, which would retain and reduce the rate of runoff and the potential for erosion or siltation to occur. In addition, the proposed project would include bio-retention swales to reduce runoff. The project is also required to prepare a SWQMP that would specify and describe the implementation process of all BMPs that address equipment operation and materials management, prevent the erosion process from occurring, and prevent sedimentation in any onsite and downstream drainage swales. The County Department of Planning and Development Services would ensure that the SWQMP is implemented as proposed.

Therefore, the proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

iv) impede or redirect flood flows?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Refer to Response IX (c)(iii). The project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet above mean sea level (amsl) in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

An existing culvert is present in the southwestern portion of the site which presently accommodates stormwater flows from the north/northeast that sheet flow across the subject property. A 48-inch storm drain collects runoff from north of the site and outlets into this culvert. Under current conditions, well-established vegetation abuts the culvert and generally obscures it from view. Runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the restaurant parcel currently sheet flows to Campo Road.

As discussed above in Responses IX(a) and (b), the project would require a site-specific SWPPP and would be landscaped in accordance with County standards, which would retain and reduce the rate of runoff. In addition, the proposed project would include bio-retention swales to reduce runoff. The project would include bio-retention swales to reduce runoff. The project is also required to prepare a SWQMP that would specify and describe the implementation process of all BMPs that address equipment operation and materials management, prevent the erosion process from occurring, and prevent sedimentation in any onsite and downstream drainage swales. The County Department of Planning and Development Services would ensure that the SWQMP is implemented as proposed. In addition, construction plans for the proposed project would be required to include drainage design to reduce runoff during a 100-year storm to avoid impacts to downstream properties.

Therefore, with compliance with applicable State and local drainage regulations and standards, the proposed project would not substantially alter the existing drainage pattern of the project site, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would impede or redirect flood flows. Impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities, because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. Tsunamis are a type of earthquake-induced flooding that is produced by large-scale sudden disturbances of the sea floor. Tsunamis interact with the shallow sea floor topography upon approaching a landmass, resulting in an increase in wave height and a destructive wave surge into low-lying coastal areas.

Less Than Significant Impact: According to the California Emergency Management Agency Tsunami Inundation Maps for Emergency Planning-County of San Diego, the site is not located in a tsunami inundation area, and therefore, it is not anticipated that inundation due to tsunami would occur (California Emergency Management Agency 2019). In addition, based on the distance between the site and large, open bodies of water, inundation of the site due to a seiche event is not anticipated. The project site is located in Zone X (Other Areas) as illustrated on Federal Emergency Management Act (FEMA) map panel 06073C1930G, which is outside of the FEMA-mapped 100-year floodplain (Appendix F). Therefore, the potential for on-site flooding is considered low.

As the potential for project inundation relative to flood hazard, tsunami, or seiche zones is low, it is not anticipated that project implementation would risk release of pollutants as the result of such events. Impacts would be less than significant**.**

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: As described above, the project applicant would prepare and implement a SWPPP that would manage stormwater runoff during construction activities. The SWPPP would include site design and source control BMPs to ensure stormwater runoff and impervious areas are minimized, and natural areas are conserved where feasible. The use of on-site detention and/or biofiltration basins is anticipated to meet the treatment and flow control requirements for post-construction BMPs. Therefore, the proposed project would not conflict with a water quality control plan.

There are four groundwater basins within the County that are subject to the Sustainable Groundwater Management Act: Borrego Valley, San Diego River Valley, San Luis Rey Valley, and San Pasqual Valley. The proposed project is not located within one of these groundwater basins (Michael Baker International 2020b).

Public water service for the project would be provided by the Helix Water District. Proposed utility improvements would include connections to the public water system. The proposed project does not include the use of groundwater wells. Additionally, the project would be designed in accordance with current MS4 requirements, the San Diego County Hydrology Manual, and the County of San Diego BMP Design Manual. Infiltration would be maintained through project design, including detention basins and design requirements of the MS4 permit. This includes management practices, control techniques, system design and engineering methods, and other measures as appropriate. The project would not decrease the quality or increase the quantity or runoff discharging from the project site compared to existing conditions.

With compliance with local, state, and federal water quality and groundwater requirements, the project would not conflict with a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

X. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: The project is located on a graded lot in an urbanized community, surrounded by a mix of commercial, general office, and multi-family and (limited) single-family residential uses. The proposed project does not include significant new infrastructure, such as major roadways or water supply systems, or utilities, that would induce population growth or alter the existing land uses. Additionally, the proposed project would not remove barriers to growth, generate extraordinary economic growth, generate an indirect inducement to significant growth, be a precedent setting action, or encroach into open space. Therefore, the proposed project would not significantly disrupt or divide the established community. Impacts would be less than significant.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The existing County General Plan land use designations and zoning classifications for the affected properties. No change in the existing General Plan or zoning is required or proposed with project implementation. The proposed project is not located within a local coastal program or specific plan area. The project would be consistent with the General Plan land use designation, as it consists of a public library facility and would be consistent with the floor area ratio.

The project is also subject to the policies of the Spring Valley Community Plan. The portion of the site on which the library will be constructed (APNs 500-170-10 and -11) is zoned C36, General Commercial Use, which permits civic use types, including library services as proposed with the current project. Therefore, the project would not conflict with any applicable plan, policy, or regulation, and impacts would be less than significant.

XI. MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

The term “mineral resource” refers to a concentration or occurrence of a naturally occurring material in such form or amount that economic extraction of a commodity is currently potentially feasible.

Less Than Significant Impact: According to the County’s General Plan, the project site is located in an area designated as MRZ-3: Resources Potentially Present (County of San Diego 2008). While the proposed project would develop over an area identified with potential mineral resource significance, the project would not extract the resource, and therefore it would still be available for extraction if future mining is proposed at the site. Additionally, the project site is surrounded by densely developed land uses including general commercial and single- and multi-family residential, which are incompatible with future extraction of mineral resources on the project site. A future mining operation at the project site would likely create a significant impact to neighboring properties for issues such as noise, air quality, traffic, and possibly other impacts. As such, mineral extraction is currently infeasible.

Therefore, as implementation of the proposed project would not result in the loss of availability of a known mineral resource, and future mining operation at the site is unlikely, a less than significant impact would occur.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

☐ Potentially Significant Impact
☒ Less than Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: As described above, the project site is located in an area that has MRZ-3 designated lands. The project site is currently surrounded by densely developed land uses including general commercial and single- and multi-family residential, which are incompatible to future extraction of mineral resources on the project site.

The project site is designated as General Commercial and Public/Semi-Public Facilities in the County of San Diego General Plan, and zoned as General Commercial Use (C36) and Rural Residential Single (RS). The associated use designations do not call for the extraction of mineral resources on sites under these designations.

Additionally, the placement of the proposed use on the project site would not result in a loss of mineral resources because the feasibility of future mining at the site is already impacted by existing land use incompatibilities. Based on current land use conditions, a future mining operation at the project site would likely create a significant impact to neighboring properties for issues such as noise, air quality, traffic, and other impacts, thereby reducing the feasibility of future mining operations, regardless of the proposed project. Therefore, no potentially significant loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan would occur as a result of this project. Impacts would be less than significant.

XII. NOISE

Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

☐ Potentially Significant Impact
☐ Less than Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ No Impact

Discussion/Explanation:

Noise is generally defined as unwanted sound (i.e., loud, unexpected, or annoying sound). Sound is measured in decibels (dB), on a logarithmic scale ranging from 0 dB corresponding roughly to the threshold of human hearing to 120 to 140 dB corresponding to the threshold of pain. Further, the typical human ear is not equally sensitive to all frequencies of the audible sound spectrum, and as such dB levels are weighted to the human ear's decreased sensitivity to extremely low and extremely high frequencies, expressed as A-weighted decibels (dBA). Noise exposure is a measure of noise over a period of time; a noise level is a measure of noise at a given instant in time. The maximum, instantaneous noise level experienced during a given period of time is expressed as L_{max}. The equivalent sound level (L_{eq}) is used to describe noise over a specified period of time (typically 1 hour), which may also be referred to as the average sound level. The Community Noise Equivalent Level (CNEL) is the average A-weighted noise level during a 24-hour day. Noise attenuates with distance at a rate of -6 dBA per doubling of distance for stationary sources (including construction noise) and -3 dBA per doubling of distance for mobile source (e.g., vehicle traffic on roadways).

The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road, and within approximately 500 feet of SR 94. The area surrounding the project site is highly developed with a variety of land uses including commercial, general office, and multi-family and (limited) single-family residential uses.

Adjacent to the north and west of the site is the Spring Valley Academy, a middle school serving grades 5 to 8, that is overseen by the La Mesa-Spring Valley School District. To the east is the District maintenance yard. Sports fields owned and maintained by the school abut the project site to the north and west. A small-scale restaurant fronting directly onto Campo Road is located in the southern portion of the proposed site; refer to Figure 2, Local Vicinity Map/Project Site. This restaurant would be demolished to provide access to the subject property. Commercial uses are located directly to the south, along with single-family and multi-family uses to the south/southwest of the site. Single-family rural residential uses are present in the distance along the hillsides to the north and south. The Campo Road commercial corridor trends east–west through the community and forms the southern boundary of the proposed site.

Noise in the project vicinity is generally generated by traffic, heavy machinery, and day-to-day outdoor activities. Various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the community generate stationary source noise. Mobile sources of noise, especially cars and trucks, are the most common source of noise. The major noise sources in the vicinity of the project site include roadway noise traffic from Campo Road and SR 94 to the south, as well as sources associated with the various land uses that surround the project site, such as parking lot noise, mechanical equipment (e.g., HVAC), school bells, and crowd noise.

A noise technical memorandum was prepared for the proposed project by ECORP Consulting (2020c; Appendix G). In order to quantify existing ambient noise levels in the project vicinity, five short-term noise measurements were recorded near the project site to determine existing noise exposure within and immediately adjacent to the project site; refer to Attachment A of Appendix G. The 15-minute measurements were taken between 9:17 a.m. and 11:45 a.m. on August 26, 2020. Short-term (Leq) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in Table XII-1, below.

Table XII-1. Existing (Baseline) Noise Measurements

Location Number	Location	Leq dBA	Lmin dBA	Lmax dBA	Time
1	956 Campo Road	62.7	52.2	74.6	10:57 a.m.-11:13 a.m.
2	Edge of asphalt/baseball field north of project site	51.6	46.6	55.9	10:12 a.m.-10:27 a.m.
3	Behind the Casa De Oro Senior Apartments	50.6	42.7	59.8	11:30 a.m.-11:45 a.m.
4	Grocery Outlet parking lot off Campo Road	55.2	47.6	62.1	9:17 a.m.-9:32 a.m.
5	Behind Grocery Outlet	53.2	48.4	60.4	9:43 a.m.-9:58 a.m.

Source: ECORP Consulting 2020c (Appendix G).

As shown, the ambient recorded noise levels in the project vicinity range from 50.6 to 62.7 dBA. The most common noise in the project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles). Traffic moving along a roadway produces a sound level that remains relatively constant and is part of the project area's minimum ambient noise level.

Existing Roadway Noise Levels

Existing roadway noise levels were calculated in the noise memorandum for the following roadway segments in the project vicinity: Campo Road, Kenwood Drive, and Conrad Drive. Analysis is based on the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic volumes from the Transportation Impact Study prepared for the project by Michael Baker International (2020c; Appendix H). The model calculated the average noise level at specific locations based on traffic

volumes, average speeds, roadway geometry, and site environmental conditions. The average daily noise levels along the roadway segments are presented in Table XII-2, below.

Table XII-2. Existing (Baseline) Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway
Campo Road		
West of the project driveway	Residential and Lodging	54.8
Between the project driveway and Kenwood Drive	Church and Commercial	52.9
Kenwood Drive		
South of Campo Road	Church and Commercial	56.1
Conrad Drive		
North of Campo Road	Residential and Commercial	51.0

Source: ECORP Consulting 2020c (Appendix G).

As shown, the existing traffic-generated noise level on project-vicinity roadways currently ranges from 51.0 to 56.1 dBA CNEL. As previously described, CNEL is a 24-hour average noise level with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. It should be noted that the modeled noise levels depicted in Table XII-2 may differ from measured levels in Table XII-1 because the measurements represent noise levels at different locations around the project site and are also reported in different noise metrics (e.g., noise measurements are the Leq values and traffic noise levels are reported in CNEL).

Less Than Significant with Mitigation Incorporated:

Construction Noise Impacts

Construction noise would be short term and would vary depending on the construction activity (e.g., grading, excavation, trenching, paving). Noise generated would primarily be associated with the operation of construction machinery and equipment as well as construction vehicle traffic on area roadways. Noise generated by construction equipment, including excavators, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels may negatively affect sensitive land uses in the vicinity of the construction site. The nearest noise sensitive land uses to the project site are residences located adjacent to the southwestern project site boundary.

According to Section 36.409, Sound Level Limitations on Construction Equipment, of the County Code, noise sources associated with construction are limited to an average sound level of 75 dBA for an eight-hour period, between 7:00 a.m. and 7:00 p.m., when measured at any occupied property where the noise is being received. Construction is prohibited between the nighttime hours of 7:00 p.m. and 7:00 a.m. as well as on Sundays and all major holidays (Section 36.408, Hours of Operation of Construction Equipment).

Table XII-3 provides the anticipated short-term construction noise levels based on the proposed construction equipment. Construction noise was measured from the center of the project site consistent with Federal Transit Administration (FTA) recommendations for calculating construction noise.

Table XII-3. On-site Construction Average (dBA) Noise Levels by Receptor Distance and Construction Equipment

Equipment	Estimated Exterior Construction Noise Level @ Closest Residence	Construction Noise Standard (dBA Leq)	Exceeds Standards?
Demolition			
Concrete/Industrial Saws (1)	74.8	75	No
Rubber Tired Dozers (1)	69.9	75	No

Table XII-3, continued

Equipment	Estimated Exterior Construction Noise Level @ Closest Residence	Construction Noise Standard (dBA Leq)	Exceeds Standards?
Tractors/Loaders/Backhoes (1)	72.3	75	No
Combined Demolition Equipment	79.6	75	Yes
Site Preparation			
Water Truck (1)	77.4	75	Yes
Graders (1)	73.3	75	No
Tractors/Loaders/Backhoes (1)	72.3	75	No
Rubber Tired Dozers (1)	69.9	75	No
Combined Site Preparation Equipment	80.1	75	Yes
Grading			
Water Truck (1)	77.4	75	Yes
Rubber Tired Dozers (2)	69.9 (each)	75	No
Tractors/Loaders/Backhoes (1)	72.3	75	No
Graders (2)	73.3 (each)	75	No
Scrapers (2)	71.9 (each)	75	No
Plate Compactors (1)	68.5	75	No
Rollers (1)	65.3	75	No
Combined Grading Equipment	82.4	75	Yes
Building Construction			
Generator Sets (1)	69.9	75	No
Cranes (1)	64.8	75	No
Forklifts (1)	71.7	75	No
Tractors/Loaders/Backhoes (1)	72.3	75	No
Welders (3)	62.3	75	No
Combined Building Construction Equipment	76.9	75	Yes
Paving			
Cement and Mortar Mixers (1)	67.1	75	No
Pavers (1)	66.5	75	No
Rollers (1)	65.3	75	No
Tractors/Loaders/Backhoes (1)	72.3	75	No
Paving Equipment (1)	74.8	75	No
Combined Paving Equipment	77.8	75	Yes
Architectural Coating			
Air Compressors (1)	65.9	75	No
Combined Architectural Coating Equipment	65.9	75	No

Source: ECORP Consulting 2020c (Appendix G).

As shown in Table XII-3, most of the cumulative construction equipment and multiple individual pieces of construction equipment would exceed the County's 75 dBA construction noise standard at the nearest sensitive receptor. As such, mitigation is required to reduce construction noise to levels below the County's 75 dBA threshold.

Implementation of mitigation measures **NOI-1** and **NOI-2** would reduce construction-generated noise levels to a less than significant level. Noise barriers or enclosures, such as that recommended in mitigation measure **NOI-1,** would provide a sound reduction of approximately 35 dBA or greater, which would reduce construction noise levels below the County's 75 dBA threshold. Therefore, with implementation of mitigation measures **NOI-1** and **NOI-2**, project construction activities would not expose persons to and generate noise levels in excess of County standards and impacts would be less than significant.

Operational Noise Impacts

The nearest noise-sensitive land uses to the project site are residences adjacent to the site to the southwest. Additionally, a middle school campus lies just north of the project site. Operational noise

sources associated with the proposed project include mobile and stationary (i.e., mechanical equipment, on-site activity) sources.

Operational Traffic Noise

Future traffic noise levels throughout the project vicinity (i.e., vicinity roadway segments that traverse noise sensitive land uses) were modeled based on the traffic volumes identified in the Transportation Impact Study (Appendix H). Table XII-4 provides the calculated off-site roadway noise levels under existing traffic levels compared to future buildout of the project. The calculated noise levels as a result of the project at affected sensitive land uses are compared to an increase of 3 dB over existing conditions.

Table XII-4. Existing Plus Project Conditions - Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway			
		Existing Conditions	Existing Plus Project Conditions	Noise Standard (dBA CNEL)	Exceed Standard/ Significant Impact?
Campo Road					
West of the project driveway	Residential and Lodging	54.8	54.9	>3	No
Between the project driveway and Kenwood Drive	Church and Commercial	52.9	53.4	>3	No
Kenwood Drive					
South of Campo Road	Church and Commercial	56.1	56.5	>3	No
Conrad Drive					
North of Campo Road	Residential and Commercial	51.0	51.1	>3	No

Source: ECORP Consulting 2020c (Appendix G).

As previously stated, a 3 dBA change is considered a perceivable difference to the common person. As shown in Table XII-4, the predicted increase in traffic noise levels associated with the project would be less than 3 dBA. Therefore, impacts would be less than significant.

Operational Stationary Noise

In general, libraries are considered relatively quiet places. The main stationary noise associated with library operations would be parking lot activity (e.g., car doors opening and closing, people talking, stereo music) and internal vehicle circulation in the parking lot located on the northern end of the project site. Previous noise measurements taken by ECORP Consulting, using a Larson Davis SoundExpert LxT precision sound level meter, at the edge of a parking lot of a large shopping center recorded a noise level of 61.1 dBA at approximately 5 feet distance. (The proposed library would not be expected to generate noise levels at the same intensity as a large grocery store and therefore this reference noise applied to the project is conservative.)

The nearest sensitive noise receptor, the residence adjacent to the southwestern property line, is located approximately 55 feet from the proposed parking lot. As sound level generally attenuates at a rate of approximately 6 dBA for each doubling of distance from a stationary or point source, the anticipated noise level at the nearby residences would be approximately 40.8 dBA. County Code Section 36.404 limits stationary-source noise at any location on a residential property at a maximum 50 dBA Leq from 7:00 a.m. to 10:00 p.m. and 45 dBA Leq from 10:00 p.m. to 7:00 a.m. Thus, the parking lot activity as a result of the proposed project would not exceed the daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.) County noise standards.

Additionally, as previously mentioned, the project may result in the construction of on-site retaining walls in support of the proposed development or to expand the existing building pad. Depending on the height of any retaining walls, they may offer an additional reduction in noise levels. Therefore, operational noise impacts would be less than significant.

Mitigation Measures:

NOI-1: In order to reduce construction noise during the demolition, site preparation, grading, building construction and paving phases, a temporary noise barrier or enclosure shall be positioned between the construction site and the neighboring residences to the southwest of the site in a manner that breaks the line of sight between the construction equipment and these residences. The temporary noise barrier shall have a sound transmission class (STC) of 10 or greater in accordance with ASTM Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. The temporary noise barrier can consist of a solid plywood fence at least 7/16-inch in thickness and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket, attached to chain link fencing. The length, height, and location of the temporary noise barrier shall be adequate to ensure proper acoustical performance. Specifically, the barrier must completely break the line of sight between the construction site and the residences to the southwest, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. The temporary noise barrier must span the entire length of the western boundary of the project site. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion.

OR

In the case that a retaining wall (or walls) is constructed along the southern and western property boundaries, is constructed to a height that breaks the line of sight between the construction site and neighboring residences to the southwest, and is constructed prior to any other construction taking place, no temporary construction noise barrier shall be required along these site perimeters. Otherwise, provision of temporary noise barriers as described above in **NOI-1** shall be required, prior to commencement of any project construction activities.

NOI-2: The project improvement and building plans will include the following requirements for construction activities:

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices.
- A sign, legible at a distance of 50 feet, shall be posted at the project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the County within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the County. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator.

- Identification of construction noise reduction methods. These reduction methods may include shutting off idling equipment (5 minutes), installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and using electric air compressors and similar power tools.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- Per Section 36.409 of the County code, construction shall be prohibited between the hours of 7:00 p.m. to 7:00 a.m. as well as on Sundays and all major holidays.

b) Generation of excessive groundborne vibration or groundborne noise levels?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact:

Construction Vibration Impacts

Increases in groundborne vibration and noise levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers and jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in Table XII-5.

Table XII-5. Typical Construction Equipment Vibration Levels

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Impact Pile Driver	0.644
Sonic Pile Driver	0.17
Vibratory Roller	0.21
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: ECORP Consulting 2020c (Appendix G).

San Diego County's regulation pertaining to vibration is included in Policy N-3.1 of the General Plan Noise Element. Policy N-3.1 recommends the use of the FTA guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to groundborne vibration from construction equipment. As such, to be conservative, a threshold of 0.2 inches per second peak particle velocity (PPV) was used in the noise analysis, which is the vibration level that is considered by the FTA to be acceptable for "non-engineered timber and masonry buildings." Consistent with FTA

recommendations for calculating construction vibration, construction vibration was measured from the center of the project site. The nearest structures of concern to the construction site are located approximately 122 feet from the center of the project site. Table XII-6 provides the project's vibration levels at the nearest receptors based on the vibration levels provided in Table XII-5.

Table XII-6. Specific Plan Construction Vibration Levels at 122 Feet

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold
Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Vibratory Roller			
0.002	0.003	0.007	0.008	0.019	0.019	0.2	No

1. Based on the Vibration Source Levels of Construction Equipment included on Table XII-6 (FTA 2018).
Source: ECORP Consulting 2020c (Appendix G).

As shown in Table XII-6, vibration as a result of construction activities exceed would not exceed 0.2 PPV at the nearest structure. Therefore, the proposed project would not generate excessive groundborne vibration or groundborne noise levels during construction activities.

Operational Vibration Impacts

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels. Therefore, the project would result in no groundborne vibration impacts during operations. Impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The nearest public airport is Gillespie Field Airport, located approximately 5.5 miles to the north of the site. No private airstrips are located within the vicinity of the site. The site is not located within the boundaries of an airport land use plan or within 2 miles of a public airport or public use airport. As such, the project would not expose people residing or working in the project area to excessive noise levels. Impacts would be less than significant.

XIII. POPULATION AND HOUSING

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: The project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in an area. The proposed project does not include housing or require extensions of roads and other infrastructure (see Section XVIII, Utilities and Service Systems). While the proposed project would construct a new public facility in the form of a

public library, the proposed project would replace the existing public library located at 9805 Campo Road with a new public library located at Campo Road between Conrad Drive and Rogers Road. Therefore, the project would not create a change that would induce population growth and no impacts would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: Refer to Response XIII (a) above. The proposed project would not displace any existing housing as the project site currently supports a small-scale restaurant, sports field associated with the school, and a modular office structure. Therefore, no impact would occur.

XIV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

ii) Police protection?

iii) Schools?

iv) Parks?

v) Other public facilities?

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

a.i) **Less Than Significant Impact.** The San Diego County Fire Department provides fire protection services to the project site and surrounding community. The fire station that serves the project site is the San Miguel Fire District Station 15, located at 2850 Via Orange Way, Spring Valley, approximately 1.5 miles southeast of the project site.

Construction activities would be short term and the need for fire protection services is considered low. Once the library is constructed and operational, it is anticipated that the library would be staffed by a maximum of 6 to 8 part- and/or full-time employees on a daily basis. The proposed project does not include new homes that would require additional services or extended response times for fire protection services.

As the proposed project physically replaces an existing restaurant currently served by the San Diego County Fire Department, the proposed library would not substantially alter the existing fire service demands. The San Diego County Fire Department would not be required to expand or construct new fire station locations to serve the project site. Therefore, a less than significant impact would occur associated with fire protection.

a.ii) **Less Than Significant Impact.** Police services are provided by the San Diego County Sheriff's Department. The sheriff's station that serves the project site is San Diego County Sheriff's Department Lemon Grove Substation located at 3240 Main Street, Lemon Grove, approximately 2.8 miles west of the proposed project site.

Construction activities would be short term and the need for police services is considered low. Once the library is constructed and operational, it is anticipated that the library would be staffed by a maximum of 6 to 8 part- and/or full-time employees on a daily basis. The proposed project does not include new homes that would require additional services or extended response times for police services.

As the proposed project physically replaces an existing restaurant currently served by the San Diego County Sheriff's Department, it would not substantially alter the existing police service demands. Therefore, police protection needs would not increase and the San Diego County Sheriff's Department would not be required to expand or construct new police stations to serve the project area. Therefore, a less than significant would occur associated with police protection.

a.iii) **No Impact.** The project would not change existing demand for school services, as the project would not result in an increase in population. Therefore, the project would have no impact related to school services.

a.iv) **No Impact.** The project would not result in an increase in population and would not prompt the need for new or altered parks. Therefore, the project would have no impact related to parks.

a.v) **Less Than Significant With Mitigation Incorporated.** The project would result in the construction of a new library facility. As construction of the new library facility is the proposed project, the proposed construction and operation impacts have been considered throughout the discussion of environmental impacts in this document. As discussed in Sections I through XIX, all potential impacts would either be less than significant or reduced to less than significant levels with implementation of mitigation measures **BIO-1** to **BIO-3**, **CR-1 to CR-3**, **NOI-1** to **NOI-2**, and **TR-1**. Therefore, the proposed project would be less than significant with mitigation incorporated.

XV. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

- ☐ Potentially Significant Impact
- ☐ Less than Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ No Impact

Discussion/Explanation:

No Impact: The project does not propose any residential use, including but not limited to a residential subdivision, mobile home park, or construction for a single-family residence, that may increase the use of existing neighborhood and regional parks or other recreational facilities in the vicinity. Therefore, no impact would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

- ☐ Potentially Significant Impact
- ☐ Less than Significant Impact
- ☐ Less Than Significant With Mitigation Incorporated
- ☒ No Impact

Discussion/Explanation:

No Impact: The project does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, no impact would occur .

XVI. TRANSPORTATION AND TRAFFIC

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact:

Direct access to the project site would be provided from Campo Road, between Conrad Drive and Rogers Road. It is anticipated that a minimum 24-foot-wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.

Although the vehicle miles traveled (VMT) methodology is now applied in evaluating potential transportation impacts of a project, the County's General Plan identifies standards for maintaining an adequate level of service (LOS) for County roadways and intersections. To evaluate project consistency with the General Plan Circulation Element, a LOS analysis was prepared for the project (Michael Baker International 2020c); refer to Appendix H for additional discussion. To be consistent with the 2020 CEQA Guidelines, LOS analysis is not required for purposes of this impact analysis. However, the LOS analysis provided in Appendix H will be considered by the County's decision-makers when making General Plan consistency findings for the project. The LOS summary is consistent with County General Plan Policy M-2.1, which requires projects to provide associated road improvements necessary to achieve a LOS D or better on all Mobility Element roads except for those where a failing LOS (E or F) has been accepted by the County. The results of the analysis show that all three intersections studied currently operate at acceptable levels of service (LOS D or better). Under Opening Year 2022 Plus Project conditions, study intersections would continue to operate at acceptable levels of service. Therefore, no physical improvements to the study intersections are recommended, and no conflict with the General Plan would occur with project implementation.

The project would be served by alternative means of transportation to encourage residents and visitors to the project site to utilize such modes of travel. The Metropolitan Transit System (MTS) operates the local bus service within the Valle de Oro Community. MTS Route 855 travels along Campo Road connecting La Mesa, Casa de Oro, Spring Valley, and Rancho San Diego. Destinations on Route 855 include Campo Road, Casa de Oro Plaza, Monte Vista High School, and Sweetwater Springs Boulevard. The bus route travels between the Spring Street Trolley Station (with connections to Route 851 and the Orange Line Trolley), and Rancho San Diego (with connections to Route 856 at Jamacha Boulevard and Lamplighter Village Drive). Therefore, users of the library would have access to both the local and regional transit systems. No changes to the existing bus stops are proposed with the project.

Existing sidewalks are located along both the northern and southern sides of Campo Road, including along the proposed project frontage. Temporary closure of the sidewalk along the project frontage

may occur during project construction; however, during operations, these sidewalks would provide pedestrian access to the project vicinity as well as connection to the larger off-site circulation system.

Bike lanes are present along both sides of Campo Road in the project vicinity. Project implementation would not interfere with the continued use of such bike lanes, with the exception of possible temporary interruption (i.e., relocation) of the westbound bike lane during project construction. Additionally, bike parking would be provided on-site to encourage residents and visitors to the site to bike instead of driving an automobile. It is also anticipated that 2 EV charging stations would be provided on-site in the surface parking lot. The number of EV stations would be in conformance with CalGreen standards.

Additionally, the County is currently preparing the Casa de Oro Specific Plan. The study area for the Specific Plan is focused along an approximately 3/4-mile section of Campo Road in the commercial corridor between Granada Avenue and Rogers Road. As part of the Casa de Oro Specific Plan and revitalization of the Campo Road corridor, transportation improvements such as roundabouts, enhanced pedestrian facilities and protected bikeways are being evaluated and considered. Many of the enhancements to pedestrian and bicycle facilities along Campo Road will be extended from Kenwood Drive to the new library site to improve connectivity throughout the corridor. Although not yet adopted, it is not anticipated that the proposed project improvements would conflict with any policies or goals of this Specific Plan.

As such, the project is not anticipated to propose any features that are inconsistent with adopted policies, plans, and programs regarding public transit, bicycle, and pedestrian facilities and would not otherwise decrease the performance or safety of such facilities. The project would not result in a conflict with the County's General Plan supporting alternative transportation modes. Overall, impacts would be less than significant.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

☐	Potentially Significant Impact	☒	Less than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

In December 2018, new CEQA guidelines were approved that shift traffic analysis from delay and operations to VMT when evaluating transportation impacts under CEQA. This change in methodology is a result of Senate Bill (SB) 743, which was signed into law in September 2013. SB 743 creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Governor's Office of Planning and Research to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses.[2]

Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."[3] According to SB 743, projects should aim to reduce VMT and mitigate potential VMT impacts through the implementation of transportation demand management strategies. As of July 1, 2020, agencies must fully implement the new CEQA guidelines for transportation.

The CEQA transportation analysis for the proposed project was based on the County's Transportation Study Guidelines (TSG), which was adopted by the County's Board of Supervisors on June 24, 2020. According to the TSG, a project that meets at least one of the screening criteria

2 Public Resources Code Section 21099(b)(1); Office of Planning and Research, http://www.opr.ca.gov/ceqa/updates/sb-743/

3 Public Resources Code Section 21099(b)(1)

would not be required to prepare a detailed VMT analysis and would have a less than significant VMT impact. The proposed project is a library which is considered a public facility serving the surrounding community and thus meets the screening criteria for a CEQA VMT analysis. Therefore, the Casa de Oro Library was not required to prepare a detailed CEQA VMT analysis and is considered to have a less than significant VMT impact on the environment; refer to additional discussion below.

Less Than Significant Impact:

VMT Screening Criteria

The TSG includes screening criteria for all land development projects. A project that meets at least one of the screening criteria listed in Section 3.3.1 (Screening Criteria for CEQA VMT Analysis) of the TSG is considered to have a less than significant VMT impact due to project characteristics and/or location. Each of the screening criteria have been reviewed to determine if the Casa De Oro Library meets the screening criteria, see Table XIV-1, below.

Table XIV-1. VMT Screening Criteria Evaluation

ID	VMT Screening Criteria	Description	Criteria Met? (Yes / No)
1	Projects Located in a VMT Efficient Area	Projects that are located within a VMT efficient area (more than 15% below the Unincorporated Average VMT) according to the County's screening maps.	No
2	Small Residential and Employment Projects	Projects generating less than 110 daily vehicle trips based on ITE trip generation rates.	No
3	Projects Located in a Transit Accessible Area	Projects located within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor.	No
4	Locally Serving Retail/Service Projects	Local serving retail/service projects less than 50,000 square feet.	No
5	Locally Serving Public Facilities and Other Uses	Public facilities that serve the surrounding community such as transit centers, schools, libraries, post offices, park-and-ride lots, local health/medical clinics, law enforcement and fire facilities, and local parks and trailheads.	Yes
6	Redevelopment Projects with Greater VMT Efficiency	Total project VMT is less than existing land use's total VMT. (Note: The existing restaurant is being demolished which will further reduce VMT generated by the site.)	No
7	Affordable Housing	100% of residential units are affordable.	No

Source: Michael Baker International 2020c (Appendix H).

As shown in Table XIV-1, the Casa de Oro Library meets one of the seven VMT screening criteria. The proposed library is considered a locally serving public facility and therefore meets the VMT screening criteria. As at least one criterion is satisfied, a detailed VMT analysis was not required and the Casa de Oro Library is presumed to have a less than significant VMT impact on transportation. No mitigation measures are required.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☒ No Impact

Discussion/Explanation:

No Impact: The project does not propose any off-site improvements to the local circulation network. Although temporary disturbance would occur along Campo Road during construction of the proposed

access drive and demolition of an existing on-site structure, the project would not construct any new turn lanes or install new stop signs or traffic signals along Campo Road (or other local roads). The public library would not introduce any operating characteristics that would be incompatible with surrounding land uses. No impact would occur.

d) Result in inadequate emergency access?

☐	Potentially Significant Impact	☐	Less than Significant Impact
☒	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant with Mitigation Incorporated: Improvement plans prepared for the project would be subject to review by the San Miguel Consolidated Fire District to ensure that adequate emergency access and circulation can be accommodated for the site. As access improvements are required adjacent to Campo Road to construct the proposed access drive, the project may result in lane closures during such activities that may affect local traffic flows and bicycle travel. Additionally, demolition activities required adjacent to Campo Road and the movement of equipment and haul trucks to/from the site would have the potential to restrict or influence emergency access and circulation. Such conditions would have the potential to create a significant impact.

To ensure that public safety and emergency access are maintained during construction, mitigation measure **TR-1** would be implemented to require preparation of a traffic control plan, which would include measures to maintain emergency flows and access. Adherence to this mitigation measure would reduce any potential impacts regarding emergency service access to a level of less than significant.

Mitigation Measure

TR-1: Prior to the start of construction, the County shall require the construction contractor to prepare and implement a traffic control plan to show specific methods for maintaining traffic flows. Traffic control measures could include but are not limited to the following tasks:

- Develop circulation and detour plans to minimize impacts to local street circulation, including the use of signage and flagging to guide vehicles through or around the construction zone.
- Schedule truck trips outside the range of peak morning (7:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) commute hours.
- Limit lane closures during peak hours to the extent possible.
- Use haul routes that minimize truck traffic on local roadways to the extent possible.
- Include accommodations for bicycle and pedestrians in all areas potentially affected by project construction, including detours and signage to maintain connectivity for bikeways and sidewalks.
- Store construction materials only in designated areas.
- Coordinate signage for temporarily eliminated on-street parking, with instructions including timing and duration, and nearby areas where parking is currently available, as necessary.
- Coordinate with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary.

- Develop comprehensive strategies for maintaining emergency flows. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches and identification of alternate routing around construction zones. Police, fire, and other emergency service providers shall be notified of the timing, location and duration of the construction activities and the location of detours and lane closures.

XVII. TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Cultural resources include places, objects, and settlements that reflect group or individual religious, archaeological, architectural, or paleontological activities. By statute, tribal cultural resources are generally described as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are further defined in PRC Section 21074(a)(1)(A)–(B).

A cultural resources investigation was conducted for the proposed project by ECORP Consulting (2020c; Appendix C). The cultural resources investigation included a CHRIS records search, a search of the Sacred Lands File by the NAHC, two field surveys, and an evaluation of two historic-period resources to the California Register and County Local Register.

Less than Significant with Mitigation Incorporated: As part of the cultural resources investigation, ECORP contacted the California NAHC on August 4, 2020, to request a search of the Sacred Lands File for the area of potential effects. A search of the Sacred Lands File by the NAHC was negative and failed to indicate the presence of Native American cultural resources in the project area.

Pursuant to AB 52, the County has initiated consultation with culturally affiliated tribes. On August 24, 2020, the County received a letter from the San Pasqual Band of Mission Indians in response to the proposed project. The tribe stated that while the project is not within the boundaries of the recognized San Pasqual Indian Reservation, the project is within the Traditional Use Territory (TUA) of the tribe. As such, the tribe requests further consultation and requests the inclusion of a mitigation measure that requires a Kumeyaay tribal monitor during all construction ground-disturbing activities (see mitigation measures **CR-1** and **CR-2**).

In response to the received request for Kumeyaay Native American monitoring, ECORP contacted Red Tail Environmental to provide a Kumeyaay Native American monitor during the field surveys for the cultural resources investigation. Kumeyaay Native American monitors Anthony LaChappa and Shuuluk Linton were present for the field surveys. The entire project area was observed to have been previously modified and developed, currently consisting of paved asphalt parking lots and play areas, a historic-period building, a modern building, a storage trailer, a modern concrete drainage

culvert, fences, and grass fields. No tribal cultural resources were found as a result of the field surveys

While no specific tribal cultural resources that could be impacted by the project have been identified, consultation remains ongoing. To address unknown tribal cultural resources, the County would implement archaeological and Native American monitoring of project-related ground-disturbing activities. As such, implementation of Mitigation Measures **CR-1** to **CR-3** would reduce potential impacts to unknown tribal cultural resources, including human remains, to less than significant. Pending the outcome of consultation, these mitigation measures may be revised or additional mitigation may be implemented.

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code §5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant with Mitigation Incorporated: As noted above, while no specific tribal cultural resources that could be impacted by the project have been identified, consultation remains ongoing. To address unknown tribal cultural resources, the County would implement archaeological and Native American monitoring of project-related ground-disturbing activities. As such, implementation of mitigation measures **CR-1** to **CR-3** would reduce potential impacts to unknown tribal cultural resources, including human remains, to less than significant. Pending the outcome of consultation, these mitigation measures may be revised or additional mitigation may be implemented.

XVIII. UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Water

Public water service would be provided by the Helix Water District. The project would connect to an existing 8-inch water main located in Campo Road. No upgrades to the existing public water system are anticipated to accommodate water demands of the proposed library use. The County would obtain a service availability letter from the Helix Water District as part of the construction process to ensure that adequate water supplies are available to serve the proposed use.

Sewer

The project site is located within the boundaries of the Spring Valley Sanitation District. The project would connect to an existing 8-inch sewer line located in Campo Road. No upgrades to the existing public sewer system are anticipated to accommodate wastewater flows generated by the proposed project. The County would obtain a service availability letter from the Spring Valley Sanitation District as part of the construction process to ensure that adequate sewer services are available to serve the proposed use.

Stormwater

Stormwater runoff from properties located to the north of the site is accommodated by an existing 48-inch reinforced concrete pipe storm drain that extends north–south across the property. This pipe collects school district water runoff as well as off-site runoff waters. Additionally, runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the southernmost parcel currently flows to Campo Road.

The project design would include a drainage network designed to control and filter stormwater runoff in conformance with requirements of the San Diego Regional Water Quality Control Board and County of San Diego. The proposed stormwater system may include the use of biofilters, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff. It is anticipated that stormwater runoff from the site would connect to the existing public storm drain system in Conrad Drive, as occurs under existing conditions. The project would not comingle stormwater flows from the project site in its improved condition with flows that are currently accommodated by the existing storm drain system serving the site. Further, drainage design for the project would not result in a change in stormwater volume, rate, or direction of flow from the site following project implementation. No upgrades or other improvements to the existing storm drain system are anticipated or proposed as part of the project.

Electricity

Electricity would be provided by San Diego Gas and Electric (SDG&E). Adjoining lands are currently served by SDG&E and the project would connect to the existing system for service.

Less Than Significant Impact: As described above, the proposed project would connect to existing utility services on-site or in the project area. The County would obtain service availability letters from the Helix Water District for water service and the Spring Valley Sanitation District for sewer service as part of the construction process to ensure that adequate water and sewer services can be provided for the project. For stormwater, the project design would include a drainage network designed to control and filter stormwater runoff in conformance with requirements of the San Diego RWQCB and County of San Diego. Further, drainage design for the project would not result in a change in stormwater volume, rate, or direction of flow from the site following project implementation. Electricity on-site would be provided by SDG&E and would not require expansion from existing conditions. Natural gas and telecommunication services currently exist in the area and would be extended to the site to support operations.

Therefore, implementation of the project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

☐ Potentially Significant Impact
☒ Less than Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Water service for the project site would be provided by the Helix Water District. Construction of the project would require water for dust control, which would be provided by imported water trucks. Similarly, construction of the proposed project would create a minimal amount of wastewater generated by construction workers. Wastewater generated during construction would be collected within portable toilet facilities. All wastewater generated in portable toilets would be collected by a permitted portable toilet waste hauler and appropriately disposed of off-site at an identified liquid-disposal station. Therefore, construction or expansion of water or wastewater facilities would not be required for construction of the project.

According to the Helix Water District's 2015 Urban Water Management Plan (UWMP) Update, the District's normal local water supply is comprised of groundwater and local runoff supply. The District's available supply of local water during a "normal" or average water year is assumed to be 3,388 Acre-Feet per Year (AFY), based on the sum of the net median runoff and the average groundwater production (Helix Water District 2015a).

The Urban Water Management Planning Act requires each urban water supplier to assess the reliability of its water supply for normal, single dry, and multiple dry years. Table XVIII-1, below, shows the District's estimated water supply projections from 2020 to 2035.

Table XVIII-1: Multiple Dry Years Supply and Demand

		2020	2025	2030	2035
First Year	**Supply Totals**	40,172	38,761	37,593	39,977
	Demand Totals	34,082	35,275	35,435	36,252
	Difference	6,089	3,486	2,158	3,725
Second Year	**Supply Totals**	38,965	37,548	37,024	37,916
	Demand Totals	35,864	36,781	37,024	37,916
	Difference	3,101	767	0	0
Third Year	**Supply Totals**	38,110	38,805	37,498	36,908
	Demand Totals	38,110	38,805	38,867	40,093
	Difference	0	0	(1,369)	(3,186)

Source: Helix Water District 2015a.

Analysis in the UWMP determined that potential shortages are considered minor and can be primarily contributed to increasing water demands due to economic growth within the San Diego region. To address a year of shortage, the District has a Drought Response Policy and Procedure with actions available to implement and/or increase conservation. Measures to address water shortage include, but are not limited to, the following: compensate for shortage years include carryover supplies, dry year transfers, and extraordinary conservation savings by means of voluntary and mandatory water use restrictions detailed in the District's Water Shortage and Drought Response Plan. The plan also establishes landscaped area based water use targets for irrigation class customers. The policy was developed to be compatible with other water suppliers' policies and was completed with input from cities, law enforcement agencies and the general public. The policy is intended to be consistent with this and the San Diego County Water Authority's UWMP, and is further intended to implement the authority's Drought Action Plan (Helix Water District 2015b).

Once constructed, the project would consist of a public library facility. There would be no permanent residents on the project site; however, water and wastewater would be needed for general plumbing services. The Helix Water District does not include water demand factors within its 2015 UWMP. Therefore, for the purpose of this analysis, water demand for the proposed project is based on the water demand of the recently built (2016) County of San Diego Alpine Library, as the proposed project would be similar in use. From May 2016 to May 2017, the Alpine Library required 1.14 acre-feet per year (AFY) of water (County of San Diego 2017a). The proposed project is expected to be similar in size to the Alpine Library, and therefore, it is reasonable to assume that the proposed project would require approximately 1.14 AFY of water. As stated above, the District's available supply of local water during a "normal" or average water year is assumed to be 3,388 AFY. The proposed project's water demand results in 0.0003 percent of that estimated demand. Furthermore, water demands of the existing restaurant on-site would offset a portion of the proposed project's anticipated water demand.

Additionally, the proposed project would implement water conservation measures to reduce potable water use to the extent feasible. The project would meet or exceed the conservation measures mandated by the 2019 California Green Building Standards Code. Additionally, the project would include non-mandatory water conservation measures, such as the implementation of energy-efficient water heaters; water efficient/drought tolerant landscaping, use of reclaimed water, and limiting use of conventional turf; and/or other features.

Therefore, the Helix Water District has sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Refer to Response XVIII (b), above. Wastewater for the Spring Valley area is currently treated at the Helix Water District's Levy Water Treatment Plant (WTP). The current treatment capacity of the Levy WTP is 106 million gallons per day (mgd) (Helix Water District 2020).

The project site is located within the boundaries of the Spring Valley Sanitation District. The project would connect to an existing 8-inch sewer line located in Campo Road. No upgrades to the existing public sewer system are anticipated in order to accommodate wastewater flows generated by the proposed project.

Additionally, the County would obtain a service availability letter from the Spring Valley Sanitation District as part of the construction process to ensure that adequate sewer services are available to serve the proposed use. Furthermore, the existing restaurant on-site uses water which would offset a portion of the proposed project's sewage demand. As such, the proposed project's contribution to existing wastewater demands on affected treatment facilities would be negligible.

As such, it is anticipated that the project would result in a determination by the wastewater treatment provider that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Impacts would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Assembly Bill (AB) 939 established the California Integrated Waste Management Act of 1989 (PRC Sections 42900–42927) which required all California cities and counties to reduce the volume of solid waste deposited in landfills by 50 percent by the year 2000. It also requires that cities and counties continue to remain at 50 percent or higher for each subsequent year. The act is intended to reduce, recycle, and reuse solid waste generated to the maximum extent feasible.

The act requires each California city and county to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the act's mandated diversion goals. Each jurisdiction's SRRE must include specific components as defined in PRC Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated in the jurisdiction consistent with the following hierarchy: (1) source reduction; (2) recycling and composting; and (3) environmentally safe transformation and land disposal. The SRRE is required to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste to be disposed of by transformation and land disposal (PRC Sections 40051, 41002, and 41302).

Less Than Significant Impact: The project would be served by EDCO Waste and Recycling Services, which operates through a franchise agreement with the County. Solid waste is collected and taken to a local transfer station and then to either the Otay Landfill in Chula Vista or the Sycamore Landfill in Santee.

Solid waste from construction activities would be delivered to the two landfills identified above, both of which have capacity to accommodate solid waste from the proposed project. During project operations, the proposed project would collect and sort waste materials for diversion in order to ensure compliance with statewide mandates. Additionally, the solid waste produced is anticipated to be similar to or less than the amount produced by the existing restaurant on-site. Therefore, the project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Refer to Response XVIII (d), above. The project proposes construction of a public library. Generated solid waste would consist primarily of standard inorganic waste normally associated with this type of use. The generation of substantial amounts of hazardous waste is not anticipated (refer to Section VIII, Hazards and Hazardous Materials). As noted above, the site is adequately served by local landfills. The project would comply with all applicable federal, state, and local statutes and regulations related to solid waste handling, transport, recycling, and disposal during both construction and long-term operation. Impacts would be less than significant.

XIX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: The project site is located in a developed urban area generally surrounded by institutional uses (school), commercial retail uses, and limited residential uses. According to CalFire's Fire Hazard Severity Zone Map, the project site is not located in a zone designated as Very High Fire Hazard Severity (CalFire 2020).

Emergency response and evacuation is the responsibility of the San Diego County Fire Department. The County maintains the San Diego County Emergency Operations Plan, which was approved in 2018 (County of San Diego 2018). The Emergency Operations Plan is used by agencies that respond to major emergencies and disasters, including those related to environmental health.

During construction, materials would be placed within the project boundaries adjacent to the current phase of construction to avoid any access conflicts in case of emergency evacuations. Direct access to the project site would be from Campo Drive. It is anticipated that a minimum 24-foot-wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.

Activities associated with the proposed project would not impede the free movement of emergency response vehicles. Existing off-site roadways would be adequate to serve the development for purposes of emergency evacuation in the event of a wildfire. The proposed project would not interfere with the San Diego County Sheriff's Department's ability to safely evacuate the area in the event of an emergency. Additionally, the proposed project has been designed in compliance with County's Fire Department access and design requirements related to fire prevention and subject to approval by PDS.

Therefore, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Refer to Response XIX (a), above. The project site is not located in a zone designated as Very High Fire Hazard Severity by CalFire (CalFire 2020).

The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet amsl in the southern portion of the site near Campo Road to

approximately 443 feet amsl in the northwestern portion of the site. The proposed project would be constructed in compliance with access and design requirements of the San Diego County Fire Department (conditions of approval) to ensure risks from wildfire are minimized. Therefore, the proposed project is not anticipated to exacerbate wildfire risks or otherwise expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Refer to Response XIX (a), above. The project site is not located in a zone designated as Very High Fire Hazard Severity by CalFire (CalFire 2020). The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road.

The proposed project does not include housing or require extensions of roads and other infrastructure (see Section XVIII, Utilities and Service Systems). Electricity would be provided by SDG&E. Adjoining lands are currently served by SDG&E and the project would connect to the existing system for service. Access to the site would be provided by existing roadways. Therefore, the project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Impacts would be less than significant.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact: Refer to Response XIX (a), above. The project site is not located in a zone designated as Very High Fire Hazard Severity by CalFire (CalFire 2020).

The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet amsl in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

As described under Response VII (a)(iiv), the site is designated as marginally susceptible to landslides in the County's Multi-Jurisdictional Hazard Mitigation Plan. However, the topography of the project site and surrounding vicinity is relatively flat. The project site does not include slopes greater than 25 percent. Furthermore, signs of landslides were not observed during the field exploration (Appendix D-1).

Therefore, the proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact With Mitigation Incorporated: Per the instructions for evaluating environmental impacts in this Initial Study, the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory were considered in the response to each question in Sections IV and V. In addition to project-specific impacts, this evaluation considered the project's potential for significant cumulative effects. No native vegetation communities or habitats for special-status species exist on or adjacent to the site (Appendix B). One special-status wildlife species was observed, western bluebird, and there is potential for five other special-status wildlife species to occur within the development area. As such, the proposed project would implement mitigation measure **BIO-1** to reduce potential impacts to the western bluebird to a less than significant level. Additionally, two bat species designated as special species of concern have a high potential to occur within the development area. The palm trees in the development area may support roosting habitats for one or more of these bat species, so direct impacts to bat species roosting within the palm trees are potentially significant. Therefore, the proposed project would implement mitigation measure **BIO-2** to reduce potential impacts to bat species to a less than significant level. With the implementation of mitigation measures **BIO-1** and **BIO-2**, the project would result in less than significant impacts to candidate, sensitive, or special-status species.

Although no archaeological resources were found during the field surveys, a potentially significant impact to unknown archaeological resources may occur from subsurface construction disturbances (i.e., trenching, excavation, grading) associated with the proposed project. To ensure proper protection of any unknown resources, should they be encountered during project-related ground disturbance activities, archaeological and Native American monitoring is required (mitigation measures **CR-1** and **CR-2**). Impacts would be less than significant with mitigation incorporated.

As a result of this evaluation, there is no substantial evidence that, after mitigation, significant effects associated with this project would result. Therefore, the project has been determined not to meet this Mandatory Finding of Significance.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact with Mitigation Incorporated. A cumulative impact could occur if the proposed project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present, and reasonably foreseeable future projects for each resource area. No direct significant impacts were identified for the proposed project that could not be mitigated to a less than significant level. However, when combined with other projects within the vicinity, the proposed project may result in a contribution to a potentially significant cumulative impact.

The proposed project does not include any agricultural resources that could be impacted, and the project would have no effect on population and housing and recreation. In addition, impacts would be less than significant for aesthetics, air quality, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, minerals, and utilities and service systems. As a result, cumulative impacts related to these resources would not occur.

Biological resources, cultural resources, noise, and traffic effects that are generated by construction activities would be short term and limited by a short construction period. The minimal noise and traffic generated by the project would also be less than cumulatively considerable due to limited construction activities and duration occurring at the same time. Further, effects related to biological resources, cultural resources, geology and soils, noise, public services, and transportation would be less than cumulatively considerable with implementation of mitigation measures. As a result of this evaluation, there is no substantial evidence that, after mitigation, there are cumulative effects associated with the proposed project. Therefore, the project has been determined not to meet this Mandatory Finding of Significance.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

☐ Potentially Significant Impact
☒ Less Than Significant With Mitigation Incorporated
☐ Less than Significant Impact
☐ No Impact

Discussion/Explanation:

Less than Significant Impact With Mitigation Incorporated: In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to certain questions in Sections I. Aesthetics; III. Air Quality; VI. Geology and Soils; VIII. Hazards and Hazardous Materials; IX Hydrology and Water Quality; XII. Noise; XIII. Population and Housing; and XVI. Transportation and Traffic. As a result of this evaluation, potentially significant effects to human beings related to noise and transportation were identified. However, mitigation has been included that reduces these effects to a level below significance, including mitigation measures **NOI-1** to **NOI-2** and **TR-1**. As a result of this evaluation, there is no substantial evidence that, after mitigation, there are adverse effects to human beings associated with this project. Therefore, the project has been determined not to meet this Mandatory Finding of Significance.

XIX. REFERENCES USED IN THE COMPLETION OF THE INITIAL STUDY CHECKLIST

CalFire (California Department of Forestry and Fire Protection). 2020. *California Fire Hazard Severity Zone Viewer*. November 2020. https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414.

CDC (California Department of Conservation). 2020. *California Important Farmland Finder*. https://maps.conservation.ca.gov/dlrp/ciff/.

_____. 2019. *Tsunami Inundation Maps – San Diego County*. https://www.conservation.ca.gov/cgs/tsunami/maps/san-diego.

Construction Testing & Engineering Inc. 2020. *Preliminary Geotechnical Investigation*.

County of San Diego. 2008. *County of San Diego Guidelines for Determining Significance: Mineral Resources.* http://www.sandiegocounty.gov/content/dam/sdc/dplu/docs/Mineral_Resources_Guidelines.pdf.

_____. 2009. *Guidelines for Determining Significance: Paleontological Resources*. https://www.sandiegocounty.gov/dplu/docs/Paleo-Guidelines.pdf.

_____. 2011. *General Plan: A Plan for Growth, Conservation, and Sustainability.* https://www.sandiegocounty.gov/pds/generalplan.html.

_____. 2017a. *Lakeside Library Initial Study/Mitigated Negative Declaration* – [Section XVIII. Utilities and Service Systems (Billing History of Alpine Library (New): 4/1/2016 through 7/25/2017].

_____. 2017b. *Multi-Jurisdictional Hazard Mitigation Plan, San Diego County*. https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/HazMit/2018/2018%20Hazard%20Mitigation%20Plan.pdf .

_____. 2018. *Emergency Operations Plan*. https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/plans/op-area-plan/2018/2018-EOP-Complete-Plan.pdf.

ECORP Consulting. 2020a. *Emissions Memorandum*.

_____. 2020b. *Biological Resources Letter Report*.

_____. 2020c. *Archaeological and Historic Technical Report*.

Google Earth. 2020©.

Helix Water District. 2015a. *Urban Water Management Plan 2015*. https://hwd.com/wp-content/uploads/2016/05/2015-HWD-UWMP_Adopted-1.pdf.

_____. 2015b. *Draft Drought Action Plan*. https://hwd.com/wp-content/uploads/2015/09/Drought-Action-Plan-052015-web.pdf

_____. 2020. *Managing Water Quality*. Accessed November 2020. https://hwd.com/water-quality/.

Michael Baker International. 2020a. *Hydrology and Water Quality Technical Memorandum*.

_____. 2020b. *Phase I Environmental Site Assessment*.

_____. 2020c. *Traffic Impact Study*.

OEHHA (Office of Environmental Health Hazard). 2015. *Guidance Manual*.

San Diego Natural History Museum - PaleoServices. 2020. *Paleontological Resources Technical Report.*

TECHNICAL APPENDICES

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APPENDIX A
AIR QUALITY/GREENHOUSE GAS EMISSIONS TECHNICAL MEMORANDUM

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September 2020

Michael Baker International, Inc.
Mr. Steve Wragg
9755 Clairemont Mesa Boulevard, Suite 100
San Diego, CA 92124

Subject: Casa De Oro Branch Library – Emissions Memorandum

PROJECT DESCRIPTION

The Casa de Oro Branch Library Project (proposed project) would result in replacement of the existing County of San Diego (County) Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The proposed project consists of an approximately 13,000 square-foot (SF) library facility that aims to achieve "zero net energy," with access off Campo Road, 52 parking spaces, landscaping, and fencing. The existing library is currently located at 9805 Campo Road within an existing retail commercial shopping center, just to the southeast of the proposed project site. The proposed project is intended to enhance the County's regional library system and provide expanded services to its patrons within the Spring Valley community and surrounding areas. The proposed project would be processed through the County's Department of General Services (DGS).

PROJECT LOCATION

The proposed project site is located in the community of Spring Valley in southeastern unincorporated San Diego County, California. The site is within the Valle de Oro Community Plan Area. The affected County Assessor Parcel Numbers (APNs) include portions of APNs 500-170-10, -11, and -41.

Regional access to the project vicinity is provided via State Route (SR) 94 located approximately 480 feet to the south/southwest of the site at its closest point; refer to Figure 1. Direct access to the project site would be provided from Campo Road, between Conrad Drive and Rodgers Road.

PROJECT SETTING AND EXISTING CONDITIONS

The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The area surrounding the project site is highly developed with a variety of land uses including commercial, general office, and multi-family and (limited) single-family residential uses.

The land where the library would be constructed is currently disturbed and/or developed. The majority of the property is surfaced with asphaltic pavement. Limited vegetation is present on-site and consists of turf grass associated with the sports fields and slope along the western boundary, as well as along the existing drainage in the southwestern portion of the property.

The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet above mean sea level (amsl) in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

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Location: N:\2020\2020-137.01 Casa de Oro Library\MAPS\location_vicinity\CDO_Location.mxd (TR)-trotellini 9/16/2020

Map Date: 9/16/2020

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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Location and Vicinity

2020-137.01 Casa de Oro Library

PROJECT CHARACTERISTICS

The library building would total approximately 13,000 SF in size and would house a number of rooms in order to accommodate internal library operations, as well as to provide a variety of services to the public. The proposed library would consist of the components identified in Table 1.

Table 1. Project Components

Proposed Use	
Entry plaza	Entry lobby
Restroom facilities (including staff-only)	Circulation desk
Public multi-media room (computers/copy machines)	Manager's office/work room/ sorter/storage/break room/staff restroom
Adult (study rooms/seating/book stacks)	Great room (reading area and magazine stacks)
Children (story-time area/discovery zone/book stacks/reading room/study area/crafts and children's restrooms)	Teens (study rooms/seating/book stacks)
Community room	Conference room
Audio/visual storage	Marketplace (popular books/ holds and self-checkouts)
Homework center	Friends of Library bookstore
Outdoor patio	

Project implementation would require acquisition of Real Property from an adjoining private party to the south. The County would lease the affected property from the La Mesa Spring Valley School District; no lands would be purchased from the school.

Access

Direct access to the project site would be from Campo Drive. It is anticipated that a minimum 24-foot wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.

PROJECT CONSTRUCTION

Schedule

It is anticipated that project construction would occur over a period of approximately 12 to 14 months from the onset of demolition through final construction.

Demolition

An existing modular building located on the La Mesa Spring Valley School District property would be removed to accommodate the parking lot for the library. Additionally, an existing restaurant fronting onto

Campo Road would be demolished to allow for site access. The existing asphaltic surface in the southern portion of the site would also be broken up and removed. Removal of a portion of the existing sports fields abutting the site to the north would also occur with project grading.

Grading and Site Preparation

The site would anticipate minor grading, 4,000 cubic yards (import), to accommodate the proposed library pad, surface parking area, and driveway. This includes preparation of and/or back filling of the site's retaining walls and driveway ramping (American Disability Act compliant), plus removal and recompaction (12-inch) for the foundation and parking areas. Existing on-site vegetation (i.e., on the sports fields) would be removed. Grading would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment.

PROJECT OPERATIONS

Hours of Operation and Staffing

It is anticipated that the library would be staffed by a maximum of 6 to 8 part- and/or full-time employees on a daily basis. Consistent with current operating hours for other libraries within the County's system, it is anticipated that the Casa de Oro library would operate during the following hours:

Monday and Wednesday: 9:30 a.m. to 6:00 p.m.
Tuesday and Thursday: 9:30 a.m. to 8:00 p.m.
Friday and Saturday: 9:30 a.m. to 5:00 p.m.
Sunday: Closed

AIR QUALITY ANALYSIS

Environmental Setting

San Diego Air Basin

The project site is located in the Community of Spring Valley in San Diego County. This region is identified as the San Diego Air Basin (SDAB). The topography in the SDAB varies greatly, from beaches on the west to mountains and desert on the east. Much of the topography in between consists of mesa tops intersected by canyon areas. The region's topography influences air flow and the dispersal and movement of pollutants in the basin. The mountains to the east prevent air flow mixing and prohibit dispersal of pollutants in that direction.

Regional climate and local meteorological conditions influence ambient air quality. The climate of the SDAB is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell, called the Pacific High-Pressure Cell (or Zone) influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high-pressure cell also creates two types of temperature inversions that may act to degrade local air quality. Subsidence inversions occur during the warmer months as descending air associated with the Pacific High-Pressure Cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion

that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools through radiation and the air aloft remains warm. The shallow inversion layer formed between these two air masses can also trap pollutants. In addition, ambient air quality in the SDAB is affected by air quality in the South Coast Air Basin (the metropolitan areas of Los Angeles, Orange, San Bernardino, and Riverside counties). Air pollutants, specifically the components of smog, are transported to San Diego County during relatively mild Santa Ana weather conditions. Winds blowing toward the southwest transport the polluted air from the South Coast Air Basin over the ocean. The sea breeze brings this air onshore into San Diego County. When the transported smog is at ground level, the highest ozone (O_3) concentrations are measured at coastal and near-coastal monitoring sites. However, when the blown-in smog cloud is elevated, coastal sites may be passed over, and the transported O_3 is measured farther inland.

San Diego County Air Pollution Control District

The San Diego Air Pollution Control District (SDAPCD) is the local agency responsible for the administration and enforcement of air quality regulations in San Diego County. The Air District regulates most air pollutant sources, except for motor vehicles, marine vessels, aircraft, and agricultural equipment, which are regulated by the California Air Resources Board (CARB) or the U.S. Environmental Protection Agency (USEPA). State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the District. Additionally, the SDAPCD, along with CARB, maintains and operates ambient air quality monitoring stations at numerous locations throughout San Diego County. These stations are used to measure and monitor criteria and toxic air pollutant levels in the ambient air.

Criteria Air Pollutants

Both the USEPA and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are O_3 (precursor emissions include nitrogen oxide (NOx) and reactive organic gases (ROG)), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The SDAB is designated as a nonattainment area for the federal O_3 standard and is also a nonattainment area for the state standards for O_3, coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is

expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive receptors to the project site are existing residences directly adjacent to the site's southwestern boundary. These residences front Campo Road. Additionally, the Spring Valley Middle School campus lies just north of the project site.

REGULATORY SETTING

Local Air Quality Management

As previously described, the SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations in the SDAB. The SDAPCD monitors air quality in the SDAB and serves as the lead agency responsible for implementing and enforcing federal, state, and local air quality regulations. The Air District regulates most air pollutant sources, except for motor vehicles, marine vessels, aircraft, and agricultural equipment, which are regulated by CARB or the USEPA. State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the District.

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991 and

is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009 and most recently in 2016. The RAQS outlines the SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The SDAPCD has also developed the SDAB's input to the State Implementation Plan (SIP), which is required under the federal Clean Air Act for pollutants that are designated as being in nonattainment of federal air quality standards for the basin.

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth, to project future emissions and then establish the strategies necessary for the reduction of emissions through regulatory controls. The RAQS and the SIP utilized the *2030 Regional Transportation Plan* prepared by the SANDAG to project future growth in the air basin. The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The plan also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. Stationary source control measures are developed by the SDAPCD with the goal of setting limits on the amount of emissions from various types of sources and/or requiring specific emissions control technologies. In order to implement control measures, a permit system is used to impose controls on new and modified stationary sources and to ensure compliance with regulations by prescribing specific operation conditions or equipment on a source.

At the time of this analysis, the SDAPCD had drafted the proposed *2020 Plan for Attaining the National Ozone Standards*, which is scheduled for a vote of approval by the District Board in early October. If approved by the SDAPCD Board, the plan will be submitted to CARB for their approval, and then submittal to the USEPA as a revision to the California SIP for attaining the O_3 standards. The *2020 Plan for Attaining the National Ozone Standards* demonstrates how the region will further reduce air pollutant emissions in order to attain the current National Ambient Air Quality Standards (NAAQS) for O_3 by specified dates. SANDAG was also involved in the preparation of the *2020 Plan for Attaining the National Ozone Standards* through the collection and review of the data necessary to generate comprehensive emission inventories, including socio-economic projections and industrial and travel activities.

Additionally, the SDAPCD has primary responsibility for controlling emissions from construction activity throughout the SDAB. In December 2005, the SDAPCD adopted the Measures to Reduce Particulate Matter in the SDAB. This document identifies fugitive dust as the major source of directly emitted particulate matter in the SDAB, with mobile sources and residential wood combustion as minor contributors. Data on $PM_{2.5}$ source apportionment indicates that the main contributors to $PM_{2.5}$ in the SDAB are combustion organic carbon, and ammonium sulfate and ammonium nitrate from combustion sources. The main contributors to PM_{10} include resuspended soil and road dust from unpaved and paved roads, construction and demolition sites, and mineral extraction and processing. Based on the report's evaluation of control measures recommended by CARB to reduce particulate matter emissions, the SDAPCD adopted Rule 55, the Fugitive Dust Rule, in June 2009. The SDAPCD requires that construction activities implement the measures listed in Rule 55 to minimize fugitive dust emissions. Rule 55 requires the following:

1. No person shall engage in construction or demolition activity in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.

2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall be minimized by the use of any of the equally effective track-out/carry-out and erosion control measures listed in Rule 55 that apply to the project or operation. These measures include track-out grates or gravel beds at each egress point; wheel-washing at each egress during muddy conditions; soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; watering for dust control; and using secured tarps or cargo covering, watering, or treating of transported material for outbound transport trucks. Erosion control measures must be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations.

AIR QUALITY IMPACTS

Methodology

Air quality emissions-related impacts were assessed in accordance with methodologies recommended by CARB and the SDAPCD. Where quantification is required, emissions are modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated emissions were primarily calculated using CalEEMod model defaults for San Diego County, though the span of construction and the equipment used during grading has been adjusted to reflect the information provided above (see Page 3). Specifically, it is anticipated that project construction would occur over a period of approximately 12 to 14 months from the onset of demolition through final construction. Grading would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment. Existing on-site vegetation (i.e., on the sports fields) and an existing modular building would be removed, while one structure and over 17,000 SF of asphalt would be demolished. Operational air pollutant emissions were calculated based on the project site plans and the estimated traffic trip generation rates from Michael Baker International (2020). Projected operational emissions associated with proposed operations are compared to the existing baseline, which includes a high-turnover restaurant operating out of a 2,310 SF building.

Air dispersion modeling for construction emissions was performed using the USEPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case).

Impact Discussion

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The significance criteria established by the applicable air quality management or air pollution control district (SDAPCD) may be relied upon to make impact

determinations. According to the SDAPCD, an air quality impact is considered significant if the proposed project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SDAPCD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 2.

Table 2. SDAPCD Significance Thresholds – Pounds per Day

Air Pollutant	Construction Activities	Operations
Reactive Organic Gas	75	75
Carbon Monoxide	550	550
Nitrogen Oxide	250	250
Sulfur Oxide	250	250
Coarse Particulate Matter	100	100
Fine Particulate Matter	55	55

Would the Project Conflict with or Obstruct Implementation of the Applicable Air Quality Plan?

As part of its enforcement responsibilities, the USEPA requires each state with federal nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal air quality standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in federal nonattainment areas, using a combination of performance standards and market-based programs. The SDAPCD currently monitors implementation of the SIP in the SDAB through the RAQS, which as previously described contains strategies and tactics to be applied in order to attain and maintain acceptable air quality in the SDAB. The RAQS is the applicable air quality plan for the proposed project. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. As previously described, the SDAPCD had drafted the proposed *2020 Plan for Attaining the National Ozone Standards*, which is scheduled for a vote of approval by the District Board in early October. If approved by the SDAPCD Board, the plan will be submitted to CARB for their approval, and then submittal to the USEPA as a revision to the California SIP for attaining the O_3 standards.

Consistency with the RAQS is determined by two standards: (1) whether the project would increase the frequency or severity of violations of existing air quality standards, contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as contained in the RAQS; and (2) whether the proposed project would exceed assumptions contained in the RAQS. The air quality emission projections and emission reduction strategies in the RAQS are based on information from CARB and SANDAG regarding mobile and area source emissions, as well as growth in unincorporated Spring Valley. CARB mobile source emissions projections and SANDAG growth projections are derived from population and vehicle use trends, and land use plans developed by the cities and the County of San Diego as part of their general plans. A project that proposes development consistent with the growth anticipated in a

general plan would be consistent with the RAQS (as well as the *2020 Plan for Attaining the National Ozone Standards*, when approved). Projects that propose development that is greater than the population growth projections and land use intensity of the adopted local general plan warrants further analysis to determine consistency with the RAQS and the SIP.

As evaluated below, the project would not exceed the short-term construction standards or long-term operational standards (see Table 3 and Table 4) and in so doing would not violate any air quality standards. Therefore, the project would not contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as contained in the RAQS. Thus, the project would be consistent with the first criterion.

In terms of the second criterion, the project involves the replacement of the existing Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The new library would be constructed on land that is currently disturbed and developed. Thus, the project would not represent a new type of land use in Spring Valley or an expanded source of air pollutant emissions. For instance, the project would not result in an increase of existing traffic in the Spring Valley area, a major source of air pollutants, as project traffic already occurs in association with the existing branch library. Additionally, no population growth would occur as a result of the project. Therefore, the project would not affect County-wide plans for population growth at in the Spring Valley area and would be consistent with the second criterion.

The project would not conflict with or obstruct implementation of the applicable air quality plan.

Would the Project Result in a Cumulative Considerable Net Increase of Any Criteria Pollutant for which the Project Region is Non-Attainment Under an Applicable Federal or State Ambient Air Quality Standard?

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

A portion of the proposed project's air quality impacts are attributable to construction activities. The majority of the long-term air quality impacts will be due to the operation of motor vehicles traveling to and from the site. For purposes of impact assessment, air quality impacts have been separated into construction impacts and operational impacts.

Construction Emission Impacts

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed project: operation of the construction vehicles (i.e., graders, scrapers, haul trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as demolition and grading operations,

construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SDAPCD Rule 55, the Fugitive Dust Rule, as described above.

Construction-generated emissions associated with the proposed project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A1 for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

The SDAPCD identifies significance thresholds for ROG, CO, and NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Predicted maximum daily construction-generated emissions for the proposed project are summarized in Table 3. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SDAPCD's thresholds of significance.

Table 3. Construction-Related Emissions

Construction Year	Maximum Pollutants (pounds per day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction in the Year 2021	4.48	53.22	26.73	0.07	7.16	4.07
Construction in the Year 2022	34.73	20.52	22.93	0.04	1.39	1.01
SDAPCD Potentially Significant Impact Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Exceed SDAPCD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A1 for Model Data Outputs.
Notes: The emission reduction of watering the construction site is applied based on the required implementation of SDAPCD Rule 55.

As shown in Table 3, construction-generated emissions would not exceed SDAPCD significance thresholds. Since the project's emissions do not exceed SDAPCD thresholds, no exceedance of the ambient air quality standards would occur, and no health effects from project criteria pollutants would occur.

Operational Emission Impacts

Implementation of the project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROG and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Operational air pollutant emissions were based on the project site plans and the estimated traffic trip generation rates from Michael Baker International (2020).

Long-term operational emissions attributable to the project are identified in Table 4 and compared to the existing baseline, which includes a high-turnover restaurant operating out of a 2,310 SF building. The difference is assessed against the regional operational significance thresholds promulgated by the SDAPCD.

Table 4. Operational-Related Emissions (Regional Significance Analysis)

Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Proposed Project – 13,000 SF Library						
Area Source	0.39	0.00	0.00	0.00	0.00	0.00
Energy Use	0.00	0.04	0.03	0.00	0.00	0.00
Mobile Source	1.26	4.98	12.39	0.04	3.40	0.93
Total	**1.68**	**5.02**	**12.43**	**0.04**	**3.40**	**0.93**
Existing Baseline - 2,310 SF High Turnover Restaurant						
Area Source	0.06	0.00	0.00	0.00	0.00	0.00
Energy Use	0.02	0.11	0.09	0.00	0.00	0.00
Mobile Source	0.58	2.08	5.00	0.01	1.03	0.29
Total	**0.66**	**2.19**	**5.09**	**0.01**	**1.03**	**0.29**
Difference						
Area Source	+0.33	0.00	0.00	0.00	0.00	0.00
Energy Use	-0.02	-0.07	-0.06	0.00	0.00	0.00
Mobile Source	+0.68	+2.90	+7.39	+0.03	+2.37	+0.64
Total	**+1.02**	**+2.83**	**+7.34**	**+0.03**	**+2.37**	**+0.64**
SDAPCD Significance Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Exceed SDAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A1 *for Model Data Outputs.*

Notes: Proposed project emissions projections account for 937 vehicle trips per day and existing baseline emissions projections account for 410 vehicle trips per day, per the traffic trip generation rates from Michael Baker International (2020).

Construction emissions taken from the season (summer or winter) with the highest output.

As indicated in Table 4, project operational-generated emissions would not exceed SDAPCD significance thresholds.

Would the Project Expose Sensitive Receptors to Substantial Pollutant Concentrations?

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has

identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the project site are existing residences directly adjacent to the site's southwestern boundary. Additionally, the Spring Valley Middle School campus lies just north of the project site.

Construction Generated Air Contaminants

Construction-related activities would result in temporary, short-term proposed project-generated emissions of DPM, ROG, NO_x, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. However, as shown in Table 3 the project would not exceed the SDAPCD emission thresholds during project construction. The portion of the SDAB which encompasses the project area is designated as a nonattainment area for the federal and state O_3 standards and for the state PM_{10} and $PM_{2.5}$ standards.

The health effects associated with O_3 are generally associated with reduced lung function. Because the project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the SDAPCD thresholds, the project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The project would not involve construction activities that would result in CO emissions in excess of the SDAPCD thresholds. Thus, the project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. As with O_3 and NO_x, the project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SDAPCD's thresholds. Additionally, the project would be required to comply with SDAPCD Rule 55, described above, which limits the amount of fugitive dust generated during construction. Accordingly, the project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

DPM (exhaust $PM_{2.5}$) is the primary toxic air contaminant (TAC) of concern during construction activity. Modeled exhaust $PM_{2.5}$ is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., $PM_{2.5}$). Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 1.85 pounds in a single day (see Attachment A1). This would occur during the grading phase of construction. Most DPM derives from combustion, such as use of gasoline and diesel fuels by motor vehicles. The risks associated

with the carcinogenic effects of DPM are typically evaluated based on a lifetime of chronic exposure (i.e., 24 hours per day, seven days per week, 365 days per year for 70 years). Because the generation of project-related construction emissions of DPM would typically be limited to an eight-hour work day and occur for approximately one year, and grading activities would last substantially less than a year, the proposed project would not result in long-term chronic lifetime exposure to diesel exhaust from heavy duty diesel equipment.

In order to demonstrate this, air dispersion modeling of project construction generated DPM was performed using the USEPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data provided by CARB for Gillespie Field was selected as being the most representative meteorology based on proximity to the project site (approximately 5.5 miles distant).

Emissions sources in the model include 6 line-volume sources on the project site each day of construction, which is estimated to span between 12 – 14 months, to represent construction equipment maneuvering around the construction site. Additionally, emissions sources in the model include a separate line source (comprised of 7 line-volume sources collectively) representing the material haul truck routes from the project site to the State Route 94 onramp. The maximum daily exhaust emissions for all diesel equipment was used to produce an emission rate in terms of grams per second per square meter. Emissions from construction equipment were assigned a release height of 2.5 meters and heavy trucks were assigned a release height of 3.65 meters in order to provide a conservative analysis (i.e., using higher release heights would result in a smaller impact by allowing pollutants to disperse before they affect a receptor).

Construction equipment emissions were estimated using emission factors for exhaust fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and exhaust coarse particulate matter spanning between 2.5 and 10 microns in diameter (PM_{10}) combined, as generated by the CARB-approved CalEEMod, version 2016.3.2. The model was run to obtain the peak one-hour and annual average concentration in micrograms per cubic meter ($\mu g/m^3$) at nearby sensitive receptors. Note that the concentration estimates developed using this methodology is considered conservative and is not a specific prediction of the actual concentrations that would occur as a result of the project any one point in time. Actual one-hour and annual average concentrations are dependent on many variables, particularly the number and type of equipment working at specific distances during time periods of adverse meteorology.

A health risk computation was performed to determine the risk of developing an excess cancer risk as a result of the full span of construction. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual (2015).

Based on the AERMOD outputs, the expected annual average DPM emission concentrations at the most exposed sensitive receptor resulting from project construction would be 0.067 $\mu g/m^3$ at the greatest and this would occur just to the east of the northeastern boundary of the site at the location of the school

district corporation yard. The calculated carcinogenic risk at this location as well as several other locations in the project vicinity as a result of project construction is depicted in Table 5.

Table 5. Maximum Cancer Risk for Project Construction

Exposure Scenario	Location	Maximum Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds SDAPCD Significance Threshold?
Construction – Highest Concentration	Adjacent to the northeastern boundary of the site, school corporation yard	8.00	*10*	**No**
Construction	Spring Valley Middle School Ball Field	2.86	*10*	**No**
Construction	Residences adjacent to southwestern boundary of the site	1.79	*10*	**No**
Construction	Tennis Courts across Campo Road	1.09	*10*	**No**
Construction	Residences to the west of the site	1.52	*10*	**No**
Construction	Grass Field to the northwest of the site	2.18	*10*	**No**

Source: Refer to Attachment A2 for Model Data Outputs

As shown, potential cancer risk from project construction would be below the 10 in one million threshold.

The significance thresholds for construction generated DPM exposure also requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index would occur just to the east of the northeastern boundary of the site at the location of the school district corporation yard. Specifically, the highest maximum chronic and acute hazard index would be 0.01 and 0.35, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits.

In summary, the project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Operational Air Contaminants

Operation of the proposed project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the project; nor would the project

attract mobile sources that spend long periods queuing and idling at the site. Thus, by its very nature, would not be a source of TAC concentrations during proposed project operations.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. In 1993, much of the state was designated nonattainment under the California Ambient Air Quality Standards (CAAQS) and NAAQS for CO. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration across the entire state is now designated as attainment. Detailed modeling of project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

In order to establish a more accurate record of baseline CO concentrations affecting the South Coast Air Basin, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway.

According to the Traffic Study prepared for the project (Michael Baker International 2020), the project is anticipated to generate 937 daily trips on average, which represents an increase of 527 average daily trips over existing conditions (937 project trips – 410 existing high turnover restaurant trips = 527). Because the proposed project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, or even 44,000 vehicles per day, there is no likelihood of the project traffic exceeding CO values. CO "hot spots" are not an environmental impact of concern for the project. Localized air quality impacts related to mobile source emissions would not be a concern.

Would the Project Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People?

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Project Construction

During construction, the proposed project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area.

Project Operations

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified as being associated with odors.

GREENHOUSE GAS EMISSIONS ANALYSIS

Environmental Setting

Greenhouse gas (GHG) emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere.

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

In 2019, CARB released the 2019 edition of the California GHG inventory covering calendar year 2017 emissions. In 2017, California emitted 424.1 million gross metric tons of CO2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent) and the electric power sector including both in-state and out-of-state sources (15 percent) (CARB 2019). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

REGULATORY SETTING

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlines measures to meet the 2020 GHG reduction goals. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by the end of 2020.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

Senate Bill 100 of 2018

In 2018, SB 100 was signed codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 standards are a major step toward meeting Zero Net Energy. According to the California Energy Commission, single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards and nonresidential buildings will use about 30 percent less energy (due mainly to lighting upgrades) (CEC 2018).

County of San Diego Climate Action Plan

In February 2018, the County's Board of Supervisors adopted a Climate Action Plan (CAP) that serves as a long-term programmatic plan that identifies strategies and measures to meet the County's targets to reduce GHG emissions by 2020 and 2030, consistent with the State's legislative GHG reduction targets, and demonstrates progress towards the State's 2050 GHG reduction goal. The Board's adoption of the CAP is the culmination of a multi-year plan development process that followed from the judicial invalidation (see Sierra Club v. County of San Diego (Case No. D064243)) of the County's prior CAP, which was adopted in 2012. When certifying the Environmental Impact Report (EIR) for the CAP, the Board also adopted mitigation measure M-GHG-1, establishing a protocol through which projects requiring a General Plan Amendment may meet a portion of their GHG reduction obligation by purchasing GHG emission offsets, including offsets that are generated by GHG reduction activities located outside of the County. In March 2018, several petitioners filed a lawsuit against the County alleging that the CAP, and in particular M-GHG-1, were inconsistent with the County General Plan Conservation and Open Space Element. In December 2018, the San Diego Superior Court ruled against the County, finding that the County General Plan Conservation and Open Space Element contains policy provisions that are "fundamental, mandatory, and clear" policies requiring only in-County GHG emissions reductions and foreclosing the use of offsets if such offsets originated outside San Diego County. The Court issued a writ ordering the approval of the CAP and its EIR to be set aside, and enjoining reliance on the County CAP's mitigation measure M-GHG-1. In January 2019, the County appealed the San Diego Superior Court ruling

which stayed the above described writ. In June 2020, the 4th District Court of Appeal in San Diego upheld the ruling to invalidate portions of the CAP and CAP EIR. In response to a June 12 Court of Appeal ruling, the County is revising its 2018 CAP and associated EIR yet seeks to continue implementing sustainability measures to effectively reduce GHG emissions as part of its ongoing commitment to the environment. The court ruling struck down part of the CAP and CAP EIR but did not find fault with its 26 GHG reduction measures.

GREENHOUSE GAS EMISSIONS IMPACTS

Methodology

Where quantification is required, GHG emissions are modeled using CalEEMod. Project construction generated GHG emissions were primarily calculated using CalEEMod model defaults for San Diego County, though the span of construction and the equipment used during grading has been adjusted to reflect the information provided above (see Page 3). Specifically, it is anticipated that project construction would occur over a period of approximately 12 to 14 months from the onset of demolition through final construction. Grading would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment. Existing on-site vegetation (i.e., on the sports fields) and an existing modular building would be removed, while one structure and over 17,000 SF of asphalt would be demolished. Operational GHG emissions were calculated based on the project site plans and the estimated traffic trip generation rates from Michael Baker International (2020). Projected operational GHG emissions associated with proposed operations are compared to the existing baseline, which includes a high-turnover restaurant operating out of a 2,310 SF building.

Impact Discussion

As previously described, the County is revising its 2018 CAP and associated EIR. Therefore, this CEQA analysis does not rely on the CAP to streamline the project's environmental analysis under CEQA Guidelines Section 15183.5. Rather, project GHG emissions are quantified and compared to the thresholds issued by the California Air Pollution Control Officers Association (CAPCOA), which is an association of the air pollution control officers from all 35 local air quality agencies throughout California, including the SDAPCD. CAPCOA recommends a significance threshold of 900 metric tons annually. This threshold is based on a capture rate of 90 percent of land use development projects, which in turn translates into a 90 percent capture rate of all GHG emissions. The 900 metric ton threshold, the lowest promulgated in any region in the state, is considered by CAPCOA to be low enough to capture a substantial fraction of future projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG

requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the state that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

As previously described, the 900 metric tons of CO_2e per year threshold represents a 90 percent capture rate (i.e., this threshold captures projects that represent approximately 90 percent of GHG emissions from new sources). The 900 metric tons of CO_2e per year value is typically used in defining small projects that are considered less than significant because it represents less than one percent of future 2050 statewide GHG emissions target and the lead agency can provide more efficient implementation of CEQA by focusing its scarce resources on the top 90 percent. Land use projects above the 900 metric tons of CO_2e per year level would fall within the percentage of largest projects that are worth mitigating without wasting scarce financial, governmental, physical and social resources. (SCAQMD, Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold, at pp. 3-2 and 3-3; Crockett 2011). As noted in the academic study, the fact that small projects below a numeric bright line threshold are not subject to CEQA-based mitigation, does not mean such small projects do not help the state achieve its climate change goals because even small projects participate in or comply with non-CEQA-based GHG reduction programs, such constructing development in accordance with statewide GHG-reducing energy efficiency building standards, called Cal Green or Title 24 energy-efficiency building standards (Crockett 2011), which among many goals seek to reduce GHG emissions from construction projects.

The project is also evaluated for consistency with the County's General Plan Conservation and Open Space Element, which includes smart growth and land use planning principles designed to result in a reduction in GHG emissions. Additionally, it is noted that while the County is currently revising its 2018 CAP and associated EIR at the time of this analysis, the court ruling, previously described, struck down part of the CAP and CAP EIR but did not find fault with its GHG reduction measures. Therefore, the project is assessed for consistency with the CAP Consistency Review Checklist (Checklist). The Checklist is the mechanism that is used to demonstrate consistency with the CAP's reduction measures. If a project does not comply with required actions in the Checklist, it would be determined to be inconsistent with the County's GHG reduction goals. If a project is consistent with the Checklist, a project, in terms of GHG emissions, was accounted for in the CAP's projections and would not increase emissions beyond what is anticipated in the CAP or inhibit the County from reaching its reduction targets.

Would the Project Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment?

Construction-Generated Greenhouse Gas Emissions

A potent source of GHG emissions associated with the proposed project would be combustion of fossil fuels during construction activities. The construction phase of the proposed project is temporary but would result in GHG emissions from the use of heavy construction equipment and construction-related vehicle trips.

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 6 illustrates the specific construction generated GHG emissions that would result from construction of the project.

Table 6. Construction-Related Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons/ Year)
Construction in the Year 2021	407
Construction in the Year 2022	65
CAPCOA's Potentially Significant Impact Threshold	*900*
Exceed Significance Threshold?	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment B for Model Data Outputs.

As shown in Table 6, project construction would not result in the exceedance of 900 metric tons of CO_2e during any year of construction. Once construction is complete, the generation of these GHG emissions would cease.

Operational-Generated Greenhouse Gas Emissions

Operation of the project would result in GHG emissions predominantly associated with the use of motor vehicles traveling to and from the site. Operational GHG emissions were based on the project site plans and the estimated traffic trip generation rates from Michael Baker International (2020). Long-term operational emissions attributable to the project are identified in Table 7 and compared to the existing baseline, which includes a high-turnover restaurant operating out of a 2,310 SF building.

Table 7. Operational-Related GHG Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Proposed Project – 13,000 SF Library	
Area Source Emissions	0
Energy Source Emissions	43
Mobile Source Emissions	649
Solid Waste Emissions	6
Water Emissions	5
Total Emissions	**703**
Existing Baseline - 2,310 SF High Turnover Restaurant	
Area Source Emissions	0
Energy Source Emissions	54
Mobile Source Emissions	215
Solid Waste Emissions	14
Water Emissions	4
Total Emissions	**287**
Difference	
Area Source Emissions	0
Energy Source Emissions	-11
Mobile Source Emissions	+434
Solid Waste Emissions	-8
Water Emissions	+1
Total Emissions	**+416**
CAPCOA's Potentially Significant Impact Threshold	*900*
Exceed Significance Threshold?	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment B for Model Data Outputs.

As shown in Table 7, project operations would result in an increase of approximately 416 metric tons of CO_2e annually compared with existing conditions and would not exceed CAPCOA's significance threshold of 900 metric tons annually.

Would the Project Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases?

The County of San Diego does not currently have an adopted plan for the purpose of reducing GHG emissions. However, as previously described the State of California promulgates several mandates and goals to reduce statewide GHG emissions, including the goal to reduce statewide GHG emissions to 40 percent below 1990 levels by the year 2030 (SB 32). As previously shown, project generated GHG emissions would not exceed GHG significance thresholds, which were prepared with the purpose of complying with statewide GHG emission reduction goals. Furthermore, it may be noted the existing Casa de Oro branch library would be replaced by the proposed new library. Thus, the majority of project traffic trips, a predominate source of GHG emissions, would actually not be new. It is additionally noted that the proposed project aims to achieve "zero net energy" consistent with statewide GHG reduction goals.

The County's General Plan Conservation and Open Space Element includes smart growth and land use planning principles designed to result in a reduction in GHG emissions. Table 8 presents the project's consistency with applicable General Plan strategies, goals, and policies.

Table 8. County Greenhouse Gas Related General Plan Policies	
COS 14.3 Sustainable Development. Require design of residential subdivisions and nonresidential development through "green" and sustainable land development practices to conserve energy, water, open space, and natural resources.	**Consistent.** As discussed, the proposed new library would replace the existing Casa de Oro branch library. The new library would be constructed consistent with the 2019 Building and Efficiency Standards (Title 24) which are substantially more efficient than the standards regulating past development. Additionally, the proposed project aims to achieve "zero net energy".
COS 14.7 Alternative Energy Sources for Development Projects. Encourage development projects that use energy recovery, photovoltaic, and wind energy.	**Consistent.** The proposed project aims to achieve "zero net energy", which would likely require the employment of alternative energy sources.
COS 14.10 Low Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.	**Consistent.** The project would be constructed in compliance with all applicable SDAPCD rules and regulations related to the reduction of construction emissions.
COS 15.1 Design and Construction of New Buildings. Require that new buildings be designed and constructed in accordance with "green building" programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.	**Consistent.** The project proposes sustainability and efficiency features consistent with the requirement of the 2019 Building and Efficiency Standards (Title 24). As stated, the proposed project aims to achieve "zero net energy."
COS 15.4 Title 24 Energy Standards. Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.	**Consistent.** The project proposes implementing energy efficiency features that would meet 2019 Title 24 standards.
COS 17.1 Reduction of Solid Waste Materials. Reduce GHG emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of solid waste that is generated. Divert solid waste from landfills in compliance with State law.	**Consistent.** Areas for storage and collection of recyclables would be provided.
COS 17.2 Construction and Demolition Waste. Require recycling, reduction and reuse of construction and demolition debris.	**Consistent.** The project would be required to comply with Section 68.508-68.518 of the County Municipal Code, which requires the diversion at least 90 percent of inerts and 70 percent of construction waste from landfills through reuse and recycling.

Implementing the County of San Diego General Plan Conservation and Open Space Element will greatly reduce the regional GHG emissions. As shown, the proposed project would in no way conflict with the stated goals of the Conservation and Open Space Element.

The project is also assessed for consistency with the CAP Checklist. The purpose of the Checklist is to implement GHG reduction measures from the CAP that apply to new development projects. The CAP presents the County's comprehensive strategy to reduce GHG emissions to meet its reduction targets. These reductions will be achieved through a combination of County initiatives and reduction actions for both existing and new development. Reduction actions that apply to existing and new development will be implemented through a combination of mandatory requirements and incentives.

The first step in determining consistency with the Checklist is to assess the project's consistency with the growth projections used in the development of the CAP. The project is consistent with the GHG inventory

and forecast in the CAP. Both the existing and the projected GHG inventories in the CAP were derived based on the land use designations and associated densities defined in the County's General Plan. The project involves the replacement of the existing Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The new library would be constructed on land that is currently disturbed and developed. Thus, the project would not represent a new type of land use in Spring Valley or an expanded source of GHG emissions. For instance, the project would not result in an increase of existing traffic in the Spring Valley area, a major source of GHG emissions, as project traffic already occurs in association with the existing branch library. Therefore, the project would not affect County-wide plans for growth at in the Spring Valley area. The second step of the Checklist consistency review is to review and evaluate a project's consistency with the applicable reduction measures of the Checklist. All development in San Diego County, including the project, is required to adhere to all County-adopted policy provisions, including those contained in the Checklist. The County ensures all project-applicable provisions of the Checklist are incorporated into projects and their permits through development review and applications of conditions of approval as applicable. In terms of vehicle mile reduction provisions in the Checklist, it is noted that the existing Casa de Oro branch library would be replaced by the proposed new library. Thus, the majority of project traffic trips, a predominate source of GHG emissions, would actually not be new. In terms of water use efficiency requirements in the Checklist, the project is required to submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and that demonstrates a 40 percent reduction in current maximum applied water allowance (MAWA) for outdoor use. It is noted that the project proposes to remove approximately 0.75 acre of existing on-site turf (i.e., on the sports fields), which requires a substantial amount of irrigation. The proposed project is consistent with the Checklist. Although, the Project would be conditioned to include all relevant measures of the Checklist, the project does not rely on M-GHG-1, described above.

For the reasons described, the proposed project would not interfere with the County's ability to reduce countywide GHG emissions.

REFERENCES

CARB (California Air Resources Board). 2019. California Greenhouse Gas Emission Inventory 2019 Edition. https://ww3.arb.ca.gov/cc/inventory/data/data.htm.

CAPCOA (California Air Pollution Control Officers Association). 2017. California Emissions Estimator Model (CalEEMod), version 2016.3.2.

CEC (California Energy Commission). 2018. 2019 Building Energy Efficiency Standards- Frequently Asked Questions.

Crockett, Alexander G. 2011. Addressing the Significance of Greenhouse Gas Emissions Under CEQA: California's Search for Regulatory Certainty in an Uncertain World.

Michael Baker International. 2020. Transportation Impact Analysis: Casa de Oro Library.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. Guidance Manual for Preparation of Health Risk Assessments.

SCAQMD (South Coast Air Quality Management District). 2003. Air Quality Management Plan.

_____. 1992. 1992 Federal Attainment Plan for Carbon Monoxide.

ATTACHMENT A1

Daily Criteria Air Pollutant Emissions Modeling Output

Casa De Oro - Proposed Project

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Library	13.00	1000sqft	0.30	13,000.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0
Other Non-Asphalt Surfaces	0.90	Acre	0.90	39,204.00	0
Parking Lot	52.00	Space	0.47	20,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Casa De Oro - Proposed Project - San Diego County, Summer

Project Characteristics -

Land Use - Land uses account for library, parking lot, access driveway, landscaping, and fencing

Construction Phase - Construction expected to last 12 - 14 months. Building construction and paving assumed to occur simultaneously

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - The Project Description notes that grading will employ scrapers, graders, water trucks (accounted for in Construction Trips), dozers and compaction equipment

Off-road Equipment -

Demolition - 885.7 tons of demolished debris accounted. Conservatively includes modular building, as this is only being removed, existing restaurant, 17,424 sf of asphalt, and existing building fronting Campo Road

Grading - Exported material includes removal of grass fields. Imported material per Project Description

Vehicle Trips - Trip generation per Proejct Traffic Impact Assessment

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - 2019 Building Energy Efficiency Standards 30% more efficient in nonresidential building than Standards built-in to CalEEMod

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	10.00	189.00
tblConstructionPhase	NumDays	2.00	15.00
tblGrading	MaterialExported	0.00	1,452.00
tblGrading	MaterialImported	0.00	2,000.00
tblGrading	MaterialImported	0.00	2,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblVehicleTrips	ST_TR	46.55	72.08
tblVehicleTrips	SU_TR	25.49	72.08
tblVehicleTrips	WD_TR	56.24	72.08

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.4802	53.2246	26.7375	0.0732	12.2750	2.0364	14.3114	5.4089	1.8748	7.2836	0.0000	7,302.1753	7,302.1753	1.8704	0.0000	7,348.9349
2022	34.7317	20.5238	22.9372	0.0423	0.4509	0.9410	1.3919	0.1215	0.8938	1.0152	0.0000	3,998.3101	3,998.3101	0.7937	0.0000	4,018.1524
Maximum	**34.7317**	**53.2246**	**26.7375**	**0.0732**	**12.2750**	**2.0364**	**14.3114**	**5.4089**	**1.8748**	**7.2836**	**0.0000**	**7,302.1753**	**7,302.1753**	**1.8704**	**0.0000**	**7,348.9349**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.4802	53.2246	26.7375	0.0732	5.1327	2.0364	7.1691	2.2031	1.8748	4.0779	0.0000	7,302.1752	7,302.1752	1.8704	0.0000	7,348.9349
2022	34.7317	20.5238	22.9372	0.0423	0.4509	0.9410	1.3919	0.1215	0.8938	1.0152	0.0000	3,998.3101	3,998.3101	0.7937	0.0000	4,018.1524
Maximum	**34.7317**	**53.2246**	**26.7375**	**0.0732**	**5.1327**	**2.0364**	**7.1691**	**2.2031**	**1.8748**	**4.0779**	**0.0000**	**7,302.1752**	**7,302.1752**	**1.8704**	**0.0000**	**7,348.9349**

Casa De Oro - Proposed Project - San Diego County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.12	0.00	45.48	57.97	0.00	38.63	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Energy	4.4400e-003	0.0404	0.0339	2.4000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003		48.4384	48.4384	9.3000e-004	8.9000e-004	48.7262
Mobile	1.2884	4.9006	12.2297	0.0403	3.3675	0.0332	3.4006	0.9000	0.0310	0.9310		4,099.3581	4,099.3581	0.2216		4,104.8973
Total	**1.6886**	**4.9411**	**12.2706**	**0.0405**	**3.3675**	**0.0363**	**3.4037**	**0.9000**	**0.0341**	**0.9341**		**4,147.8115**	**4,147.8115**	**0.2225**	**8.9000e-004**	**4,153.6395**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Energy	3.9400e-003	0.0359	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		43.0205	43.0205	8.2000e-004	7.9000e-004	43.2761
Mobile	1.2884	4.9006	12.2297	0.0403	3.3675	0.0332	3.4006	0.9000	0.0310	0.9310		4,099.3581	4,099.3581	0.2216		4,104.8973
Total	**1.6881**	**4.9366**	**12.2668**	**0.0405**	**3.3675**	**0.0359**	**3.4034**	**0.9000**	**0.0337**	**0.9337**		**4,142.3936**	**4,142.3936**	**0.2224**	**7.9000e-004**	**4,148.1895**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.03**	**0.09**	**0.03**	**0.05**	**0.00**	**0.96**	**0.01**	**0.00**	**1.03**	**0.04**	**0.00**	**0.13**	**0.13**	**0.05**	**11.24**	**0.13**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	4/16/2021	5	15	
3	Grading	Grading	4/17/2021	5/14/2021	5	20	
4	Building Construction	Building Construction	5/15/2021	2/18/2022	5	200	
5	Paving	Paving	6/1/2021	2/18/2022	5	189	
6	Architectural Coating	Architectural Coating	2/19/2022	3/4/2022	5	10	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 50

Acres of Paving: 1.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 19,500; Non-Residential Outdoor: 6,500; Striped Parking Area: 3,780 (Architectural Coating – sqft)

OffRoad Equipment

Casa De Oro - Proposed Project - San Diego County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	2	6.00	187	0.41
Grading	Plate Compactors	1	7.00	8	0.43
Grading	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	2	6.00	247	0.40
Grading	Scrapers	2	7.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	88.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	432.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	32.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9595	0.0000	0.9595	0.1453	0.0000	0.1453			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**0.9595**	**1.0409**	**2.0004**	**0.1453**	**0.9715**	**1.1168**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0327	1.1279	0.2759	3.3900e-003	0.0769	3.4400e-003	0.0803	0.0211	3.2900e-003	0.0244		372.0993	372.0993	0.0329		372.9211
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0450	0.0292	0.3448	1.0600e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		105.8773	105.8773	3.0200e-003		105.9529
Total	**0.0776**	**1.1571**	**0.6207**	**4.4500e-003**	**0.1837**	**4.1800e-003**	**0.1879**	**0.0494**	**3.9700e-003**	**0.0534**		**477.9766**	**477.9766**	**0.0359**		**478.8739**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3742	0.0000	0.3742	0.0567	0.0000	0.0567			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**0.3742**	**1.0409**	**1.4151**	**0.0567**	**0.9715**	**1.0281**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0327	1.1279	0.2759	3.3900e-003	0.0769	3.4400e-003	0.0803	0.0211	3.2900e-003	0.0244		372.0993	372.0993	0.0329		372.9211
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0450	0.0292	0.3448	1.0600e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		105.8773	105.8773	3.0200e-003		105.9529
Total	**0.0776**	**1.1571**	**0.6207**	**4.4500e-003**	**0.1837**	**4.1800e-003**	**0.1879**	**0.0494**	**3.9700e-003**	**0.0534**		**477.9766**	**477.9766**	**0.0359**		**478.8739**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8183	0.0000	5.8183	2.9565	0.0000	2.9565			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041		1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**5.8183**	**0.7654**	**6.5837**	**2.9565**	**0.7041**	**3.6607**		**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1237	4.2722	1.0452	0.0129	0.2912	0.0130	0.3043	0.0798	0.0125	0.0923		1,409.4672	1,409.4672	0.1245		1,412.5798
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	**0.1514**	**4.2902**	**1.2574**	**0.0135**	**0.3570**	**0.0135**	**0.3704**	**0.0972**	**0.0129**	**0.1101**		**1,474.6224**	**1,474.6224**	**0.1264**		**1,477.7815**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2691	0.0000	2.2691	1.1531	0.0000	1.1531			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**2.2691**	**0.7654**	**3.0345**	**1.1531**	**0.7041**	**1.8572**	**0.0000**	**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1237	4.2722	1.0452	0.0129	0.2912	0.0130	0.3043	0.0798	0.0125	0.0923		1,409.4672	1,409.4672	0.1245		1,412.5798
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	**0.1514**	**4.2902**	**1.2574**	**0.0135**	**0.3570**	**0.0135**	**0.3704**	**0.0972**	**0.0129**	**0.1101**		**1,474.6224**	**1,474.6224**	**0.1264**		**1,477.7815**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.7086	0.0000	11.7086	5.2553	0.0000	5.2553			0.0000			0.0000
Off-Road	4.2403	47.6361	24.7729	0.0547		2.0182	2.0182		1.8574	1.8574		5,288.1844	5,288.1844	1.7037		5,330.7764
Total	**4.2403**	**47.6361**	**24.7729**	**0.0547**	**11.7086**	**2.0182**	**13.7268**	**5.2553**	**1.8574**	**7.1127**		**5,288.1844**	**5,288.1844**	**1.7037**		**5,330.7764**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1603	5.5368	1.3545	0.0167	0.3774	0.0169	0.3943	0.1034	0.0162	0.1196		1,826.6694	1,826.6694	0.1614		1,830.7034
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0796	0.0517	0.6101	1.8800e-003	0.1889	1.3100e-003	0.1902	0.0501	1.2000e-003	0.0513		187.3214	187.3214	5.3500e-003		187.4551
Total	**0.2399**	**5.5885**	**1.9646**	**0.0185**	**0.5664**	**0.0182**	**0.5846**	**0.1536**	**0.0174**	**0.1709**		**2,013.9908**	**2,013.9908**	**0.1667**		**2,018.1585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5664	0.0000	4.5664	2.0496	0.0000	2.0496			0.0000			0.0000
Off-Road	4.2403	47.6361	24.7729	0.0547		2.0182	2.0182		1.8574	1.8574	0.0000	5,288.1844	5,288.1844	1.7037		5,330.7764
Total	**4.2403**	**47.6361**	**24.7729**	**0.0547**	**4.5664**	**2.0182**	**6.5845**	**2.0496**	**1.8574**	**3.9070**	**0.0000**	**5,288.1844**	**5,288.1844**	**1.7037**		**5,330.7764**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1603	5.5368	1.3545	0.0167	0.3774	0.0169	0.3943	0.1034	0.0162	0.1196		1,826.6694	1,826.6694	0.1614		1,830.7034
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0796	0.0517	0.6101	1.8800e-003	0.1889	1.3100e-003	0.1902	0.0501	1.2000e-003	0.0513		187.3214	187.3214	5.3500e-003		187.4551
Total	**0.2399**	**5.5885**	**1.9646**	**0.0185**	**0.5664**	**0.0182**	**0.5846**	**0.1536**	**0.0174**	**0.1709**		**2,013.9908**	**2,013.9908**	**0.1667**		**2,018.1585**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0363	1.2220	0.3114	3.2500e-003	0.0812	2.5700e-003	0.0838	0.0234	2.4500e-003	0.0258		349.6223	349.6223	0.0250		350.2469
Worker	0.1107	0.0719	0.8488	2.6200e-003	0.2629	1.8200e-003	0.2647	0.0697	1.6700e-003	0.0714		260.6211	260.6211	7.4400e-003		260.8070
Total	**0.1470**	**1.2939**	**1.1602**	**5.8700e-003**	**0.3441**	**4.3900e-003**	**0.3485**	**0.0931**	**4.1200e-003**	**0.0972**		**610.2434**	**610.2434**	**0.0324**		**611.0539**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0363	1.2220	0.3114	3.2500e-003	0.0812	2.5700e-003	0.0838	0.0234	2.4500e-003	0.0258		349.6223	349.6223	0.0250		350.2469
Worker	0.1107	0.0719	0.8488	2.6200e-003	0.2629	1.8200e-003	0.2647	0.0697	1.6700e-003	0.0714		260.6211	260.6211	7.4400e-003		260.8070
Total	**0.1470**	**1.2939**	**1.1602**	**5.8700e-003**	**0.3441**	**4.3900e-003**	**0.3485**	**0.0931**	**4.1200e-003**	**0.0972**		**610.2434**	**610.2434**	**0.0324**		**611.0539**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0337	1.1548	0.2949	3.2100e-003	0.0812	2.2100e-003	0.0834	0.0234	2.1100e-003	0.0255		346.3365	346.3365	0.0242		346.9419
Worker	0.1046	0.0656	0.7893	2.5200e-003	0.2629	1.7800e-003	0.2647	0.0697	1.6400e-003	0.0714		251.0591	251.0591	6.8200e-003		251.2296
Total	**0.1384**	**1.2204**	**1.0842**	**5.7300e-003**	**0.3441**	**3.9900e-003**	**0.3481**	**0.0931**	**3.7500e-003**	**0.0969**		**597.3957**	**597.3957**	**0.0310**		**598.1715**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0337	1.1548	0.2949	3.2100e-003	0.0812	2.2100e-003	0.0834	0.0234	2.1100e-003	0.0255		346.3365	346.3365	0.0242		346.9419
Worker	0.1046	0.0656	0.7893	2.5200e-003	0.2629	1.7800e-003	0.2647	0.0697	1.6400e-003	0.0714		251.0591	251.0591	6.8200e-003		251.2296
Total	**0.1384**	**1.2204**	**1.0842**	**5.7300e-003**	**0.3441**	**3.9900e-003**	**0.3481**	**0.0931**	**3.7500e-003**	**0.0969**		**597.3957**	**597.3957**	**0.0310**		**598.1715**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7804**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0450	0.0292	0.3448	1.0600e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		105.8773	105.8773	3.0200e-003		105.9529
Total	**0.0450**	**0.0292**	**0.3448**	**1.0600e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**105.8773**	**105.8773**	**3.0200e-003**		**105.9529**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7804**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0450	0.0292	0.3448	1.0600e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		105.8773	105.8773	3.0200e-003		105.9529
Total	**0.0450**	**0.0292**	**0.3448**	**1.0600e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**105.8773**	**105.8773**	**3.0200e-003**		**105.9529**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6942**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**		**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0266	0.3206	1.0200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		101.9928	101.9928	2.7700e-003		102.0620
Total	**0.0425**	**0.0266**	**0.3206**	**1.0200e-003**	**0.1068**	**7.2000e-004**	**0.1075**	**0.0283**	**6.6000e-004**	**0.0290**		**101.9928**	**101.9928**	**2.7700e-003**		**102.0620**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6942**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**	**0.0000**	**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0266	0.3206	1.0200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		101.9928	101.9928	2.7700e-003		102.0620
Total	**0.0425**	**0.0266**	**0.3206**	**1.0200e-003**	**0.1068**	**7.2000e-004**	**0.1075**	**0.0283**	**6.6000e-004**	**0.0290**		**101.9928**	**101.9928**	**2.7700e-003**		**102.0620**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	34.5076					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**34.7121**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0123	0.1480	4.7000e-004	0.0493	3.3000e-004	0.0496	0.0131	3.1000e-004	0.0134		47.0736	47.0736	1.2800e-003		47.1056
Total	**0.0196**	**0.0123**	**0.1480**	**4.7000e-004**	**0.0493**	**3.3000e-004**	**0.0496**	**0.0131**	**3.1000e-004**	**0.0134**		**47.0736**	**47.0736**	**1.2800e-003**		**47.1056**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	34.5076					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**34.7121**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0123	0.1480	4.7000e-004	0.0493	3.3000e-004	0.0496	0.0131	3.1000e-004	0.0134		47.0736	47.0736	1.2800e-003		47.1056
Total	**0.0196**	**0.0123**	**0.1480**	**4.7000e-004**	**0.0493**	**3.3000e-004**	**0.0496**	**0.0131**	**3.1000e-004**	**0.0134**		**47.0736**	**47.0736**	**1.2800e-003**		**47.1056**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2884	4.9006	12.2297	0.0403	3.3675	0.0332	3.4006	0.9000	0.0310	0.9310		4,099.3581	4,099.3581	0.2216		4,104.8973
Unmitigated	1.2884	4.9006	12.2297	0.0403	3.3675	0.0332	3.4006	0.9000	0.0310	0.9310		4,099.3581	4,099.3581	0.2216		4,104.8973

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Library	937.04	937.04	937.04	1,588,149	1,588,149
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	937.04	937.04	937.04	1,588,149	1,588,149

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Library	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Other Non-Asphalt Surfaces	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9400e-003	0.0359	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		43.0205	43.0205	8.2000e-004	7.9000e-004	43.2761
NaturalGas Unmitigated	4.4400e-003	0.0404	0.0339	2.4000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003		48.4384	48.4384	9.3000e-004	8.9000e-004	48.7262

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Library	411.726	4.4400e-003	0.0404	0.0339	2.4000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003		48.4384	48.4384	9.3000e-004	8.9000e-004	48.7262
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.4400e-003**	**0.0404**	**0.0339**	**2.4000e-004**		**3.0700e-003**	**3.0700e-003**		**3.0700e-003**	**3.0700e-003**		**48.4384**	**48.4384**	**9.3000e-004**	**8.9000e-004**	**48.7262**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Library	0.365674	3.9400e-003	0.0359	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		43.0205	43.0205	8.2000e-004	7.9000e-004	43.2761
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.9400e-003**	**0.0359**	**0.0301**	**2.2000e-004**		**2.7200e-003**	**2.7200e-003**		**2.7200e-003**	**2.7200e-003**		**43.0205**	**43.0205**	**8.2000e-004**	**7.9000e-004**	**43.2761**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Unmitigated	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6000e-004	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Total	**0.3957**	**6.0000e-005**	**7.0500e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0151**	**0.0151**	**4.0000e-005**		**0.0161**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6000e-004	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Total	**0.3957**	**6.0000e-005**	**7.0500e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0151**	**0.0151**	**4.0000e-005**		**0.0161**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Casa De Oro - Proposed Project

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Library	13.00	1000sqft	0.30	13,000.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0
Other Non-Asphalt Surfaces	0.90	Acre	0.90	39,204.00	0
Parking Lot	52.00	Space	0.47	20,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Casa De Oro - Proposed Project - San Diego County, Winter

Project Characteristics -

Land Use - Land uses account for library, parking lot, access driveway, landscaping, and fencing

Construction Phase - Construction expected to last 12 - 14 months. Building construction and paving assumed to occur simultaneously

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - The Project Description notes that grading will employ scrapers, graders, water trucks (accounted for in Construction Trips), dozers and compaction equipment

Off-road Equipment -

Demolition - 885.7 tons of demolished debris accounted. Conservatively includes modular building, as this is only being removed, existing restaurant, 17,424 sf of asphalt, and existing building fronting Campo Road

Grading - Exported material includes removal of grass fields. Imported material per Project Description

Vehicle Trips - Trip generation per Proejct Traffic Impact Assessment

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - 2019 Building Energy Efficiency Standards 30% more efficient in nonresidential building than Standards built-in to CalEEMod

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	10.00	189.00
tblConstructionPhase	NumDays	2.00	15.00
tblGrading	MaterialExported	0.00	1,452.00
tblGrading	MaterialImported	0.00	2,000.00
tblGrading	MaterialImported	0.00	2,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblVehicleTrips	ST_TR	46.55	72.08
tblVehicleTrips	SU_TR	25.49	72.08
tblVehicleTrips	WD_TR	56.24	72.08

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.4953	53.2787	26.7862	0.0728	12.2750	2.0367	14.3117	5.4089	1.8751	7.2840	0.0000	7,259.1399	7,259.1399	1.8754	0.0000	7,306.0247
2022	34.7344	20.5312	22.9018	0.0420	0.4509	0.9411	1.3920	0.1215	0.8939	1.0153	0.0000	3,967.6814	3,967.6814	0.7946	0.0000	3,987.5469
Maximum	**34.7344**	**53.2787**	**26.7862**	**0.0728**	**12.2750**	**2.0367**	**14.3117**	**5.4089**	**1.8751**	**7.2840**	**0.0000**	**7,259.1399**	**7,259.1399**	**1.8754**	**0.0000**	**7,306.0247**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.4953	53.2787	26.7862	0.0728	5.1327	2.0367	7.1695	2.2031	1.8751	4.0782	0.0000	7,259.1399	7,259.1399	1.8754	0.0000	7,306.0247
2022	34.7344	20.5312	22.9018	0.0420	0.4509	0.9411	1.3920	0.1215	0.8939	1.0153	0.0000	3,967.6814	3,967.6814	0.7946	0.0000	3,987.5469
Maximum	**34.7344**	**53.2787**	**26.7862**	**0.0728**	**5.1327**	**2.0367**	**7.1695**	**2.2031**	**1.8751**	**4.0782**	**0.0000**	**7,259.1399**	**7,259.1399**	**1.8754**	**0.0000**	**7,306.0247**

Casa De Oro - Proposed Project - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.12	0.00	45.48	57.97	0.00	38.63	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Energy	4.4400e-003	0.0404	0.0339	2.4000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003		48.4384	48.4384	9.3000e-004	8.9000e-004	48.7262
Mobile	1.2469	4.9859	12.3914	0.0382	3.3675	0.0335	3.4010	0.9000	0.0313	0.9313		3,883.3417	3,883.3417	0.2259		3,888.9895
Total	**1.6470**	**5.0263**	**12.4323**	**0.0384**	**3.3675**	**0.0366**	**3.4041**	**0.9000**	**0.0344**	**0.9344**		**3,931.7951**	**3,931.7951**	**0.2269**	**8.9000e-004**	**3,937.7318**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Energy	3.9400e-003	0.0359	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		43.0205	43.0205	8.2000e-004	7.9000e-004	43.2761
Mobile	1.2469	4.9859	12.3914	0.0382	3.3675	0.0335	3.4010	0.9000	0.0313	0.9313		3,883.3417	3,883.3417	0.2259		3,888.9895
Total	**1.6465**	**5.0218**	**12.4285**	**0.0384**	**3.3675**	**0.0363**	**3.4038**	**0.9000**	**0.0341**	**0.9340**		**3,926.3772**	**3,926.3772**	**0.2268**	**7.9000e-004**	**3,932.2817**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.03**	**0.09**	**0.03**	**0.05**	**0.00**	**0.96**	**0.01**	**0.00**	**1.02**	**0.04**	**0.00**	**0.14**	**0.14**	**0.05**	**11.24**	**0.14**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	4/16/2021	5	15	
3	Grading	Grading	4/17/2021	5/14/2021	5	20	
4	Building Construction	Building Construction	5/15/2021	2/18/2022	5	200	
5	Paving	Paving	6/1/2021	2/18/2022	5	189	
6	Architectural Coating	Architectural Coating	2/19/2022	3/4/2022	5	10	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 50

Acres of Paving: 1.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 19,500; Non-Residential Outdoor: 6,500; Striped Parking Area: 3,780 (Architectural Coating – sqft)

OffRoad Equipment

Casa De Oro - Proposed Project - San Diego County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	2	6.00	187	0.41
Grading	Plate Compactors	1	7.00	8	0.43
Grading	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	2	6.00	247	0.40
Grading	Scrapers	2	7.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	88.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	432.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	32.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9595	0.0000	0.9595	0.1453	0.0000	0.1453			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**0.9595**	**1.0409**	**2.0004**	**0.1453**	**0.9715**	**1.1168**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0336	1.1376	0.2933	3.3300e-003	0.0769	3.5100e-003	0.0804	0.0211	3.3600e-003	0.0244		365.6705	365.6705	0.0340		366.5192
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.0846**	**1.1704**	**0.6174**	**4.3300e-003**	**0.1837**	**4.2500e-003**	**0.1879**	**0.0494**	**4.0400e-003**	**0.0534**		**465.0616**	**465.0616**	**0.0368**		**465.9818**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3742	0.0000	0.3742	0.0567	0.0000	0.0567			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**0.3742**	**1.0409**	**1.4151**	**0.0567**	**0.9715**	**1.0281**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0336	1.1376	0.2933	3.3300e-003	0.0769	3.5100e-003	0.0804	0.0211	3.3600e-003	0.0244		365.6705	365.6705	0.0340		366.5192
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.0846**	**1.1704**	**0.6174**	**4.3300e-003**	**0.1837**	**4.2500e-003**	**0.1879**	**0.0494**	**4.0400e-003**	**0.0534**		**465.0616**	**465.0616**	**0.0368**		**465.9818**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8183	0.0000	5.8183	2.9565	0.0000	2.9565			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041		1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**5.8183**	**0.7654**	**6.5837**	**2.9565**	**0.7041**	**3.6607**		**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1271	4.3091	1.1110	0.0126	0.2912	0.0133	0.3045	0.0798	0.0127	0.0926		1,385.1154	1,385.1154	0.1286		1,388.3303
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	**0.1585**	**4.3293**	**1.3104**	**0.0132**	**0.3570**	**0.0138**	**0.3707**	**0.0972**	**0.0132**	**0.1104**		**1,446.2792**	**1,446.2792**	**0.1304**		**1,449.5380**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2691	0.0000	2.2691	1.1531	0.0000	1.1531			0.0000			0.0000
Off-Road	1.5558	17.4203	7.5605	0.0172		0.7654	0.7654		0.7041	0.7041	0.0000	1,666.5174	1,666.5174	0.5390		1,679.9920
Total	**1.5558**	**17.4203**	**7.5605**	**0.0172**	**2.2691**	**0.7654**	**3.0345**	**1.1531**	**0.7041**	**1.8572**	**0.0000**	**1,666.5174**	**1,666.5174**	**0.5390**		**1,679.9920**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1271	4.3091	1.1110	0.0126	0.2912	0.0133	0.3045	0.0798	0.0127	0.0926		1,385.1154	1,385.1154	0.1286		1,388.3303
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	**0.1585**	**4.3293**	**1.3104**	**0.0132**	**0.3570**	**0.0138**	**0.3707**	**0.0972**	**0.0132**	**0.1104**		**1,446.2792**	**1,446.2792**	**0.1304**		**1,449.5380**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.7086	0.0000	11.7086	5.2553	0.0000	5.2553			0.0000			0.0000
Off-Road	4.2403	47.6361	24.7729	0.0547		2.0182	2.0182		1.8574	1.8574		5,288.1844	5,288.1844	1.7037		5,330.7764
Total	**4.2403**	**47.6361**	**24.7729**	**0.0547**	**11.7086**	**2.0182**	**13.7268**	**5.2553**	**1.8574**	**7.1127**		**5,288.1844**	**5,288.1844**	**1.7037**		**5,330.7764**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1648	5.5846	1.4398	0.0164	0.3774	0.0173	0.3947	0.1034	0.0165	0.1199		1,795.1095	1,795.1095	0.1667		1,799.2760
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0902	0.0580	0.5735	1.7600e-003	0.1889	1.3100e-003	0.1902	0.0501	1.2000e-003	0.0513		175.8459	175.8459	5.0500e-003		175.9722
Total	**0.2550**	**5.6426**	**2.0133**	**0.0181**	**0.5664**	**0.0186**	**0.5849**	**0.1536**	**0.0177**	**0.1713**		**1,970.9555**	**1,970.9555**	**0.1717**		**1,975.2483**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5664	0.0000	4.5664	2.0496	0.0000	2.0496			0.0000			0.0000
Off-Road	4.2403	47.6361	24.7729	0.0547		2.0182	2.0182		1.8574	1.8574	0.0000	5,288.1844	5,288.1844	1.7037		5,330.7764
Total	**4.2403**	**47.6361**	**24.7729**	**0.0547**	**4.5664**	**2.0182**	**6.5845**	**2.0496**	**1.8574**	**3.9070**	**0.0000**	**5,288.1844**	**5,288.1844**	**1.7037**		**5,330.7764**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1648	5.5846	1.4398	0.0164	0.3774	0.0173	0.3947	0.1034	0.0165	0.1199		1,795.1095	1,795.1095	0.1667		1,799.2760
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0902	0.0580	0.5735	1.7600e-003	0.1889	1.3100e-003	0.1902	0.0501	1.2000e-003	0.0513		175.8459	175.8459	5.0500e-003		175.9722
Total	**0.2550**	**5.6426**	**2.0133**	**0.0181**	**0.5664**	**0.0186**	**0.5849**	**0.1536**	**0.0177**	**0.1713**		**1,970.9555**	**1,970.9555**	**0.1717**		**1,975.2483**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0383	1.2187	0.3467	3.1700e-003	0.0812	2.6700e-003	0.0839	0.0234	2.5500e-003	0.0259		340.5832	340.5832	0.0265		341.2465
Worker	0.1255	0.0807	0.7978	2.4500e-003	0.2629	1.8200e-003	0.2647	0.0697	1.6700e-003	0.0714		244.6552	244.6552	7.0300e-003		244.8310
Total	**0.1638**	**1.2994**	**1.1446**	**5.6200e-003**	**0.3441**	**4.4900e-003**	**0.3486**	**0.0931**	**4.2200e-003**	**0.0973**		**585.2384**	**585.2384**	**0.0336**		**586.0774**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0383	1.2187	0.3467	3.1700e-003	0.0812	2.6700e-003	0.0839	0.0234	2.5500e-003	0.0259		340.5832	340.5832	0.0265		341.2465
Worker	0.1255	0.0807	0.7978	2.4500e-003	0.2629	1.8200e-003	0.2647	0.0697	1.6700e-003	0.0714		244.6552	244.6552	7.0300e-003		244.8310
Total	**0.1638**	**1.2994**	**1.1446**	**5.6200e-003**	**0.3441**	**4.4900e-003**	**0.3486**	**0.0931**	**4.2200e-003**	**0.0973**		**585.2384**	**585.2384**	**0.0336**		**586.0774**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0356	1.1509	0.3283	3.1300e-003	0.0812	2.3000e-003	0.0835	0.0234	2.2000e-003	0.0256		337.3231	337.3231	0.0257		337.9653
Worker	0.1190	0.0736	0.7403	2.3600e-003	0.2629	1.7800e-003	0.2647	0.0697	1.6400e-003	0.0714		235.6882	235.6882	6.4400e-003		235.8491
Total	**0.1545**	**1.2245**	**1.0686**	**5.4900e-003**	**0.3441**	**4.0800e-003**	**0.3482**	**0.0931**	**3.8400e-003**	**0.0970**		**573.0113**	**573.0113**	**0.0321**		**573.8143**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0356	1.1509	0.3283	3.1300e-003	0.0812	2.3000e-003	0.0835	0.0234	2.2000e-003	0.0256		337.3231	337.3231	0.0257		337.9653
Worker	0.1190	0.0736	0.7403	2.3600e-003	0.2629	1.7800e-003	0.2647	0.0697	1.6400e-003	0.0714		235.6882	235.6882	6.4400e-003		235.8491
Total	**0.1545**	**1.2245**	**1.0686**	**5.4900e-003**	**0.3441**	**4.0800e-003**	**0.3482**	**0.0931**	**3.8400e-003**	**0.0970**		**573.0113**	**573.0113**	**0.0321**		**573.8143**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7804**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.0510**	**0.0328**	**0.3241**	**1.0000e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**99.3912**	**99.3912**	**2.8600e-003**		**99.4626**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7804**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.0510**	**0.0328**	**0.3241**	**1.0000e-003**	**0.1068**	**7.4000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**99.3912**	**99.3912**	**2.8600e-003**		**99.4626**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6942**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**		**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0483	0.0299	0.3008	9.6000e-004	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		95.7483	95.7483	2.6100e-003		95.8137
Total	**0.0483**	**0.0299**	**0.3008**	**9.6000e-004**	**0.1068**	**7.2000e-004**	**0.1075**	**0.0283**	**6.6000e-004**	**0.0290**		**95.7483**	**95.7483**	**2.6100e-003**		**95.8137**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	6.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6942**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**	**0.0000**	**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0483	0.0299	0.3008	9.6000e-004	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		95.7483	95.7483	2.6100e-003		95.8137
Total	**0.0483**	**0.0299**	**0.3008**	**9.6000e-004**	**0.1068**	**7.2000e-004**	**0.1075**	**0.0283**	**6.6000e-004**	**0.0290**		**95.7483**	**95.7483**	**2.6100e-003**		**95.8137**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	34.5076					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**34.7121**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0223	0.0138	0.1388	4.4000e-004	0.0493	3.3000e-004	0.0496	0.0131	3.1000e-004	0.0134		44.1915	44.1915	1.2100e-003		44.2217
Total	**0.0223**	**0.0138**	**0.1388**	**4.4000e-004**	**0.0493**	**3.3000e-004**	**0.0496**	**0.0131**	**3.1000e-004**	**0.0134**		**44.1915**	**44.1915**	**1.2100e-003**		**44.2217**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	34.5076					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**34.7121**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0223	0.0138	0.1388	4.4000e-004	0.0493	3.3000e-004	0.0496	0.0131	3.1000e-004	0.0134		44.1915	44.1915	1.2100e-003		44.2217
Total	**0.0223**	**0.0138**	**0.1388**	**4.4000e-004**	**0.0493**	**3.3000e-004**	**0.0496**	**0.0131**	**3.1000e-004**	**0.0134**		**44.1915**	**44.1915**	**1.2100e-003**		**44.2217**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2469	4.9859	12.3914	0.0382	3.3675	0.0335	3.4010	0.9000	0.0313	0.9313		3,883.3417	3,883.3417	0.2259		3,888.9895
Unmitigated	1.2469	4.9859	12.3914	0.0382	3.3675	0.0335	3.4010	0.9000	0.0313	0.9313		3,883.3417	3,883.3417	0.2259		3,888.9895

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Library	937.04	937.04	937.04	1,588,149	1,588,149
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	937.04	937.04	937.04	1,588,149	1,588,149

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Library	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Other Non-Asphalt Surfaces	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9400e-003	0.0359	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		43.0205	43.0205	8.2000e-004	7.9000e-004	43.2761
NaturalGas Unmitigated	4.4400e-003	0.0404	0.0339	2.4000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003		48.4384	48.4384	9.3000e-004	8.9000e-004	48.7262

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Library	411.726	4.4400e-003	0.0404	0.0339	2.4000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003		48.4384	48.4384	9.3000e-004	8.9000e-004	48.7262
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.4400e-003**	**0.0404**	**0.0339**	**2.4000e-004**		**3.0700e-003**	**3.0700e-003**		**3.0700e-003**	**3.0700e-003**		**48.4384**	**48.4384**	**9.3000e-004**	**8.9000e-004**	**48.7262**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Library	0.365674	3.9400e-003	0.0359	0.0301	2.2000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003		43.0205	43.0205	8.2000e-004	7.9000e-004	43.2761
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.9400e-003**	**0.0359**	**0.0301**	**2.2000e-004**		**2.7200e-003**	**2.7200e-003**		**2.7200e-003**	**2.7200e-003**		**43.0205**	**43.0205**	**8.2000e-004**	**7.9000e-004**	**43.2761**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Unmitigated	0.3957	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6000e-004	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Total	**0.3957**	**6.0000e-005**	**7.0500e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0151**	**0.0151**	**4.0000e-005**		**0.0161**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6000e-004	6.0000e-005	7.0500e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0151	0.0151	4.0000e-005		0.0161
Total	**0.3957**	**6.0000e-005**	**7.0500e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0151**	**0.0151**	**4.0000e-005**		**0.0161**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Casa de Oro - Existing Baseline

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	2.31	1000sqft	0.05	2,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction this model

Vehicle Trips - Trip Generation per Traffic Impact Assessment

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	3/10/2021	3/3/2021
tblVehicleTrips	ST_TR	158.37	177.48
tblVehicleTrips	SU_TR	131.84	177.48
tblVehicleTrips	WD_TR	127.15	177.48

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0941	0.0000	0.0000	0.0941	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0941	0.0000	0.0000	0.0941	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Energy	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Mobile	0.5895	2.0558	4.7732	0.0134	1.0087	0.0134	1.0221	0.2696	0.0126	0.2822		1,356.8311	1,356.8311	0.0833		1,358.9141
Total	**0.6656**	**2.1655**	**4.8656**	**0.0140**	**1.0087**	**0.0217**	**1.0305**	**0.2696**	**0.0209**	**0.2905**		**1,488.4104**	**1,488.4104**	**0.0858**	**2.4100e-003**	**1,491.2754**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Energy	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Mobile	0.5895	2.0558	4.7732	0.0134	1.0087	0.0134	1.0221	0.2696	0.0126	0.2822		1,356.8311	1,356.8311	0.0833		1,358.9141
Total	**0.6656**	**2.1655**	**4.8656**	**0.0140**	**1.0087**	**0.0217**	**1.0305**	**0.2696**	**0.0209**	**0.2905**		**1,488.4104**	**1,488.4104**	**0.0858**	**2.4100e-003**	**1,491.2754**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/4/2021	3/3/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,465; Non-Residential Outdoor: 1,155; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5895	2.0558	4.7732	0.0134	1.0087	0.0134	1.0221	0.2696	0.0126	0.2822		1,356.8311	1,356.8311	0.0833		1,358.9141
Unmitigated	0.5895	2.0558	4.7732	0.0134	1.0087	0.0134	1.0221	0.2696	0.0126	0.2822		1,356.8311	1,356.8311	0.0833		1,358.9141

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	409.98	409.98	409.98	475,684	475,684
Total	409.98	409.98	409.98	475,684	475,684

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
NaturalGas Unmitigated	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	1118.42	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Total		**0.0121**	**0.1097**	**0.0921**	**6.6000e-004**		**8.3300e-003**	**8.3300e-003**		**8.3300e-003**	**8.3300e-003**		**131.5788**	**131.5788**	**2.5200e-003**	**2.4100e-003**	**132.3607**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	1.11842	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Total		**0.0121**	**0.1097**	**0.0921**	**6.6000e-004**		**8.3300e-003**	**8.3300e-003**		**8.3300e-003**	**8.3300e-003**		**131.5788**	**131.5788**	**2.5200e-003**	**2.4100e-003**	**132.3607**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Unmitigated	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0641**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0641**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Casa de Oro - Existing Baseline

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	2.31	1000sqft	0.05	2,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction this model

Vehicle Trips - Trip Generation per Traffic Impact Assessment

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	3/10/2021	3/3/2021
tblVehicleTrips	ST_TR	158.37	177.48
tblVehicleTrips	SU_TR	131.84	177.48
tblVehicleTrips	WD_TR	127.15	177.48

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0941	0.0000	0.0000	0.0941	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0941	0.0000	0.0000	0.0941	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0941**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Energy	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Mobile	0.5721	2.0845	5.0042	0.0126	1.0087	0.0136	1.0223	0.2696	0.0128	0.2824		1,283.3869	1,283.3869	0.0862		1,285.5408
Total	**0.6483**	**2.1941**	**5.0966**	**0.0133**	**1.0087**	**0.0219**	**1.0307**	**0.2696**	**0.0211**	**0.2907**		**1,414.9662**	**1,414.9662**	**0.0887**	**2.4100e-003**	**1,417.9020**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Energy	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Mobile	0.5721	2.0845	5.0042	0.0126	1.0087	0.0136	1.0223	0.2696	0.0128	0.2824		1,283.3869	1,283.3869	0.0862		1,285.5408
Total	**0.6483**	**2.1941**	**5.0966**	**0.0133**	**1.0087**	**0.0219**	**1.0307**	**0.2696**	**0.0211**	**0.2907**		**1,414.9662**	**1,414.9662**	**0.0887**	**2.4100e-003**	**1,417.9020**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/4/2021	3/3/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,465; Non-Residential Outdoor: 1,155; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5721	2.0845	5.0042	0.0126	1.0087	0.0136	1.0223	0.2696	0.0128	0.2824		1,283.3869	1,283.3869	0.0862		1,285.5408
Unmitigated	0.5721	2.0845	5.0042	0.0126	1.0087	0.0136	1.0223	0.2696	0.0128	0.2824		1,283.3869	1,283.3869	0.0862		1,285.5408

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	409.98	409.98	409.98	475,684	475,684
Total	409.98	409.98	409.98	475,684	475,684

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
NaturalGas Unmitigated	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	1118.42	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Total		**0.0121**	**0.1097**	**0.0921**	**6.6000e-004**		**8.3300e-003**	**8.3300e-003**		**8.3300e-003**	**8.3300e-003**		**131.5788**	**131.5788**	**2.5200e-003**	**2.4100e-003**	**132.3607**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	1.11842	0.0121	0.1097	0.0921	6.6000e-004		8.3300e-003	8.3300e-003		8.3300e-003	8.3300e-003		131.5788	131.5788	2.5200e-003	2.4100e-003	132.3607
Total		**0.0121**	**0.1097**	**0.0921**	**6.6000e-004**		**8.3300e-003**	**8.3300e-003**		**8.3300e-003**	**8.3300e-003**		**131.5788**	**131.5788**	**2.5200e-003**	**2.4100e-003**	**132.3607**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Unmitigated	0.0641	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0641**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0641**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT A2

Construction Diesel Particulate Matter Health Risk Calculations and AERMOD Outputs

Casa de Oro
DPM Emission Rates
Construction

Casa de Oro - Construction
Emissions Calculations

Maximum ON-SITE Daily DPM **DPM**

On-Site	g/day	g/sec
On-Site Project Construction Activities	3.23E+01	3.74E-04

Maximum OFFSITE Daily DPM

Off-Site	g/day	g/sec
Off-Site Project Haul Trucks	1.23E-01	1.43E-06

Sources:
DPM Emission Factors for On-Site Construction Activities are derived from CalEEMod v. 2016.3.2 and include the combined Exhaust PM10 and Exhaust PM2.5 emissions
DPM Emission Factors for Off-Site Construction Haul Trucks are derived from CalEEMod v. 2016.3.2 and include the combined Exhaust PM10 and Exhaust PM2.5 emissions

Notations
Grams per second based on OEHHA's minimum years of exposure to caclucate health risk (9 years)

Annual On-Site

	2021	2022	2023	2024	2025	2026	2027	2028	2029	
Construction	0.255	0.032	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
										Total months
Months	*10*	*12*	*12*	*12*	*12*	*12*	*12*	*12*	*12*	106
Percentage	*9%*	*11%*	*11%*	*11%*	11%	11%	11%	11%	11%	100%
Weighted Total	0.0241	0.0036	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0277

Days **2332**
Hrs/Day **8**
Total Seconds **67,161,600**

Ton/Year: 0.0277
Gram/Sec 0.000374 onsite equipment

Annual Off-Site Haul Trucks

	2021	2022	2023	2024	2025	2026	2027	2028	2029	
Construction Haul Trucks	0.001	0.0001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
										Total months
Months	*10*	*12*	*12*	*12*	*12*	*12*	*12*	*12*	*12*	106
Percentage	*9%*	*11%*	*11%*	*11%*	11%	11%	11%	11%	11%	100%
Weighted Total	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001

Days **2332**
Hrs/Day **8**
Total Seconds **67,161,600**

Ton/Year: 0.0001
Gram/Sec 0.000001 haul trucks

Conversions:
1 ton = 907184.7 grams
1 year = 3.15E+07 seconds

Cancer Risk Calcuations at Highest Pollutant Concentration
School District Corporation Yard

Risk Calculations

1 Hour Avg Concentration: 0.425
Annual Avg Concentration: 0.0670

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	1.6689E-05	5.03907E-05	3.9804E-05	3.44414E-05	1.54871E-05	1.34067E-05
Risk = DOSEair * CPF * ASF * ED/AT * FAH	1.78334E-07	4.71153E-06	3.10744E-06	3.39021E-06	5.152099E-07	4.46003E-07

		Risk	in one million
Cancer Risk:	9-year exposure	8.00E-06	**8.00**
			10 in one million

Threshold:	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
BR/BW	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.067	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.69	days/year	Exposure frequency (days/year) - 255 days of construction (factoring weekends & six major holidays)
	ED (3rd trimester)	0.08	years	Exposure duration (years) - Adjusted to reflect 8 hour work day
	ED (0 < 2 years)	0.7		
ED	ED (2 < 9 years)	2.3		
	ED (2 < 16, 16 < 30 years)	2.9		
	ED (16 - 70 years)	2.9		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
	FAH (3rd trimester - 2 years)	0.85		Fraction of time spent at home (unitless)
FAH	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **1.34E-02**

C_i 6.70E-02 Concentration (annual average)
REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **3.53E-01**

Max Hourly 6.70E-02
Acute REL (Acrolein) 0.19

Cancer Risk Calcuations at
Spring Valley Middle School Ball Field

Risk Calculations

1 Hour Avg Concentration: 0.367
Annual Avg Concentration: 0.0240

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	5.97816E-06	1.80504E-05	1.42582E-05	1.23372E-05	5.5476E-06	4.8024E-06
Risk = DOSEair * CPF * ASF * ED/AT * FAH	6.38809E-08	1.68771E-06	1.11311E-06	1.2144E-06	1.845528E-07	1.59762E-07

		Risk	in one million
Cancer Risk:	9-year exposure	2.86E-06	**2.86**
			10 in one million

Threshold:	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
BR/BW	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.024	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.69	days/year	Exposure frequency (days/year) - 255 days of construction (factoring weekends & six major holidays)
	ED (3rd trimester)	0.08	years	Exposure duration (years) - Adjusted to reflect 8 hour work day
	ED (0 < 2 years)	0.7		
ED	ED (2 < 9 years)	2.3		
	ED (2 < 16, 16 < 30 years)	2.9		
	ED (16 - 70 years)	2.9		
	AT	70	years	Averaging time period over which exposure is averaged
	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
ASF	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
	FAH (3rd trimester - 2 years)	0.85		Fraction of time spent at home (unitless)
FAH	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **4.80E-03**

C_i 2.40E-02 Concentration (annual average)
REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **1.26E-01**

Max Hourly 2.40E-02
Acute REL (Acrolein) 0.19

Cancer Risk Calcuations at Adjacent Residences to Southwest

Risk Calculations

1 Hour Avg Concentration: 0.223
Annual Avg Concentration: 0.0150

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	3.73635E-06	1.12815E-05	8.91135E-06	7.71075E-06	3.46725E-06	3.0015E-06
Risk = DOSEair * CPF * ASF * ED/AT * FAH	3.99256E-08	1.05482E-06	6.95696E-07	7.59002E-07	1.153455E-07	9.98513E-08

		Risk	in one million
Cancer Risk:	9-year exposure	1.79E-06	**1.79**
			10 in one million

Threshold:	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.015	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.69	days/year	Exposure frequency (days/year) - 255 days of construction (factoring weekends & six major holidays)
ED	ED (3rd trimester)	0.08	years	Exposure duration (years) - Adjusted to reflect 8 hour work day
	ED (0 < 2 years)	0.7		
	ED (2 < 9 years)	2.3		
	ED (2 < 16, 16 < 30 years)	2.9		
	ED (16 - 70 years)	2.9		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	0.85		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **3.00E-03**

C_i 1.50E-02 Concentration (annual average)
REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **7.89E-02**

Max Hourly 1.50E-02
Acute REL (Acrolein) 0.19

Cancer Risk Calcuations at Tennis Courts Accross Campo Road

Risk Calculations

1 Hour Avg Concentration:	0.265
Annual Avg Concentration:	0.0091

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	2.26672E-06	6.84411E-06	5.40622E-06	4.67786E-06	2.10347E-06	1.82091E-06
Risk = DOSEair * CPF * ASF * ED/AT * FAH	2.42215E-08	6.39924E-07	4.22056E-07	4.60461E-07	6.997627E-08	6.05765E-08

		Risk	in one million
Cancer Risk:	9-year exposure	1.09E-06	**1.09**
			10 in one million

Threshold:	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.0091	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.69	days/year	Exposure frequency (days/year) - 255 days of construction (factoring weekends & six major holidays)
ED	ED (3rd trimester)	0.08	years	Exposure duration (years) - Adjusted to reflect 8 hour work day
	ED (0 < 2 years)	0.7		
	ED (2 < 9 years)	2.3		
	ED (2 < 16, 16 < 30 years)	2.9		
	ED (16 - 70 years)	2.9		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	0.85		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **1.82E-03**

C_i	9.10E-03	Concentration (annual average)
REL_i	5	Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **4.79E-02**

Max Hourly	9.10E-03
Acute REL (Acrolein)	0.19

Cancer Risk Calcuations at Residences to the West

Risk Calculations

1 Hour Avg Concentration: 0.291
Annual Avg Concentration: 0.0127

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	3.16344E-06	9.55167E-06	7.54494E-06	6.52844E-06	2.93561E-06	2.54127E-06
Risk = DOSEair * CPF * ASF * ED/AT * FAH	3.38036E-08	8.93081E-07	5.89023E-07	6.42622E-07	9.765919E-08	8.45408E-08

		Risk	in one million
Cancer Risk:	9-year exposure	1.52E-06	**1.52**
			10 in one million

Threshold:	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.0127	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.69	days/year	Exposure frequency (days/year) - 255 days of construction (factoring weekends & six major holidays)
ED	ED (3rd trimester)	0.08	years	Exposure duration (years) - Adjusted to reflect 8 hour work day
	ED (0 < 2 years)	0.7		
	ED (2 < 9 years)	2.3		
	ED (2 < 16, 16 < 30 years)	2.9		
	ED (16 - 70 years)	2.9		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	0.85		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **2.54E-03**

C_i 1.27E-02 Concentration (annual average)
REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **6.68E-02**

Max Hourly 1.27E-02
Acute REL (Acrolein) 0.19

Cancer Risk Calcuations at Grass Field to Northwest

Risk Calculations

1 Hour Avg Concentration: 0.392
Annual Avg Concentration: 0.0183

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	4.55835E-06	1.37634E-05	1.08718E-05	9.40712E-06	4.23005E-06	3.66183E-06
Risk = DOSEair * CPF * ASF * ED/AT * FAH	4.87092E-08	1.28688E-06	8.4875E-07	9.25983E-07	1.407215E-07	1.21819E-07

		Risk	in one million
Cancer Risk:	9-year exposure	2.18E-06	**2.18**
			10 in one million

Threshold:	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
BR/BW	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.0183	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.69	days/year	Exposure frequency (days/year) - 255 days of construction (factoring weekends & six major holidays)
	ED (3rd trimester)	0.08	years	Exposure duration (years) - Adjusted to reflect 8 hour work day
	ED (0 < 2 years)	0.7		
ED	ED (2 < 9 years)	2.3		
	ED (2 < 16, 16 < 30 years)	2.9		
	ED (16 - 70 years)	2.9		
	AT	70	years	Averaging time period over which exposure is averaged
	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
ASF	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
	FAH (3rd trimester - 2 years)	0.85		Fraction of time spent at home (unitless)
FAH	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **3.66E-03**

C_i 1.83E-02 Concentration (annual average)
REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **9.63E-02**

Max Hourly 1.83E-02
Acute REL (Acrolein) 0.19

Control Pathway

Dispersion Options

Titles

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Dispersion Options

- [x] Regulatory Default
- [ ] Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

- [x] Concentration
- [ ] Total Deposition (Dry & Wet)
- [ ] Dry Deposition
- [ ] Wet Deposition

Plume Depletion

- [ ] Dry Removal
- [ ] Wet Removal

Output Warnings

- [ ] No Output Warnings
- [ ] Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

PM2.5

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
■	☐	☐	☐	☐	☐	☐	■

- [ ] Month
- [ ] Period
- [x] Annual

Exponential Decay

Half-life of 4 hrs will be used

Terrain Height Options

- [ ] Flat
- [x] Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

- [ ] Yes
- [x] No

Default Height = 0.00 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: Casa de Oro.err

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1 (Onsite Construction)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	0.00037		500943.38	3623373.58	131.37	2.50
			500927.43	3623451.74	134.23	2.50
			500911.48	3623397.51	131.17	2.50
			500896.33	3623487.62	134.77	2.50

Source Type: LINE VOLUME

Source: SLINE2 (Offsite Hauling)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.43E-6		500944.18	3623352.20	130.91	1.11
			501087.02	3623350.90	128.29	1.11
			500987.03	3623240.52	126.69	1.11

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000027	500941.16	3623384.44	131.43	2.50	0.00006	22.15		19.12	2.37
	L0000028	500932.94	3623424.71	134.01	2.50	0.00006	22.15		19.12	2.37
	L0000029	500923.61	3623438.77	134.12	2.50	0.00006	22.15		19.12	2.37
	L0000030	500912.01	3623399.33	132.87	2.50	0.00006	22.15		19.12	2.37
	L0000031	500904.98	3623436.17	134.25	2.50	0.00006	22.15		19.12	2.37
	L0000032	500898.16	3623476.70	134.71	2.50	0.00006	22.15		19.12	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE2	L0000033	500955.26	3623352.10	131.01	1.11	2.04E-7	22.15		20.60	2.37
	L0000034	500999.55	3623351.69	131.21	1.11	2.04E-7	22.15		20.60	2.37
	L0000035	501043.85	3623351.29	129.87	1.11	2.04E-7	22.15		20.60	2.37
	L0000036	501086.26	3623350.06	128.31	1.11	2.04E-7	22.15		20.60	2.37
	L0000037	501056.52	3623317.23	127.65	1.11	2.04E-7	22.15		20.60	2.37
	L0000038	501026.78	3623284.40	127.24	1.11	2.04E-7	22.15		20.60	2.37
	L0000039	500997.04	3623251.57	126.86	1.11	2.04E-7	22.15		20.60	2.37

Source Pathway

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
SCHOOL	500866.56	3623505.60	10	6	35.00	35.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	500927.30	3623492.44		134.56	
2	500880.55	3623387.26		130.92	
3	500905.22	3623324.93		129.08	
4	500857.18	3623382.06		130.97	
5	500839.00	3623383.36		130.98	
6	500824.72	3623380.77		131.66	
7	500854.58	3623465.17		137.41	

Plant Boundary Receptors

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	500946.57	3623359.23	FENCEPRI	130.88	
2	500945.77	3623467.68	FENCEPRI	134.26	
3	500915.47	3623472.47	FENCEPRI	134.54	
4	500905.90	3623486.03	FENCEPRI	134.69	
5	500904.30	3623517.92	FENCEPRI	134.91	
6	500885.96	3623517.92	FENCEPRI	135.17	
7	500892.34	3623374.38	FENCEPRI	130.80	
8	500938.59	3623374.38	FENCEPRI	131.28	
9	500939.39	3623374.38	FENCEPRI	131.28	
10	500940.19	3623359.23	FENCEPRI	130.81	

Receptor Pathway

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors

Receptor Pathway

Terrain Elevations and Flagpole Heights for Network Grids

Uniform Cartesian Grid

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
SCHOOL	500866.56	3623505.60	137.90	Option not Selected
	500901.56	3623505.60	134.90	
	500936.56	3623505.60	134.60	
	500971.56	3623505.60	134.50	
	501006.56	3623505.60	134.20	
	501041.56	3623505.60	134.00	
	501076.56	3623505.60	133.90	
	501111.56	3623505.60	133.70	
	501146.56	3623505.60	133.40	
	501181.56	3623505.60	132.70	
	500866.56	3623540.60	138.40	
	500901.56	3623540.60	135.90	
	500936.56	3623540.60	136.20	
	500971.56	3623540.60	136.10	
	501006.56	3623540.60	136.90	
	501041.56	3623540.60	136.30	
	501076.56	3623540.60	135.90	
	501111.56	3623540.60	135.80	
	501146.56	3623540.60	135.00	
	501181.56	3623540.60	134.00	
	500866.56	3623575.60	138.70	
	500901.56	3623575.60	138.70	
	500936.56	3623575.60	138.80	
	500971.56	3623575.60	138.90	
	501006.56	3623575.60	138.80	
	501041.56	3623575.60	138.80	
	501076.56	3623575.60	138.60	
	501111.56	3623575.60	138.30	
	501146.56	3623575.60	137.90	
	501181.56	3623575.60	135.60	
	500866.56	3623610.60	139.00	
	500901.56	3623610.60	139.00	
	500936.56	3623610.60	139.00	
	500971.56	3623610.60	139.10	
	501006.56	3623610.60	139.00	
	501041.56	3623610.60	139.40	
	501076.56	3623610.60	139.40	
	501111.56	3623610.60	139.40	
	501146.56	3623610.60	138.40	
	501181.56	3623610.60	137.20	
	500866.56	3623645.60	139.30	
	500901.56	3623645.60	139.30	
	500936.56	3623645.60	139.20	
	500971.56	3623645.60	139.70	
	501006.56	3623645.60	139.70	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
SCHOOL	501041.56	3623645.60	139.90	Option not Selected
	501076.56	3623645.60	140.30	
	501111.56	3623645.60	140.30	
	501146.56	3623645.60	139.40	
	501181.56	3623645.60	138.80	
	500866.56	3623680.60	145.40	
	500901.56	3623680.60	143.10	
	500936.56	3623680.60	142.10	
	500971.56	3623680.60	140.50	
	501006.56	3623680.60	140.90	
	501041.56	3623680.60	141.50	
	501076.56	3623680.60	146.90	
	501111.56	3623680.60	146.90	
	501146.56	3623680.60	145.10	
	501181.56	3623680.60	141.00	

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: C:\Users\smyers\Desktop\Casa de Oro\722907.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: C:\Users\smyers\Desktop\Casa de Oro\722907.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 111.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			
Upper Air		2009			

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No
24	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: Casa de Oro.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
24	ALL	1st	24H1GALL.PLT
Annual	ALL	N/A	AN00GALL.PLT

Results Summary

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PM2.5 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.42525	ug/m^3	500905.90	3623486.03	134.69	0.00	217.70	12/27/2012, 1
24-HR	1ST	0.12512	ug/m^3	500905.90	3623486.03	134.69	0.00	217.70	12/18/2013, 24
ANNUAL		0.06720	ug/m^3	500945.77	3623467.68	134.26	0.00	217.70	

Sensitive Receptor Summary

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PM2.5 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.36724	ug/m^3	Ball Field	500927.30	3623492.44	134.56	0.00	217.70	1/8/2013, 3
1-HR	1ST	0.22340	ug/m^3	Residnce1	500880.55	3623387.26	130.92	0.00	217.70	10/18/2012, 1
1-HR	1ST	0.26496	ug/m^3	Tennis	500905.22	3623324.93	129.08	0.00	217.70	2/15/2013, 4
1-HR	1ST	0.29127	ug/m^3	Residnce2	500857.18	3623382.06	130.97	0.00	217.70	12/5/2012, 1
1-HR	1ST	0.26502	ug/m^3	Residnce3	500839.00	3623383.36	130.98	0.00	217.70	12/5/2012, 1
1-HR	1ST	0.24435	ug/m^3	Residnce4	500824.72	3623380.77	131.66	0.00	217.70	12/5/2012, 1
1-HR	1ST	0.39249	ug/m^3	Field	500854.58	3623465.17	137.41	0.00	217.70	12/26/2012, 21
24-HR	1ST	0.10848	ug/m^3	Ball Field	500927.30	3623492.44	134.56	0.00	217.70	12/18/2013, 24
24-HR	1ST	0.04007	ug/m^3	Residnce1	500880.55	3623387.26	130.92	0.00	217.70	10/25/2013, 24
24-HR	1ST	0.03244	ug/m^3	Tennis	500905.22	3623324.93	129.08	0.00	217.70	12/14/2013, 24
24-HR	1ST	0.04212	ug/m^3	Residnce2	500857.18	3623382.06	130.97	0.00	217.70	10/25/2013, 24
24-HR	1ST	0.03407	ug/m^3	Residnce3	500839.00	3623383.36	130.98	0.00	217.70	10/25/2013, 24
24-HR	1ST	0.02865	ug/m^3	Residnce4	500824.72	3623380.77	131.66	0.00	217.70	10/25/2013, 24
24-HR	1ST	0.10732	ug/m^3	Field	500854.58	3623465.17	137.41	0.00	217.70	11/16/2013, 24
ANNUAL		0.02404	ug/m^3	Ball Field	500927.30	3623492.44	134.56	0.00	217.70	
ANNUAL		0.01500	ug/m^3	Residnce1	500880.55	3623387.26	130.92	0.00	217.70	
ANNUAL		0.00914	ug/m^3	Tennis	500905.22	3623324.93	129.08	0.00	217.70	
ANNUAL		0.01273	ug/m^3	Residnce2	500857.18	3623382.06	130.97	0.00	217.70	
ANNUAL		0.00915	ug/m^3	Residnce3	500839.00	3623383.36	130.98	0.00	217.70	
ANNUAL		0.00722	ug/m^3	Residnce4	500824.72	3623380.77	131.66	0.00	217.70	

Sensitive Receptor Summary

C:\Lakes\AERMOD View\Casa de Oro\Casa de Oro.isc

PM2.5 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.01839	ug/m^3	Field	500854.58	3623465.17	137.41	0.00	217.70	

ATTACHMENT B

Greenhouse Gas Emissions Modeling Output

Casa De Oro - Proposed Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Library	13.00	1000sqft	0.30	13,000.00	0
Other Non-Asphalt Surfaces	3.00	1000sqft	0.07	3,000.00	0
Other Non-Asphalt Surfaces	0.90	Acre	0.90	39,204.00	0
Parking Lot	52.00	Space	0.47	20,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Casa De Oro - Proposed Project - San Diego County, Annual

Project Characteristics -

Land Use - Land uses account for library, parking lot, access driveway, landscaping, and fencing

Construction Phase - Construction expected to last 12 - 14 months. Building construction and paving assumed to occur simultaneously

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - The Project Description notes that grading will employ scrapers, graders, water trucks (accounted for in Construction Trips), dozers and compaction equipment

Off-road Equipment -

Demolition - 885.7 tons of demolished debris accounted. Conservatively includes modular building, as this is only being removed, existing restaurant, 17,424 sf of asphalt, and existing building fronting Campo Road

Grading - Exported material includes removal of grass fields. Imported material per Project Description

Vehicle Trips - Trip generation per Proejct Traffic Impact Assessment

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - 2019 Building Energy Efficiency Standards 30% more efficient in nonresidential building than Standards built-in to CalEEMod

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	10.00	189.00
tblConstructionPhase	NumDays	2.00	15.00
tblGrading	MaterialExported	0.00	1,452.00
tblGrading	MaterialImported	0.00	2,000.00
tblGrading	MaterialImported	0.00	2,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblVehicleTrips	ST_TR	46.55	72.08
tblVehicleTrips	SU_TR	25.49	72.08
tblVehicleTrips	WD_TR	56.24	72.08

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3037	2.7375	2.3489	4.6500e-003	0.2160	0.1255	0.3416	0.0885	0.1183	0.2068	0.0000	404.4040	404.4040	0.0854	0.0000	406.5378
2022	0.2179	0.3666	0.4103	7.5000e-004	7.9500e-003	0.0169	0.0248	2.1400e-003	0.0161	0.0182	0.0000	64.6045	64.6045	0.0127	0.0000	64.9218
Maximum	**0.3037**	**2.7375**	**2.3489**	**4.6500e-003**	**0.2160**	**0.1255**	**0.3416**	**0.0885**	**0.1183**	**0.2068**	**0.0000**	**404.4040**	**404.4040**	**0.0854**	**0.0000**	**406.5378**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3037	2.7375	2.3489	4.6500e-003	0.1122	0.1255	0.2377	0.0421	0.1183	0.1604	0.0000	404.4036	404.4036	0.0854	0.0000	406.5374
2022	0.2179	0.3666	0.4103	7.5000e-004	7.9500e-003	0.0169	0.0248	2.1400e-003	0.0161	0.0182	0.0000	64.6045	64.6045	0.0127	0.0000	64.9218
Maximum	**0.3037**	**2.7375**	**2.3489**	**4.6500e-003**	**0.1122**	**0.1255**	**0.2377**	**0.0421**	**0.1183**	**0.1604**	**0.0000**	**404.4036**	**404.4036**	**0.0854**	**0.0000**	**406.5374**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.38**	**0.00**	**28.36**	**51.25**	**0.00**	**20.65**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	**12-17-2020**	**3-16-2021**	0.1311	0.1311
3	**3-17-2021**	**6-16-2021**	1.0829	1.0829
4	**6-17-2021**	**9-16-2021**	0.8374	0.8374
5	**9-17-2021**	**12-16-2021**	0.8292	0.8292
6	**12-17-2021**	**3-16-2022**	0.7213	0.7213
		Highest	1.0829	1.0829

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0722	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Energy	8.1000e-004	7.3700e-003	6.1900e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	0.0000	45.7038	45.7038	1.6700e-003	4.6000e-004	45.8829
Mobile	0.2204	0.9122	2.2124	7.0200e-003	0.5985	6.0600e-003	0.6046	0.1603	5.6600e-003	0.1659	0.0000	648.2375	648.2375	0.0367	0.0000	649.1546
Waste						0.0000	0.0000		0.0000	0.0000	2.4298	0.0000	2.4298	0.1436	0.0000	6.0197
Water						0.0000	0.0000		0.0000	0.0000	0.1290	4.0409	4.1699	0.0134	3.5000e-004	4.6086
Total	**0.2934**	**0.9196**	**2.2192**	**7.0600e-003**	**0.5985**	**6.6200e-003**	**0.6051**	**0.1603**	**6.2200e-003**	**0.1665**	**2.5588**	**697.9834**	**700.5423**	**0.1954**	**8.1000e-004**	**705.6672**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0722	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Energy	7.2000e-004	6.5400e-003	5.5000e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	43.2646	43.2646	1.5900e-003	4.3000e-004	43.4330
Mobile	0.2204	0.9122	2.2124	7.0200e-003	0.5985	6.0600e-003	0.6046	0.1603	5.6600e-003	0.1659	0.0000	648.2375	648.2375	0.0367	0.0000	649.1546
Waste						0.0000	0.0000		0.0000	0.0000	2.4298	0.0000	2.4298	0.1436	0.0000	6.0197
Water						0.0000	0.0000		0.0000	0.0000	0.1290	4.0409	4.1699	0.0134	3.5000e-004	4.6086
Total	**0.2933**	**0.9187**	**2.2185**	**7.0600e-003**	**0.5985**	**6.5600e-003**	**0.6051**	**0.1603**	**6.1600e-003**	**0.1664**	**2.5588**	**695.5442**	**698.1031**	**0.1953**	**7.8000e-004**	**703.2172**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.03**	**0.09**	**0.03**	**0.00**	**0.00**	**0.91**	**0.01**	**0.00**	**0.96**	**0.04**	**0.00**	**0.35**	**0.35**	**0.04**	**3.70**	**0.35**

3.0 Construction Detail

Construction Phase

Casa De Oro - Proposed Project - San Diego County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	4/16/2021	5	15	
3	Grading	Grading	4/17/2021	5/14/2021	5	20	
4	Building Construction	Building Construction	5/15/2021	2/18/2022	5	200	
5	Paving	Paving	6/1/2021	2/18/2022	5	189	
6	Architectural Coating	Architectural Coating	2/19/2022	3/4/2022	5	10	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 50

Acres of Paving: 1.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 19,500; Non-Residential Outdoor: 6,500; Striped Parking Area: 3,780 (Architectural Coating – sqft)

OffRoad Equipment

Casa De Oro - Proposed Project - San Diego County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	2	6.00	187	0.41
Grading	Plate Compactors	1	7.00	8	0.43
Grading	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	2	6.00	247	0.40
Grading	Scrapers	2	7.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	88.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	432.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	32.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.5900e-003	0.0000	9.5900e-003	1.4500e-003	0.0000	1.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**	**9.5900e-003**	**0.0104**	**0.0200**	**1.4500e-003**	**9.7100e-003**	**0.0112**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0115	2.8300e-003	3.0000e-005	7.5000e-004	3.0000e-005	7.9000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	3.3511	3.3511	3.0000e-004	0.0000	3.3587
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.2000e-004	3.2500e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9107	0.9107	3.0000e-005	0.0000	0.9113
Total	**7.8000e-004**	**0.0118**	**6.0800e-003**	**4.0000e-005**	**1.7900e-003**	**4.0000e-005**	**1.8400e-003**	**4.9000e-004**	**4.0000e-005**	**5.2000e-004**	**0.0000**	**4.2618**	**4.2618**	**3.3000e-004**	**0.0000**	**4.2700**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.7400e-003	0.0000	3.7400e-003	5.7000e-004	0.0000	5.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**	**3.7400e-003**	**0.0104**	**0.0142**	**5.7000e-004**	**9.7100e-003**	**0.0103**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0115	2.8300e-003	3.0000e-005	7.5000e-004	3.0000e-005	7.9000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	3.3511	3.3511	3.0000e-004	0.0000	3.3587
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.2000e-004	3.2500e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9107	0.9107	3.0000e-005	0.0000	0.9113
Total	**7.8000e-004**	**0.0118**	**6.0800e-003**	**4.0000e-005**	**1.7900e-003**	**4.0000e-005**	**1.8400e-003**	**4.9000e-004**	**4.0000e-005**	**5.2000e-004**	**0.0000**	**4.2618**	**4.2618**	**3.3000e-004**	**0.0000**	**4.2700**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0436	0.0000	0.0436	0.0222	0.0000	0.0222	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0117	0.1307	0.0567	1.3000e-004		5.7400e-003	5.7400e-003		5.2800e-003	5.2800e-003	0.0000	11.3388	11.3388	3.6700e-003	0.0000	11.4305
Total	**0.0117**	**0.1307**	**0.0567**	**1.3000e-004**	**0.0436**	**5.7400e-003**	**0.0494**	**0.0222**	**5.2800e-003**	**0.0275**	**0.0000**	**11.3388**	**11.3388**	**3.6700e-003**	**0.0000**	**11.4305**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.4000e-004	0.0327	8.0500e-003	1.0000e-004	2.1400e-003	1.0000e-004	2.2400e-003	5.9000e-004	9.0000e-005	6.8000e-004	0.0000	9.5203	9.5203	8.6000e-004	0.0000	9.5418
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.5000e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4203	0.4203	1.0000e-005	0.0000	0.4206
Total	**1.1500e-003**	**0.0328**	**9.5500e-003**	**1.0000e-004**	**2.6200e-003**	**1.0000e-004**	**2.7200e-003**	**7.2000e-004**	**9.0000e-005**	**8.1000e-004**	**0.0000**	**9.9406**	**9.9406**	**8.7000e-004**	**0.0000**	**9.9624**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0170	0.0000	0.0170	8.6500e-003	0.0000	8.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0117	0.1307	0.0567	1.3000e-004		5.7400e-003	5.7400e-003		5.2800e-003	5.2800e-003	0.0000	11.3388	11.3388	3.6700e-003	0.0000	11.4305
Total	**0.0117**	**0.1307**	**0.0567**	**1.3000e-004**	**0.0170**	**5.7400e-003**	**0.0228**	**8.6500e-003**	**5.2800e-003**	**0.0139**	**0.0000**	**11.3388**	**11.3388**	**3.6700e-003**	**0.0000**	**11.4305**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.4000e-004	0.0327	8.0500e-003	1.0000e-004	2.1400e-003	1.0000e-004	2.2400e-003	5.9000e-004	9.0000e-005	6.8000e-004	0.0000	9.5203	9.5203	8.6000e-004	0.0000	9.5418
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.5000e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4203	0.4203	1.0000e-005	0.0000	0.4206
Total	**1.1500e-003**	**0.0328**	**9.5500e-003**	**1.0000e-004**	**2.6200e-003**	**1.0000e-004**	**2.7200e-003**	**7.2000e-004**	**9.0000e-005**	**8.1000e-004**	**0.0000**	**9.9406**	**9.9406**	**8.7000e-004**	**0.0000**	**9.9624**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1171	0.0000	0.1171	0.0526	0.0000	0.0526	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0424	0.4764	0.2477	5.5000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	47.9736	47.9736	0.0155	0.0000	48.3600
Total	**0.0424**	**0.4764**	**0.2477**	**5.5000e-004**	**0.1171**	**0.0202**	**0.1373**	**0.0526**	**0.0186**	**0.0711**	**0.0000**	**47.9736**	**47.9736**	**0.0155**	**0.0000**	**48.3600**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6200e-003	0.0564	0.0139	1.7000e-004	3.7000e-003	1.7000e-004	3.8700e-003	1.0200e-003	1.6000e-004	1.1800e-003	0.0000	16.4510	16.4510	1.4800e-003	0.0000	16.4881
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	5.7000e-004	5.7500e-003	2.0000e-005	1.8400e-003	1.0000e-005	1.8600e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.6112	1.6112	5.0000e-005	0.0000	1.6124
Total	**2.4200e-003**	**0.0570**	**0.0197**	**1.9000e-004**	**5.5400e-003**	**1.8000e-004**	**5.7300e-003**	**1.5100e-003**	**1.7000e-004**	**1.6800e-003**	**0.0000**	**18.0622**	**18.0622**	**1.5300e-003**	**0.0000**	**18.1005**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0457	0.0000	0.0457	0.0205	0.0000	0.0205	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0424	0.4764	0.2477	5.5000e-004		0.0202	0.0202		0.0186	0.0186	0.0000	47.9736	47.9736	0.0155	0.0000	48.3599
Total	**0.0424**	**0.4764**	**0.2477**	**5.5000e-004**	**0.0457**	**0.0202**	**0.0658**	**0.0205**	**0.0186**	**0.0391**	**0.0000**	**47.9736**	**47.9736**	**0.0155**	**0.0000**	**48.3599**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6200e-003	0.0564	0.0139	1.7000e-004	3.7000e-003	1.7000e-004	3.8700e-003	1.0200e-003	1.6000e-004	1.1800e-003	0.0000	16.4510	16.4510	1.4800e-003	0.0000	16.4881
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	5.7000e-004	5.7500e-003	2.0000e-005	1.8400e-003	1.0000e-005	1.8600e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.6112	1.6112	5.0000e-005	0.0000	1.6124
Total	**2.4200e-003**	**0.0570**	**0.0197**	**1.9000e-004**	**5.5400e-003**	**1.8000e-004**	**5.7300e-003**	**1.5100e-003**	**1.7000e-004**	**1.6800e-003**	**0.0000**	**18.0622**	**18.0622**	**1.5300e-003**	**0.0000**	**18.1005**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1495	1.1250	1.0642	1.8200e-003		0.0565	0.0565		0.0545	0.0545	0.0000	149.7768	149.7768	0.0267	0.0000	150.4453
Total	**0.1495**	**1.1250**	**1.0642**	**1.8200e-003**		**0.0565**	**0.0565**		**0.0545**	**0.0545**	**0.0000**	**149.7768**	**149.7768**	**0.0267**	**0.0000**	**150.4453**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0600e-003	0.1017	0.0271	2.7000e-004	6.5700e-003	2.2000e-004	6.7900e-003	1.9000e-003	2.1000e-004	2.1000e-003	0.0000	25.8826	25.8826	1.9200e-003	0.0000	25.9306
Worker	9.1800e-003	6.5500e-003	0.0660	2.0000e-004	0.0212	1.5000e-004	0.0213	5.6300e-003	1.4000e-004	5.7600e-003	0.0000	18.4938	18.4938	5.3000e-004	0.0000	18.5071
Total	**0.0122**	**0.1083**	**0.0931**	**4.7000e-004**	**0.0277**	**3.7000e-004**	**0.0281**	**7.5300e-003**	**3.5000e-004**	**7.8600e-003**	**0.0000**	**44.3764**	**44.3764**	**2.4500e-003**	**0.0000**	**44.4376**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1495	1.1250	1.0642	1.8200e-003		0.0565	0.0565		0.0545	0.0545	0.0000	149.7766	149.7766	0.0267	0.0000	150.4451
Total	**0.1495**	**1.1250**	**1.0642**	**1.8200e-003**		**0.0565**	**0.0565**		**0.0545**	**0.0545**	**0.0000**	**149.7766**	**149.7766**	**0.0267**	**0.0000**	**150.4451**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0600e-003	0.1017	0.0271	2.7000e-004	6.5700e-003	2.2000e-004	6.7900e-003	1.9000e-003	2.1000e-004	2.1000e-003	0.0000	25.8826	25.8826	1.9200e-003	0.0000	25.9306
Worker	9.1800e-003	6.5500e-003	0.0660	2.0000e-004	0.0212	1.5000e-004	0.0213	5.6300e-003	1.4000e-004	5.7600e-003	0.0000	18.4938	18.4938	5.3000e-004	0.0000	18.5071
Total	**0.0122**	**0.1083**	**0.0931**	**4.7000e-004**	**0.0277**	**3.7000e-004**	**0.0281**	**7.5300e-003**	**3.5000e-004**	**7.8600e-003**	**0.0000**	**44.3764**	**44.3764**	**2.4500e-003**	**0.0000**	**44.4376**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0289	0.2188	0.2227	3.9000e-004		0.0103	0.0103		9.9500e-003	9.9500e-003	0.0000	31.7760	31.7760	5.5300e-003	0.0000	31.9143
Total	**0.0289**	**0.2188**	**0.2227**	**3.9000e-004**		**0.0103**	**0.0103**		**9.9500e-003**	**9.9500e-003**	**0.0000**	**31.7760**	**31.7760**	**5.5300e-003**	**0.0000**	**31.9143**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-004	0.0204	5.4500e-003	6.0000e-005	1.3900e-003	4.0000e-005	1.4300e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.4383	5.4383	3.9000e-004	0.0000	5.4481
Worker	1.8400e-003	1.2700e-003	0.0130	4.0000e-005	4.4900e-003	3.0000e-005	4.5200e-003	1.1900e-003	3.0000e-005	1.2200e-003	0.0000	3.7791	3.7791	1.0000e-004	0.0000	3.7817
Total	**2.4400e-003**	**0.0217**	**0.0184**	**1.0000e-004**	**5.8800e-003**	**7.0000e-005**	**5.9500e-003**	**1.5900e-003**	**7.0000e-005**	**1.6600e-003**	**0.0000**	**9.2174**	**9.2174**	**4.9000e-004**	**0.0000**	**9.2298**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0289	0.2188	0.2227	3.9000e-004		0.0103	0.0103		9.9500e-003	9.9500e-003	0.0000	31.7759	31.7759	5.5300e-003	0.0000	31.9143
Total	**0.0289**	**0.2188**	**0.2227**	**3.9000e-004**		**0.0103**	**0.0103**		**9.9500e-003**	**9.9500e-003**	**0.0000**	**31.7759**	**31.7759**	**5.5300e-003**	**0.0000**	**31.9143**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-004	0.0204	5.4500e-003	6.0000e-005	1.3900e-003	4.0000e-005	1.4300e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.4383	5.4383	3.9000e-004	0.0000	5.4481
Worker	1.8400e-003	1.2700e-003	0.0130	4.0000e-005	4.4900e-003	3.0000e-005	4.5200e-003	1.1900e-003	3.0000e-005	1.2200e-003	0.0000	3.7791	3.7791	1.0000e-004	0.0000	3.7817
Total	**2.4400e-003**	**0.0217**	**0.0184**	**1.0000e-004**	**5.8800e-003**	**7.0000e-005**	**5.9500e-003**	**1.5900e-003**	**7.0000e-005**	**1.6600e-003**	**0.0000**	**9.2174**	**9.2174**	**4.9000e-004**	**0.0000**	**9.2298**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0596	0.5962	0.6820	1.0400e-003		0.0320	0.0320		0.0295	0.0295	0.0000	90.5903	90.5903	0.0287	0.0000	91.3082
Paving	5.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0601**	**0.5962**	**0.6820**	**1.0400e-003**		**0.0320**	**0.0320**		**0.0295**	**0.0295**	**0.0000**	**90.5903**	**90.5903**	**0.0287**	**0.0000**	**91.3082**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4800e-003	2.4800e-003	0.0250	8.0000e-005	8.0300e-003	6.0000e-005	8.0800e-003	2.1300e-003	5.0000e-005	2.1900e-003	0.0000	7.0122	7.0122	2.0000e-004	0.0000	7.0173
Total	**3.4800e-003**	**2.4800e-003**	**0.0250**	**8.0000e-005**	**8.0300e-003**	**6.0000e-005**	**8.0800e-003**	**2.1300e-003**	**5.0000e-005**	**2.1900e-003**	**0.0000**	**7.0122**	**7.0122**	**2.0000e-004**	**0.0000**	**7.0173**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0596	0.5962	0.6820	1.0400e-003		0.0320	0.0320		0.0295	0.0295	0.0000	90.5902	90.5902	0.0287	0.0000	91.3081
Paving	5.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0601**	**0.5962**	**0.6820**	**1.0400e-003**		**0.0320**	**0.0320**		**0.0295**	**0.0295**	**0.0000**	**90.5902**	**90.5902**	**0.0287**	**0.0000**	**91.3081**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4800e-003	2.4800e-003	0.0250	8.0000e-005	8.0300e-003	6.0000e-005	8.0800e-003	2.1300e-003	5.0000e-005	2.1900e-003	0.0000	7.0122	7.0122	2.0000e-004	0.0000	7.0173
Total	**3.4800e-003**	**2.4800e-003**	**0.0250**	**8.0000e-005**	**8.0300e-003**	**6.0000e-005**	**8.0800e-003**	**2.1300e-003**	**5.0000e-005**	**2.1900e-003**	**0.0000**	**7.0122**	**7.0122**	**2.0000e-004**	**0.0000**	**7.0173**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0120	0.1185	0.1541	2.4000e-004		6.0800e-003	6.0800e-003		5.6100e-003	5.6100e-003	0.0000	20.5968	20.5968	6.5300e-003	0.0000	20.7601
Paving	1.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1185**	**0.1541**	**2.4000e-004**		**6.0800e-003**	**6.0800e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**20.5968**	**20.5968**	**6.5300e-003**	**0.0000**	**20.7601**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	5.1000e-004	5.2800e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.5353	1.5353	4.0000e-005	0.0000	1.5363
Total	**7.5000e-004**	**5.1000e-004**	**5.2800e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.8000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.5353**	**1.5353**	**4.0000e-005**	**0.0000**	**1.5363**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0120	0.1185	0.1541	2.4000e-004		6.0800e-003	6.0800e-003		5.6100e-003	5.6100e-003	0.0000	20.5968	20.5968	6.5300e-003	0.0000	20.7601
Paving	1.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1185**	**0.1541**	**2.4000e-004**		**6.0800e-003**	**6.0800e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**20.5968**	**20.5968**	**6.5300e-003**	**0.0000**	**20.7601**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	5.1000e-004	5.2800e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.5353	1.5353	4.0000e-005	0.0000	1.5363
Total	**7.5000e-004**	**5.1000e-004**	**5.2800e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.8000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.5353**	**1.5353**	**4.0000e-005**	**0.0000**	**1.5363**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1725					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.1736**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2025	0.2025	1.0000e-005	0.0000	0.2026
Total	**1.0000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2025**	**0.2025**	**1.0000e-005**	**0.0000**	**0.2026**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1725					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.1736**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2025	0.2025	1.0000e-005	0.0000	0.2026
Total	**1.0000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2025**	**0.2025**	**1.0000e-005**	**0.0000**	**0.2026**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2204	0.9122	2.2124	7.0200e-003	0.5985	6.0600e-003	0.6046	0.1603	5.6600e-003	0.1659	0.0000	648.2375	648.2375	0.0367	0.0000	649.1546
Unmitigated	0.2204	0.9122	2.2124	7.0200e-003	0.5985	6.0600e-003	0.6046	0.1603	5.6600e-003	0.1659	0.0000	648.2375	648.2375	0.0367	0.0000	649.1546

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Library	937.04	937.04	937.04	1,588,149	1,588,149
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	937.04	937.04	937.04	1,588,149	1,588,149

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Library	9.50	7.30	7.30	52.00	43.00	5.00	44	44	12
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Library	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Other Non-Asphalt Surfaces	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36.1421	36.1421	1.4500e-003	3.0000e-004	36.2682
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	37.6843	37.6843	1.5200e-003	3.1000e-004	37.8158
NaturalGas Mitigated	7.2000e-004	6.5400e-003	5.5000e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.1225	7.1225	1.4000e-004	1.3000e-004	7.1649
NaturalGas Unmitigated	8.1000e-004	7.3700e-003	6.1900e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	0.0000	8.0195	8.0195	1.5000e-004	1.5000e-004	8.0672

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Library	150280	8.1000e-004	7.3700e-003	6.1900e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	0.0000	8.0195	8.0195	1.5000e-004	1.5000e-004	8.0672
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.1000e-004**	**7.3700e-003**	**6.1900e-003**	**4.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**	**0.0000**	**8.0195**	**8.0195**	**1.5000e-004**	**1.5000e-004**	**8.0672**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Library	133471	7.2000e-004	6.5400e-003	5.5000e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.1225	7.1225	1.4000e-004	1.3000e-004	7.1649
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.2000e-004**	**6.5400e-003**	**5.5000e-003**	**4.0000e-005**		**5.0000e-004**	**5.0000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**7.1225**	**7.1225**	**1.4000e-004**	**1.3000e-004**	**7.1649**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Library	108030	35.3052	1.4200e-003	2.9000e-004	35.4283
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7280	2.3792	1.0000e-004	2.0000e-005	2.3875
Total		**37.6843**	**1.5200e-003**	**3.1000e-004**	**37.8158**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Library	103311	33.7629	1.3600e-003	2.8000e-004	33.8807
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7280	2.3792	1.0000e-004	2.0000e-005	2.3875
Total		**36.1421**	**1.4600e-003**	**3.0000e-004**	**36.2682**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0722	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Unmitigated	0.0722	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0548					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Total	**0.0722**	**1.0000e-005**	**6.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**0.0000**	**0.0000**	**1.3100e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0548					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2300e-003	1.2300e-003	0.0000	0.0000	1.3100e-003
Total	**0.0722**	**1.0000e-005**	**6.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**0.0000**	**0.0000**	**1.3100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1699	0.0134	3.5000e-004	4.6086
Unmitigated	4.1699	0.0134	3.5000e-004	4.6086

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Library	0.406756 / 0.636208	4.1699	0.0134	3.5000e-004	4.6086
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.1699**	**0.0134**	**3.5000e-004**	**4.6086**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Library	0.406756 / 0.636208	4.1699	0.0134	3.5000e-004	4.6086
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.1699**	**0.0134**	**3.5000e-004**	**4.6086**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.4298	0.1436	0.0000	6.0197
Unmitigated	2.4298	0.1436	0.0000	6.0197

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Library	11.97	2.4298	0.1436	0.0000	6.0197
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**2.4298**	**0.1436**	**0.0000**	**6.0197**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Library	11.97	2.4298	0.1436	0.0000	6.0197
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**2.4298**	**0.1436**	**0.0000**	**6.0197**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Casa de Oro - Existing Baseline

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	2.31	1000sqft	0.05	2,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction this model

Vehicle Trips - Trip Generation per Traffic Impact Assessment

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	3/10/2021	3/3/2021
tblVehicleTrips	ST_TR	158.37	177.48
tblVehicleTrips	SU_TR	131.84	177.48
tblVehicleTrips	WD_TR	127.15	177.48

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0117	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	53.9065	53.9065	1.7100e-003	6.7000e-004	54.1480
Mobile	0.1007	0.3817	0.8858	2.3300e-003	0.1793	2.4500e-003	0.1817	0.0480	2.3000e-003	0.0503	0.0000	214.5056	214.5056	0.0139	0.0000	214.8536
Waste						0.0000	0.0000		0.0000	0.0000	5.5802	0.0000	5.5802	0.3298	0.0000	13.8248
Water						0.0000	0.0000		0.0000	0.0000	0.2225	3.1462	3.3687	0.0230	5.7000e-004	4.1116
Total	**0.1146**	**0.4017**	**0.9026**	**2.4500e-003**	**0.1793**	**3.9700e-003**	**0.1833**	**0.0480**	**3.8200e-003**	**0.0518**	**5.8027**	**271.5584**	**277.3611**	**0.3684**	**1.2400e-003**	**286.9380**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0117	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	53.9065	53.9065	1.7100e-003	6.7000e-004	54.1480
Mobile	0.1007	0.3817	0.8858	2.3300e-003	0.1793	2.4500e-003	0.1817	0.0480	2.3000e-003	0.0503	0.0000	214.5056	214.5056	0.0139	0.0000	214.8536
Waste						0.0000	0.0000		0.0000	0.0000	5.5802	0.0000	5.5802	0.3298	0.0000	13.8248
Water						0.0000	0.0000		0.0000	0.0000	0.2225	3.1462	3.3687	0.0230	5.7000e-004	4.1116
Total	**0.1146**	**0.4017**	**0.9026**	**2.4500e-003**	**0.1793**	**3.9700e-003**	**0.1833**	**0.0480**	**3.8200e-003**	**0.0518**	**5.8027**	**271.5584**	**277.3611**	**0.3684**	**1.2400e-003**	**286.9380**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/4/2021	3/3/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,465; Non-Residential Outdoor: 1,155; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1007	0.3817	0.8858	2.3300e-003	0.1793	2.4500e-003	0.1817	0.0480	2.3000e-003	0.0503	0.0000	214.5056	214.5056	0.0139	0.0000	214.8536
Unmitigated	0.1007	0.3817	0.8858	2.3300e-003	0.1793	2.4500e-003	0.1817	0.0480	2.3000e-003	0.0503	0.0000	214.5056	214.5056	0.0139	0.0000	214.8536

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	409.98	409.98	409.98	475,684	475,684
Total	409.98	409.98	409.98	475,684	475,684

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	32.1222	32.1222	1.2900e-003	2.7000e-004	32.2342
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	32.1222	32.1222	1.2900e-003	2.7000e-004	32.2342
NaturalGas Mitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7843	21.7843	4.2000e-004	4.0000e-004	21.9138
NaturalGas Unmitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7843	21.7843	4.2000e-004	4.0000e-004	21.9138

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	408223	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7843	21.7843	4.2000e-004	4.0000e-004	21.9138
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.7843**	**21.7843**	**4.2000e-004**	**4.0000e-004**	**21.9138**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	408223	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7843	21.7843	4.2000e-004	4.0000e-004	21.9138
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.7843**	**21.7843**	**4.2000e-004**	**4.0000e-004**	**21.9138**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	98290.5	32.1222	1.2900e-003	2.7000e-004	32.2342
Total		**32.1222**	**1.2900e-003**	**2.7000e-004**	**32.2342**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	98290.5	32.1222	1.2900e-003	2.7000e-004	32.2342
Total		**32.1222**	**1.2900e-003**	**2.7000e-004**	**32.2342**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0117	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Unmitigated	0.0117	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Total	**0.0117**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**4.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Total	**0.0117**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**4.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.3687	0.0230	5.7000e-004	4.1116
Unmitigated	3.3687	0.0230	5.7000e-004	4.1116

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.701163 / 0.0447551	3.3687	0.0230	5.7000e-004	4.1116
Total		**3.3687**	**0.0230**	**5.7000e-004**	**4.1116**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.701163 / 0.0447551	3.3687	0.0230	5.7000e-004	4.1116
Total		**3.3687**	**0.0230**	**5.7000e-004**	**4.1116**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.5802	0.3298	0.0000	13.8248
Unmitigated	5.5802	0.3298	0.0000	13.8248

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	27.49	5.5802	0.3298	0.0000	13.8248
Total		**5.5802**	**0.3298**	**0.0000**	**13.8248**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	27.49	5.5802	0.3298	0.0000	13.8248
Total		**5.5802**	**0.3298**	**0.0000**	**13.8248**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B
BIOLOGICAL RESOURCES LETTER REPORT

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October 26, 2020

Michael Baker International, Inc.
Mr. Steve Wragg
9755 Clairemont Mesa Boulevard
San Diego, California 92124

Subject: Biological Resources Letter Report for the Proposed Casa de Oro Branch Library Project

Dear Mr. Wragg:

This letter report provides an assessment of potential biological resources associated with the proposed Casa de Oro Branch Library Project (proposed project) in Spring Valley, California. The proposed project includes the construction of a library and parking lot within previously developed landscape.

In accordance with the current San Diego County Report Format and Content Requirements for Biological Resources (County of San Diego 2010), this letter report describes the field assessment methods, existing biological resources, potential for sensitive biological resources to be present, potential biological constraints, and recommended design, avoidance, minimization, and mitigation measures. The Project regulations are discussed in accordance with the California Environmental Quality Act (CEQA), Clean Water Act (CWA), Porter Cologne Water Quality Control Act, Migratory Bird Treaty Act (MBTA), California Fish and Game Code, the County of San Diego Multiple Species Conservation Program (MSCP) County Subarea Plan (South County Plan), and County of San Diego Biological Mitigation Ordinance.

The County-approved CEQA - Biological Resources Consultant that participated in the preparation of this report and review of the study is Scott Taylor, ECORP Consulting, Inc.

SUMMARY OF FINDINGS

The proposed project's area of development ("Development Area") comprises approximately two acres of urban/developed land. Because the land is a non-sensitive, developed area, very few sensitive species have potential to use the area of impact. Biological resources identified within the Development Area and nearby, which could be impacted by the proposed project, include nesting bird species, bat species and jurisdictional waters.

Significant indirect and or direct impacts could potentially occur to nesting bird species, including raptors, to roosting bat species and to jurisdictional waters. These impacts should be avoided, if feasible. If avoidance is not possible, then the following recommendations are made to mitigate for the impacts:

- If construction would occur from January 16th through August 31st, then a qualified biologist should survey for nesting bird species within the Development Area and a 150-foot buffer and determine if active nests are present within or adjacent to proposed work areas and could be

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impacted by construction activities, including direct impacts or indirect impacts due to noise and activity.

- Areas within the Development Area that could support roosting bat species should be avoided if feasible. If not feasible, then a qualified biologist will conduct surveys for roosting bat species prior to impacting those areas.
- If an identified jurisdictional feature located within the Development Area cannot be avoided by construction activities, then regulatory permitting will be required or the proposed project.
- To avoid effects to jurisdictional waters, project design considerations and best management practices (BMPs) during construction should be implemented.

PURPOSE OF THE REPORT

The San Diego County Department of General Services (DGS) is considering the leasing and purchasing of properties in order to build a new library, the Casa de Oro Branch Library, in the Spring Valley community. This Biological Resources Report was prepared in support of a CEQA Initial Study/Mitigated Negative Declaration for the proposed project.

PROJECT AND STUDY AREA LOCATION

The proposed project is located in the community of Spring Valley in unincorporated San Diego County (County), California (Figure 1. *Project Location and Vicinity*), approximately 0.08 mile west of Kenwood Drive, directly north of California State Route 94 and adjacent to Spring Valley Academy. It is situated within Section 28 of Township 16 South, Range 1 West of the Jamul Mountains United States Geological Survey (USGS) 7.5-minute topographic quadrangle. The site is within the Valle de Oro Community Plan Area and the affected County Assessor Parcel Numbers (APNs) include portions of APNs #500-170-10, -11, and -41. The area assessed for this report includes the entire Development Area and a 500-foot buffer around the project site (cumulatively referred to as the "Survey Area").

PROJECT DESCRIPTION

The proposed project would result in replacement of the existing County Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The proposed project consists of an approximately 13,000-square-foot library facility that aims to achieve "zero net energy," with access off Campo Road, 52 parking spaces, landscaping, and fencing. The existing library is currently located at 9805 Campo Road within an existing retail commercial shopping center, just to the southeast of the proposed project site. The proposed project is intended to enhance the County's regional library system and provide expanded services to its patrons within the Spring Valley community and surrounding areas.

REGIONAL AND REGULATORY CONTEXT

The South County Plan provides a framework for the conservation of targeted species and habitats within

this region of the County, within the context of allowing and permitting developments. The proposed project will need to achieve consistency with the South County Plan and also the County's Zoning and Land Use Regulations, specifically the Biological Mitigation Ordinance (BMO), which enables the County to achieve the conservation goals set forth in the MSCP Subarea Plan. County staff reviews each project and determines what is necessary for conformance with the South County Plan.

Additional federal, state and local regulations also apply to the proposed project. Table 1 provides a summary of the regulations related to the biological resources on or near the Development Area.

Table 1. Applicable Federal, State, and Local Regulations

Federal Regulations		
Regulation	**Resource**	**Regulating Agency(ies)**
Federal Endangered Species Act	Listed "Endangered" or "Threatened" plant and animal species	USFWS
Migratory Bird Treaty Act	Migratory birds, or their parts, nests, or eggs	USFWS
Clean Water Act	"Waters of the U.S." – aquatic resources	USACE/SWRCB
State Regulations		
Regulation	**Resource**	**Regulating Agency**
California Endangered Species Act	Listed "Endangered," "Threatened," or "Candidate" native species and their habitats	CDFW
Fully Protected Species	Fish, wildlife, and native plants	CDFW
Native Plant Protection Act	64 species, subspecies, and varieties of endangered or rare native plants	CDFW
California Fish and Game Code	37 California ESA threatened or endangered species that are rare or face possible extinction; Section 1600: protection of streambeds and associated riparian habitat; Section 4150: protection of non game mammals	CDFW
Porter-Cologne Water Quality Control Act/ California Water Code	"Waters of the State" – aquatic resources	SWRCB
Local Regulations		
Regulation	**Resource**	**Regulating Agency**
CEQA Significance Criteria	Special status species, riparian habitat or sensitive natural communities, federal wetlands, and wildlife movement and nursery sites	County of San Diego
County MSCP Subarea Plan	Sensitive, rare, threatened, and endangered plant and animal species; preserve areas, and pre-approved mitigation areas	County of San Diego
County's Zoning and Land Use Regulations, Ch. 5 Biological Mitigation Ordinance	Environmentally sensitive lands, wetlands, wetland buffers, floodways, steep slopes, sensitive habitat lands, and significant prehistoric or historic sites	County of San Diego

*ESA = Endangered Species Act; USFWS = U.S. Fish and Wildlife Service; MBTA = Migratory Bird Treaty Act; CWA = Clean Water Act; SWRCB = State Water Resources Control Board; CDFW = California Department of Fish and Wildlife; CEQA = California Environmental Quality Act MSCP = Multi-Species Conservation Program



Location: N:\2020\2020-137.01 Casa de Oro Library\MAPS\location_vicinity\CDO_Location.mxd (TR)-trotellini 9/16/2020

Map Date: 9/16/2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community Photo Source: NAIP

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Figure 1. Project Location and Vicinity

2020-137.01 Casa de Oro Library

METHODS

Background Review

ECORP conducted background research, which included a review of standard resources such as the latest version of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) within five miles of the Development Area (CNDDB; CDFW 2020a), CDFW Special Animals Lists (CDFW 2020b) U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal and Information for Planning and Consultation (IPaC) Trust Resource List (USFWS 2020a), California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants (CNPS 2020), USFWS National Wetland Inventory (USFWS 2020b), and San Diego Geographic Information Source (SANGIS) as preparation for a field visit and reporting.

Using desktop review information and observations in the field, a list of special-status plant and wildlife species that have potential to occur within the Development Area and Survey Area was generated. For the purpose of this assessment, special-status species are defined as plants or wildlife that:

- are covered species under the MSCP
- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California Endangered Species Acts (ESAs);
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515; and/or
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Potential for occurrence of special-status species were determined based on the following guidelines:

Present: The species was observed within the Survey Area during a site visit.

High: Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a known occurrence has recently been recorded (within the last 20 years) within five miles of the area.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs in the Survey Area.

Low: Limited or marginal habitat for the species occurs within the Survey Area and a recently documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or suitable habitat strongly associated with the species occurs within the Survey Area, but no records or only historic records were found within the database search.

Presumed Absent: Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist within the Survey Area; or the known geographic range of the species does not include the Survey Area.

Field Survey

Following the literature review, qualified ECORP biologist Caroline Garcia conducted a field assessment on August 26, 2020 from 0730 to 1115. Weather conditions consisted of early morning fog, which transitioned to 30 percent cloud coverage, temperature range of 68 – 82° Fahrenheit, and wind speeds of three to seven miles per hour.

The entire Survey Area was surveyed on foot by a biologist familiar with the biological resources located in the regional vicinity of the property. The proposed Development Area was surveyed to provide for 100 percent visual coverage. Where access was restricted within the Survey Area, the biologist scanned for biological resources using binoculars. Focused protocol-level surveys were not conducted as a part of this visit. Vegetation mapping was conducting using aerial imagery and ground-truthed during field surveys. Plant and wildlife species observed during the survey were recorded and representative photographs of the property were taken (Attachment A). Binoculars were used to aid in bird and butterfly identifications.

The assessment was conducted on foot to visually and audibly cover 100 percent of the Survey Area and a 130-scale (i.e., 1 inch = 130 feet) digital orthographic map of the site with aerial was utilized to map the vegetation communities and record any special-status biological resources directly in the field.

The habitat and vegetation community mapping conducted during the survey was consistent with the classifications described by Robert F. Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). Oberbauer et al.'s Draft Vegetation Communities of San Diego County was also used as a reference (Oberbauer et al. 2008). Habitat and vegetation community mapping were based off San Diego Association of Governments' (SANDAG's) parcel lookup interactive map with San Diego County vegetation layer (SANGIS 2013) and Western San Diego County (2012) vegetation layers; and, Vegetation Classification Manual for Western San Diego County (SANDAG 2011).

RESULTS

The field survey confirmed that the proposed project and the entirety of the Development Area will be constructed within previously developed grounds of the Spring Valley Academy and restaurant property. Other existing uses within the Survey Area are the baseball field, soccer field, residential businesses, and private residences.

Topography and Soils

The Development Area occurs within relatively flat topography at an elevation range of approximately 421-443 feet above mean sea level. There is a gradual slope that occurs where the soccer field and baseball field meet in the northwestern portion of the Development Area. The site is within the Visalia sandy loam soil series map unit; this series is characterized as being well-drained and having low runoff.

Habitats and Vegetation Communities

Within the Survey Area, there was one land cover type present – Urban/Developed (Holland Code 12000). This land cover type is described below. Representative photographs of the habitat within the Survey Area are included within Attachment A.

Urban/Developed (Holland Code 12000)

Urban/Developed areas do not constitute a vegetation classification, but rather a land cover type. This land cover is characterized by structures, pavement, and landscaped areas that usually require irrigation; native vegetation is no longer supported (Oberbauer et al. 2008). This land cover dominated the entirety of the Survey Area and included the concrete lot comprising the center of the Development Area, the landscaped vegetation of adjacent properties, the Spring Valley Academy baseball and soccer fields, residential homes and roads, and structures and areas completely devoid of vegetation with compacted soils (Figure 2. *Biological Resources Assessment Results*).

Within the Development Area, vegetation consists of a mix of landscaped groundcovers, non-native herbs, and ornamental and landscaped trees including Brazilian pepper tree (*Schinus terebinthifolius*), weeping fig (*Ficus bejamina*), Mexican fan palm (*Washingtonia robusta*), Mexican palo verde (*Parkinsonia aculeata*), gum (*Eucalyptus* sp.) and pine (*Pinus* sp.). Native herbs include telegraph weed (*Heterotheca grandiflora*) and horseweed (*Erigeron canadensis*) growing up through the concrete pad and common pepper grass (*Lepidium densiflorum*) growing in the outskirts of the baseball field. Ruderal species include spotted spurge (*Euphorbia maculata*), pigweed (*Amaranthus* sp.), sow thistle (*Sonchus oleraceus*), short-pod mustard (*Hirschfeldia incana*), castor bean (*Ricinus communis*), ice plant (*Carpobrotus edulis*), and Russian thistle (*Salsola tragus*), as well as non-native grasses such as smilo grass (*Stipa miliacea*), natal grass (*Melinis repens*), and landscaped grasses and turf of the baseball field. The Survey Area supports ornamental and landscaped trees such as olive (*Olea europaea*), Peruvian pepper tree (*Schinus molle*), pine, and gum.

General Wildlife Species

The Survey Area provides habitat for wildlife species that commonly occur in developed and suburban areas. Wildlife observed within the Survey Area included mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), California towhee (*Melozone crissalis*), lesser goldfinch (*Spinus psaltria*), black phoebe (*Sayornis nigricans*), Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Dryobates nuttallii*), western bluebird (*Sialia mexicana*), and western fence lizard (*Sceloporus occidentalis*). Although the trees onsite provide suitable nesting and roosting opportunities for bird species, no nests (active or inactive) were observed during the reconnaissance survey.

Special-Status Species

No special-status plant species were observed within the Survey Area. One sensitive wildlife species, western bluebird, was observed during the assessment and is discussed in more detail below.



Map Features

- Development Area
- 500-ft Buffer

Land Cover Type

- Urban/Developed

Stormwater features

- Stormwater Drainage
- Storm Drain Inlet
- Storm Drain Outlet

Sources: NAIP (2018)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 9/16/2020

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Scale in Feet
0 200

Figure 2. Biological Resources Assessment Results

2020-137.01 Casa de Oro Library

Special-Status Plants

No special-status plants were observed during the assessment. All special-status plants were determined unlikely to occur within the Development Area and Survey Area due to the lack of suitable habitat and/or other conditions such as soil or elevation. Justifications for the conclusions regarding potential to occur are provided in Attachment B.

Special-Status Wildlife

The special-status wildlife species with occurrence records in the area were assessed for potential to occur within the Study Area (Attachment C). One sensitive wildlife species, western bluebird (*Sialia mexicana*), was observed within the Development Area. Five additional species have a moderate to high potential to occur onsite.

Special-Status Wildlife Species Observed

Western bluebird is a County Group 2 species and is a South County Plan-covered species. This species often resides in the County's foothills and mountains, especially where meadows lie among groves of oak or pine. However, western bluebird has shown signs of spreading out of its primary range, colonizing urban areas with mature trees and wide lawns (Unitt 2004). Further, the Survey Area is within an area mapped as "Probable" for breeding by the species. Foraging habitat is present in the Survey Area. Nesting habitat is limited within the Development Area but is present within the overall Survey Area.

Special-Status Wildlife Species with a Potential to Occur within the Development Area

The five additional special-status wildlife species that were determined to have a moderate to high potential to occur within the Development Area are listed below with their status designations. Justifications for potential to occur are provided in Attachment C.

- Western red bat (*Lasiurus blossevillii*), California Species of Special Concern (SSC), Group 2 (declining)
- Western yellow bat (*Lasiurus xanthinus*), California SSC
- Yuma myotis (*Myotis yumanensis*), Group 2 (declining)
- Cooper's hawk (*Accipiter cooperii*), Watch List, Group 1 (high sensitivity)
- Red-shouldered hawk (*Buteo lineatus*), Group 1 (high sensitivity)

The palm trees within the Development Area provide roosting habitat for bat species. There are two bat species with the potential to occur in the palm trees of the Development Area that are currently listed as a California SSC, including western red bat and western yellow bat. Yuma myotis could also potentially roost within existing structures of the Development Area. Western red bat and Yuma myotis are considered Group 2 sensitive wildlife by the County. There is one recent CNDDB record for western red bat and several recent CNDDB record for Yuma myotis within five miles of the site. In addition to western yellow bat, several other southern California bat species have been documented using palm trees as roosts

including canyon bat (*Parastrellus hesperus*), pallid bat (*Antrozous pallidus*), and big brown bat *(Eptesicus fuscus*), among others.

The gum and pine tree species in the northern portion of the Development Area west of the baseball diamond are suitable nesting habitat for the Cooper's hawk and red-shouldered hawk. The open field behind the residential housing to the northwest of the Development Area is suitable for raptor foraging and various additional trees within the Survey Area are marginally suitable for nesting for raptors and migratory bird species.

U.S. Fish and Wildlife Service Designated Critical Habitat

The proposed project is not located within any USFWS-designated Critical Habitat.

Migratory Birds and Raptors

The Development Area provides limited foraging and nesting habitat for migratory bird species and raptors. The Survey Area provides much more suitable nesting habitat in the form of gum and pine trees and foraging habitat of the open field behind residential homes to the northwest. No long-standing nests were observed within the Survey Area during the field survey.

Jurisdictional Wetlands and Waterways

There is an historic natural channel that flows north and south of the Survey Area that is classified as an intermittent stream by the USFWS National Wetlands Inventory (USFWS 2020b). Upon inspection, it appears degraded as it runs alongside residential property north of the Survey Area. Before entering the Survey Area, water from this channel is directed to a concrete culvert north of the Development Area (outside the Survey Area) at Rogers Road and continues underground as a 48-inch storm drain pipe. Another storm drain inlet exists north of the Spring Valley Academy baseball field (Figure 2) and exits at a concrete outlet within the Development Area (Attachment A, Photos 5 and 6). From the outlet, water flows through a riprap-lined storm water drainage to the next inlet, which travels under Campo Road. Water was not actively flowing during the field survey, but stagnant water was present near the mouth of the concrete outlet (Attachment A, Photos 6 and 7). Because this drainage is part of an historic drainage feature, it is presumed to be jurisdictional to the USACE, CDFW and SWRCB.

There is also a concrete v-ditch that runs east-west along the southern perimeter of the Development Area that contributes to the aforementioned storm water drainage. This feature also could be potentially jurisdictional.

Wildlife Corridors and Linkages

The Survey Area is isolated from large open space blocks of habitat and does not provide wildlife corridors or linkages between such areas for small mammal species or other ground-dwelling species. Bird species could pass through the Survey Area as migrants, but there is no unique character to the site that would cause bird species to prefer the Survey Area over adjacent areas. Due to the overall lack of native

habitat cover, developed land uses, and high level of consistent anthropogenic activity within the Survey Area, the proposed project is not considered to be a wildlife corridor.

PROJECT EFFECTS AND SIGNIFICANCE DETERMINATION

For the purposes of this analysis, direct and indirect impacts will be analyzed for biological resources recorded within the Survey Area or those with the potential to occur within the Survey Area. Direct impacts include the primary effects of construction that displace habitats and species. For the proposed project, this includes all of the Development Area. Indirect impacts occur from a secondary effect of construction activities or long-term effects of a development. This type of impact could include habitat isolation, urban edge effects, exotic species invasion, vehicular noise or increased human or pet intrusion. The magnitude of an indirect impact can be as significant as that of a direct impact, depending on the circumstances.

The proposed project would not have significant impacts, either directly or indirectly, on a formally listed or candidate species for listing by the CDFW or USFWS. Impacts to habitats also to not apply to the proposed project because the entirety of the Development Area is considered an urban landscape.

Below is a discussion of the biological resources, by type, and expected impacts.

Habitats and Vegetation Communities

Direct Impacts

All disturbance and staging will occur within previously disturbed areas, consisting of impacts to urban/developed land. Because these habitats are not considered as sensitive biological resources, there is no significant impact to habitats and vegetation communities due to the proposed project.

Indirect Impacts

Because the habitats within the Survey Area are not considered as sensitive biological resources, there is no significant impact to habitats and vegetation communities due to the proposed project.

Special-Status Species

Direct Impacts

One special-status wildlife species was observed, western bluebird, and there is potential for five other special-status wildlife species to occur within the Development Area.

Western bluebird prefers to nest in pre-existing cavities within trees; however, the ornamental and landscaped trees that may be removed within the Development Area are unlikely to provide suitable nesting cavities. If active bluebird nests were directly impacted by construction activities or indirectly impacted by noise and dust, to the point where nesting activities cease, then these impacts would be considered significant. Mitigation for this impact can be found below in the BIO-1 Measure.

Implementation of this mitigation measure would reduce impacts to this species to a less than significant level.

The gum and pine trees within the Survey Area that could support nesting of Cooper's hawk and red-shouldered hawk are not anticipated for removal. However, if these species were to nest within these tree species, there is a potential for significant impacts similar to those described above for the western bluebird. Mitigation for this impact can be found below in the BIO-1 Measure. Implementation of this measure would reduce impacts to these species to a less than significant level.

Bat species in California are protected by Section 4150 (Protection of non-game mammals from take) of the California Fish and Game Code. Section 4150 prohibits the take of any naturally occurring mammals in California that are nongame mammals, which includes all species of the Order Chiroptera (bats). Furthermore, the two bat species with high potential to occur within the Development Area are California Species of Special Concern. The palm trees located within the Development Area may support roosting habitats for one or more of these bat species. While maternity roosting habitat for colonial roosting species is not present within the Development Area, the palm trees would provide habitat for maternity roosts of western red bat and western yellow bat as these tend to be solitary-roosting species. Direct impacts to bat species roosting within the palm trees are possible and potentially significant. Mitigation for this impact can be found below in the BIO-2 Measure. Implementation of this mitigation measure would reduce impacts to bat species to a less than significant level.

Indirect Impacts

Within areas near the Development Area, measures described above for nesting bird species are required due to the potential for significant impacts under the MBTA. Implementation of the BIO-1 Measure would reduce indirect impacts to nesting bird species to a less than significant level. Significant indirect impacts to bat species are not anticipated due to the proposed project.

Migratory Birds and Raptors

Direct Impacts

Direct impacts to nesting migratory birds and raptors are possible and, if they occur to the extent that a nest is harmed or breeding activities cease, then this impact would be considered significant. Mitigation for this impact can be found below in the BIO-1 Measure. Implementation of this mitigation measure would reduce impacts to these species to a less than significant level.

Indirect Impacts

Indirect impacts to nesting migratory birds and raptors are possible and, if they occur to the extent that a nest is harmed or breeding activities cease, then this impact would be considered significant. Mitigation for this impact can be found below in the BIO-1 Measure. Implementation of this mitigation measure would reduce impacts to these species to a less than significant level.

Jurisdictional Wetlands and Waterways

Direct Impacts

Any direct impacts to the mapped drainage feature within the Development Area would be considered significant under CEQA, because the drainage would be classified as federal, state, or local jurisdictional waters. If the proposed project cannot avoid this feature, regulatory permitting for the impacts would be needed as well as a compensatory mitigation plan prior to impacts. The BMO also regulates wetlands and floodplains and mitigation measures are required that result in a net gain in wetland and/or riparian habitat.

Indirect Impacts

Indirect impacts to the jurisdictional feature could occur, and would be considered significant, if pollutants from the proposed project construction were to enter the drainage. Mitigation for the impacts to the feature would be required as described in BIO-3 below. Implementation of this mitigation measure would reduce indirect impacts to jurisdictional features to a less than significant level.

RECOMMENDED MEASURES

The following measures are recommended to reduce identified impacts for the proposed project to a level below significance:

BIO-1: **Compliance with Migratory Bird Treaty Act.** Construction activity (for example, but not limited to, staging, site preparation, grading) should be conducted from September 1st through January 15th if possible to avoid the migratory bird and raptor nesting season. However, if construction does occur or is ongoing within the nesting season (January 16th through August 31st), regardless of when construction activities began, surveys for migratory bird and raptor nests should be conducted. These surveys should be performed by a qualified biologist within 72 hours prior to the commencement of construction activities or if construction activities are ongoing, within 72 hours prior to January 15th. Surveys should include the construction area plus a 500-foot buffer. Survey findings would be documented prior to initiating any construction activities. If active nests are found during nesting bird survey, appropriately sized no-work buffers (generally 50 to 300 feet, depending on species sensitivity) will be established around the active nests identified within and adjacent to the project site. The qualified biologist will determine the appropriate buffer size and level of nest monitoring necessary for species not listed under the federal or California ESAs based on the species' life history, the species' sensitivity to disturbances (e.g., noise, vibration, human activity), individual behavior, status of nest, location of nest and site conditions, presence of screening vegetation, anticipated project activities, ambient noise levels compared to project-related noise levels, existing non-project-related disturbances in vicinity, and ambient levels of human activity.

Buffers will be marked (flagged or fenced with environmentally sensitive area fencing) around any active nests and periodic monitoring by the qualified biologist will occur to

ensure the project does not result in the failure of the nest. The buffer(s) will be maintained around each nest until the nest becomes inactive as determined by the qualified biologist. At the discretion of the qualified biologist, if a nesting bird appears to be stressed as a result of project activities and the buffer does not appear to provide adequate protection, additional minimization measures may need to be implemented.

Construction may continue outside of the no-work buffers. The qualified biologist will ensure that restricted activities occur outside of the delineated buffers, check nesting birds for any potential indications of stress, and ensure that installed fencing or flagging is properly maintained during nest monitoring and any additional site visits. Buffer sizes may be adjusted (either increased or reduced), or the extent of nest monitoring may be adjusted, at the discretion of the qualified biologist based on the conditions of the surrounding area and/or the behavior of the nesting bird.

Any changes to buffer sizes and/or nest monitoring frequency will be documented.

If listed species are found to be nesting in the Survey Area, construction activity should not occur without coordination with regulating agencies and may require an agency-approved bird management plan.

BIO-2: **Compliance with Section 4150 of California Fish and Game Code.** The palm trees within the Development Area could support roosting bat species (including sensitive species) and may provide maternity roosts. Palm tree removal should occur between October 1st and February 28th if possible, to avoid the bat maternity season and direct mortality of non-volant young. If palm trees must be removed from March 1st through September 31st, a qualified bat biologist should conduct bat surveys which include an appropriate combination of sampling, exit counts, and acoustic surveys to determine if bats are using these resources in the Development Area. If bat surveys are negative, palm trees should be removed the next day. If bat surveys are positive, palm tree removal should be postponed until October 1st. If palm trees are removed October 1st through February 28th, then no survey by a qualified bat biologist is necessary.

Because bat roosting within palm trees occurs throughout the year, palm-tree removal at any time of year should occur using a two-step process conducted over two consecutive days in order to minimize direct injury or mortality to any roosting bats. This process should be monitored by a qualified biologist. Permittee shall only trim the outermost fronds of each individual tree on the first day; innermost fronds shall not be trimmed. No more than 50% of the palm fronds shall be removed from each tree during day 1. On the second day the remaining fronds shall be removed. All fronds must be removed/trimmed using chainsaws. No use of bulldozers, backhoes, cranes, or other heavy equipment is permitted. If bats emerge during the tree trimming, trimming activities shall cease at the individual tree for the remainder of the day to allow for any additional bats roosting in the tree to emerge during evening hours when it is safe and appropriate for them to do so. Trimming of the tree may resume the following morning.

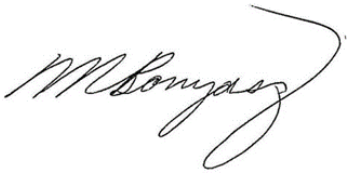
Tree trimming activities in the fall should be conducted on days when weather conditions are such that roosting bats are unlikely to be in torpor (predicted overnight lows on evenings before and after the tree trimming activities are above 45 degrees Fahrenheit) to the extent practicable.

BIO-3: **Standard BMPs.** The project must comply with standards outlined in the County of San Diego Watershed Protection, Stormwater Management and Discharge Control Ordinance (WPO). Limits of work should be designated and clearly demarcated, and specifications should provide a stringent level of BMPs to control dust, runoff, and spills and prevent indirect effects to the adjacent habitats. To reduce potential impacts related to erosion, BMPs including slope stabilization and control of runoff should be implemented during construction. To prevent potential impacts related to waters, straw wattles and other Stormwater Pollution Prevention Plan (SWPPP) measures should be implemented during construction. This would guarantee that the proposed project does not have a direct effect on surface water quality that exits the onsite storm drain outlet and later enters potential jurisdictional waters.

SIGNIFICANCE OF PROJECT EFFECTS

The proposed project will not have significant direct effects on biological resource with appropriate design and mitigation measures implemented to avoid impacts to sensitive resources that could occupy the Development Area such as the storm water drainage and covered species.

With regards from the following report preparers,



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FIGURES AND ATTACHMENTS:

Figure 1: Project Location and Vicinity

Figure 2: Biological Resources Assessment Results

Attachment A: Site Photographs

Attachment B: Sensitive Plant Species Potential for Occurrence

Attachment C: Sensitive Wildlife Species Potential for Occurrence

REFERENCES

CDFW. 2020a. RareFind 5 California Department of Fish and Wildlife Natural Diversity Database (CNDDB) Version Commercial Version. Sacramento, CA: California Department of Fish and Game, Biogeographic Data Branch.

_____. 2020b. Special Animals List. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Game. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline.

CNPS. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Rare Plant Scientific Advisory Committee. California Native Plant Society. Sacramento, CA. Website http://www.rareplants.cnps.org. Accessed on August 12, 2020.

County of San Diego. 2010. County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements – Biological Resources.

_____. 2010. San Diego County Code of Regulatory Ordinances - Biological Mitigation Ordinance.

_____. 1997. Preliminary Multiple Species Conservation Program Subarea Plan (MSCP South County Plan). October 1997.

Holland, R. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Department of Fish and Game, Sacramento, CA. NETRonline. 2020.

NRCS. 2020a. Soil Survey Geographic Database. Available Online: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed on August 12, 2020.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," Robert F. Holland, Ph.D., October 1986. February 2008.

SANDAG. 2011. Vegetation Classification Manual for Western San Diego County.

SANGIS. 2013. San Diego Association of Governments. "ECO_VEGETATION_CN" August 2013. San Diego Geographic Information Source – JPA. Accessed on August 12, 2020.

USFWS. 2020a. IPAC Trust Resources List. http://ecos.fws.gov/ipac/. Accessed on August 12, 2020.

_____. 2020b. National Wetland Inventory. https://www.fws.gov/wetlands/data/Mapper.html. Accessed on August 12, 2020.

ATTACHMENT A

Site Photos



Photo 1: Eastern section of the Development Area, facing west.



Photo 2: Center of the Development Area, facing east.



Photo 3: Center of the Development Area, facing north.



Photo 4: Center of the Development Area, facing west.



Photo 5: View above the storm drain outlet in the Development Area, facing south.



Photo 6: View of the storm drain outlet, facing north.



Photo 7: View of water that exits the outlet and continues down the drainage, facing south.



Photo 8: View of the storm water drainage, facing south.



Photo 9: View of the storm drain passage under Campo Road, outside the Development Area, facing southeast.



Photo 10: View of the northern portion of the Development Area, facing south.



Photo 11: View of the Survey Area, west of Development Area, facing southeast.



Photo 12: Western bluebird in the northwest portion of the Development Area.

ATTACHMENT B

Potential for Occurrence – Sensitive Plants

Scientific Name Common Name	Status		Flowering Period; Elevation (meters)	Habitat Requirements	Potential for Occurrence
Acanthomintha ilicifolia San Diego thorn-mint	USFWS: CDFW: CNPS: County:	**THR END** 1B.1 List A	April-June 10-960	Occurs in various chaparral habitats, coastal scrub, valley and foothill grasslands, and vernal pools, typically on clay sediment lenses within openings of vegetation. This plant is endemic to active vertisol clay soils in mesas and valleys. It is equally likely to occur in wetlands or non-wetlands.	**Presumed absent.** No suitable habitat is present due to lack of soils and habitat. One recent CNDDB record within 5 miles of the site.
Adolphia californica California adolphia	USFWS: CDFW: CNPS: County:	none none 2B.1 List B	December-May 10-740	Occurs in chaparral, coastal sage scrub, valley and foothill grasslands. Found in a variety of substrate from sandy/gravelly to clay soils; various exposures. Nearly all known occurrences in coastal San Diego County.	**Presumed absent.** No suitable habitat is present due to lack of soils and habitat. Three recent CNDDB records within 5 miles of the site.
Ambrosia pumila San Diego ambrosia	USFWS: CDFW: CNPS: County:	**END** none 1B.1 List A	April-October 20-415	Occurs in disturbed and vernal pool sites within valley grasslands, chaparral, coastal sage scrub, and wetland habitats.	**Low.** Marginally suitable soils and habitat present. Five recent CNDDB records within 5 miles of the site in the San Diego National Wildlife Refuge.
Baccharis vanessae Encinitas baccharis	USFWS: CDFW: CNPS: County:	**THR END** 1B.1 List A	August-November 60-300	Occurs in coastal mixed chaparral, chaparral, and foothills.	**Presumed absent.** No suitable habitat is present. No CNDDB records occur within 5 miles of the site.
Brodiaea filifolia thread-leaved brodiaea	USFWS: CDFW: CNPS: County:	**THR END** 1B.1 List A	March-June 25-1120	Occurs in openings within chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools. Often found in clay soils.	**Presumed absent.** Soils are not suitable for this species. No CNDDB records occur within 5 miles of the site.
Brodiaea orcutti Orcutt's brodiaea	USFWS: CDFW: CNPS: County:	none none 1B.1 List A	May-July 30-1692	Occurs in chaparral, cismontane woodland, closed-cone coniferous forest, meadow and seep, ultramafic, valley and foothill grassland, vernal pool, and wetland habitats.	**Low.** No suitable soils or habitat present. No CNDDB records occur within 5 miles of the site.
Deinandra conjugens Otay tarplant	USFWS: CDFW: CNPS: County	**THR END** 1B.1 List A	May-June 20-300	Occurs in clay soils of coastal sage scrub and valley grassland.	**Presumed absent.** No suitable habitat is present due to lack of soils and habitat. There are several recent records within 5 miles of the site.
Dudleya variegata variegated dudleya	USFWS: CDFW: CNPS: County:	none none 1B.2 List A	May-June 10-550	Occurs in bluff and rocky cliffs in coastal chaparral and coastal scrub in rocky soils.	**Presumed absent.** No suitable habitat is present within the site. One recent CNDDB record within 5 miles of the project as recently as 2019.

Ericameria palmeri **var.** *palmeri* Palmer's goldenbush	USFWS: CDFW: CNPS: County:	none none 1B.1 List B	July-November 30-600	Occurs in chaparral and coastal scrub in mesic soils.	**Presumed absent.** No suitable habitat present. Two CNDDB records within 5 miles of the site.
Eryngium aristulatum **var.** *parishii* San Diego button-celery	USFWS: CDFW: CNPS: County:	**END** **END** 1B.1 List A	April-June <705	Occurs in vernal-pools of valley grassland, coastal sage scrub, freshwater wetlands, and wetland-riparian habitats.	**Presumed absent.** No suitable habitat is present due to lack of soils and habitat. There are several recent records within 5 miles of the site.
Ferocactus viridescens San Diego barrel cactus	USFWS: CDFW: CNPS: County:	none none 2B.1 COV	May-June 10-150	Occurs in chaparral, valley grassland, coastal sage scrub, freshwater wetlands.	**Presumed absent.** No suitable habitat is present due to lack of soils and habitat. There are several recent records within 5 miles of the site.
Fremontodendron mexicanum Mexican flannelbush	USFWS: CDFW: CNPS: County:	**END** **RAR** 1B.1 List A	March-June 10-716	Occurs in chaparral, foothill woodland, and closed-cone pine forest habitats of Otay Mountain.	**Presumed absent.** No suitable habitat is present due to lack of soils and habitat. There are several recent records within 5 miles of the site.
Isocoma menziesii **var.** *decumbens* decumbent goldenbush	USFWS: CDFW: CNPS: County:	none none 1B.2 List A	April-November 10-135	Occurs in chaparral and coastal scrub in sandy, often disturbed areas.	**Presumed absent.** No suitable habitat is present due to lack of soils and habitat. Four recent CNDDB records within 5 miles of the site.
Monardella viminea willowy monardella	USFWS: CDFW: CNPS: County:	**END** **END** 1B.1 List A	June-August 0-400	Occurs in rocky washes with cobbles, alluvial benches.	**Presumed absent.** Soils are not suitable for this species. There are no recent CNDDB records within 5 miles.
Navarretia fossalis spreading navarretia	USFWS: CDFW: CNPS: County:	**THR** none 1B.1 List A	June-July 200-700	Occurs in vernal pools and ephemeral basins/ditches.	**Presumed absent.** There is no suitable habitat in the form of ephemeral basins for this species within the site. No CNDDB records occur within 5 miles of the site.
Orcuttia californica California orcutt grass	USFWS: CDFW: CNPS: County:	**END** **END** 1B.1 List A	April-August <700	Occurs in vernal pool habitats.	**Presumed absent.** There is no suitable habitat in the form of vernal pools for this species within the site. No CNDDB records occur within 5 miles of the site.
Pogogyne abramsii San Diego mesa-mint	USFWS: CDFW: CNPS: County:	**END** **END** 1B.1 List A	March-July 100-200	Occurs in vernal pool habitats.	**Presumed absent.** There is no suitable habitat in the form of vernal pools for this species within the site. No CNDDB records occur within 5 miles of the site.

Pogogyne nudiuscula Otay mesa-mint	USFWS: CDFW: CNPS: County:	**END** **END** 1B.1 List A	May-July 100-250	Occurs in vernal pool habitats of Otay Mesa.	**Presumed absent.** There is no suitable habitat in the form of vernal pools for this species within the site. No CNDDB records occur within 5 miles of the site.
Salvia munzii Munz's sage	USFWS: CDFW: CNPS: County:	none none 2B.2 List B	March-June 0-1500	Occurs in dry areas in scrub, chaparral, woodland, and forest habitats.	**Presumed absent.** There is no suitable habitat in the form of for this species within the site. Several CNDDB records occur within 5 miles of the site.

Federal Designations:
(Federal Endangered Species Act, USFWS)

END: Federally-listed, Endangered
THR: Federally-listed, Threatened
FC: Federal Candidate Species
FSC: Federal Species of Concern
FPD: Federal Proposed for Delisting
DL: Federally-delisted

State designations:
(California Endangered Species Act, CDFW)

END: State-listed, Endangered
THR: State-listed, Threatened
RAR: State-listed, Rare
SSC: California Species of Special Concern
FP: Fully Protected Species

California Native Plant Society (CNPS) Designations:
1A: Plants presumed extinct in California.
1B: Plants rare and endangered in CA and throughout their range.
2: Plants rare, threatened, or endangered in CA but more common elsewhere in their range.
3: Plants about which need more information; a review list.
4: Plants of limited distribution; a watch list.

Plants 1B, 2, and 4 extension meanings:
.1 Seriously endangered in CA (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Fairly endangered in California (20-80% occurrences threatened)
.3 Not very endangered in CA (<20% of occurrences threatened or no current threats known)

*Note: according to CNPS [Skinner and Pavlik 1994], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code (CDFG 2010b). This interpretation is inconsistent with other definitions.)

San Diego County Designations
List A: Plants rare, threatened or endangered in California and elsewhere
List B: Plants rare, threatened or endangered in California but more common elsewhere
List C: Plants which may be rare, but need more information to determine their true rarity status
List D: Plants of limited distribution and are uncommon, but not presently rare or endangered

ATTACHMENT C

Potential for Occurrence – Sensitive Wildlife

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
INVERTEBRATES				
CRUSTACEA				
Branchinecta sandiegoensis San Diego fairy shrimp	USFWS: CDFW: County: MSCP:	**END** none Group 1 COV	Vernal pools and ephemeral wetlands. Typically, in small and shallow pools with mud or grassy bottoms.	**Presumed absent.** No potential vernal pools detected within the site and buffer. Several CNDDB records occur within 5 miles of the site but habitat is not present.
INSECTA				
Bombus crotchii Crotch bumblebee	USFWS: CDFW: County: MSCP:	none **CAN** none none	Open grassland and scrub habitats of southern California.	**Presumed absent.** Site and buffer are absent of host plants. Two historic but no recent CNDDB record within 5 miles of the site.
Euphydryas editha quino Quino checkerspot butterfly	USFWS: CDFW: County: MSCP:	**END** none Group 1 none	Openings within chaparral and coastal sage scrublands in Riverside and San Diego Counties.	**Presumed absent.** Site and buffer are absent of primary host plants, plantains such as California plantain (*Plantago erecta)* and secondary host plants. One recent CNDDB record within 5 miles of the site.
Lycaena hermes Hermes copper butterfly	USFWS: CDFW: County: MSCP:	**CAN** none Group 1 none	Chaparral and coastal sage scrublands in San Diego County. Typically found where its larval host plant (spiny redberry) occurs within 10 feet of its primary nectar source (California buckwheat).	**Presumed absent.** Site and buffer are absent of host plants spiny redberry (*Rhamnus crocea*). No CNDDB record within 5 miles of the site.
AMPHIBIANS				
SCAPHIOPODIDAE (spadefoot toads)				
Spea hammondii western spadefoot	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Open areas with sandy soils in a wide range of habitats including lowlands to foothills, coastal sage scrub, chaparral, mixed woodlands, alluvial fans, and grasslands.	**Low.** No habitat present within site and buffer. Two recent CNDDB records within 5 miles of the site.
REPTILES				
ANNIELLIDAE (American legless lizards)				
Anniella stebbinsi southern California legless lizard	USFWS: CDFW: County: MSCP:	none SSC none none	Moist, warm, loose soils within sparsely vegetation areas of beach dunes, chaparral, pine and oak woodlands, desert scrub, sandy washes and terraces with leaf litter. Often found under rocks, wood, leaf litter. Occasionally found in suburban landscaped features.	**Low.** Limited habitat exists within the site and buffer. One recent CNDDB record within 5 miles of the site.
TEIIDAE (whiptails and relatives)				
Aspidoscelis hyperythra orange-throated whiptail	USFWS: CDFW: County: MSCP:	none WL Group 2 COV	Semi-arid open areas with coarse soils including coastal sage scrub, chaparral, and dry riparian areas and washes.	**Low.** Unlikely to occur on site due to absence of suitable habitat within the site and buffer. One recent

				CNDDB record occurs within 5 miles of the site.
PHRYNOSOMATIDAE (spiny lizards)				
Phrynosoma blainvillii coast horned lizard	USFWS: CDFW: County: MSCP:	none SSC Group 2 COV	Open areas of valleys, foothills, and semiarid mountains with sandy soil and low vegetation including chaparral, woodlands, and grasslands.	**Low.** Limited habitat exists within the site and buffer. One recent CNDDB record within 5 miles of the site.
BIRDS				
ACCIPITRIDAE (hawks, kites, harriers, and eagles)				
Accipiter cooperii Cooper's hawk (nesting)	USFWS: CDFW: County: MSCP:	none WL Group 1 COV	Open woodlands, or broadleaf and coniferous forested areas but also found in parks and fields with tall trees. Nests in tall trees, usually on flat ground, in dense woods.	**Moderate.** Site and buffer provide potential nesting habitat due to presence of large eucalyptus and pine trees. Foraging habitat present. One recent CNDDB record occurs within 5 miles of the site.
Buteo lineatus red-shouldered hawk (nesting)	USFWS: CDFW: County: MSCP:	none none Group 1 none	Associated with low-elevation riparian woodlands, particularly in areas with interspersed swamps and emergent wetlands.	**Moderate.** Site and buffer provide potential nesting habitat due to presence of large eucalyptus and pine trees. Foraging habitat present. No CNDDB records occur within 5 miles of the site.
EMBERIZIDAE (sparrows, buntings, warblers, and relatives)				
Aimophila ruficeps canescens southern California rufous-crowned sparrow	USFWS: CDFW: County: MSCP:	none WL Group 1 COV	Coastal sage scrub or scrub with low scattered shrubs and moderate to steep, dry, and rocky slopes. Nests on ground or within 1 meter of ground in shrubs or trees.	**Low.** There is no coastal sage scrub habitat within the site and buffer. Several CNDDB records occur within 5 miles of the site.
FALCONIDAE (falcons)				
Falco mexicanus prairie falcon (nesting)	USFWS: CDFW: County: MSCP:	none WL Group 1 none	Open habitats such as plains, prairies, steppe, and mountainous areas. Nests in a sheltered ledge of rocky cliffs.	**Presumed absent.** There is no suitable nesting habitat within the site or buffer. No recent CNDDB record within 5 miles of the Project.
ICTERIDAE (blackbirds)				
Agelaius tricolor tricolored blackbird (nesting colony)	USFWS: CDFW: County: MSCP:	BCC **THR** Group 1 COV	Freshwater marshes with dense cattails, bulrushes, sedges, and tule. Forages in open habitat such as cultivated fields and pastures.	**Presumed absent.** There is no freshwater marsh habitat within the site and buffer. Foraging habitat present with perennial man-made water sources nearby. One historic CNDDB record occurs within 5 miles of the site.
PARULIDAE (new world warblers)				
Icteria virens yellow-breasted chat	USFWS: CDFW: County: MSCP:	none SSC Group 1 none	Riparian and upland thickets, and dry overgrown pastures. Prefers to nest in dense scrub along streams or at the edges of ponds or swamps.	**Low.** Unlikely to occur on site due to absence of continuous riparian vegetation, but limited foraging habitat exists within the buffer. No recent CNDDB records within 5 miles of the site.

Setophaga petechia yellow warbler	USFWS: CDFW: County: MSCP:	BCC SSC Group 2 none	Riparian woodlands especially with willows, open scrub, gardens, and thickets often near water.	**Low.** Unlikely to occur on site due to absence of riparian woodland habitat, but limited habitat exisits within the buffer. No recent CNDDB records within 5 miles of the site.
RALLIDAE (rails)				
Rallus obsoletus levipes light-footed Ridgway's rail	USFWS: CDFW: County: MSCP:	**END** **END** Group 1 COV	Coastal salt marshes, lagoons, and their maritime associations.	**Presumed absent.** Unlikely to occur on site due to absence of coastal salt marsh habitat. No recent CNDDB records within 5 miles of the site.
SYLVIIDAE (gnatcatchers)				
Polioptila californica californica coastal California gnatcatcher	USFWS: CDFW: County: MSCP:	**THR** SSC Group 1 COV	Dry coastal slopes, washes, and mesas with areas of low vegetation and coastal sage scrub.	**Low.** There is no coastal sage scrub habitat within the site and buffer. There are four recent CNDDB records within 5 miles of the site.
TROGLODYTIDAE (wrens)				
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	USFWS: CDFW: County: MSCP:	none SSC Group 1 COV	Coastal sage scrub with tall opuntia (*Opunita* spp.) cacti. Nests in opuntia cactus.	**Presumed absent.** There is no nesting habitat in the site or buffer areas due lack of sufficient stands of cacti. Two recent CNDDB records occur within 5 miles of the site.
TURDIDAE (bluebirds and thrushes)				
Sialia mexicana western bluebird	USFWS: CDFW: County: MSCP:	none none Group 2 COV	Open, deciduous woodlands wooded riparian areas, grasslands, and farmlands. Nests in tree cavities.	**Present.** Site does not provide well suited nesting habitat due to lack of woodlands. There are several scattered native trees in the buffer that provide marginal nesting habitat. Suitable foraging habitat occurs in the buffer in the form of open space and adjacent riparian areas. No CNDDB records occur within 5 miles of the site.
TYRANNIDAE (tyrant flycatchers)				
Empidonax traillii extimus southwestern willow flycatcher	USFWS: CDFW: County: MSCP:	**END** **END** Group 1 COV	Riparian woodlands particularly with willow thickets. Nests in densest areas of shrubs and trees with low-density canopies.	**Presumed absent.** Unlikely to occur on site due to absence of dense riparian habitat. No CNDDB record within 5 miles of the site.
VIREONIDAE (vireos)				
Vireo bellii pusillus least Bell's vireo (nesting)	USFWS: CDFW: County: MSCP:	**END** **END** Group 1 COV	Riparian woodlands and willow-cottonwood forests particularly with streamside thickets and dense brush.	**Low.** Unlikely to occur on site or within buffer due to absence of contiguous, dense riparian habitat. Two recent CNDDB records occur within 5 miles.

MAMMALS				
PHYLLOSTOMIDAE (leaf-nosed bats)				
Choeronycteris mexicana Mexican long-tongued bat	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Roosts in caves, rock fissures, old mines, and rarely in buildings. Found in desert shrublands, tropical deciduous forests, deep mountain canyons with riparian vegetation, oak-conifer woodlands and forests.	**Presumed absent.** No suitable roosting habitat in the site or buffer. No recent CNDDB records within 5 miles of the site.
MOLOSSIDAE (free-tailed bats)				
Eumops perotis californicus western mastiff bat	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Roosts high above ground in rock and cliff crevices, shallow caves, and rarely in buildings. Occurs in arid and semiarid regions including rocky canyon habitats.	**Low.** No suitable roosting habitat in the site or buffer. One recent CNDDB record within 5 miles of the site.
Nyctinomops femorosaccus pocketed free-tailed bat	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Roosts in crevices of outcrops and cliffs, shallow caves, and buildings. Found along rugged canyons, high cliffs, and semiarid rock outcroppings.	**Low.** No suitable roosting habitat in the project site or buffer. One recent CNDDB record within 5 miles of the site.
Nyctinomops macrotis big free-tailed bat	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Roosts in cliff crevices, and less often in buildings, caves, and tree cavities. Occurs in rocky areas of rugged and hilly country including woodlands, evergreen forests, river floodplain-arroyo habitats, and desert scrub.	**Presumed absent.** No suitable roosting habitat in the project site or buffer. No recent CNDDB record within 5 miles of the site.
VESPERTILIONIDAE (evening bats)				
Corynorhinus townsendii Townsend's big-eared bat	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Roosts in mines, caves, buildings, or other crevices, sometimes trees. Usually requires large crevices. In San Diego, most roosts are in mines. Most common in moist areas or those with access to water.	**Low.** There is marginally suitable roosting habitat within the site and buffer. There is one historic CNDDB record within 5 miles of the site.
Lasiurus blossevillii western red bat	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Roosts in trees or large leafy shrubs and tend to avoid caves and buildings. Occurs in lowlands to mountains, in woodlands and forests and, especially along riparian habitats. Also known to occur in urban areas.	**High.** There is suitable roosting habitat in the trees located within the site and buffer. There is one recent CNDDB record within 5 miles of the site.

Lasiurus xanthinus western yellow bat	USFWS: CDFW: County: MSCP:	none SSC none none	Roosts in trees, particularly palms, in desert wash, desert riparian, valley foothill riparian, and palm oasis habitats.	**High.** There is suitable roosting habitat, particularly in the palm trees located within the site. This species has a strong association with roosting under dead palm frond skirts. There is one historic CNDDB record within 5 miles of the site.
Myotis yumanensis Yuma myotis	USFWS: CDFW: County: MSCP:	none none Group 2 none	Roosts near water in cliff crevices, caves, trees, buildings, and bridges. Occurs near water in riparian areas, moist woodlands and forests, and desert scrub.	**Moderate.** There is moderately suitable roosting habitat within the site and buffer in the trees and Campo Road bridge structure. There are several recent CNDDB records within 5 miles of the site.
LEPORIDAE (rabbits and hares)				
Lepus californicus bennettii San Diego black-tailed jackrabbit	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Variety of open or semi-open country including grasslands, croplands, and sparse coastal scrub.	**Low.** There is limited habitat within site and buffer. One recent CNDDB record occurs within 5 miles of the site.
MUSTELIDAE (weasels and relatives)				
Taxidea taxus American badger	USFWS: CDFW: County: MSCP:	none SSC Group 2 none	Open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral, and sometimes riparian zones.	**Presumed absent.** There is no habitat within site and buffer. No recent CNDDB records within 5 miles of the site.

Federal Designations:
(Federal Endangered Species Act, USFWS)

END: Federally-listed, Endangered
THR: Federally-listed, Threatened
CAN: Federal Candidate Species
FSC: Federal Species of Concern
FPD: Federal Proposed for Delisting
BCC: Bird of Conservation Concern

State designations:
(California Endangered Species Act, CDFW)

END: State-listed, Endangered
THR: State-listed, Threatened
CAN: State Candidate Species
SSC: California Species of Special Concern
FP: Fully Protected Species
WL: Watch List

San Diego County Biological Resources Guidelines
Group 1: County Sensitive
Group 2: County Sensitive

San Diego County MSCP Subarea Plan
COV: Covered Species

APPENDIX C
ARCHAEOLOGICAL AND HISTORICAL TECHNICAL REPORT

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Archaeological and Historic Technical Report

Casa de Oro Branch Library Project

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October 6, 2020

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Firm: ECORP Consulting, Inc.

Client/Project Proponent: Michael Baker International (Client)

County of San Diego (Project Proponent)

Report Date: 10/06/2020

Report Title: Historic Technical Report, Casa de Oro Library Project

Type of Study: Intensive Pedestrian Survey

New Sites: P-37-039110 (CDO-01), historic-period commercial building and P-37-039111 (CDO-02) historic-period Campo Road segment

Updated Sites: None

USGS Quad: 1994 Jamul Mountains, California

Acreage: 2.24

Key Words: Intensive Pedestrian Survey, Kumeyaay, historic-period, commercial building, historic road, Fosters Freeze, Campo Road

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LIST OF ACRONYMS AND ABBREVIATIONS

APN	Assessor Parcel Number
BP	Before present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
NAHC	Native American Heritage Commission
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
Project	Casa de Oro Library Project
RPA	Registered Professional Archaeologist
RPO	San Diego County Resource Protection Ordinance
SCIC	South Coastal Information Center
U.S.	United States
USGS	U.S. Geological Survey

EXECUTIVE SUMMARY

In September 2020, ECORP Consulting, Inc. completed a cultural resources investigation of an approximately 2.24-acre parcel for the Casa de Oro Branch Library Project located on Campo Road in the community of Spring Valley, San Diego County, California. The proposed Project includes demolishing an existing restaurant building and constructing a public library. The existing restaurant building was constructed between 1964 and 1966 and is located at 9610 Campo Road, Spring Valley, San Diego County, California.

This Historical Technical Report was prepared pursuant to compliance with the California Environmental Quality Act (CEQA) that includes evaluations and assessments prepared in accordance with the San Diego County Local Register of Historical Resources and the San Diego County Resource Protection Ordinance (RPO). The report also adheres to the Guidelines for Determining Significance and Format and Content Requirements for Cultural Resources: Archaeological and Historical Resources (Revised 2007), for San Diego County.

The cultural resources investigation included a California Historical Resources Information System (CHRIS) records search, a search of the Sacred Lands File by the Native American Heritage Commission, two field surveys, and an evaluation of two historic-period resources to the California Register of Historical Resources (CRHR)and San Diego County Local Register of Historical Resources. The CHRIS records search results indicated that no archaeological or historic-period resources have been previously recorded within the Project Area. The Sacred Lands File records search results were negative, indicating that no Tribal Cultural Resources have been documented by a California Native American tribe within the Project Area or Project vicinity. ECORP also reviewed archaeological site information and soils maps to determine the potential for buried deposits. No subsurface investigations were conducted as part of this study.

As a result of the field surveys, two historic-period cultural resources were identified within the Project Area: P-37-039110 (CDO-01), a historic-period commercial building located at 9610 Campo Road; and P-37-039111 (CDO-02), a segment of historic-period Campo Road. Neither historic-period resource was previously identified in a qualified historic resource survey and neither are currently listed in the San Diego County Local Register of Historical Resources. As a result of archival research and evaluations completed for this study, P-37-039110 and P-37-039111 were found not eligible for inclusion in the CRHR or the San Diego County Local Register of Historical Resources. Therefore, the two historic-period resources are not Historical Resources as defined by CEQA. The proposed Project will not result in impacts to Historical Resources as defined by CEQA.

Based on the review of historical aerial photographs, maps, records search results, and literature, the archaeological sensitivity for the Project Area is moderate. Protocol for unanticipated discoveries of buried cultural resources is also included.

This cultural resource investigation was not limited by constraints that affected any portion of the technical work.

1.0 INTRODUCTION

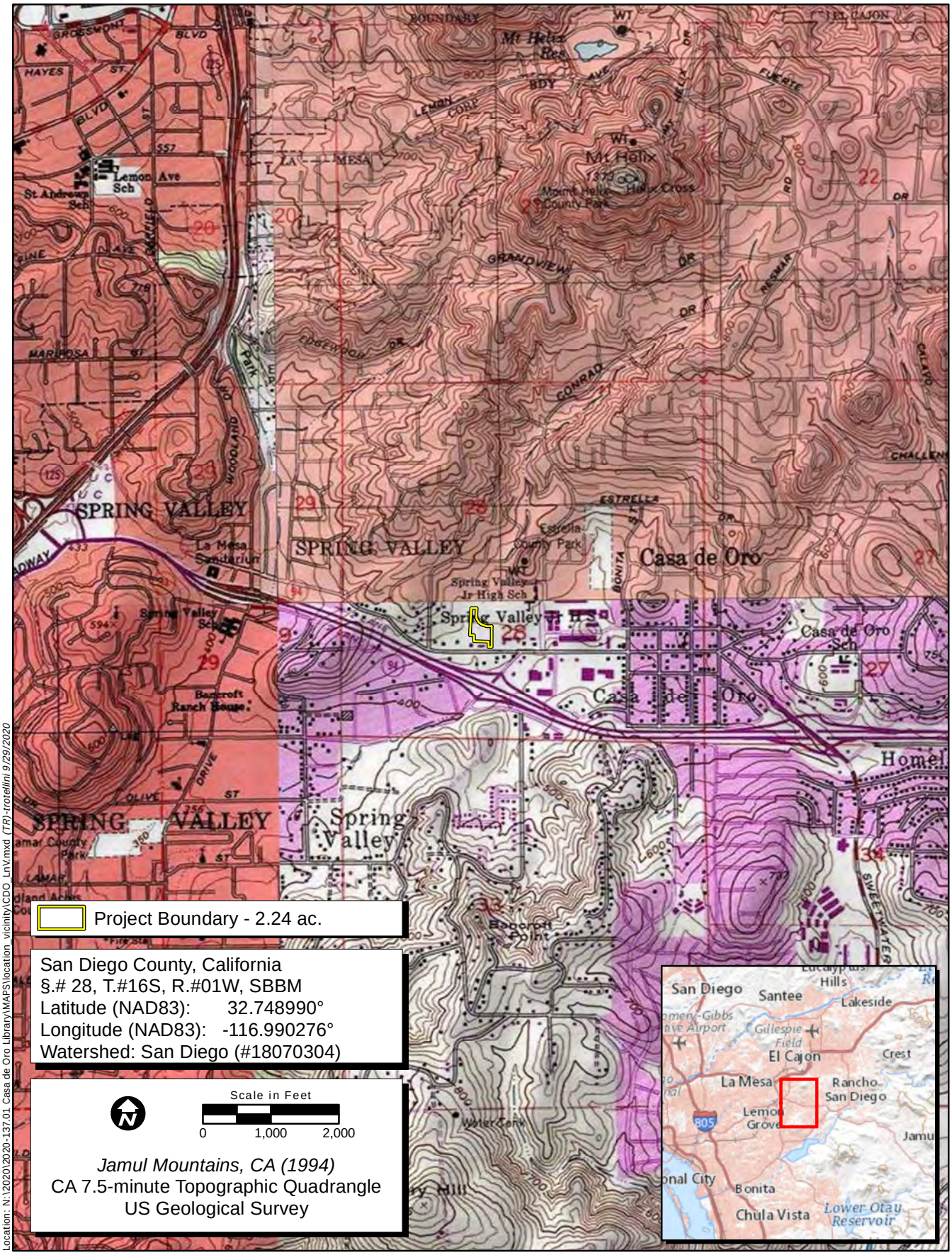
In 2020, ECORP Consulting, Inc. was retained to conduct a cultural resources inventory and evaluation of the proposed Casa de Oro Branch Library Project in the community of Spring Valley, San Diego County, California. The Casa de Oro Branch Library Project (proposed Project) would result in replacement of the existing County of San Diego Casa de Oro branch library facility with a new branch library facility at a different location. The proposed Project consists of an approximately 13,000 square-foot (SF) library facility that aims to achieve "zero net energy," with access off Campo Road, 52 parking spaces, landscaping, and fencing. The proposed project would be processed through the County's Department of General Services (DGS). An archaeological pedestrian survey of the property was required to identify potentially eligible cultural resources (archaeological sites and historic buildings, structures, and objects) that could be affected by the Project, and an architectural history evaluation of the commercial building itself was required. The commercial building, located at 9610 Campo Road, was constructed between 1964 and 1966.

1.1 Project Description

The proposed Project is located in the community of Spring Valley in southeastern unincorporated San Diego County, California (Figure 1). The property is located at 9610 Campo Road, approximately 0.08 mile west of Kenwood Drive, 300 feet north of California State Route 94, and directly south of Spring Valley Academy. It is situated within Section 28 of Township 16 South, Range 1 West, San Bernardino Base and Meridian as depicted on the 1994 Jamul Mountains, California, United States (U.S.) Geological Survey (USGS) 7.5-minute topographic quadrangle map. The Project Area consists of an approximately 2.24-acre property within the Valle de Oro Community Plan Area. The affected County Assessor Parcel Numbers (APNs) include portions of APNs 500-170-10-00, 500-170-11-00, and 500-170-41-00. Under their current use, APN 500-170-10-00 and 500-170-11-00 are owned by the Spring Valley Academy and APN 500-170-41-00 is owned by a private landowner with a restaurant onsite. The purchase of APN 500-170-41-00 and ground lease from Spring Valley Academy will be required for the proposed Project. Parts of each parcel, a storage facility on school district property and a restaurant on the private property, will be demolished in order to build the Casa de Oro Branch Library.

The purpose of this report is to document the historic resources identified as present or potentially present in the Project Area; identify potential cultural resource impacts resulting from the proposed Project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, State, and local rules and regulations including CEQA and RPO. The proposed Project includes the demolition of an existing building and improving a portion of Campo Road access to the proposed library on 2.24 acres of land.

This Historic Technical Report summarizes the historical resources investigations completed for construction work for the Project, located in the Spring Valley in San Diego County, California. This investigation was conducted in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California Public Resources Code (PRC). The purpose of this investigation was to assess the potential for Project activities to affect Historical Resources.



Location: N:\2020\2020-137.01 Casa de Oro Library\MAPS\location_vicinity\CDO_LnV.mxd (TR)-trotellini 9/29/2020

Map Date: 9/29/2020

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Location and Vicinity

2020-137.01 Casa de Oro Library

1.2 Existing Conditions

1.2.1 Environmental Setting

Natural

The Project Area is located in the community of Spring Valley in San Diego County, California. The Project Area is at 9610 Campo Road, less than 0.25 mile north of the Highway 94 and Kenwood Drive interchange. It is situated in the middle of a mixed-use developed area, with both commercial buildings and recreational ball fields for the Spring Valley Middle School. The land is modified for the current commercial and recreational land uses.

Vegetation within the Project Area consists of a mix of ornamental groundcovers and ornamental trees including Brazilian pepper tree (*Schinus terebinthifolius*), weeping fig (*Ficus bejamina*), and Mexican fan palm (*Washingtonia robusta*). Native herbs include telegraph weed (*Heterotheca grandiflora*), horseweed (*Erigeron canadensis*), and common pepper grass (*Lepidium densiflorum*). Ruderal species include spotted spurge (*Euphorbia maculata*), pigweed (*Amaranthus* sp.), sow thistle (*Sonchus oleraceus*), short-pod mustard (*Hirschfeldia incana*), castor bean (*Ricinus communis*), ice plant (*Carpobrotus edulis*), as well as non-native grasses such as smilo grass (*Stipa miliacea*), natal grass (*Melinis repens*), and landscaped grasses of the baseball field. The Project Area supports ornamental and landscaped trees such as olive (*Olea europaea*), Peruvian pepper tree (*Schinus molle*), pine (*Pinus* sp.), and gum (*Eucalyptus* sp.).

The Project Area and vicinity provide habitat for wildlife species that commonly occur in developed areas. Wildlife observed within the Project Area included mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), California towhee (*Melozone crissalis*), lesser goldfinch (*Spinus psaltria*), black phoebe (*Sayornis nigricans*), Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Dryobates nuttallii*), and western fence lizard (*Sceloporus occidentalis*).

According to the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) Web Soil Survey website (NRCS 2020), one soil type is located within the Project Area: Visalia sandy loam, 2 to 5 percent slopes (VaB). The parent material is alluvium derived from granite.

Cultural

Regional Pre-contact History

The archaeological history of Southern California is remarkably complex, with a great deal of variation and the overlapping of specific technological and cultural traditions from the onset of documented human habitation in the terminal Pleistocene to the period of European contact in the Late Holocene. Today, archaeology and culture history are typically described according to geological epoch, with delineations in years before present (BP) between the Pleistocene (>10,000 BP), Early Holocene (10,000-6,500 BP), Middle Holocene (6,500-3,500 BP) and the Late Holocene (3,500 BP to present). This approach places human history squarely in the realm of greater ecology and geological history in a way that allows discussion of human activity through time without limitations imposed by provincial labels. In California, this distinct

use of geological terminology is not entirely arbitrary, as elements of technological change and diversification in cultural practices are observable at the transition of temporal periods (Erlandson and Colten 1991). However, terminology that is generally accepted by California archaeologists and the California Office of Historic Preservation (OHP) is still helpful in describing ancient patterns of human activity. The predominant archaeological patterns through time in San Diego County in relation to behavioral traditions and temporal periods, and in specific reference to the Project Area are discussed below.

San Dieguito Complex – 10,000 to 8,500 BP

Terminal Pleistocene archaeological deposits are notably present on the California Channel Islands, but the onset of human activity in coastal areas of the Southern Bight appear after 10,000 BP (Erlandson et al. 2007). Early Holocene warming temperatures, rising sea levels, and megafaunal extinction resulted in landscape and resource changes that contributed to alternative subsistence strategies in local populations, with an emphasis on hunting smaller game and increasing reliance on plant gathering. Early Holocene archaeological sites in San Diego County occur around bays, sloughs, and coastal valleys that allowed early peoples continued access to aquatic resources. These coastal sites contain large amounts of marine faunal remains along with worked tools, such as lithic bifaces, milling tools, and bone tools from which archaeologists may reconstruct the human past in Southern California (Gallegos 1991).

The San Dieguito Complex is a cultural tradition originating in the Early Holocene and defined by material found at the Harris archaeological site (CA-SDI-149) on the San Dieguito River near Lake Hodges in San Diego County (Warren 1968). Diagnostic artifacts associated with the San Dieguito Complex include lithic manufacturing implements and a variety of chipped stone tools, including projectile points, knives, scrapers, engraving tools, and stone crescents (Knell and Becker 2017; Koerper et al. 1991). Particular interest has been paid to the stone crescents that appear in Terminal Pleistocene and Early Holocene deposits throughout the region. Though only a single specimen was found at CA-SDI-149, this class of artifacts has come to define human-environmental interactions of the period due to association with paleoshorelines and wetland habitats that existed on the Channel Islands, along the California coast, in interior areas of California and the Great Basin, and further east in what is today Wyoming and Colorado between approximately 12,000-8,000 cal BP (Moss and Erlandson 2013). The majority of these crescents appear to be utilitarian implements for the hunting of birds (Erlandson and Braje 2008; Moss and Erlandson 2013). Sanchez et al. (2017) have confirmed a strong spatial association between stone crescents and reconstructed wetland habitats, supporting the argument that these artifacts were predominantly used for the harvesting of aquatic species and avifaunal resources that once existed along Terminal Pleistocene-Early Holocene paleoshorelines.

The San Dieguito Complex at CA-SDI-149 dates to between 9,030 ±350 BP and 8,490 ±400 BP (Gallegos 1991; Knell and Becker 2017). The presence of comparable artifacts and archaeological deposits are seen specifically throughout Southern California and northwestern Mexico between 9,000 and 7,000 BP. However, it is important to note the scarcity of San Dieguito materials and radiocarbon age determinations as well as the substantial spatiotemporal overlap with artifacts and faunal assemblages typically associated with later cultural traditions (Scharlotta 2015). The established use of groundstone technologies during the Early Holocene provides support for the continuation of certain subsistence

practices during the Middle Holocene concurrent with decreases in wetland associated flaked-stone lithic assemblages. Early Holocene sites in coastal San Diego County have yielded artifacts and subsistence remains characteristic of succeeding technological traditions, including manos, metates, core-cobble tools, and species of marine shell more closely associated with the lagoon ecosystems, hotter and drier environmental contexts, and variable behavioral practices of the Middle Holocene (Gallegos 1991; Koerper et al. 1991).

La Jolla Complex – 8,500 to 1,300 BP

Sea levels continued to rise during the Early to Middle Holocene transition, eventually stabilizing around 6,000 BP and filling low-lying coastal areas and canyons in what became a relatively dense concentration of highly productive estuaries and coastal ecosystems (Masters and Gallegos 1997). The relationship of human populations to coastal resources consequently changed through time. Rocky reefs and kelp beds were more extensive during the earlier part of the Holocene and exploited by humans settling on the coast. Early Holocene coastal populations tended to aggregate around estuaries and areas of dense intertidal and littoral sustenance resources, but a greater focus on lagoon resources can be seen in later archaeological deposits. As the sea level rose, a transition in species of exploited shellfish and vertebrates is seen, from rocky reef species to sandy beach species that reflects the changes in shoreline during the Middle Holocene. Western North America experienced a period of increased warmth and aridity during the Middle Holocene that likely impacted migrations and settlement patterns from the continental interior to the coast (Kennett et al. 2007). Increasingly, human populations in California began to process plant foods with the manos (pestles) and metates (mortars) in an observable shift in technology and subsistence practices that effectively replaced the San Dieguito Complex with a lengthy tradition of cultural behaviors alternately termed the La Jolla Complex (Warren et al. 1961; Byrd and Raab 2007), Encinitas Tradition (Warren 1968), and Milling Stone Period (Wallace 1955). The term "La Jolla Complex" is used here.

The La Jolla Complex is most identified with the manos and metates found along the San Diego County coast beginning about 8,500 BP (Sutton and Gardner 2010), but La Jolla tool kits included a wide array of lithic and bone tools. Most La Jolla Complex sites are located around Middle Holocene coastal lagoons, which continued filling with sea water due to the sustained retreat of ice caps and global influx of liquid water following the last glacial maximum (approximately 20,000 BP). Shellfish from these lagoons were an important part of the diet, and most La Jolla sites are classified as shell middens. Both rocky shores shellfish, such as *Mytilus* sp. (mussels), and bay/estuary shellfish such as *Argopecten* sp. (scallops), *Chione* sp. (cockles), and *Ostrea lurida* (oyster) are found in La Jolla sites. Rocky shores species are much reduced in quantity and almost disappear from the middens in the Late Holocene. This has been attributed to increased sediment deposition around the mouths of the lagoons along the northern and central San Diego coast, which covered the rocky habitats. Fewer sites were occupied in these areas during the Late Holocene. However, the larger bays to the south (Mission and San Diego bays) never silted in, and there are numerous La Jolla Complex sites in this area (Masters and Gallegos 1997).

The Pauma Complex is a term to describe an inland cultural pattern beginning around 7,500 BP in San Diego County and occurring up to approximately 1,000 BP (Sutton and Gardner 2010; True 1958, 1970). Pauma archaeological deposits have numerous manos and metates similar to coastal sites of the same period but lack the marine subsistence remains seen in La Jolla sites. Other Pauma Complex artifacts

include core and cobble tools, scraper planes, unifacial scrapers, and infrequent cogged stones and discoidals. In most Pauma Pattern sites, the mano-metate tool kit predominates, which suggests the collection and processing of seeds and other plant materials. Pauma sites are located on older high-elevation alluvial terraces in valleys and canyons. Some Pauma sites may be buried in shallow alluvium. Shared similarities between the inland Pauma Complex and the coastal La Jolla Complex may reflect extended cultural ties or different seasonal manifestations of the same people, with the La Jolla Complex emphasizing marine resources (shellfish and fish) and the Pauma Complex emphasizing hard seeds. There are more planing and scraping tools in the La Jolla Complex and more grinding tools (i.e., manos and metates) in the Pauma Complex, which undoubtedly correspond to differential resource procurement and processing throughout this time period (Waugh 1986:55-56).

The San Diego coastline began to resemble its current appearance after about 3,500 BP, with estuaries silting in and a consequential decline in lagoon resources due to increased sedimentation along the San Diego coastline (Gallegos 2002). A warming climate, combined with the loss of estuarine resources during the Middle Holocene, resulted in an observable transition in settlement patterns during the Late Holocene as many people moved away from the coasts to more fully exploit inland habitats, though San Diego Bay remained due to freshwater runoff and tidal flushing. Additionally, coastal sedimentation and infilling events coincided with the development of the sandy beaches seen today that eliminated majority rocky coastal environments and gave way to a shift in the kinds of subsistence resources available at these locations (Byrd and Reddy 2002). This increased reliance on sandy-shore species and the dominance of small terrestrial taxa in archaeological contexts, such as lagomorphs and waterfowl, is reflective of the unique coastal environment of much of San Diego in the Late Holocene.

Late Period (Kumeyaay) – 1,300 BP to Contact

The Late Period (Kumeyaay) in San Diego archaeology is determined to have begun with substantial cultural and technological changes occurring around 1,300 BP. The Late Holocene exemplified major cultural shifts with the entrance of Shoshonean language speakers, now known as the Cahuilla, Cupeño, and Luiseño, into the northern part of San Diego County sometime between and 3,500 and 1,300 BP. This coincided with the establishment of definitive Ipai and Tipai (Kumeyaay peoples, Yuman language speakers) societal structures throughout the central and southern parts of the county. An abrupt decrease in coastal deposits appears to have occurred after 3,300 BP (Gallegos 2002), though increases in coastal occupation beginning around 1,600 to 1,200 BP appear to mirror sustained population increases throughout San Diego County during the Late Holocene to the present day (Byrd and Reddy 2002). Late Period settlement patterns are characterized by the establishment of permanent, sometimes seasonal, villages and ephemeral satellite sites dedicated to specific tasks, such as tool production, food processing, or resource acquisition (Byrd and Raab 2007). A focus on reliable water sources and intensified subsistence practices is evident in the location and nature of regional Late Period archaeological sites.

The Kumeyaay Period has been associated with population increases, particularly in coastal areas, and changes in settlement patterns (Scharlotta 2015). The Late Holocene was a time of technological change. Choices regarding technology and subsistence practices influenced the nature of human-environmental interactions with an expansion of diet breadth, the establishment of permanent villages, and changes in hunting and gathering processes that also affected social structure during the Kumeyaay Period (Bettinger

2013; Gamble and Mattingly 2012). Transition to more sedentary settlement patterns can be witnessed in aspects of technological variation such as the greater use of bedrock mortars in addition to portable milling stones (Byrd and Raab 2007). The Late Period is primarily characterized by use of the bow and arrow, which was introduced to the western U.S. sometime between 2,300 and 1,300 BP (Bettinger 2013). Bettinger argues that the adoption of bow hunting effected an expansion in the utilization of once peripheral subsistence resources (i.e., intensification of plant resource harvesting and processing) due to the increased efficacy of hunting among small groups and a shift to more localized resource harvesting among smaller family bands. Decreases in time spent hunting are thought to encourage greater time spent collecting foodstuffs once perceived as too costly.

In San Diego, principal foods for inland populations included acorns, grasses, other seeds, and lagomorphs, in addition to continued hunting of deer. However, people had returned to the coasts during the Kumeyaay Period and were exploiting a wide variety of marine resources in addition to the extensive trade networks along the Southern California coast and that of Baja California (Byrd and Raab 2007). Gamble and Mattingly (2012) document more than 200 fire-affected rock features at Torrey Pines State Natural Reserve, positing the use of these features in the processing of Torrey pine nuts (*Pinus torreyana*) by Kumeyaay peoples on the coast over the last two millennia. The introduction of the bow and arrow to Southern California was followed by other archaeologically observable shifts prior to European contact, such as distinguishable changes in projectile point morphology, a switch from Coso (Sierra Nevada source) to Obsidian Butte (Salton Sea) as a source for volcanic glass, and even a transition from burial to cremation for the dead (Gallegos 2002). Ceramics appear in the archaeological record after 1,300 BP, with the distribution of reddish-brown sherds across San Diego County from the Peninsular Ranges to the coast that differs from a lighter-colored buff pottery found in the deserts to the east (Quinn et al. 2013). Common ceramic forms include round-bottomed jars with restricted necks, bowls, scoops, plates, and other vessels used for cooking and storage. Ceramic pipes were also made (Gallegos 2002). Recovered ceramic specimens exhibit chemical signatures derived from similar geological contexts in the Laguna and Cuyamaca mountains, suggesting the transfer of materials from mountain to coast within the extensive trade networks that undoubtedly existed at this time (Quinn et al. 2013).

Ethnohistory (Kumeyaay)

The Kumeyaay (also known as Ipai and Tipai) are the Yuman-speaking native people of central and southern San Diego County and the northern Baja Peninsula in Mexico. Spanish missionaries and settlers used the collective term Diegueño for these people, which referred to people living near the presidio and mission of San Diego de Alcalá. Today, these people refer to themselves as Kumeyaay or as Ipai and Tipai, which are northern and southern subgroups of Kumeyaay language speakers, respectively (Luomala 1978). The ancestral lands of the Kumeyaay extend north from Todos Santos Bay near Ensenada, Mexico to Agua Hedionda Lagoon in north San Diego County, and east to the west side of the Imperial Valley.

The primary source of Kumeyaay subsistence was vegetal food. Seasonal travel followed the ripening of plants from the lowlands to higher elevations of the mountain slopes. Acorns, grass and sage seeds, cactus fruits, wild plums, pinyon nuts, and agave stalks were the principal plant foods. Women sometimes transplanted wild onion and tobacco plants to convenient locations and sowed wild tobacco seeds. Deer, rabbits, small rodents, and birds provided meat. Village locations were selected for seasonal use and were

occupied by exogamous, patrilineal clans or bands. Three or four clans might winter together, then disperse into smaller bands during the spring and summer (Luomala 1978).

The Kumeyaay were loosely organized into exogamous patrilineal groups termed sibs, clans, gens, and tribelets by ethnographers. The Kumeyaay term was cimul. The cimul used certain areas for hunting and gathering, but apparently did not control a bounded and defended territory, as did the Luiseño and Cahuilla. In addition, members of several different cimul usually lived in the same residential base, unlike the Luiseño, where a single party or clan controlled a village and its territory. Kumeyaay lived in residential bases during the winter and subsisted on stored resources. No permanent houses were built. Brush shelters were temporary and were not reused the next year. Ceremonies, including rites of passage and ceremonies to ensure an abundance of food, were held in the winter residential bases. The cimul leader directed the ceremonies and settled disputes (Christenson 1990:58, 62). One of the most important ceremonies was the mourning ceremony. Upon death, the Kumeyaay cremated the body of the deceased. Ashes were placed in a ceramic urn and buried or hidden in a cluster of rocks. The family customarily held a mourning ceremony one year after the death of a family member. During this ceremony, the clothes of the deceased individual were burned to ensure that the spirit would not return for his or her possessions (Gifford 1931; Luomala 1978).

The Kumeyaay were geographically and linguistically divided into western and eastern Kumeyaay. The western and eastern Kumeyaay spoke two different dialects (Christenson 1990:64). The western Kumeyaay lived along the coast and in the valleys along the drainages west of the mountains. The eastern Kumeyaay lived in the canyons and desert east of the mountains. The western Kumeyaay spent the winter in residential bases in the lowland valleys and then broke into smaller cimul groups that moved gradually eastward toward the mountains, following ripening plants and occupying temporary residential bases along the way. Thus, each group occupied several different residential bases during the course of a year (Christenson 1990:292-293). The eastern Kumeyaay spent the winter in villages on the desert margin where water was available from springs at canyon mouths. They moved up the canyons toward the mountains during spring and summer. The eastern and western Kumeyaay met in the mountains in the fall where they gathered black oak acorns, traded, and held ceremonies (Christenson 1990:63). The large residential bases in the mountains appear archaeologically to be village sites (Gross and Sampson 1990).

The Kumeyaay population was estimated to be between 10,000 and 20,000 at the time of European contact, based on Spanish accounts and ethnographies (Gallegos 2002). Beginning in 1775, the semi-nomadic life of the Kumeyaay began to change as a result of contact with Euro-Americans, particularly from the influence of the Spanish missions. Through successive Spanish, Mexican, and Anglo-American control, the Kumeyaay were forced to adopt a sedentary lifestyle and accept Christianity (Luomala 1978).

The Project Area is located in the community of Spring Valley, San Diego County, in what is generally accepted as traditional Kumeyaay territory. Boundaries between ancestral territories are often fluid or loosely defined due to movement and interaction among pre-contact and post-contact populations. However, the Project Area sits within the area of Kumeyaay presence at the time of European contact.

Regional History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port (Castillo 1978). Vizcaíno also named San Diego Bay to commemorate Saint Didacus. San Diego began to appear on European maps of the New World by 1624 (Gudde 1998:332).

In 1769, the Gaspar de Portolá Spanish land expedition arrived in the San Diego area from New Spain (Mexico), and Mission San Diego de Alcalá was founded by Father Junipero Serra as the first of 21 Spanish missions in Alta California. A presidio (military facility for Spanish soldiers) was built near the mission. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. The missions sustained themselves through cattle ranching and traded hides and tallow for supplies brought by ship. Mission San Diego was established to convert the Native Americans that lived in the area, known as the Kumeyaay or Diegueño. The presidio and mission were located on a hill on the south side of the San Diego River about three miles inland from the coast. After being destroyed by attacking Kumeyaay in 1775 during an attempt to drive out the Spanish (Robinson 1948:63; Castillo 1978:103), Mission San Diego was rebuilt in its present location on the north side of the river about 5.5 miles upstream from the presidio. However, the presidio remained in its original location and a small town or pueblo developed around it (Caughey 1933:123).

Mexico became independent from Spain in 1821, and what is now California became the Mexican province of Alta California. The Mexican government closed the missions in the 1830s and former mission lands were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos" (Robinson 1948). During the Mexican period there were small towns at San Diego (near the presidio), San Juan Capistrano (around the mission), and Los Angeles. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the U.S. in 1848. Alta California became part of the U.S. as the territory of California, officially becoming the State of California in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries which were surveyed by the U.S. Surveyor General's office. Land that was not part of a land grant was owned by the U.S. government until it was acquired by individuals through purchase or homesteading. Floods and drought in the 1860s greatly reduced the cattle herds on the ranchos, making it difficult to pay the new American taxes on the thousands of acres they owned. At the same time, the Homestead Act of 1862 brought American settlers to Southern California in search of land to claim. Many Mexican-American cattle ranchers borrowed money at usurious rates from newly arrived Anglo-Americans. The resulting foreclosures and land sales transferred most of the land grants into the hands of Anglo-Americans (Cleland 1941:137-138).

Local History

The Project Area is located in San Diego County, which was created in 1850 as one of the first counties within the new state of California (Coy 1973; Marschner 2000). At that time, the area designated as San Diego County included nearly all of present-day San Diego, Imperial, Riverside, and San Bernardino counties, as well as a small portion of present-day Inyo County (Coy 1973:221; Marschner 2000:39). The city of San Diego continued as a small settlement around the presidio until a new town was platted south of the old town by Alonzo Horton, a San Francisco furniture dealer. He sold lots beginning in 1867 and built a 700-foot wharf in 1869. By 1870 San Diego had 800 buildings and a population of 3,000 (Dumke 1944:134). The completion of the California Southern Railroad from National City and San Diego to San Bernardino via Oceanside in 1883 and the completion of the Santa Fe line from Los Angeles to Oceanside (connecting to San Diego via the California Southern track) in 1888 resulted in a real estate boom and the economic development of the San Diego area (Dumke 1944:136-137). The population continued to increase throughout the earlier part of the twentieth century, with continued growth in the city of San Diego as well as the gradual growth and eventual incorporation of various rural communities throughout San Diego County.

The Project Area is located within the community of Spring Valley, approximately 10 miles northeast of downtown San Diego. A. Judge Augustus S. Enswoth filed a claim for 160 acres of land with a natural spring in the valley in 1863 and by 1850 Enswoth built two-room abode in what would become Spring Valley (Spring Valley Historical Society 2020). The land was later sold to the Porter family around 1865 after Enswoth's death. Rufus King Porter and his wife Sophia and daughter Rufina moved to the property. The Porter family named the area Spring Valley in 1866 (Spring Valley Historical Society 2020). A post office was established out of Porter's homes under the name Helix in 1885. The name Helix was commonly known in the area after a scientist discovered a European snail (*Helix aspersa)* at a nearby mountain. Hubert Howe Bancroft later purchased the Porter Ranch and adjacent ranches for a total of 500 acres in 1885. The Bancroft property was known as Helix Farms and Bancroft built a ranch house in 1889. By the early 1900s, the Bancroft's Helix Farm became one of the largest olive ranches in Southern California. The adobe and the Bancroft ranch house are listed as California State Landmark No. 626 and is located 0.7 mile southwest of the Project Area.

Development of Roads

Following is a brief context of the theme of road development specifically during the period that Campo Road was constructed and used. The context is included to better understand the social and economic factors associated with road development and how the resources fit within that context.

Road development in the U.S. primarily consisted of expanding local urban streets, utilitarian in design and function, in the eastern U.S. and moving westward across the nation. California roadways, in particular, largely consisted of dirt utilitarian roads from the period of the Gold Rush through the turn of the twentieth century. From 1890 to 1926, the groundwork was laid for the modern road network, largely due to a number of factors including the advent of the pneumatic tire and the expansion of production of the affordable personal automobile (the Ford Model T being the industry leader). These new convenient modes of transportation began the slow decline in the use of the railroad, consisting of several hundred

thousand miles of track in the U.S. and previously considered the most efficient and reliable mode of transportation and shipping. This decline led automobile and automobile accessory manufacturers to usher in the "Good Roads Movement" (Marriott 2010).

The Good Roads Movement was first advocated by bicycle organizations seeking hard-surfaced roads. Automobile industry advocates, however, quickly found the development of a better-planned road network a greater concern. Despite national efforts to develop hard-surface roads, the prohibitive cost caused a priority shift in the Good Roads Movement from hard-surface roads to a well-planned road network. In California, many of these road networks began to be constructed during the late part of the nineteenth and into the early part of the twentieth century, particularly in rural areas. Rural road development was crucial for the expansion of agricultural lands since farmers and ranchers needed a better network of roads to transport their crops or goods from the farms and fields to train stations for transport. Prior to the Good Roads Movement, rural farmers depended on extremely underdeveloped roads, consisting mostly of known paths or routes to get to those stations while access to urban or other rural areas was limited because existing road networks often did not connect simply with each other. The agricultural industry began to flourish with use of the new road networks as a result of the Good Roads Movement. Light-duty developed roads, such as Canton Drive, were constructed and used by rural farmers and ranchers to transport their goods not only to local train stations but, through the new networks of decent roads, to other urban areas or even other rural towns (Marriott 2010).

By the end of the Good Roads Movement, from 1910 to 1926, large intrastate and interstate highways, even transcontinental highways such as the Lincoln Highway, were constructed. These large networks of roads were primarily in response to the advent of World War I and the nation's realization that if the war was ever fought on U.S. soil, the existing road networks could not support the necessary military mobilization for the war effort. Therefore, better connectivity in large roads and urban centers became a top priority toward the end of the Good Roads Movement. In addition, pavement became the new medium for these larger roads and was also used extensively in these larger highways and roads (Hokanson 1999).

The network of roads in the U.S., and California, was beginning to come together toward the end of the Good Roads Movement. One of the last stages of the Movement was the development of scenic roads. Scenic road development was largely advocated by the National Park Service (NPS) to allow automobile access within their parks. Prior to road development, access to National Parks was reliant on railroads and simple carriage rides within parks. At the end of the Good Roads Movement, however, automobile safe routes were constructed within National Parks and other scenic roads were built to attract travelers away from the urban areas (Marriott 2010).

Commercial Storefronts and Signs

Following is a brief context of the theme of commercial advertising and architecture relevant to the commercial building at 9610 Campo Road. The context is included to better understand the social and economic factors associated with commercial building design and how the building, that historically was built as a Fosters Freeze, fits within that context. In particular, the Fosters Freeze was intentionally

designed with storefront and signage advertising that complimented the car culture period for which it was constructed.

A business sign or a storefront is a distinguishable entity that has the potential to possess individual historic character, identity, and significance. Signs are often depicted by the local community as more than simply advertisements of a business. Signs can also be viewed as elements of designs that contribute to the character, scale, and identity of a streetscape by means of graphic architecture. They are a visual illustration of a distinct period in history, including the history of the business, community, and the commercial corridor for which it is located.

The original Fosters Freeze signage is no longer present as this ice cream shop location has long been closed. The commercial restaurant building located at 9610 Campo Road currently contains the original sign frame but now displays the name of the Vietnamese restaurant. Due to the extensive history of storefront and sign advertising, the history below touches on relevant context that is applicable to the building at 9610 Campo Road.

Signs have been a way of advertising along main streets in Southern California as early as the area was established. The materials and functions of storefronts and signs have evolved throughout the decades. By the 1930s, signs and storefronts had changed in styles multiple times to accommodate the always progressing physical landscape, cultural and societal views, use of the automobile, advances in electricity and manufacturing, and other artistic likes and dislikes for each period (Treu 2012).

The Great Depression of the 1930s played a significant role on the developing commercial landscape as it relates to storefronts and signs. Due to the poor economy, apartments and commercial buildings were often left unoccupied on the floors above the street level. In a major attempt to heighten retail sales and increase foot traffic in commercial areas, businesses in the U.S. looked to the modern designs of European storefronts and commercial districts. European shops, particularly those designed in the late 1920s by French architect Rene Herbst, utilized the skillfully integrated signs on the building facades that foreshadowed the visual aspects of moderne architecture (Treu 2012).

One of the primary influences taken from European commercial design was the use of the entire façade as an advertisement. The design of the storefront was intended to carry a unique characteristic that was uniform across the entire façade that matched the sales objective of the shop. European designers began to utilize all aspects of the storefront including windows, doorways, and ornamentation in the overall advertising scheme to match with the signs in a cohesive graphic and architectural display. Such changes brought about the use of large store display windows, awning covers, multiple materials such as brick, metal, and lights, decorative detail, matching color and architectural themes whose focal point was typically the sign or front entrance. As such, European commercial shop designs were more focused on architecture and art as the advertising focus. Shops in the U.S. were desperate for the success of European commercial districts and, therefore, many followed suit (Treu 2012). Buildings that reflected the European architectural styles first appeared along commercial corridors, namely near highways and major travel routes, in American cities like Los Angeles in the late 1920s and early 1930s (Treu 2012).

By the mid-1930s and early 1940s, commercial architecture in the U.S. began a complicated split in physical advertising schemes. Many businesses began designing their buildings following the example of

the European storefronts, using artistic designs that included integration of decorative and elaborate signs. Other businesses, however, began to focus primarily on the contents within the store with very little graphic illustrations to draw in the consumer. These commercial buildings followed the graphic restraint theme of the International style of architecture. The International style of architecture also developed out of European moderne architectural thought and ultimately was a rejection of the artistic moderne architecture as described above. International style commercial buildings focused on large windows, rectilinear forms, and use of glass, steel, and concrete with almost no ornamentation or graphic illustrations. By the end of the 1930s, most commercial buildings being constructed or remodeled during this time took either the artistic approach of moderne architecture or the rejection of art and ornamentation approach of International style architecture (Treu 2012).

By the beginning of the 1940s, articles and ideas were appearing about expanding the role of the sign industry on the commercial landscape. Prior to the 1940s, most signs on storefronts did not project out from the building but rather were built into the design of the storefront, typically somewhat flush with the wall surface. These signs included simple designs such as striping, pictures, portholes, and basic lettering or visual effects on a flat surface. Eventually, a few graphic and industrial designers such as Charles Oppenheimer, John Albright, and George Meyers began to integrate the third dimension into their sign designs that subtly ventured into the area of architecture. One such primary focus was the projecting sign that jutted out over the sidewalk or street.

Simultaneously, with emphasis growing on the projecting sign, almost all other aspects of the façade of commercial buildings gave way to surface projections. These projections included walls, canopies, lettering, and signs that all rippled away from the building's façade. These projections were often designed in a fashion to give the appearance that the wall surface was moving or in motion. Motion was a prominent theme of the 1930s and 1940s with the vastly expanded use of the automobile and airplane throughout the world. The pioneering work of the early designers, particularly that of Meyers, led the 1940s commercial streetscape into a period of extensive use of surface projections that focused on the artistic design of the business façade and sign within the streetscape (Treu 2012).

Along with the rapid expansion of the projecting storefront features was the heavy utilization of the neon sign. Neon, or "new gas," is a rare gas similar to other rare gases such as argon and helium. It was originally discovered by English scientists Sir William Ramsay and William Travers in 1898. No real use came from the discovery until French scientist Georges Claude first developed a systematic method for liquefying the gas in 1902. Claude discovered that the gas was sensitive to electrical charges and produced a red color when charged. Claude eventually developed a very practical discharge tube that held the neon gas and connected to an electrode that, when charged, would light up all of the gas within the tube. It was not long until Claude, assisted by Count J. De Beaufort, conceived the idea of bending the tubes to form shapes and letters. Shortly after that innovation, the two scientists began combining other elements, such as mercury, with the gas to produce other brilliant colors making the shaped tubes a perfect advertising tool for attracting customers (Claus 1975).

The use of neon signs in the U.S. quickly took root, along with the development of artistic storefronts. In the 1920s and 1930s, neon signs could be individually manufactured with "vernacular" inflections by local companies specifically designed for the business purchasing it. In the 1920s, neon signs were originally

expensive, being sold for an average of $400 a sign. Businesses often could not afford to purchase the signs outright, so many manufacturers leased signs instead. Even many years later, during World War II, gas and metal rationing kept neon sign prices high (Claus 1975).

The end of World War II brought another big change to the use and designs of neon signs. The end of wartime rationing caused prices for neon signs to drop significantly. The drop in prices brought a rapid resurgence of production of neon signs, particularly in commercial corridors of many cities. The end of World War II also led manufacturing back to the extensive production of automobiles, which, in turn, led to the need for businesses to capture the attention of automobile drivers from a distance. Post-World War II signs in cities were largely designed at highway-size scale, often dwarfing pedestrians walking below them. The intent of creating these massive signs was so they could be seen from a distance and on both sides of the major multi-lane roads within urban centers. Concurrent with advances in tube bending and the new affordability of these custom signs, many businesses had signs with neon installed during the 1940s and 1950s. By the late 1950s and early 1960s, however, advancements in plastics reduced the use of neon signs, as plastic became the aesthetic preference (Treu 2012).

The decade of the 1960s was primarily characterized by the use of plastic lettering and signage due to its affordability and capability to be placed anywhere on the building and at any scale. Though plastics quickly took over the commercial landscape, the use of neon never fully disappeared due to the creative potential each business had with its sign making. In addition, many storefronts that remodeled their façade to match a particular architectural style during the 1930s and 1940s, such as Art/Streamline Moderne, Art Deco, Googie, or International style, often kept their original signs in place because they matched the complete look and design of the building.

Architectural Context

The following summary of the architectural style elements, character-defining features, and brief history of the Mid-Century Modern architecture is included for frame of reference and to assist with understanding the architectural style and merit of the building. The information identified during archival research suggests that the architectural style and design of the building, storefront, and sign was a result of the historical influences of commercial development and roadside advertising of its period.

The Mid-Century Modern period of architecture generally references those buildings and structures that were built between the 1930s and 1970 and includes a variety of sub-styles including styles such as Streamline Moderne, International, Googie, and Contemporary to name a few. Mid-Century Modern architecture was popular among local architects with a variety of examples in most major cities in California. In particular, the commercial industry often employed styles from this period in the design and construction of stores, restaurants, and other shopping centers due to the visual appeal. Mid-Century Modern styles emerged prior to World War II but most sub-styles matured during the postwar period, spurred largely by the economic prosperity of the nation that coincided with a construction boom. One of the primary objectives of Mid-Century Modern architectural styles is the appearance of "forward thinking" design. Specific characteristics of buildings constructed during this period include use of new materials and building techniques, integration of indoor and outdoor spaces, and functional floor plans.

Originally, this building was one of the many Fosters Freeze locations. Fosters Freeze is a soft-serve ice cream shop opened by George Foster and the first location was built in 1946 in Inglewood, California (Fosters Freeze 2020). Many original historic-period Fosters Freeze buildings were constructed in the Moderne or Streamline Moderne style of architecture and contained blue roofs, wide canopies with rounded edges and flat roofs, fabric canopy covered windows, walk-up ordering windows, outdoor seating, and distinctive and decorative customized neon signage to attract passing vehicle traffic.

The building located at 9610 Campo Road, including the original signage, was constructed within the period of car culture and heavy use of automobile advertising for the commercial industry in Southern California. The post-World War II period of construction in San Diego County followed this same pattern, attempting to cater to modern and "trendy" popular culture, including car culture. The original Fosters Freeze sign was a visual landmark for car traffic extending high above the building to be seen from a distance by passing traffic. By the end of the 1960s, the car culture phenomenon was significantly declining with the modernization of roads and freeways throughout California that bypassed commercial corridors. The construction of Highway 94 in the late 1960s led to the decline of the commercial corridor along Campo Road. The building and signage were modified when the Fosters Freeze business at this location closed and the building was later converted into a retail space. The building was later substantially remodeled in 2011, and the sign was replaced for the current occupant. For the remodel, the windows were replaced with fixed windows, the wide eaves were modified, framing was replaced and possibly altered, and the building no longer represents the walk-up ice cream shop feeling.

By 1950, there were over 360 store Fosters Freeze locations in California (Golob 2017). Another Fosters Freeze location is in Spring Valley and was built prior to the Campo Road location around 1964. The Elkelton Boulevard location is a walk-up style eatery with wraparound windows on the exterior for ordering and displays the original Fosters Freeze "Old Fashion" backlit sign. The Elkelton Boulevard location currently still operates as a Fosters Freeze. The Campo Road location received a remodel in 2011 and no longer operates as a Fosters Freeze location.

1.2.2 Record Search Results

Previous Studies

On August 4, 2020, ECORP requested a CHRIS records search for the Project Area from the South Coastal Information Center (SCIC). The purpose of the records search is to identify the locations and extent of previous surveys conducted within one mile of the Project Area and to determine if there are any known cultural resources (i.e., pre-contact or historic-period archaeological sites or historic-period features) located within or near the Project Area. In addition, the records search would identify resources listed on or determined eligible for listing on the NRHP and/or the CRHR located within one mile of the Project Area. Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the NRHP, CRHR, California Points of Historical Interest, California Landmarks, and National Historic Landmarks. Historic maps and aerial photographs of the Project Area were also reviewed.

The results of the CHRIS records search were received by ECORP on September 2, 2020. The records search results indicate that 39 cultural resources investigations were previously conducted within one mile of the Project Area between 1973 and 2020. One previous study (SD-06425), conducted in 1990, overlapped the Project Area. A list of all previous investigations within one mile of the Project Area may be found in Attachment A.

The results of the records search showed that the commercial building has not been previously recorded or evaluated as part of any cultural resources inventory or study that has been reported to the SCIC. The records search also revealed that the commercial building is not located within a known historic district. The previous study to cover the Project Area included an Historic Resources Inventory of the Sweetwater Valley, but the commercial building was not recorded as part of the 1990 inventory.

Previous Recorded Sites Adjacent to Study Area

The records search results also determined that 16 cultural resources have been previously recorded within one mile of the Project Area. Previously recorded cultural resources include two pre-contact native American resources, 12 historic-period resources, and two multi-component resources. Details of these 16 cultural resources are provided in Table 1. No cultural resources have been previously recorded within the Project Area. A confidential map of previously recorded cultural resources locations is provided in Appendix A.

Table 1. Previously Recorded Cultural Resources Outside of, but within 1.0 Mile of, the Project Area

Primary Number P-37-	Site Trinomial CA-SDI-	Report Reference or Recorder(s)	Age/ Period	Site Dimensions	Site Description
004638	4638	Pigniolo (2012)	Multi-component	20 m x 0.4 m trench	Bancroft rock house; midden, lithic tools and debitage, ceramic sherds
014802		S. Cardenas and C. Winterrowd (1985)	Pre-contact	Isolate	One bifacial granitic mano fragment
019997		Ray Brandes (1982)	Historic	200 ft x 200 ft	Heath house (Feeney house)
019998		Ray Brandes (1982)	Historic		Carmichael house
020056		CompuShare, Inc. (1982)	Multi-component	135 ft x 228 ft	Bancroft Ranch House; midden
020057		Ray Brandes (1982)	Historic	100 ft x 200 ft	Kermicle House / Prather House
020058		Ray Brandes (1982)	Historic	150 ft x 150 ft	King Home/Ronning House
027461		R&J Ogdon (2002)	Historic		McRae/Albright Ranch House

Table 1. Previously Recorded Cultural Resources Outside of, but within 1.0 Mile of, the Project Area

Primary Number P-37-	Site Trinomial CA-SDI-	Report Reference or Recorder(s)	Age/ Period	Site Dimensions	Site Description
029401		D. Fiume (2007)	Historic	2069 ft sq	Gaynes Residence (Cliff May)
035544		C. Tibbet (2013)	Historic		Single-family Ranch style residence
035545		C. Tibbet (2013)	Historic		Single-family Ranch style residence
035546		C. Tibbet (2013)	Historic		Mixed use residential/commercial property
035547		C. Tibbet (2013)	Historic		Single-family Ranch style residence
035548		C. Tibbet (2013)	Historic		Single-family Ranch style residence
036433		H. Murphy (2017)	Historic	3233 ft sq	Colonial Revival/American Vernacular residence
037046	22268	L. Downs and M. Ramos-Ponciano (2017)	Pre-contact	10 m x 5 m	Bedrock milling features

According to aerial photographs, the building was constructed between 1964 and 1966. Campo Road, also known as the Campo Highway prior to Highway 94 being constructed, predates the building as the road is present on aerial photographs taken in 1953. The 1953 and 1964 aerials show the transition of the parcels along Campo Road from agricultural properties into commercial storefronts. By 1964, the Spring Valley Middle School was constructed northeast of the Project Area. The 1966 aerial photograph reveals the building present in its current location. The 1966 aerial shows the building with its long axis-oriented north/south with a parking lot to the east. Aerial photographs taken in 1966 and 1968 show the construction of Highway 94 located south of the Project Area. By 1971, the highway had been completed and bypassed a portion of Campo Road.

1.3 Applicable Regulations

Resource importance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance. Specifically, criteria outlined in CEQA (RPO) and the San Diego County Local Register of Historical Resources provide the guidance for making such a determination. The following section(s) details the criteria that a resource must meet in order to be determined important.

1.3.1 California Environmental Quality Act

According to CEQA (§15064.5a), the term "historical resource" includes the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC SS5024.1, Title 14 California Code of Regulations [CCR] Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the PRC, shall be presumed to be historically of culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC SS5024.1, Title 14, Section 4852) including the following:
    A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    B. Is associated with the lives of persons important in our past;
    C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    D. Has yielded, or may be likely to yield, information important in prehistory or history.
4. The fact that a resource is not listed in, or determined eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC section 5020.1(j) or 5024.1.

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change as:

1. Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
2. The significance of an historical resource is materially impaired when a project:

A. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or

B. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

C. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

1. When a project will impact an archaeological site, a Lead Agency shall first determine whether the site is an historical resource, as defined in subsection (a).

2. If a Lead Agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the PRC, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the PRC do not apply.

3. If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the PRC, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in PRC Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

4. If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or Environmental Impact Report, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

d. When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission (NAHC) as provided in PRC SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the NAHC. Action implementing such an agreement is exempt from:

1. The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

2. The requirement of CEQA and the Coastal Act.

2.0 GUIDELINES FOR DETERMINING SIGNIFICANCE

2.1.1 State Evaluation Criteria

Under State law (CEQA), cultural resources are evaluated using CRHR eligibility criteria in order to determine whether any of the sites are Historical Resources, as defined by CEQA. CEQA requires that impacts to Historical Resources be identified and, if the impacts would be significant, that mitigation measures to reduce the impacts be applied.

An historical resource is a resource that:

1. is listed in or has been determined eligible for listing in the CRHR by the State Historical Resources Commission;

2. is included in a local register of historical resources, as defined in PRC 5020.1(k);

3. has been identified as significant in an historical resources survey, as defined in PRC 5024.1(g); or

4. is determined to be historically significant by the CEQA Lead Agency CCR Title 14, § 15064.5(a)]. In making this determination, the CEQA lead agency usually applies the CRHR eligibility criteria.

The eligibility criteria for the CRHR [CCR Title 14, § 4852(b)] state that a resource is eligible if:

1. it is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;

2. it is associated with the lives of persons important to local, California, or national history.

3. it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

4. it has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, § 4852(c)].

Historical buildings, structures, and objects are usually eligible under Criteria 1, 2, and 3 based on historical research and architectural or engineering characteristics. Archaeological sites are usually eligible under Criterion 4, the potential to yield information important in prehistory or history. The CEQA Lead Agency makes the determination of eligibility. Cultural resources determined eligible for the National Register of Historic Places (NRHP) by a federal agency are automatically eligible for the CRHR.

Impacts to a Historical Resource (as defined by CEQA) are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, § 15064.5(a)].

2.1.2 San Diego County Local Register of Historical Resources (Local Register)

The County requires that resource importance be assessed not only at the State level as required by CEQA, but at the local level as well. If a resource meets any one of the following criteria as outlined in the Local Register, it will be considered an important resource.

1. Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;

2. Is associated with the lives of persons important to the history of San Diego County or its communities;

3. Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

2.1.3 San Diego County Resource Protection Ordinance

The County's RPO protects significant cultural resources. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

1. Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:

    a. Formally determined eligible or listed in the NRHP by the Keeper of the National Register; or

    b. To which the Historic Resource ("H" Designator) Special Area Regulations have been applied;

    or

2. One-of-a-kind, locally unique, or regionally unique cultural resources that contain a significant volume and range of data and materials; and

3. Any location of past or current sacred religious or ceremonial observances that is either:

    a. Protected under Public Law 95-341, the American Indian Religious Freedom Act or PRC Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures or,

    b. Other formally designated and recognized sites that are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigation authorized by the County. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Noncompliance would result in a project that is inconsistent with County standards.

3.0 RESEARCH DESIGN

No archaeological excavation or evaluation was required for this Project; therefore, no research design was necessary.

4.0 ANALYSIS OF PROJECT EFFECTS

4.1 Methods

4.1.1 Archival Research

A records search for the Project Area was requested with the SCIC of the CHRIS at San Diego State University on August 4, 2020 (SCIC Search #34022, provided as Appendix A). The purpose of the records search was to determine the extent of previous surveys within a one-mile (1,600-meter) radius of the proposed Project location, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. The records search was completed by SCIC staff and returned to ECORP on September 12, 2020.

In addition to the official records and maps for archaeological sites and surveys in San Diego County, the following historic references were also reviewed: Historic Property Data File for San Diego County (OHP 2012); *The National Register Information System we*bsite (NPS 2020); *Office of Historic Preservation, California Historical Landmarks* website (OHP 2018); *California Historical Landmarks* (OHP 1996 and updates); *California Points of Historical Interest* (OHP 1992 and updates); *Directory of Properties in the Historical Resources Inventory* (1999); *Caltrans Local Bridge Survey* (Caltrans 2018a); *Caltrans State Bridge Survey* (Caltrans 2018b); and *Historic Spots in California* (Kyle 2002). Other references examined include a RealQuest Property Search.

Historic aerial photos taken in 1954, 1964, 1966, 1968, 1971, 1980, and 1993 to present were also reviewed for any indications of property usage and built environment. Google Earth Street view images was also reviewed for any indications of recent modifications to the building.

Focused archival research on the historic-period commercial building located at 9610 Campo Road was carried out by Staff Archaeologist Megan Webb, under the direction of Senior Architectural Historian Jeremy Adams.

ECORP conducted research utilizing newspaper articles, historical maps, and secondary resources where available. Very few records were found containing specific information about the current building. Online research was undertaken for other documents relating specifically to the area of Spring Valley and San Diego County and the context of the community including commercial development and architectural

context. ECORP contacted the San Diego County Historic Site Board via email on September 8, 2020 for information regarding the historic-period building. No response has been received to date.

ECORP contacted the San Diego Assessors office and the San Diego Building Department to research building permits for the building.

The archival research, online research, and review of building files provided on file with the County resulted in sufficient information for ECORP to prepare an evaluation of the building.

4.1.2 Survey Methods

On September 9, 2020, ECORP archaeologist John O'Connor, Ph.D., Registered Professional Archaeologist (RPA), and Kumeyaay Native American monitor Anthony LaChappa subjected the 2.24-acre Project Area to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983). Dr. O'Connor and Mr. LaChappa expended 0.25 workday in the field. The entire Project Area has been previously modified and developed, currently consisting of paved asphalt parking lots and play areas, an historic-period building, a modern building, a storage trailer, a modern concrete drainage culvert, fences, and grass fields. Parallel transects were walked where possible according to the orientation of features and open spaces created as part of the commercial and scholastic environment included within the proposed Project Area. Other portions of the Project Area were accessed as available based on existing modern structures. Developed and exposed ground surfaces were examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as animal activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

On September 28, 2020, Dr. O'Connor and Kumeyaay Native American monitor Shuuluk Linton completed intensive pedestrian survey of a previously unmapped portion of land in the northwestern corner of the proposed Project Area. This land was surveyed separately, being a later addition that slightly expanded the proposed Project boundary. The additional survey was conducted under the same standards described above. Dr. O'Connor and Mr. Linton expended 0.25 workday in the field.

Ground visibility was excellent throughout the Project Area, with 100-percent visibility in artificially paved areas and on non-paved terrain, and 90- to 100-percent visibility in non-paved grass fields. The only exception to this was an area of low visibility at the southwestern boundary of the Project Area along which large invasive trees have grown adjacent to the man-made drainage. This area was inaccessible due to fencing and overgrown vegetation.

Survey of the Project Area resulted in the identification of one historic-period building and one historic-period road. CDO-001 (P-37-039110) is an historic-period commercial building located at 9610 Campo Road, Spring Valley, California 91977. The building is currently occupied by Pho & Grill International Vietnamese Restaurant. CDO-002 (P-37-039111) is a portion of Campo Road that lies immediately south

of the proposed Project Area and by which the proposed library will be accessed. Descriptions of historic-period resources P-37-039110 and P-37-039111 are provided below.

All cultural resources encountered during the survey were recorded using Department of Parks and Recreation (DPR) 523-series forms approved by the California OHP. The resources were photographed, mapped using a handheld Global Positioning System receiver, and sketched as necessary to document their presence using appropriate DPR forms.

4.1.3 Structural Assessment

On September 9, 2020, ECORP conducted an intensive site visit utilizing the OHP's guidelines for recording historical resources (NPS 1983) to document the building on appropriate DPR 523 forms (Appendix D). The entire exterior of the building was walked and photographed. During the field visit, architectural details and integrity considerations were noted for the features of the building, including its setting relative to the community.

4.1.4 Native American Participation/Consultation

In accordance with Section 2.3.5 of the Report Format and Content Requirements, ECORP contacted the California NAHC on August 4, 2020 to request a search of the Sacred Lands File for the Area of Potential Effects (Appendix B). This search will determine whether or not Sacred Lands have been recorded by California Native American tribes within the APE, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. In requesting a search of the Sacred Lands File, ECORP solicited information from the Native American community regarding tribal cultural resources, but the responsibility to formally consult with the Native American community lies exclusively with the federal and local agencies under applicable State and federal law.

A search of the Sacred Lands File by the NAHC was negative and failed to indicate the presence of Native American cultural resources in the Project Area. ECORP mailed individual letters to the provided Native American contacts on August 18, 2020. The San Pasqual Reservation replied via email on August 24, 2020 stating that the Project Area was located outside of the recognized San Pasqual Indian Reservation, but the land is within the boundary of the territory that the tribe considers its Traditional Use Area. In response to the received request for Kumeyaay Native American monitoring, ECORP contacted Red Tail Environmental to provide a Kumeyaay Native American monitor for the survey. Kumeyaay Native American monitors Anthony LaChappa and Shuuluk Linton were present for the field surveys.

A record of all correspondence is provided in Appendix B.

4.2 Results

The entire Project Area was observed to have been previously modified and developed, currently consisting of paved asphalt parking lots and play areas, a historic-period building, a modern building, a storage trailer, a modern concrete drainage culvert, fences, and grass fields. Other portions of the Project Area were accessed as available based on existing modern structures.

Ground visibility was excellent throughout the Project Area, with 100-percent visibility in artificially paved areas and on non-paved terrain, and 90- to 100-percent visibility in non-paved grass fields. The only exception to this was an area of low visibility at the southwestern boundary of the Project Area along which large invasive trees have grown adjacent to the artificial drainage. This area was inaccessible due to fencing and overgrown vegetation. Photographs of the ground conditions within the Project Area are provided in Appendix C.

No archaeological resources were found as a result of the field surveys; however, two historic-period cultural resources were identified as a result of the surveys. Resource P-37-039110 is a historic-period commercial building located at 9610 Campo Road, Spring Valley, California 91977. The building is currently occupied by Pho & Grill International Vietnamese Restaurant. Resource P-37-039111 is a portion of Campo Road that lies immediately south of the proposed Project Area and by which the proposed library will be accessed. Descriptions of P-37-039110 and P-37-039111 are provided below.

4.2.1 Historic Resources

As a result of the field surveys, two historic-period cultural resources were recorded within the Project Area. Site descriptions follow, and confidential DPR site records are provided in Appendix D.

P-37-039110: Historic-Period Commercial Building

The historic-period commercial building located at 9610 Campo Road, was formally recorded on September 9, 2020. Select photographs showing the best available angles of the exterior of each building are included as Figures 2 through 7, which show the substantial remodel to the building that occurred in 2011 from Google Street view. A San Diego Suburban City Directory from 1977 lists the 9160 Campo Road, Spring Valley location as one of many Fosters Freeze stores (Pacific Telephone and Telegraph Company 1977).

This historic-period commercial building was constructed between the years 1964 and 1966, according to aerial photographs. The building currently houses a restaurant, but in the past, it was opened and operated as a Fosters Freeze location, a Southern California originated ice cream shop, and later a produce store called Papitos Produce. The building is located on the northern side of Campo Road, historically known as the Campo Highway. This building has a rectangular footprint and is oriented north-south along the long axis with a paved parking lot to the east. The building underwent remodeling in 2011 and the 1960s Fosters Freeze features of the building were removed along with any signage that would have accompanied the ice cream shop. The original frame and post of the roadside sign currently accompanies the restaurant and is visible from the main road. The sign currently advertises the current tenant, Pho & Grill International Vietnamese Restaurant. Currently, the building is a 1,300-square-foot, one-story commercial business building used as a restaurant and contains what remains of the original Modern style of architectural including long storefront with flat and wide overhanging eaves. The building originally contained large windows on the eastern and southern facing façade but those were replaced during the 2011 remodel. The original windows on the façade appear to have housed walk up windows that were common at Fosters Freeze locations as seen in other similar existing locations. The building exterior has a smooth stucco siding with square tile wainscoting detailing on the exterior that were added

to the building during the remodel. The building has an overhang that protrudes from the building on the eastern and southern facing façades. The roof was replaced and redesigned during the 2011 remodel.

After a review of Google street view photographs and Commercial Alteration or Addition Permits from the County from 2011, the building underwent major remodeling. According to the permit, the building was vacant prior to the remodeling. The remodeling included replacement of the roof, glass in all windows due to vandalism, and exterior posts as needed. The remodeling also included changing the current bathroom to be Americans with Disabilities Act-compliant and plans to change the wall from a double to single wall. The Google street view taken in May 2011 shows the building with the interior completely gutted and by October 2011 the new roof was constructed. The photograph also shows no windows and the removal of the blue awning that was common for Fosters Freeze locations. By the 2015 photographs the building looks to be in its current state.



Figure 2. P-37-039110; Commercial building, southeastern façade (view northwest; September 9, 2020).



Figure 3. P-37-039110; Commercial building, southeastern façade (view northwest; September 9, 2020).



Figure 4. P-37-039110; Commercial building, northern façade (view south; September 9, 2020).



Figure 5. P-37-039110; Commercial building, Google Earth street view taken in January 2008.

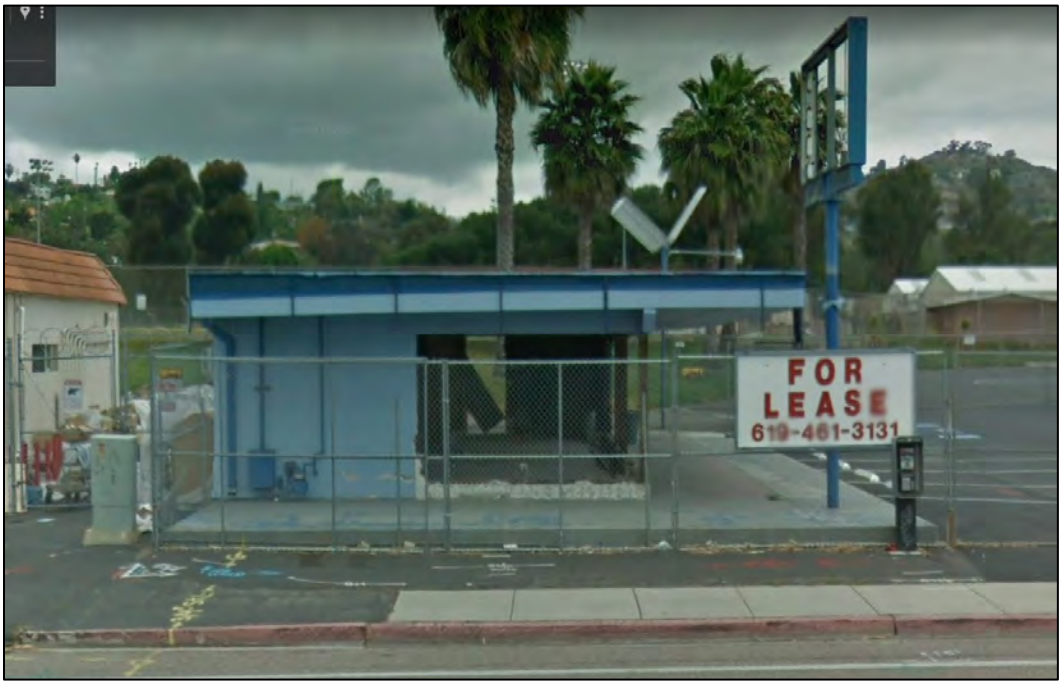


Figure 6. P-37-039110; Commercial building, Google Earth street view taken in May 2011 prior to remodeling.

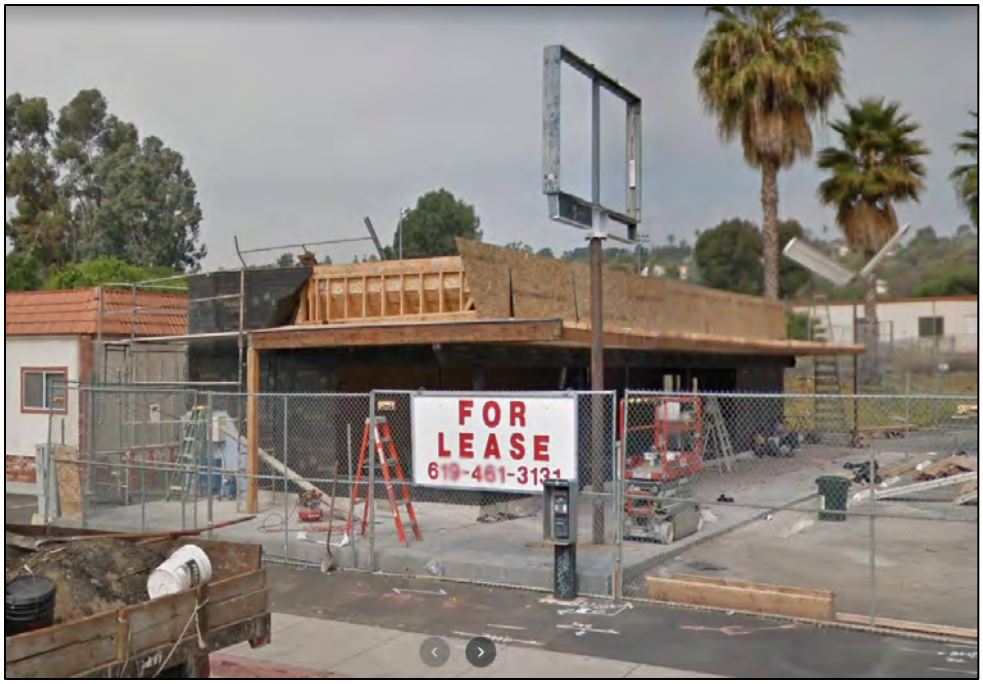


Figure 7. P-37-039110; Commercial building, Google Earth street view taken in October 2011 during remodeling.

P-37-039111 Historic-Period Segment of Campo Road

P-37-039111 is an historic-period road known today as Campo Road. The road today is a four-lane road alignment that runs east to west at the southern edge of the Project Area (Figure 8). Historically the road was known and labeled as Campo Highway. The road is a paved asphalt road that runs adjacent to developed parcels within San Diego County. Campo Highway was replaced with Highway 94 in the late 1960s after which it was known as Campo Road. The route began as a main stagecoach route between San Diego and Yuma, Arizona. Paving of Campo Road began in the late 1920s.

Campo Highway, today's Campo Road, first appears south of the Project Area beginning on aerial photographs taken 1953. The roadway was renamed and was replaced by Highway 94 is the late 1960s. Aerial photographs from 1966 and 1968 shows the construction of the interchange of Highway 94 and Kenwood Drive located southeast of the Project Area and by 1971 the interchange was completed. As a result of the development of the development of Highway 94, traffic on Campo Road within the Project Area was lessened to local traffic only.



Figure 8. P-37-039111; Campo Road overview (view northwest; September 9, 2020).

5.0 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

5.1 Resource Importance

4.1.1 Evaluation of P-37-039110

Historical and archival research for the Vietnamese restaurant (former Foster Freeze) at 9610 Campo Road has successfully resulted in a construction and use history for the building. Archival research specifically for the building utilized building permits, city directories, other city records, and aerial and street photographs. These records showed the building was constructed north of Campo Road between 1964 and 1966, though the exact construction date was not listed on permit or assessor records. The building underwent many minor repairs and a substantial structural remodel in 2011. Historical research also adequately catalogued the history of Spring Valley and San Diego County and the surrounding community and commercial context, so that the building could be placed within its relevant historical context. This research was used to evaluate the building using CRHR eligibility criteria.

The building at 9610 Campo Road in Spring Valley was originally constructed as a local Fosters Freeze built between 1964 and 1966 and was later modified for use as a produce store. Eventually, the building was remodeled and converted for use as a Vietnamese restaurant. It is associated with the automobile culture of commercial development during the period of the 1950s and 1960s. It is also associated with the use of roadside signs and storefront advertising during that same period for commercial corridors.

The original Fosters Freeze ice cream shop and storefront, including the original signage, was constructed within the period of car culture and heavy use of automobile advertising for the commercial industry in Southern California. The post-World War II period of construction in Spring Valley and neighboring

communities followed this same pattern, attempting to cater to modern and "trendy" popular culture, including car culture. The building and signage were modified in the 2000s, and eventually became the Vietnamese Restaurant it is today in 2011. By the end of the 1960s, the car culture phenomenon was significantly declining with the modernization of roads and freeways throughout California that bypassed commercial corridors. The construction of Highway 94 south of the Project Area between 1966 and 1968 led to the decline of the commercial corridor along Campo Road, historically known as Campo Highway.

Though the building maintains an association with the commercial development of automobile culture including sign and storefront advertising, neither the original construction nor the remodeled additions or alterations to the building hold any historical significance through association with those contexts. The building itself, or its modifications or alterations, has not made a significant contribution to the history of commercial development, car culture, or advertising and has not made a significant contribution to the broad patterns of history. This Fosters Freeze was constructed well after the height of popularity of automobile culture advertising. Further, merely being associated with those contexts is not enough to contribute in a significant way to those historic contexts. The building must be shown to have been significant within the established contexts in history. This building, including signage and its alterations and modifications, is not significantly associated with historical events and has not made a significant contribution to the broad patterns of history and is not eligible under CRHR Criterion 1.

Several individuals have owned and operated businesses in the building through the years. Historical and archival records and focused research on each of the individuals suggest they did not have a direct or significant historical impact or influence in history that is represented through this building. Therefore, the building, including signage and its alterations and modifications, is not associated with the lives of persons significant in the past and is not eligible under CRHR Criterion 2.

The building at 9610 Campo Road was originally constructed as a Foster Freeze location in the mid-1960s. It was modified, for use as a grocery store and later as a Vietnamese restaurant including additions and alterations to the framework, windows, exterior of the building, and signage. The building was originally designed with elements of Mid-Century Modern architecture and was likely based off a prototype for Fosters Freeze at the time. The Mid-Century Modern elements of the building are the large picture windows across the façade, wide overhang with flat roof, and signage. The layout and structure of the original building is not obvious from its current exterior appearance but can be differentiated upon review of historical records.

The building is associated with the period of commercial construction that emphasized automobile advertising and contains many characteristics that represent that period of Mid-Century Modern architecture. The building characteristics, however, do not embody the type, period, or method of construction of commercial architecture. In order to embody the distinctive characteristics, the building components must have been conceived with the design style as its primary appearance during the period of significance and contain a cohesive original structure that is distinguishable among other building types as a good representative of that style. This building contains some of the popular elements of Mid-Century Modern architecture, such as a focal point large eye-capturing structural roofline that spans the façade, but these elements have been heavily altered over time.

The layout of the building has changed several times, including additions and alterations that post-date the period of significance of Mid-Century Modern architecture, which was primarily between 1949 and the early 1960s. Additionally, the signage throughout the building is missing its original components making it more difficult to link to the period of commercial development and advertising. Even so, the sign did was not unique and did not contain vernacular influences in design or appearance. Overall, the building does contain some character-defining features of Mid-Century Modern architecture and was constructed towards the end of the period of popularity of that style. However, it does not contain a few important elements that clearly distinguish the building as a Mid-Century Modern style, such as large structural elements or futuristic details on the exterior of the building or signage. Further the Streamline Modern details often found in other Foster Freeze buildings, such as long, sweeping rounded edged rooflines and curved, fabric-covered windows, are not present nor have they ever been present on this building. The building is a product of the later years of the period of popularity for storefront and sign advertising along commercial corridors. Overall, the building does not embody the distinctive characteristics of Mid-Century Modern style of architecture, nor represent the work of a master, nor poses high artistic values, and its components lack individual distinction among other Mid-Century Modern buildings. In addition, the building was substantial remodeled over time causing it to lose significant integrity. Therefore, the building, including signage and its alterations and modifications, are not eligible under CRHR Criterion 3.

Archival research potential for the building has been exhausted, and the building's history is documented in the archival record and summarized herein. There is no potential for the building and all of its components to provide additional information that is not already represented in the archival record. Therefore, based on known and available information, the building, including signage and its alterations and modifications, is not eligible under CRHR Criterion 4.

The survey revealed that the building is in fair condition because of the recent remodel and several components of the original building have lost integrity. As mentioned above, the original structure of the building is masked by the additions that were added in 2011, which in themselves are not historically significant attributes. The remodel was construction and designed to match the Mid-Century Modern style. These additions give a misleading appearance to the age of some portions of the building. The building has not been moved and retains integrity of location. However, the building no longer retains integrity of materials, workmanship, setting, and feeling. The building currently serves its commercial purpose as a restaurant, which was its original design. The setting and feeling of the commercial corridor and car culture have completely disappeared. Further, it does not have additional distinctive attributes or features that characterize the building as compared to other properties.

Regardless of integrity, the building is evaluated as not eligible for the CRHR.

San Diego County Local Register of Historical Resources (Local Register) Criteria

The following is an evaluation of the building against the County's Historical Resource Criteria. The evaluation has been included to help the County determine if the building is an Historical Resource in accordance with CEQA.

Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage.

The building at 9610 Campo Road contains character-defining features that do contribute to the city of Spring Valley's architectural history. As a commercial building, it was designed during a period of popularity of Mid-Century Modern architecture that led architects to design buildings specifically catering to automobile advertising in commercial structures. During the post-World War II period, Spring Valley was a growing city and automobile advertising, especially the use of neon signs, was a significant and important part of the city's commercial growth. The signage and other architectural elements do not embody the historical elements of the period as described in the CRHR evaluation and do not make a significant contribution to the County's history and cultural heritage. Therefore, the building does not meet Historical Resources Criterion 1.

Is associated with the lives of persons important to the history of San Diego County or its communities.

The archival record shows that the building is identified as one of many franchised locations of the locally known ice cream shop, Fosters Freeze; however, nothing in the archival record shows that any owners made a significant contribution to the history of San Diego County or its communities. In addition, this building no longer is identified as a Fosters Freeze location and has been remodeled in a restaurant building. Lastly, many individuals have likely eaten at the building while it was a Fosters Freeze location; however, simply eating at a restaurant does not qualify a building to be significantly associated with the individual's productive life. Therefore, the building does not meet Historical Resources Criterion 2.

Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

The building does not represent any specific San Diego County region in architectural design or style. It's construction matches a period of popularity for automobile culture and storefront advertising using Mid-Century Modern architectural techniques that are not representative of any specifically significant location, period, or concept in San Diego County. See CRHR Criterion 3 evaluation for a more detailed explanation. The building does not meet Historical Resources Criterion 3.

Has yielded, or may be likely to yield, information important in prehistory or history.

The building does not meet Historical Resources Criterion 4, which is the same as CRHR Criterion 4, described in detail above.

San Diego County RPO

The building located at 9610 Campo Road does not meet the definition of a "Significant Historic or Prehistoric Site" as defined in the San Diego County RPO.

4.1.2 Evaluation of P-37-039111

Resource P-37-039111 consists of a short segment of the historic-period road alignment known as Campo Road. Review of historical topographic maps and aerials indicate that the road was likely constructed in the early 1900s with improvements in several decades through the 1900s.

As a result of archival research, this road was not identified in available historical documentation as having any significant historical associations and was not identified to have been associated with the Good Roads Movement. The road was originally developed as a stagecoach route between San Diego and Yuma,

Arizona, but the road today does not embody the historic route. This road was bypassed when Highway 94 was constructed in the 1960s. As such, the resource is not associated with any specific historic event or activity and is, therefore, not eligible under CRHR Criterion 1.

Similarly, the lack of historical documentation for this resource makes it clear that no specific individuals or groups of people significant in history are linked with this road. The resource does not demonstrate any association with the lives of persons significant in history and is, therefore, not eligible under CRHR Criterion 2.

This resource is currently a paved road that follows the similar alignment as it did when it was originally constructed prior to 1920. The original road may have been originally a dirt road which, through decades of maintenance and repairs, was converted to the paved road it is today. The road as it was originally, including its years of maintenance and changes, and as it is now, does not have any significant historical associations and its historical use, construction, improvement, and maintenance is typical among roads. It is not uniquely artistic or designed with any distinctive engineering characteristics. Therefore, this resource does not embody any distinctive characteristics of a type, period, or method of road construction; nor does it possess any artistic value. In addition, no archival evidence, or physical aspect of the road, indicates that the resource represents the work of a master road grader or specific construction crew or company. Therefore, this resource is not eligible under CRHR Criterion 3.

The information potential in historic roads lies in its alignment and route. The alignment and route of this road may not have been accurately mapped in historic times and therefore is not represented in the archival record. In a sense, many historic-period roads only exist on historic maps as dashed approximated lines, and were it not for their physical presence on the landscape, no other accurate record of its connectivity between points A and B would exist. This road, however, was recorded relatively accurately in historical topographic maps and, thus the information regarding its historical route is provided in the archival record. Furthermore, this resource does not possess the potential for subsurface archaeological deposits, and, accordingly, was not tested. The resource does not possess the potential to yield any additional information regarding the relationship or functionality of roads or provide any information that is not already represented in the archival record and, therefore, is not eligible under CRHR Criterion 4.

The road segment appears to retain integrity of location, design, feeling, and association. Routine maintenance has diminished integrity of materials and workmanship. Further, the setting has changed from more rural to urban and the road contains no distinctive attributes that give the segment significance above other roads. Regardless of integrity, the resource does not meet the eligibility criteria of the CRHR.

San Diego County Local Register of Historical Resources (Local Register) Criteria

The following is an evaluation of the building against the County's Historical Resource Criteria. The evaluation has been included to help the County determine if the road segment is an Historical Resource in accordance with CEQA.

Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage.

Campo Road was originally constructed as Campo Highway in 1900s and was stagecoach route between San Diego and Yuma, Arizona. The road was later paved in the 1920s and bypassed by Highway 94 in the late 1960s. The road was named Campo Road because it was simply the road to Campo. The early road offered a route through the County, but there is no indication that this route itself made a significant contribution to the broad patterns of San Diego County's history or cultural heritage. Therefore, the building does not meet Historical Resources Criterion 1.

Is associated with the lives of persons important to the history of San Diego County or its communities.

The archival record shows that the road is not significantly associated with any individual's productive life. Therefore, the building does not meet Historical Resources Criterion 2.

Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

The road does not have any distinctive characteristic design that represents a San Diego County region. As stated in detail in the CRHR Criterion 3 discussion, the road does not represent a type, period, or method of construction that was not already in existence or common throughout the region. The road does not meet Historical Resources Criterion 3.

Has yielded, or may be likely to yield, information important in prehistory or history.

The road does not meet Historical Resources Criterion 4, which is to the same as CRHR Criterion 4, described in detail above.

San Diego County RPO Criteria

The Campo Road segment does not meet the definition of a "Significant Prehistoric or Historic Site" as defined in the San Diego County RPO.

5.2 Impact Identification

Resources P-37-039110 and P-37-039111 are not Historical Resources under CEQA. Therefore, there are no Historical Resources, as defined by CEQA, with potential to be impacted by this project.

6.0 MANAGEMENT CONSIDERATIONS – MITIGATION MEASURES AND DESIGN CONSIDERATIONS

ECORP evaluated the two historic-period cultural resources, P-37-039110 and P-37-039111, and found them not eligible for inclusion on the CRHR under any criteria. Further, the two resources were evaluated against the San Diego County Local Register of Historical Resources and found to not meet the criteria. Lastly, the resources do not meet the definition as a "Significant Prehistoric or Historical Resource" as defined by the San Diego County RPO. Therefore, resources P-37-039110 and P-37-039111 are not Historical Resources under CEQA. No ground disturbance should occur until the lead agencies concur with this finding.

The archaeological sensitivity of the Project Area has been determined to be moderate based on the geology of the area and the subsurface presence of pre-contact Native American resources and historic-

period resources in the Project vicinity. There exists a potential for buried cultural resources to be present that may become unearthed during grading, trenching, or excavation of original ground. Therefore, the County may elect to implement the standard condition for a Grading Monitoring and Data Recovery Program to require archaeological monitoring during ground-disturbing activities to ensure that the procedures for unanticipated discoveries of cultural resources and human remains are addressed in accordance with County requirements in Section 2.3.6 of the Required Format and Content Guidelines and with state law. In addition, in accordance with Section 2.2.2 of the Report Format and Content Guidelines, one Kumeyaay Native American monitor shall be retained to monitor initial grading of the Project Area for the potential presence of tribal cultural resources.

6.1 Unmitigated Impacts

6.1.1 Mitigation Measures and Design Considerations

No Historical Resources, as defined by CEQA, will be impacted by the proposed Project. However, the potential for subsurface archaeological resources has been determined as moderate based on the presence of pre-contact Native American resources and historic-period subsurface deposits in the Project vicinity.

6.2 Mitigated Impacts

6.2.1 Mitigation Measures and Design Considerations

No Historical Resources, as defined by CEQA, will be impacted by the proposed Project.

6.3 Effects Found Not to be Significant

There are no Historical Resources, as defined by CEQA, in the Project Area. Therefore, no effects, significant or otherwise, have been identified that will impact any known Historical Resources.

7.0 REFERENCES

Bettinger, R. L., 2013. Effects of the Bow on Social Organization in Western North America. *Evolutionary Anthropology* 22, 118-123.

Byrd, B. F. and L. M. Raab. 2007. Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory: Colonization, Culture, and Complexity*, edited by T. L. Jones and K. A. Klar, 215-228. Altamira Press, Plymouth.

Byrd, B. F. and S. N. Reddy. 2002. Late Holocene Adaptations along the Northern San Diego Coast: New Perspectives on Old Paradigms. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by J. M. Erlandson and T. L. Jones, 41-62. Perspectives in California Archaeology 6, Institute of Archaeology, University of California, Los Angeles.

Castillo, Edward D. 1978. The Impact of Euro-American Exploration and Settlement. In *Handbook of North American Indians, Volume 8, California*, edited by R.F. Heizer, pp. 99-127. Smithsonian Institution, Washington D.C.

Caughey, J. W., 1933. *History of the Pacific Coast*. Privately published by J. W. Caughey, Los Angeles.

Christenson, L. E., 1990. *The Late Prehistoric Yuman People of San Diego County, California: Their Settlement and Subsistence System*. Ph.D. dissertation, Department of Anthropology, Arizona State University, Tempe. University Microfilms, Ann Arbor.

Claus, R.J. and K.E. Claus. 1975. A Brief History of the Sign Industry. Signage Research International, Palo Alto.

Cleland, R. G., 1941. *The Cattle on a Thousand Hills: Southern California, 1850-1870*. Huntington Library, San Marino, California.

Coy, O. C., 1973. *California County Boundaries: A Study of the Division of the State into Counties and the Subsequent Changes in their Boundaries*. Revised edition. Originally published 1923. Valley Publishers, Fresno.

Dumke, G. S., 1944. *The Boom of the Eighties in Southern California*. Huntington Library, San Marino.

Fosters Freeze. 2020. Fosters Freeze About page. https://www.fostersfreeze.com/about/, Accessed September 11, 2020.

Erlandson, J. M. and T. J. Braje. 2008. Five Crescents from Cardwell: Context and Chronology of Chipped Stone Crescents at CA-SMI-679, San Miguel Islands, California. *Pacific Coast Archaeological Society Quarterly*:40.

Erlandson, J. M. and R. H. Colten. 1991. An Archaeological Context for Early Holocene Studies on the California Coast. In *Hunter Gatherers of Early Holocene Coastal California*, edited by J. Erlandson and R. Colten, pp. 1-10. Perspectives in California Archaeology (Volume 1). Institute of Archaeology, University of California, Los Angeles.

Erlandson, J. M., Graham, M. H., Bourque, B. J., Corbett, D., Estes, J. A., Steneck, R. S., 2007. The Kelp Highway Hypothesis: Marine Ecology, the Coastal Migration Theory, and the Peopling of the Americas. *Journal of Island and Coastal Archaeology* 2:161-174.

Gallegos, D. R., 2002. Southern California in Transition: Late Holocene Occupation of Southern San Diego County. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by J. M. Erlandson and T. L. Jones, 27-40. Perspectives in California Archaeology 6, Institute of Archaeology, University of California, Los Angeles.

_____. 1991. Antiquity and Adaptation at Agua Hedionda, Carlsbad, California. In: *Hunter-Gatherers of Early Holocene Coastal California*, edited by J. M. Erlandson and R. H. Colten, pp. 19-41. Perspectives in California Archaeology, Vol. 1, Institute of Archaeology, University of California, Los Angeles.

Gamble, L. H. and S. Mattingly S. 2012. Pine Nut Processing in Southern California: Is the Absence of Evidence the Evidence of Absence? *American Antiquity* 77, 263-278.

Gifford, Edward W., 1931. *The Kamia of Imperial Valley*. Bureau of American Ethnology Bulletin 97. Washington, D.C.

Golob, Brittany. 2017. Spotlight on Foster's Freeze. Published in Transform Magazine. https://www.transformmagazine.net/articles/2017/spotlight-on-fosters-freeze/, Accessed September 11, 2020.

Gross, G. T. and M. Sampson. 1990. *Archaeological Studies of Late Prehistoric Sites in the Cuyamaca Mountains, San Diego County, California*. Proceedings of the Society for California Archaeology 3:135-148.

Gudde, E. G., 1998. *California Place Names: The Origin and Etymology of Current Geographical Names*. Revised from first edition, 1949. University of California Press, Berkeley.

Hokanson, Drake. 1999. The Lincoln Highway: Main Street Across America. University of Iowa Press, Iowa City.

Kennett, D. J., J. P. Kennett, J. M. Erlandson, K. G. Cannariato. 2007. Human Responses to Middle Holocene Climate Change on California's Channel Islands. *Quaternary Science Reviews* 26, 351-367.

Knell, E. J. and M. Becker. 2017. Early Holocene San Dieguito Complex Lithic Technological Strategies at the C.W. Harris Site, San Diego County, California. *Journal of California and Great Basin Anthropology*. 32:183-201.

Koerper, H. C., P.E. Langenwalter II, A. Schroth, A., 1991. Early Holocene Adaptations and the Transition Phase Problem: Evidence from the Allan O. Kelly Site, Agua Hedionda Lagoon. In: *Hunter-Gatherers of Early Holocene Coastal California*, edited by J. M. Erlandson and R. H. Colten, pp. 43-62. Perspectives in California Archaeology, Vol. 1, Institute of Archaeology, University of California, Los Angeles.

Luomala, K., 1978. Tipai-Ipai. In *Handbook of North American Indians, Volume 8, California*, edited by R. F. Heizer, pp. 592-609. Smithsonian Institution, Washington, D. C.

Marriott, Paul. 2010. The Preservation Office Guide to Historic Roads. New York, New York.

Marschner, J., 2000. *California 1850: A Snapshot in Time*. Coleman Ranch Press, Sacramento.

Masters, P. M. and D. R. Gallegos. 1997. Environmental Change and Coastal Adaptations in San Diego County During the Middle Holocene. In: *Archaeology of the California Coast During the Middle Holocene*, edited by J. M. Erlandson and M. A. Glassow, pp. 11-21. Perspectives in California Archaeology, Vol. 4, Institute of Archaeology, University of California, Los Angeles.

Moss, M. L. and J.M. Erlandson. 2013. Waterfowl and Lunate Crescents in Western North America: The Archaeology of the Pacific Flyway. *Journal of World Prehistory*, 26, 173-211.

NETROnline 2020. Historic Aerials. http://www.historicaerials.com/. Accessed September 15, 2020.

NPS. 2020. *National Register Information System Website*. Electronic document, http://www.nr.nps.gov/nrloc1.htm, September 25, 2020.

_____. 1983. *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*. 48 FR (Federal Register) 44716-68.

NRCS. 2020. Natural Resources Conservation Service Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, accessed 14 September 2020.

Pacific Telephone and Telegraph Company. 1977. San Diego Suburban City Directory. October 1977. Published by the Pacific Telephone and Telegraph Company. Available on Ancestry.com.

Quinn, P. S., M. M. Burton, D. Broughton, and S. Van Heymbeeck. 2013. Deciphering Compositional Patterning in Plainware Ceramics from Late Prehistoric Hunter-Gatherer Sites in the Peninsular Ranges, San Diego County, California. *American Antiquity* 78, 779-789.

Robinson, W. W., 1948. *Land in California: The Story of Mission Lands, Ranchos, Squatters, Mining Claims, Railroad Grants, Land Scrip, Homesteads*. University of California Press, Berkeley.

Sanchez, G. M., J.M. Erlandson, and N. Tripcevich. 2017. Quantifying the Association of Chipped Stone Crescents with Wetlands and Paleoshorelines of Western North America. *North American Archaeologist* 38, 107-137.

Scharlotta, I. 2015. Determining Temporal Boundaries and Land Use Patterns: Hunter-Gatherer Spatiotemporal Patterning in San Diego County. *California Archaeology*, 1-40.

Spring Valley Historical Society. 2020. Introduction to the History of Spring Valley. http://www.svhistoricalsociety.org/svhistoricalsociety/webpages/introduction.html, accessed September 9, 2020.

Sutton, M. Q., J. K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly* 42(4), 1-64.

True, D. L., 1970. *Investigation of a Late Prehistoric Complex in Cuyamaca Rancho State Park, San Diego County, California*. University of California, Los Angeles, Archaeological Survey Monographs 1.

_____. 1958. An Early Complex in San Diego County, California. *American Antiquity* 23(3): 255-263.

Treu, Martin. 2012. *Signs, Streets, and Storefronts: A History of Architecture and Graphics along America's Commercial Corridors*. The John Hopkins University Press, Baltimore.

Wallace, W. J., 1955. A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.

Warren, C. N., 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by Cynthia Irwin-Williams, pp. 1-14. Eastern New Mexico University Contributions in Anthropology 1(3). Portales, New Mexico.

Warren, C. N., D. L. True, A. A. Eudey. 1961. *Early Gathering Complexes of Western San Diego County: Results and Interpretations of an Archaeological Survey*. Archaeological Survey Annual Report, 1960-1961:1-106. Department of Anthropology and Sociology, University of California, Los Angeles.

Waugh, M. G. 1986. *Intensification and Land-Use: Archaeological Indication of Transition and Transformation in a Late Prehistoric Complex in Southern California* [Ph.D.]. [University of California, Davis. UMI Dissertation Services, ProQuest, Ann Arbor]: University of California, Davis.

8.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

The built environment survey and evaluations were performed by and under the direction of County Approved Historical Resources Consultant Jeremy Adams, M.A., ECORP Consulting, Inc.

The archaeological survey was performed under the direction of County Approved Archaeological Consultant and Principal Investigator Lisa Westwood, RPA, ECORP Consulting, Inc.

John O'Connor, Ph.D., RPA, ECORP Consulting, Inc., completed the field surveys, authored report sections, and managed the project.

Megan Webb conducted archival and historical research, authored report sections including records search results and historical contexts, and organized attachments.

9.0 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

No Historical Resources will be impacted by this Project, so no mitigation measures or design considerations are necessary.

Table 2. Mitigation Measures and Design Considerations

Proposed Mitigation Measures	Design Considerations
N/A	N/A

CONFIDENTIAL APPENDICES

Appendix A – SCIC Records Search Confirmation

Appendix B – Native American Coordination

Appendix C – Project Area Photographs

Appendix D – ***Confidential*** Cultural Resource Site Locations Map and Site Records (DPR 523)

APPENDIX A

SCIC Records Search Confirmation

South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
nick@scic.org

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

Company: ECORP

Company Representative: John O'Connor

Date Processed: 8/12/2020

Project Identification: Casa de Oro Library Project

Search Radius: 1 mile

Historical Resources: JL

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: JL

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: JL

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: JL

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Summary of SHRC Approved CHRIS IC Records Search Elements	
RSID:	2744
RUSH:	yes
Hours:	1
Spatial Features:	56
Address-Mapped Shapes:	yes
Digital Database Records:	69
Quads:	4
Aerial Photos:	0
PDFs:	Yes
PDF Pages:	221

This is not an invoice. Please pay from the monthly billing statement

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-00216	NADB-R - 1120216; Voided - CARDENAS03	1985	Cardenas, Sean D. and Cathy Winterrowd	Cultural Resources Inventory and Assessment: Barbic Property	RBR & Associates, Inc.	
SD-00352	NADB-R - 1120352; Voided - CARRICO96	1974	Carrico, Richard	Archaeological Survey of Helix Bay View.	WESTEC Services, Inc.	
SD-00379	NADB-R - 1120379; Voided - CARRICO67	1978	Carrico, Richard and Lesley Eckhardt	Archaeological Excavation and Analysis of W-389 D at 9142 Kenwood Drive Spring Valley, California	WESTEC Services, Inc.	
SD-00610	NADB-R - 1120610; Voided - FULMER 2	1977	Fulmer, Scott	Subsurface Test of Archaeological Resources at 9233 Kenwood Drive	ASM, Inc.	37-000221, 37-004622, 37-004638
SD-00868	NADB-R - 1120868; Voided - FINK 36	1975	Fink, Gary R.	Archaeological and Historical Resources of the Spring Valley Creek Floodplain, Spring Valley, California Project No. UJ0129	San Diego County Engineering Department	37-000221
SD-00871	NADB-R - 1120871; Voided - FINK 28	1973	Fink, Gary R.	The Archaeology of the Olivenhain Force Main Sewer	San Diego County Engineer Department	37-000214, 37-000606
SD-00895	NADB-R - 1120895; Voided - CHACE 73	1983	Chace, Paul G.	An Archaeological Survey of the Honey Springs Off-Site Water Line Appendix VI to the Archaeology of Honey Springs, San Diego County (1980) (EAD Log #81-19-24)	Paul G. Chace & Associates	37-000188, 37-009681
SD-00939	NADB-R - 1120939; Voided - FINK 75D	1978	Fink, Gary R.	Archaeological Investigation at Kenwood Drive No. 4, (W-389-D) Spring Valley, California	County of San Diego Department of Transportation	
SD-01218	NADB-R - 1121218; Voided - CROTTEAU03	1983	Crotteau, Karen	Archaeological Survey Report for the Proposed MTDB Urban Transir Corridor (11812-634517-6T11232B).	CALTRANS	37-005816
SD-01739	NADB-R - 1121739; Voided - MCCOY 5	1979	McCoy, Lesley C. and Brian W. Hunter	Archaeological Excavation and Analysis of W-389-E at 9109 Kenwood Drive, Spring Valley, California	WESTEC Services, Inc.	
SD-02465	NADB-R - 1122465; Voided - CALTRANS05	1990	ROSEN, MARTIN	PHASE II ARCHAEOLOGICAL TEST EXCAVATION REPORT, "THE JONES SITE", CA-SDI- 11687, CITY OF OCEANSIDE, CA 11-SD-76	CALTRANS	37-011687
SD-02724	NADB-R - 1122724; Voided - COOKJ 18	1977	COOK, JOHN	SUBSURFACE TEST OF ARCHAEOLOGICAL RESOURCES AT 9233 KENWOOD DRIVE, SPRING VALLEY, CA L8235 LOG# 77-19-47	ARCHAEOLOGICAL SYSTEMS MANAGEMENT AND ADVANCE PLANNING	37-004638
SD-02730	NADB-R - 1122730; Voided - COOKJ 33	1991	COOK, JOHN	COULTURAL RESOURCE SURVEY FOR KENWOOD DRIVE BETWEEN HELIX DRIVE AND HELIX STREET	ASM AFFILIATES INC	37-004638

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-02807	NADB-R - 1122807; Voided - HECTOR 92	1993	HECTOR, SUSAN	ARCHAEOLOGICAL SURVEY OF A MAINTENANCE DITCH TO BE CONSTRUCTED AT A 1940'S ADOBE LOCATED AT BANCROFT PARK, SAN DEIGO COUNTY	SUSAN M. HECTOR	37-004638
SD-04626	NADB-R - 1124626; Voided - TOUPS04	1979	PRC TOUPS	FOCUSED DRAFT ENVIRONMENTAL IMPACT REPORT FAITH CHAPEL MAJOR USE PERMIT SAN DIEGO COUNTY, CALIFORNIA	PRC TOUPS CORPORATION	
SD-05436	NADB-R - 1125436; Voided - WRIGHT2	2003	WRIGHT, GAIL	Negative Cultural Survey Report for: TPM 20711, Log. No. 02-19-025 - Reed Subdivision; APN 504-230-28	Gail Wirght	
SD-06425	NADB-R - 1126425; Voided - CARRICO242	1990	CARRICO, RICHARD, SUSAN H. CARRICO, KATHLEEN A. CRAWFORD, and S. KATHLEEN FLANIGAN	Historic Resources Inventory Sweetwater Valley		37-016578, 37-017368, 37-017369, 37-017370, 37-017371, 37-017372, 37-017373, 37-017374, 37-017375, 37-017376, 37-017377, 37-017378, 37-017379, 37-017380, 37-017381, 37-017382, 37-017383, 37-017384, 37-017385, 37-017386, 37-017387, 37-017388, 37-017389, 37-017390, 37-017391, 37-017392, 37-017393, 37-017394, 37-017395, 37-017396, 37-017397, 37-017398, 37-017399, 37-017400, 37-017401, 37-017402, 37-017403, 37-017404, 37-017405, 37-017406, 37-017407, 37-017408, 37-017409, 37-017410, 37-017411, 37-017412, 37-017413, 37-017414, 37-017415, 37-017416, 37-017417, 37-017418, 37-017419, 37-017420, 37-017421, 37-017422, 37-017423, 37-017424, 37-017425, 37-017426, 37-017427, 37-017428, 37-017429, 37-017430, 37-017431, 37-017432, 37-017433, 37-017434, 37-017435, 37-017446, 37-017447, 37-017448, 37-017449, 37-020176, 37-020177
SD-07393	NADB-R - 1127393; Voided - CRAFTS 42	2000	CRAFTS, KAREN	PRELIMINARY ARCHAEOLOGICAL SURVEY REPORT OF THE EASTERN ALIGNMENT ALTERNATIVES FOR STATE ROUTE 125-SOUTH	CALTRANS	37-001856, 37-004524, 37-004530, 37-005696, 37-006960, 37-008657, 37-010770, 37-012049, 37-012054, 37-012084, 37-012513, 37-012516, 37-018414, 37-018415, 37-018416, 37-018417, 37-018418, 37-018419

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-08658	NADB-R - 1128658; Voided - BANKS10	1980	BANKS, THOMAS J.	INDEXING AND CAPPING OF ARCHAEOLOGICAL SITE W-389-X AN EXTENSION OF THE KUMEYAAY VILLAGE OF NETI	HAVE MULE WILL TRAVEL	
SD-09023	NADB-R - 1129023; Voided - WRIGHT52	2003	WRIGHT, GAIL	NEGATIVE CULTURAL RESOURCES SURVEY REPORT FOR: TPM 20711RPL2, LOG NO. 02-19-025-REED SUBDIVISION; APN 504-230-28	COUNTY OF SAN DIEGO	
SD-09399	NADB-R - 1129399; Voided - COLLETT21	2005	COLLETT, RUSSELL	Cultural Resources Report of Exploratory Excavations for the Kenwood Drive Improvements Spring Valley, California San Diego County, California	Russell Collett	37-004638
SD-10170	NADB-R - 1130170; Voided - UNDERJ06	2006	Underwood, Jackson and Zepeda-Herman, Carmen	Final Archaeological Monitoring and Data Recovery Results for Kenwood Drive Improvements, Spring Valley, California	Recon Environmental, Inc.	
SD-10551	NADB-R - 1130551; Voided - ARRINGT01	2006	ARRINGTON, CINDY	CULTURAL RESOURCES FINAL REPORT OF MONITORING AND FINDINGS FOR THE QWEST NETWORK CONSTRUCTION PROJECT, STATE OF CALIFORNIA	SWCA ENVIRONMENTAL CONSULTANTS	
SD-10660	NADB-R - 1130660; Voided - SMITHB540	2006	SMITH, BRIAN F. and RICHARD GREENE	PHASE I ARCHAEOLOGICAL ASSESSMENT OF THE FRENCH MINOR SUBDIVISION, APN 495-401-07; TPM 21013	BRIAN F. SMITH AND ASSOCIATES	
SD-10786	NADB-R - 1130786; Voided - HISTORIC69		VARIOUS	SURVEY OF THE BANCROFT RANCH HOUSE		
SD-11557	NADB-R - 1131557; Voided - FIUMED01	2007	FIUME, DOMINICK	THE ARTHUR & LILLIAN GAYNES RESIDENCE BY CLIFF MAY, 9411 LAVELL STREET, LA MESA, CALIFORNIA	DOMINICK FIUME	
SD-11929	NADB-R - 1131929; Voided - CHAMBERS06	2008	CHAMBERS GROUP, INC	THE BANCROFT ROCK HOUSE COUNTY OF SAN DIEGO HISTORIC LANDMARK HISTORIC STRUCTURE REPORT AND REHABILITATION PLAN	CHAMBERS GROUP, INC	
SD-13800	NADB-R - 1133800; Voided - PIGNIA273	2012	PIGNIOLO, ANDREW	CULTURAL RESOURCE MONITORING REPORT FOR THE BANCROFT ROCK HOUSE RESTORATION PROJECT, 3554 JAMES CIRCLE SPRING VALLEY, SAN DIEGO COUNTY, CALIFORNIA	LAGUNA MOUNTAIN ENVIRONMENTAL, INC.	37-004638

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-14384	NADB-R - 1134384; Voided - PIGNIA285	2013	PIGNIOLO, ANDREW R.	VISTA DE LAMAR HISTORICAL EVALUATION REPORT OF STRUCTURES AT 3053 AND 3055 BANCROFT DRIVE, SPRING VALLEY, CALIFORNIA (PDS2013-MPA-13-006)	LAGUNA MOUNATIN ENVIRONMENTAL, INC.	
SD-14996	Caltrans - ; NADB-R - 1134996	2014	CASEY TIBBET	DETERMINATIONS OF ELIGIBILITY FOR THE PROPOSED STATE ROUTE 94/125 MISSING CONNECTOR PROJECT, SAN DIEGO COUNTY, CA	CALTRANS DISTRICT 11	
SD-15151	NADB-R - 1135151	2015	DAVID BRUNZELL	CULTURAL RESOURCES ASSESSMENT OF THE CROWN CASTLE/ VERIZON FIBER PUC PROJECT, SAN DIEGO, CALIFORNIA (BCR CONSULTING PROJECT NO. SYN1404)	BCR CONSULTING LLC	
SD-16643	NADB-R - 1136643	2016	BEDDOW, DONNA	CULTURAL RESOURCES SURVEY REPORT BALLARD APARTMENTS PDS2016-STP-16-004, PDS2016-ER-16-14-003, APN 501-174-09-00 NEGATIVE FINDINGS	County of San Diego	
SD-16920	NADB-R - 1136920	2016	BEDDOW, DONNA	CULTURAL RESOURCES SURVEY REPORT BARCELONA APARTMENTS PDS2016-STP-16-016 NEGATIVE FINDINGS	County of San Diego	
SD-17139	NADB-R - 1137139	2017	SMITH, BRIAN F.	A NEGATIVE CULTURAL RESOURCES SURVEY REPORT FOR THE CRESTVIEW PROJECT, SAN DIEGO COUNTY, CALIFORNIA, PDS2016-LDGRMJ-30094	Brian F. Smith & Associates	
SD-17331	NADB-R - 1137331; Other - COUNTY CONTRACT 541791 TASK ORDER NO. 70; Other - PROJECT NUMBER 60566435	2018	COOLEY, THEODORE G., LAUREN DOWNS, and JULIE ROY	CULTURAL RESOURCES PHASE I SURVEY, ESTRELLA COUNTY PARK, SAN DIEGO COUNTY, CALIFORNIA	AECOM	37-037046
SD-18041	NADB-R - 1138041	2017	NOBLE, MICHELLE D.	PHASE I INVESTIGATION FOR THE SD769 CASA DE ORO CHURCH LIGHT POLE COLLECTATION PROJECT, SPRING VALLEY, SAN DIEGO COUNTY, CALIFORNIA	NWB ENVIRONMENTAL SERVICES LLC	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-18287	NADB-R - 1138287; Other - PROJECT NO. 560.0614.085	2018	EUREK, MARY E. SEAGRAVE	FCC NEW TOWER SUBMISSION PACKET, SUBJECT PROPERTY: CA-1431 OLIVE DRIVE, 9236 OLIVE DRIVE, SPRING VALLEY, CA 91977, SAN DIEGO COUNTY	NEWFIELDS	
SD-18418	NADB-R - 1138418	2020	PORTS, KYLE	LETTER REPORT: ETS 42527 - CULTURAL RESOURCE MONITORING REPORT FOR THE NEW POLE INSTALL, P294418, SPRING VALLEY PROJECT IN THE COMMUNITY OF SPRING VALLEY, SAN DIEGO COUNTY, CALIFORNIA - IO 7074265	AECOM	
SD-18438	NADB-R - 1138438	2020	REINICKE, KRISTEN	ETS 42509.01: ARCHAEOLOGICAL MONITORING FOR SDG&E GAS LINE REMOVAL AND JOINT INSTALLATION AT THE INTERSECTION OF SPRING PLACE AND SPRING DRIVE, SPRING VALLEY	PANGIS	

APPENDIX B

Native American Coordination

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Casa de Oro Library Project

County: San Diego County

USGS Quadrangle Name: Jamul Mountains, CA (1994)

Township: 16S **Range:** 1W **Section(s):** 28

Company/Firm/Agency: ECORP Consulting, Inc.

Street Address: 3838 Camino del Rio North, Suite 370

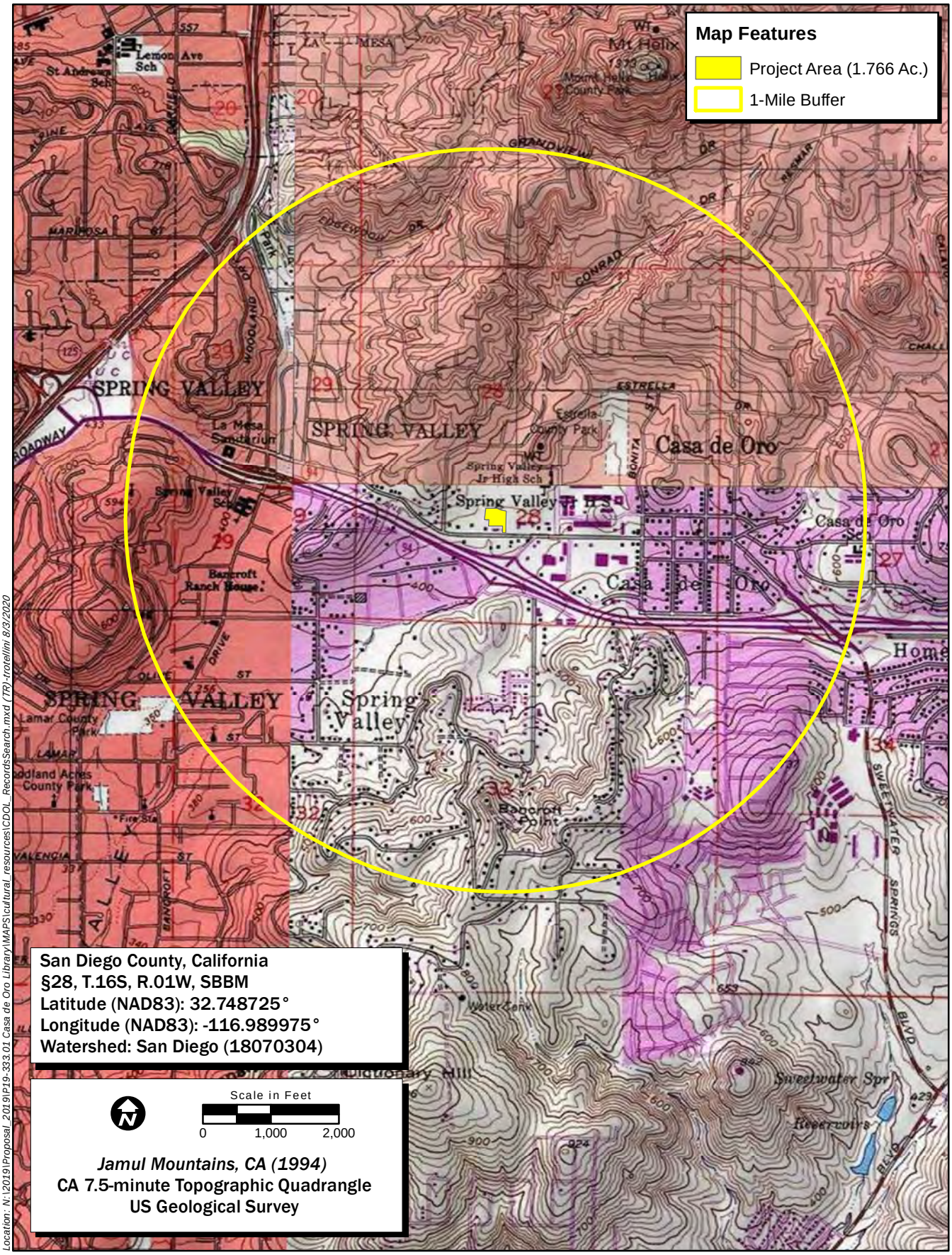
City: San Diego **Zip:** 92108

Phone: (858) 279-4040

Fax: (858) 279-4043

Email: joconnor@ecorpconsulting.com

Project Description: The proposed project will construct a new branch library in the community of Spring Valley.



Map Date: 8/3/2020

iService Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Records Search

P19-333.01 Casa de Oro Library

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
Marshall McKay
Wintun

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
[**Vacant**]

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

August 12, 2020

John O'Connor
ECORP

Via Email to: joconnor@ecorpconsulting.com

Re: Casa de Oro Library Project, San Diego County

Dear Mr. O'Connor:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Diego County
8/12/2020

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road — Diegueno
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
cloyd@barona-nsn.gov

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia, Vice Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
michaelg@leaningrock.net

Ewiiaapaayp Band of Kumeyaay Indians
Robert Pinto, Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
wmicklin@leaningrock.net

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 765 - 0845
Fax: (760) 765-0320

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
cjlinton73@aol.com

Inaja-Cosmit Band of Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. — Diegueno
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
epinto@jiv-nsn.gov

Jamul Indian Village
Lisa Cumper, Tribal Historic Preservation Officer
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4855
lcumper@jiv-nsn.gov

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 — Kwaaymii
Pine Valley, CA, 91962 — Diegueno
Phone: (619) 709 - 4207

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Casa de Oro Library Project, San Diego County.

Native American Heritage Commission
Native American Contact List
San Diego County
8/12/2020

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

San Pasqual Band of Diegueno Mission Indians
Allen Lawson, Chairperson
P.O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org

San Pasqual Band of Diegueno Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

Sycuan Band of the Kumeyaay Nation
Kristie Orosco, Kumeyaay Resource Specialist
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 6917

Sycuan Band of the Kumeyaay Nation
Cody Martinez, Chairperson
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov

Viejas Band of Kumeyaay Indians
John Christman, Chairperson
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337

Viejas Band of Kumeyaay Indians
Ernest Pingleton, Tribal Historic Officer, Resource Management
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 659 - 2314
epingleton@viejas-nsn.gov

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ENVIRONMENTAL CONSULTANTS

Edwin Romero, Chairperson
Barona Group of the Capitan Grande
1095 Barona Road
Lakeside, CA 92040

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Romero,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

The project area is located on the northern side of Campo Road, west of the intersection of Conrad Drive, in Spring Valley, California 91977. As shown on the U. S. Geological Survey (USGS) 7.5-minute Jamul Mountains, California Topographic Quadrangle map (1994, NAD83), the project area is located in Section 28, Township 16 South, Range 1 West of the San Bernardino Base and Meridian (please see attached map).

A search of the Sacred Lands File has been conducted with the Native American Heritage Commission in Sacramento, California. The Sacred Lands File did not identify any known Sacred Lands within the immediate project area, but suggested we contact additional sources for information regarding knowledge of unrecorded cultural resources.

ECORP is contacting you about the proposed project to provide you with an opportunity to comment on the project. We would appreciate any information you may have regarding Native American cultural resources located within or near the proposed project area that could be affected by the proposed project. ECORP is gathering information on potentially unrecorded cultural resources that might be affected by this project for planning purposes only. We will protect the confidentiality of information concerning the identity, location, character, and traditional use of cultural places identified during this process.

We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated without your input. We would appreciate receiving your response to this inquiry within 14 days of receipt of this letter. Please note that this data gathering process is not considered formal consultation under Assembly Bill (AB) 52 or Section 106 of the National Historic Preservation Act.

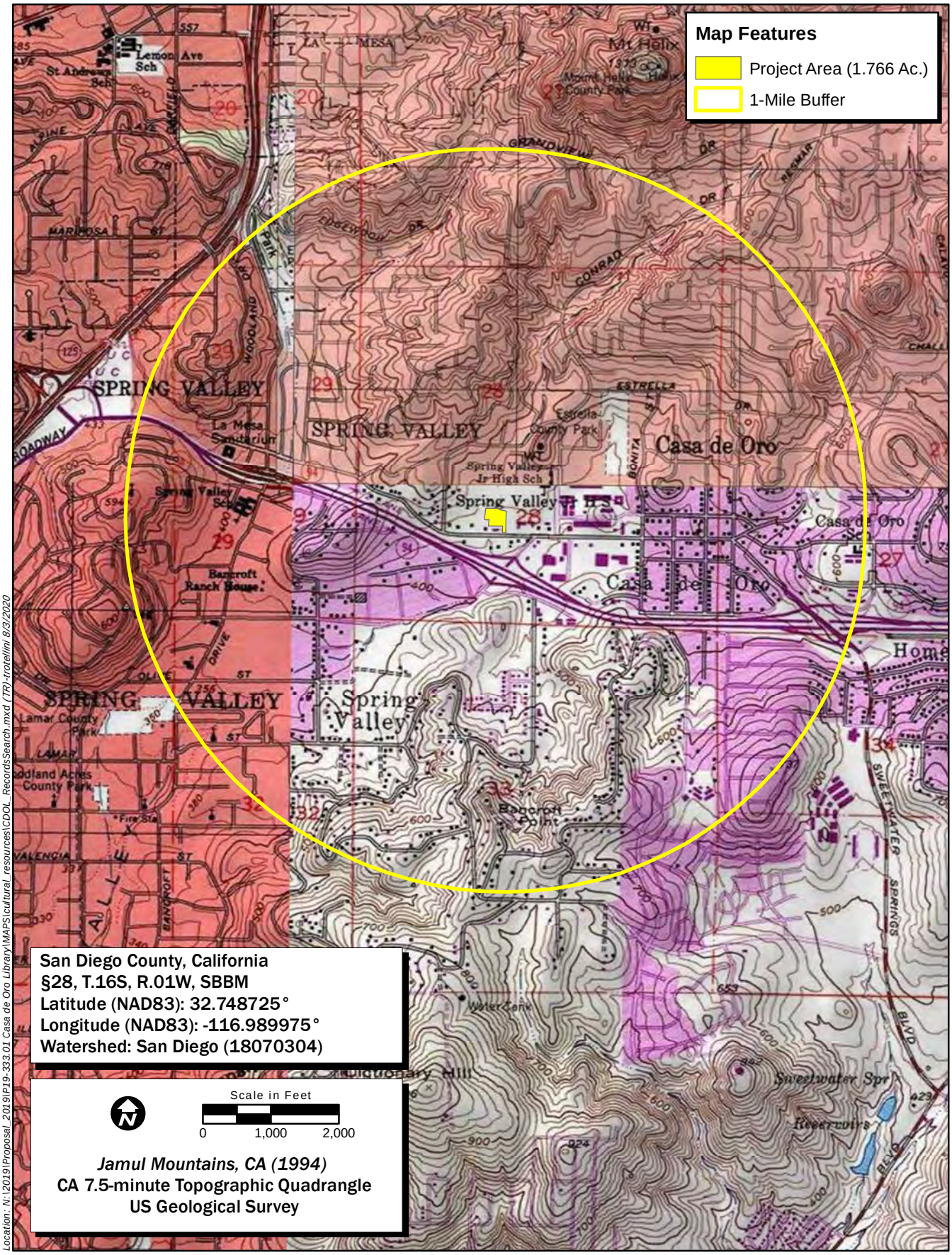
If you have any questions, please feel free to call me at (858) 279-4040 or via email at joconnor@ecorpconsulting.com. Thank you for your assistance and participation in this project.

Sincerely,
ECORP Consulting, Inc.



John O'Connor, Ph.D., RPA
Southern California Cultural Resources Manager
Senior Archaeologist

Attachments: as stated



Map Date: 8/3/2020

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Records Search

P19-333.01 Casa de Oro Library

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ENVIRONMENTAL CONSULTANTS

Ralph Goff, Chairperson
Campo Band of Diegueno Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Goff,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

The project area is located on the northern side of Campo Road, west of the intersection of Conrad Drive, in Spring Valley, California 91977. As shown on the U. S. Geological Survey (USGS) 7.5-minute Jamul Mountains, California Topographic Quadrangle map (1994, NAD83), the project area is located in Section 28, Township 16 South, Range 1 West of the San Bernardino Base and Meridian (please see attached map).

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Southern California Cultural Resources Manager
Senior Archaeologist

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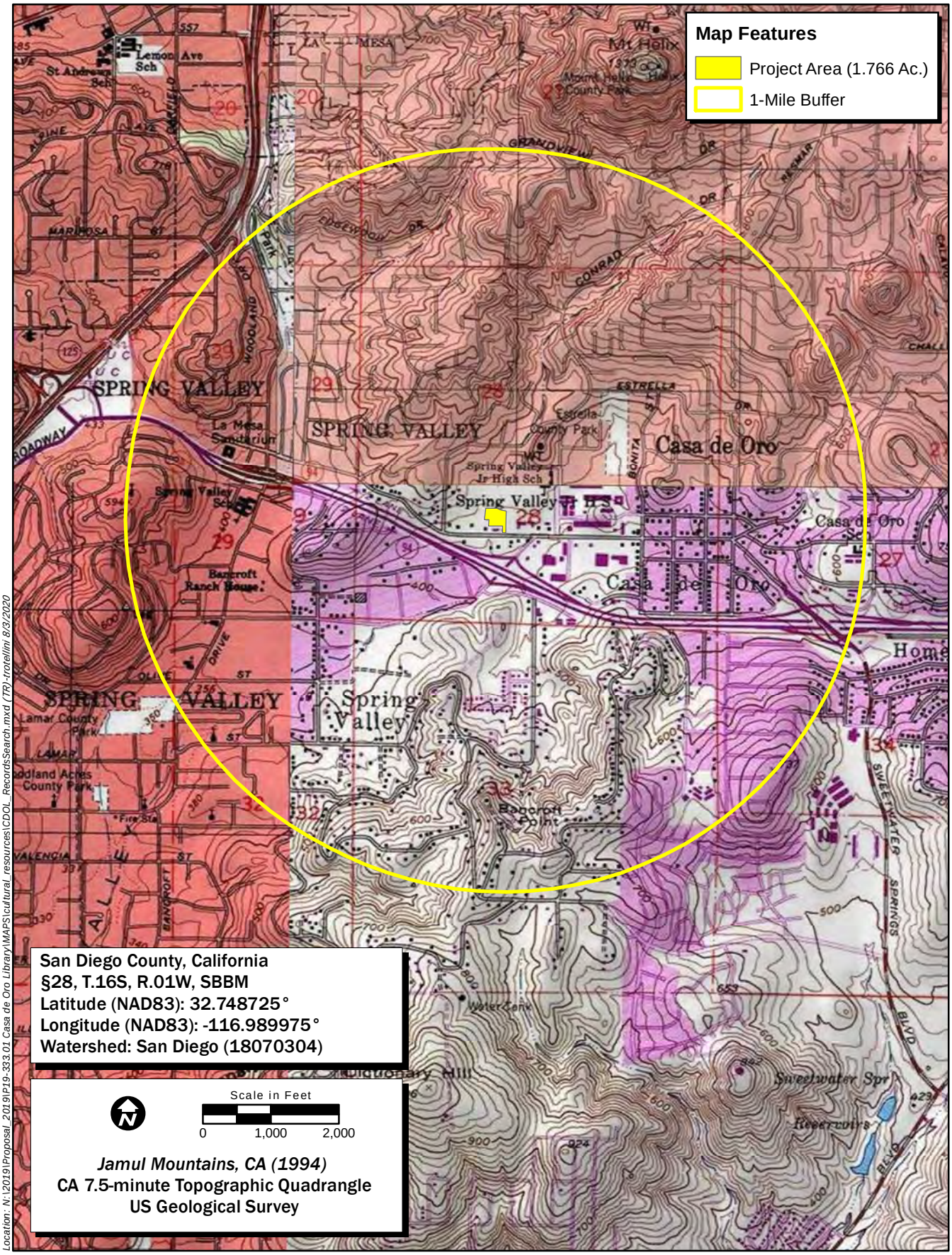

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Michael Garcia, Chairperson
Ewiiaapaayp Band of Kumeyaay Indians
4054 Willows Road
Alpine, CA, 91901

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Garcia,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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Southern California Cultural Resources Manager
Senior Archaeologist

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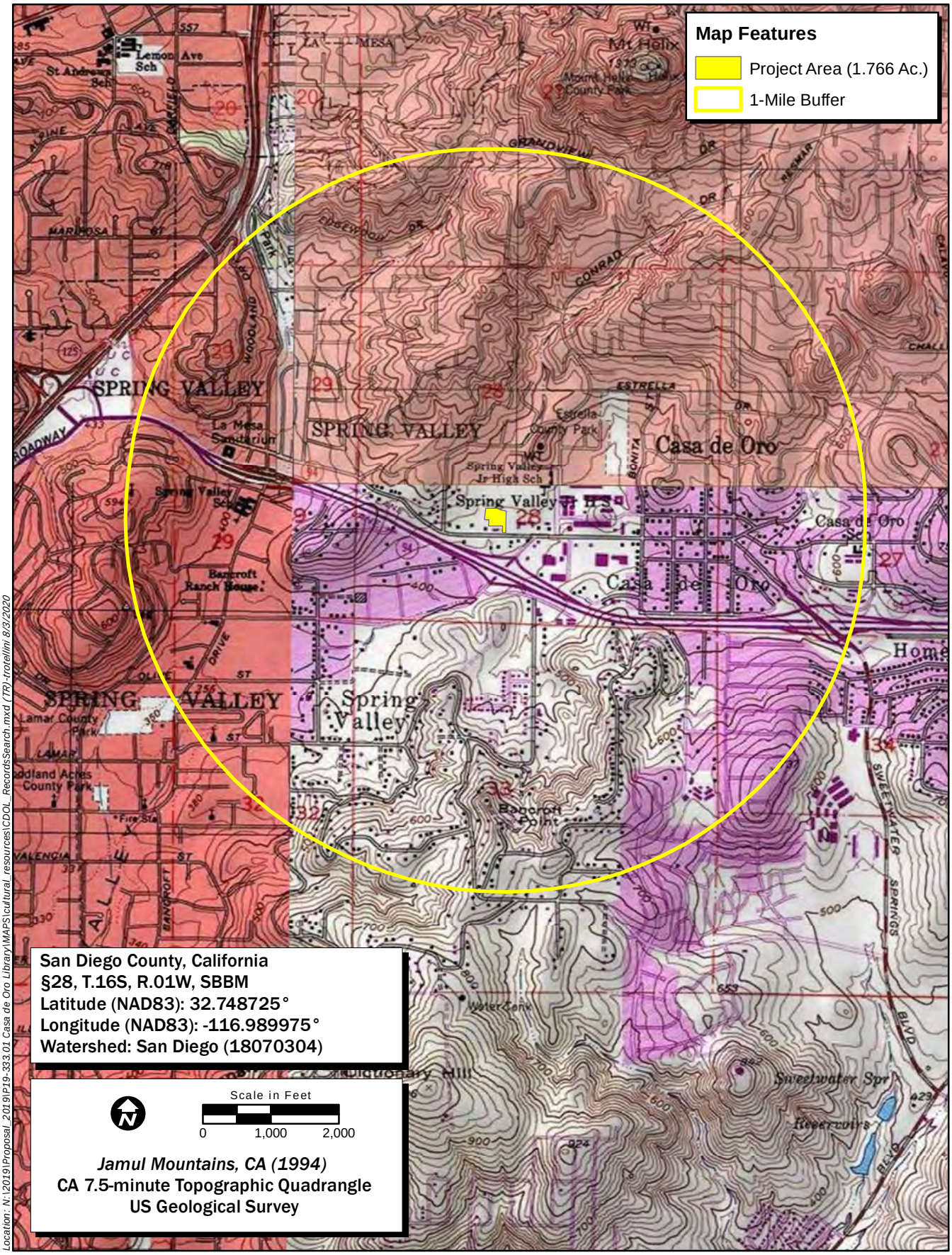

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Rebecca Osuna, Chairperson
Inaja-Cosmit Band of Indians
2005 S. Escondido Blvd.
Escondido, CA 92025

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Osuna,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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John O'Connor, Ph.D., RPA
Southern California Cultural Resources Manager
Senior Archaeologist

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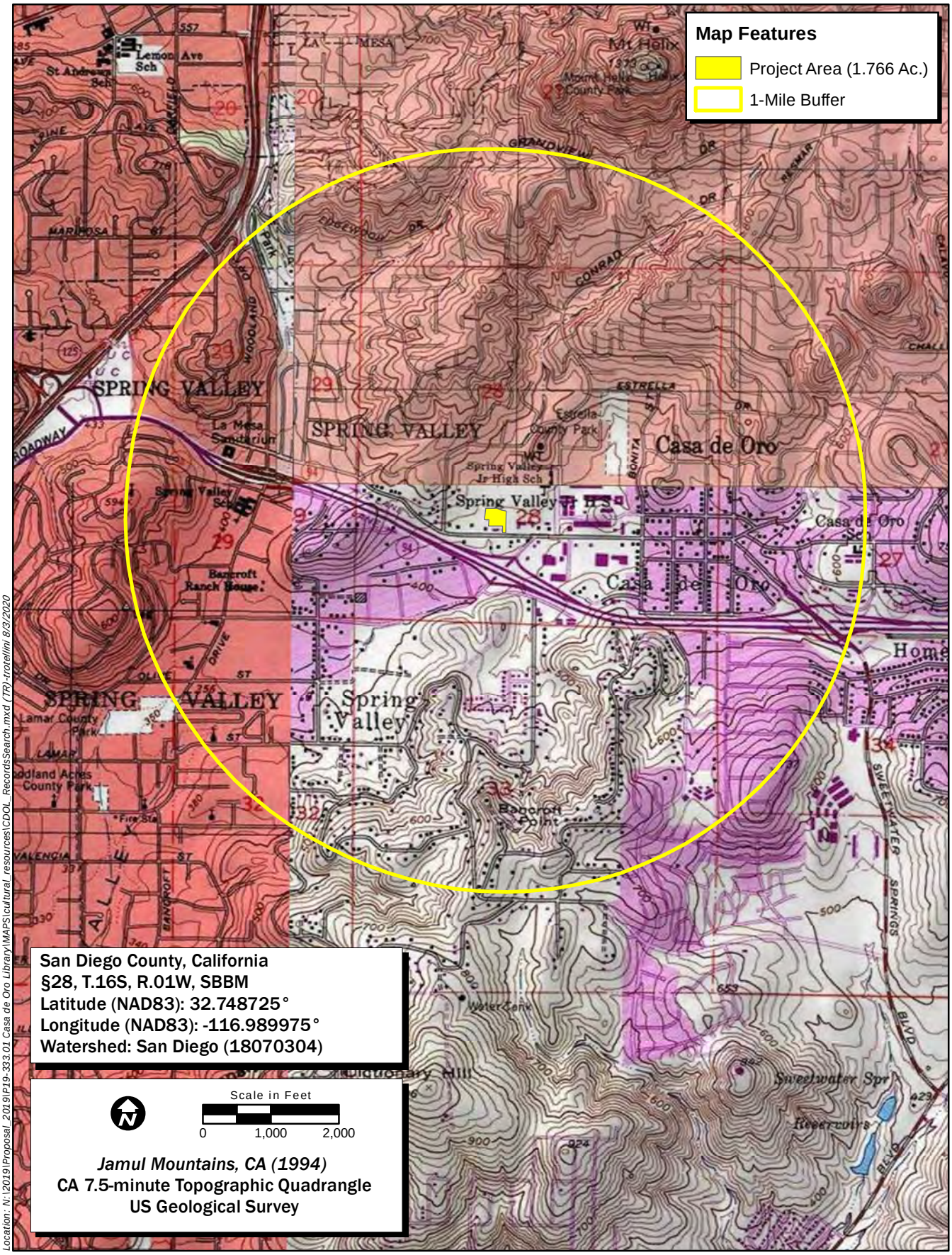

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P19-333.01 Casa de Oro Library

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Erica Pinto, Chairperson
Jamul Indian Village
P.O. Box 612
Jamul, CA, 91935

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Pinto,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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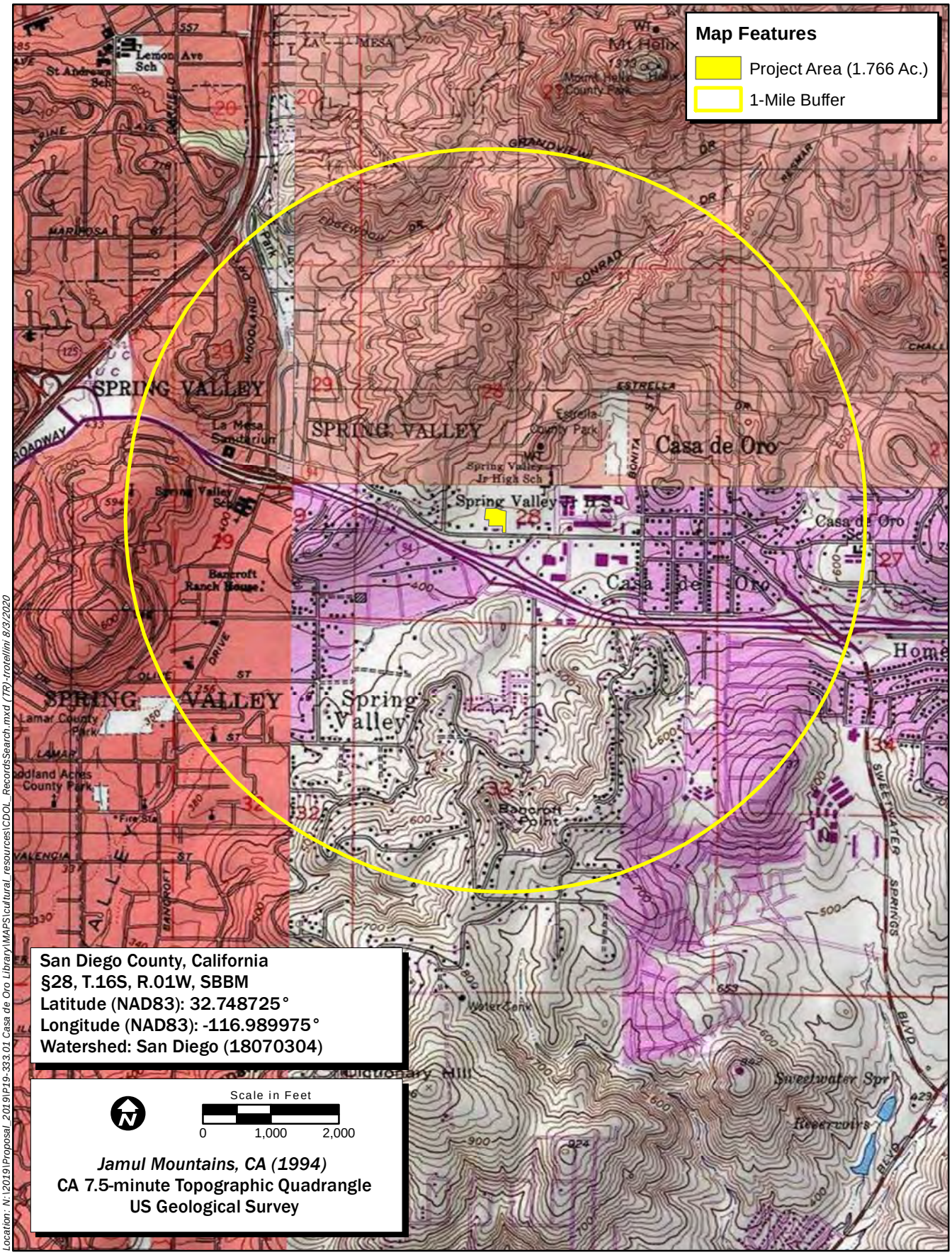
Sincerely,
ECORP Consulting, Inc.



John O'Connor, Ph.D., RPA
Southern California Cultural Resources Manager
Senior Archaeologist

Attachments: as stated



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Lisa Cumper, Tribal Historic Preservation Officer
Jamul Indian Village
P.O. Box 612
Jamul, CA, 91935

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Officer Cumper,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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Southern California Cultural Resources Manager
Senior Archaeologist

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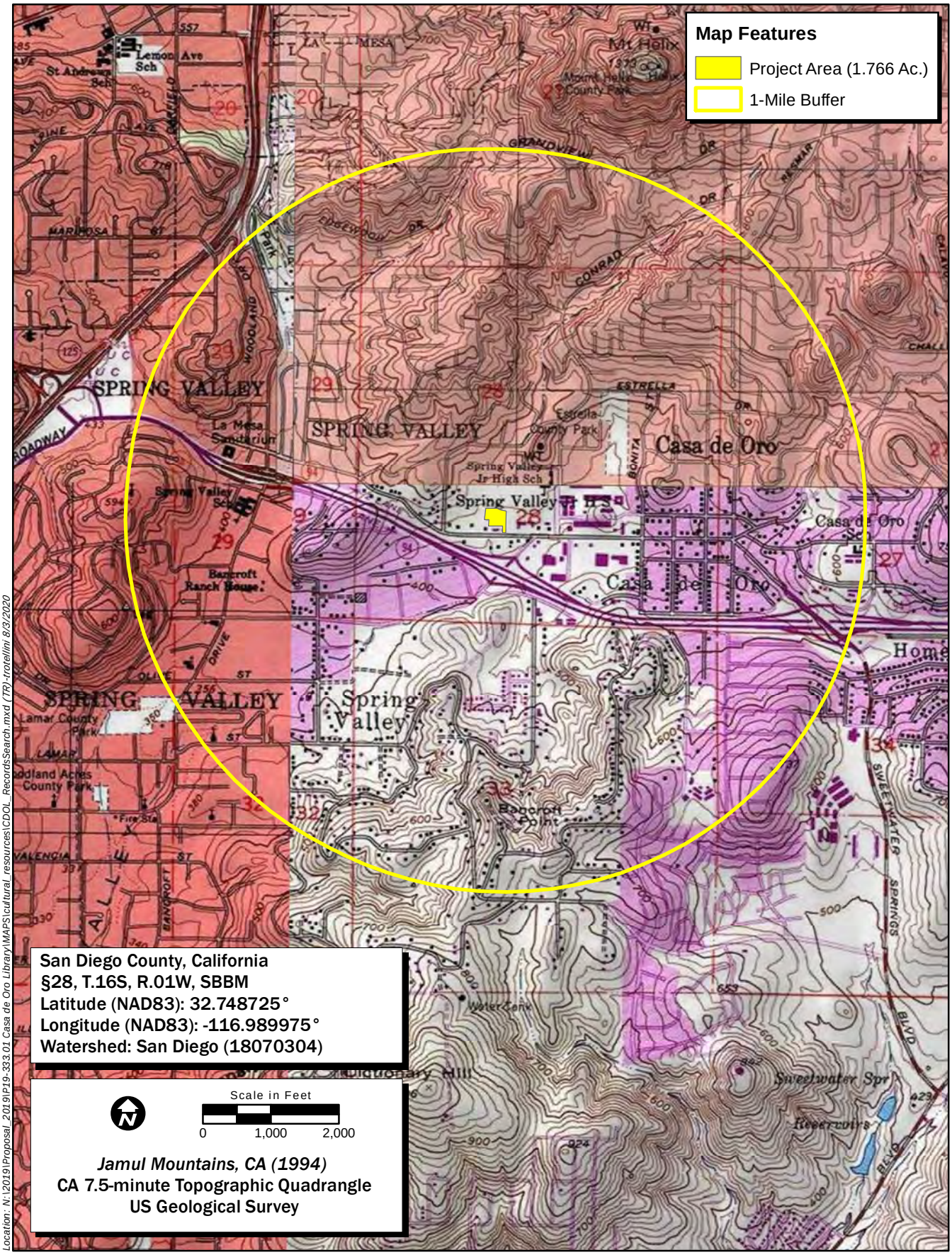

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Records Search

P19-333.01 Casa de Oro Library

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Carmen Lucas
Kwaaymii Laguna Band of Mission Indians
P.O. Box 775
Pine Valley, CA, 91962

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Ms. Lucas,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

The project area is located on the northern side of Campo Road, west of the intersection of Conrad Drive, in Spring Valley, California 91977. As shown on the U. S. Geological Survey (USGS) 7.5-minute Jamul Mountains, California Topographic Quadrangle map (1994, NAD83), the project area is located in Section 28, Township 16 South, Range 1 West of the San Bernardino Base and Meridian (please see attached map).

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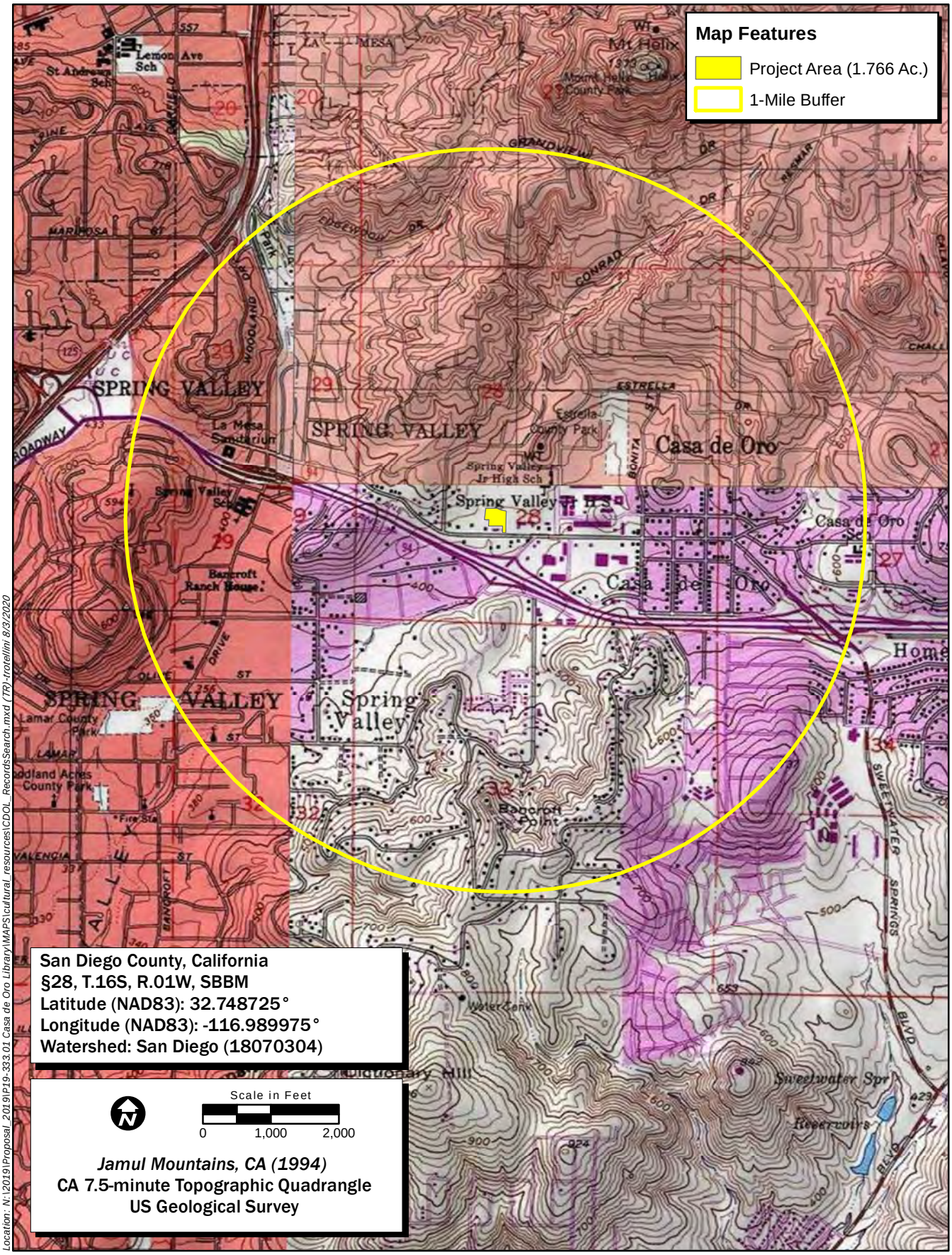

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Records Search

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ENVIRONMENTAL CONSULTANTS

Gwendolyn Parada, Chairperson
La Posta Band of Diegueno Mission Indians
8 Crestwood Road
Boulevard, CA, 91905

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Parada,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

The project area is located on the northern side of Campo Road, west of the intersection of Conrad Drive, in Spring Valley, California 91977. As shown on the U. S. Geological Survey (USGS) 7.5-minute Jamul Mountains, California Topographic Quadrangle map (1994, NAD83), the project area is located in Section 28, Township 16 South, Range 1 West of the San Bernardino Base and Meridian (please see attached map).

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Senior Archaeologist

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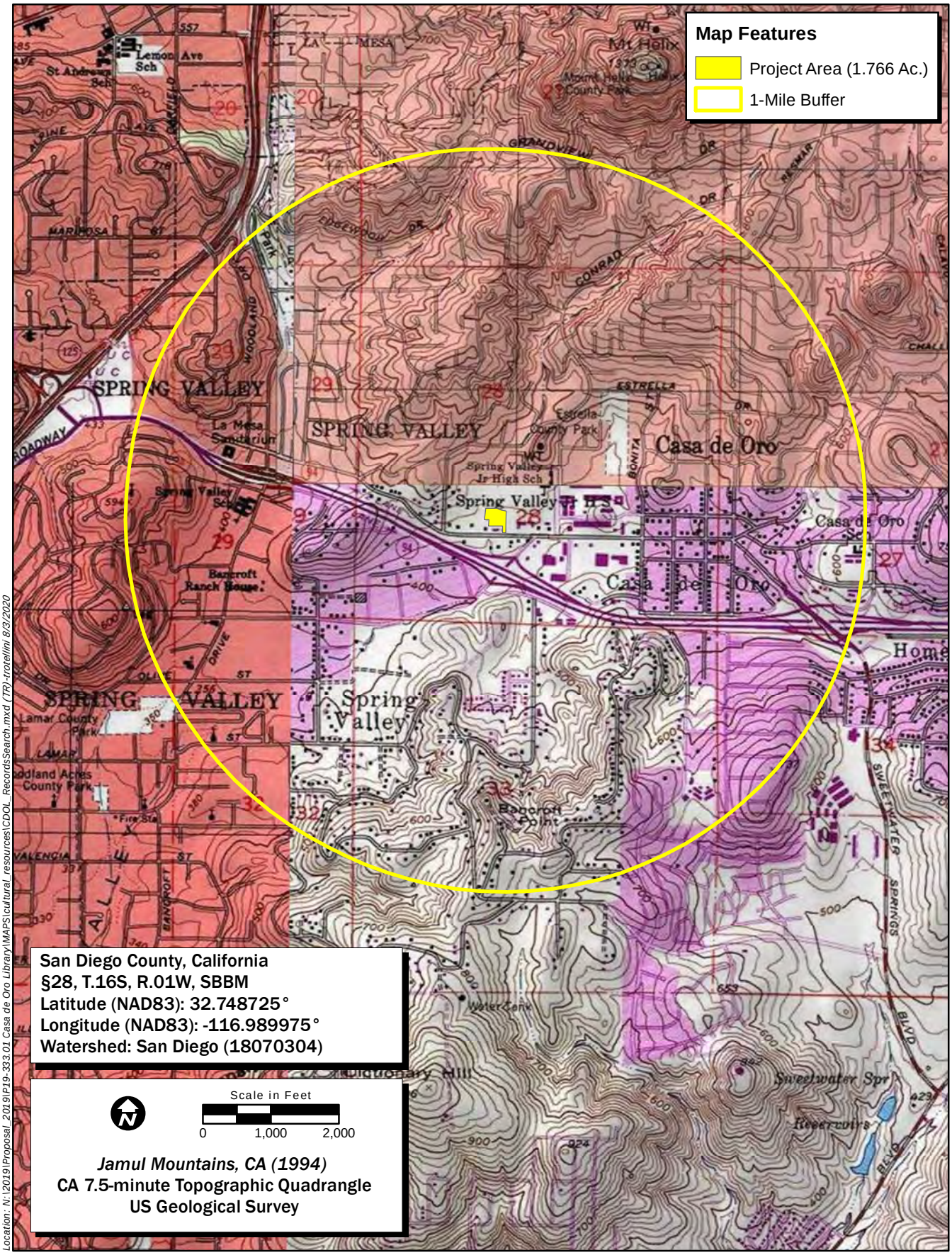

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ENVIRONMENTAL CONSULTANTS

Records Search

P19-333.01 Casa de Oro Library

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Javaughn Miller, Tribal Administrator
La Posta Band of Diegueno Mission Indians
8 Crestwood Road
Boulevard, CA, 91905

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Administrator Miller,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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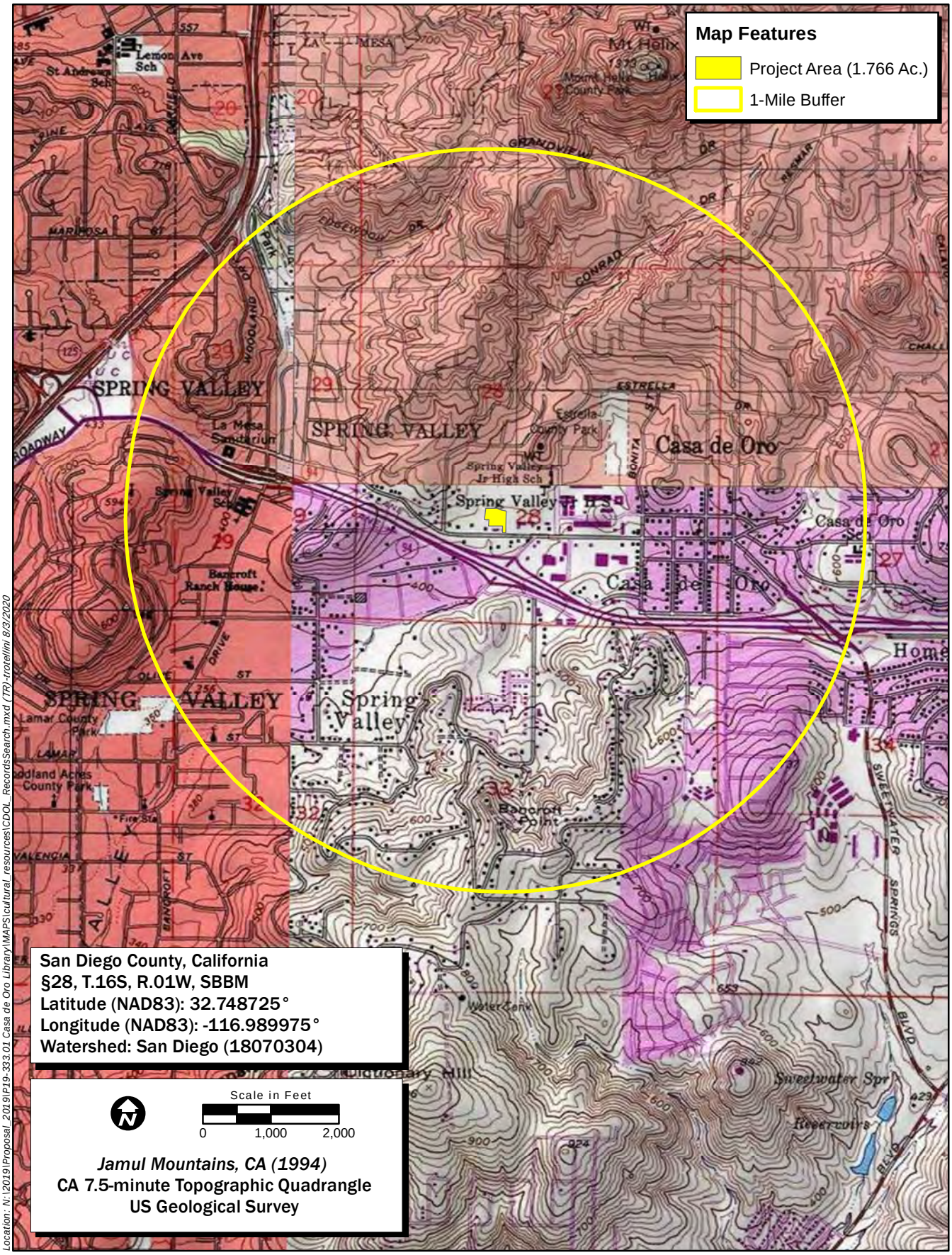
If you have any questions, please feel free to call me at (858) 279-4040 or via email at joconnor@ecorpconsulting.com. Thank you for your assistance and participation in this project.

Sincerely,
ECORP Consulting, Inc.



John O'Connor, Ph.D., RPA
Southern California Cultural Resources Manager
Senior Archaeologist

Attachments: as stated



Map Date: 8/3/2020

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Records Search

P19-333.01 Casa de Oro Library

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Angela Elliot Santos, Chairperson
Manzanita Band of Kumeyaay Nation
P.O. Box 1302
Boulevard, CA, 91905

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Santos,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

The project area is located on the northern side of Campo Road, west of the intersection of Conrad Drive, in Spring Valley, California 91977. As shown on the U. S. Geological Survey (USGS) 7.5-minute Jamul Mountains, California Topographic Quadrangle map (1994, NAD83), the project area is located in Section 28, Township 16 South, Range 1 West of the San Bernardino Base and Meridian (please see attached map).

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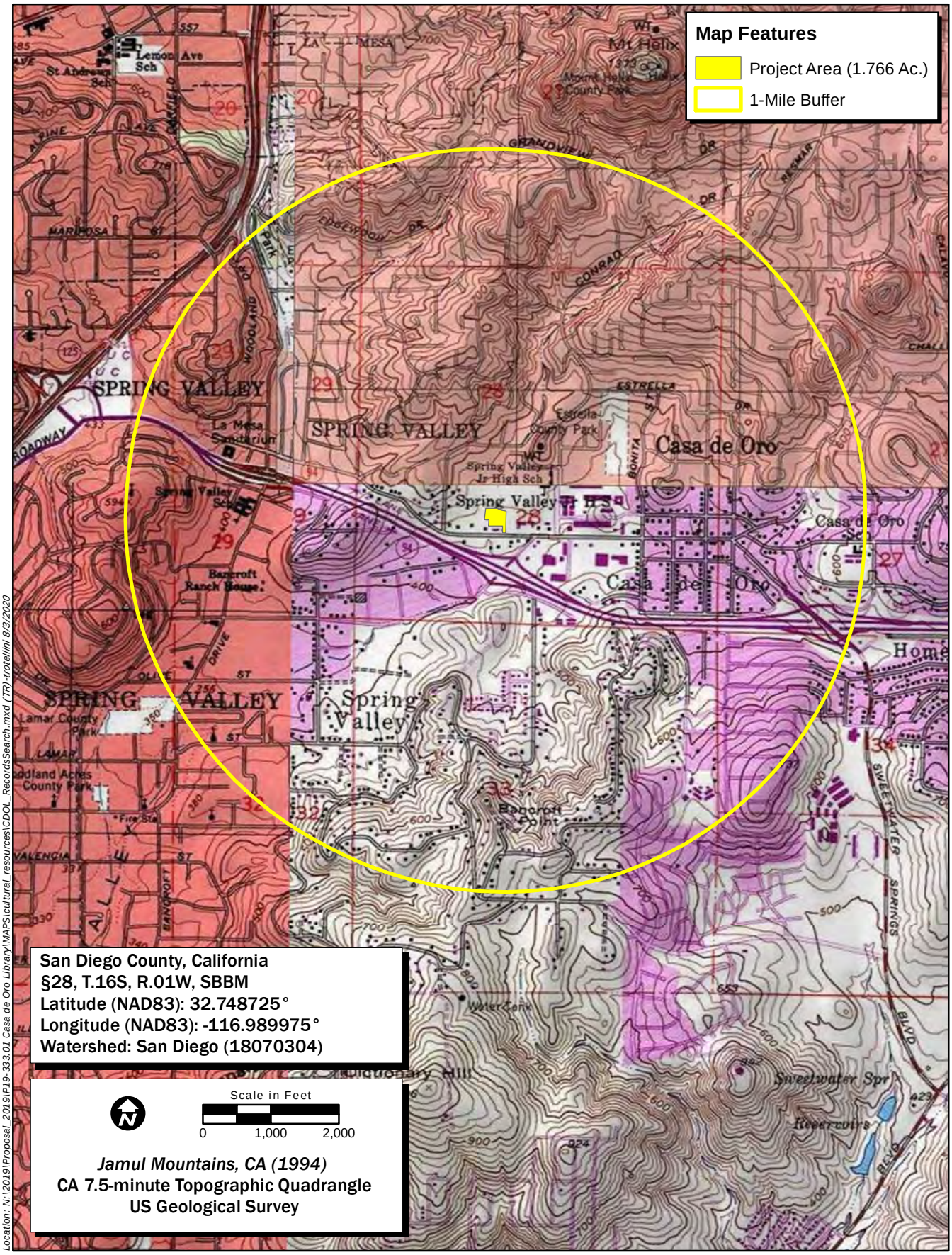

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P19-333.01 Casa de Oro Library

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Michael Linton, Chairperson
Mesa Grande Band of Diegueno Mission Indians
P.O. Box 270
Santa Ysabel, CA, 92070

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Linton,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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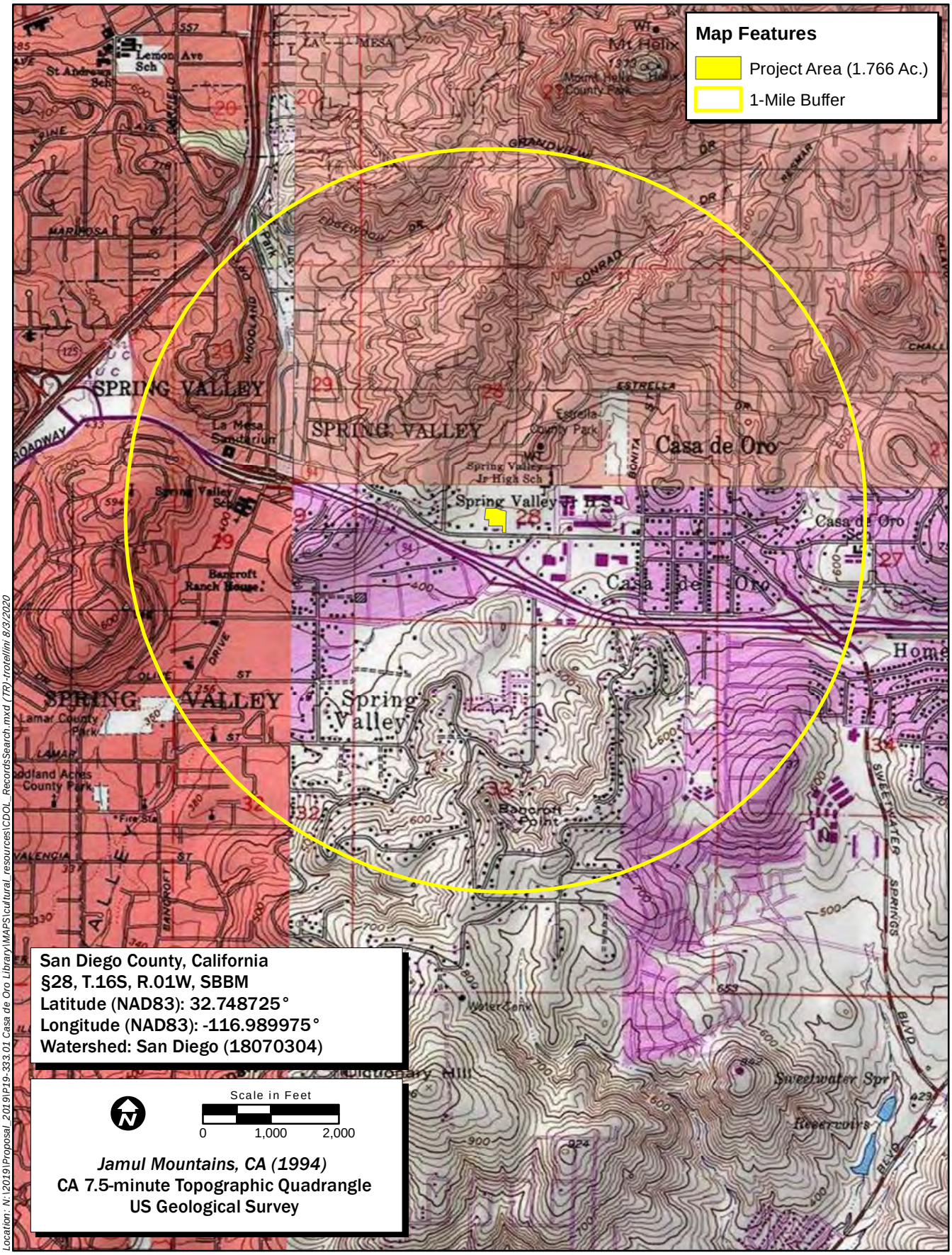

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Allen Lawson, Chairperson
San Pasqual Band of Diegueno Mission Indians
P.O. Box 365
Valley Center, CA, 92082

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Lawson,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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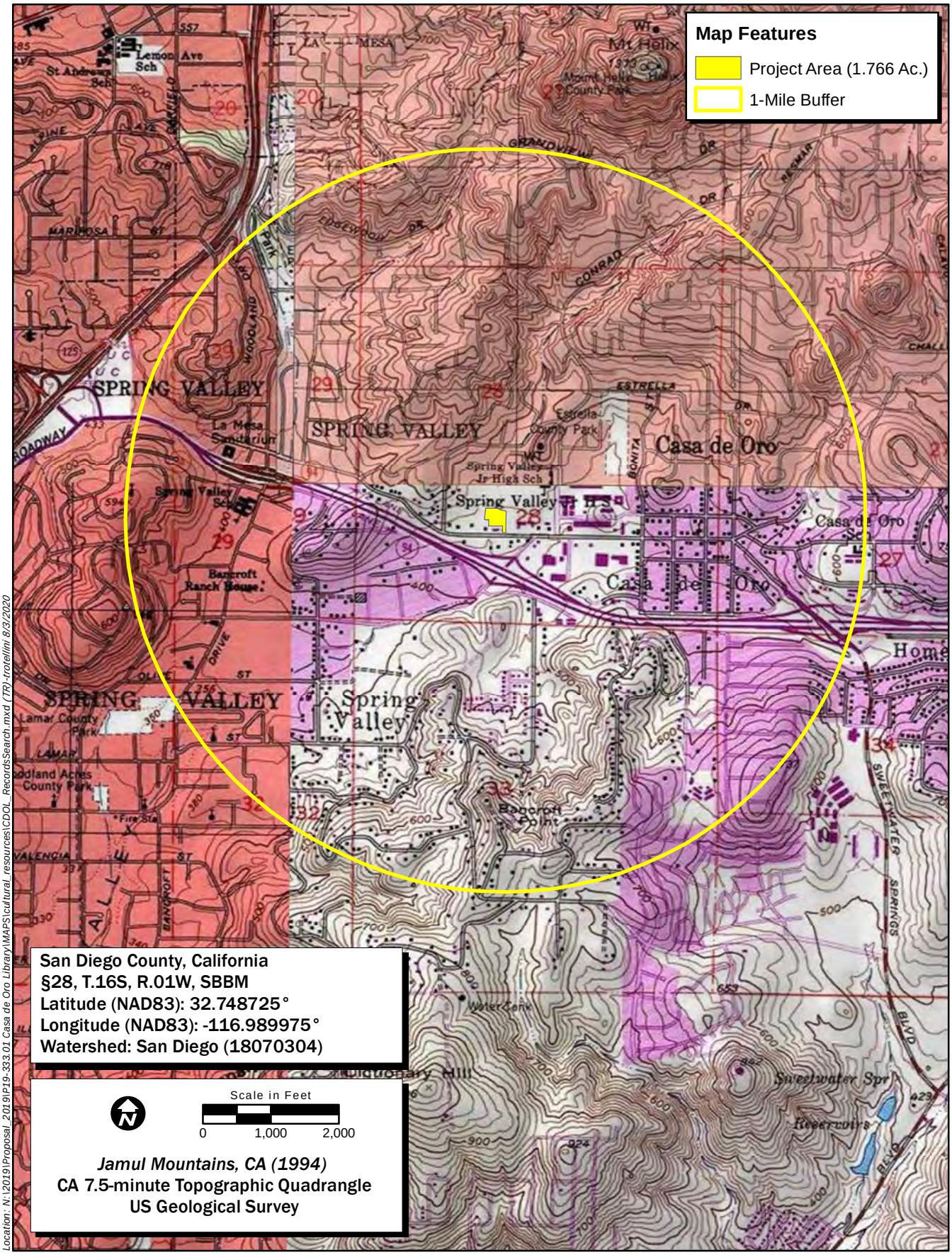

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Records Search

P19-333.01 Casa de Oro Library

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John Flores, Environmental Coordinator
San Pasqual Band of Diegueno Mission Indians
P.O. Box 365
Valley Center, CA, 92082

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Coordinator Flores,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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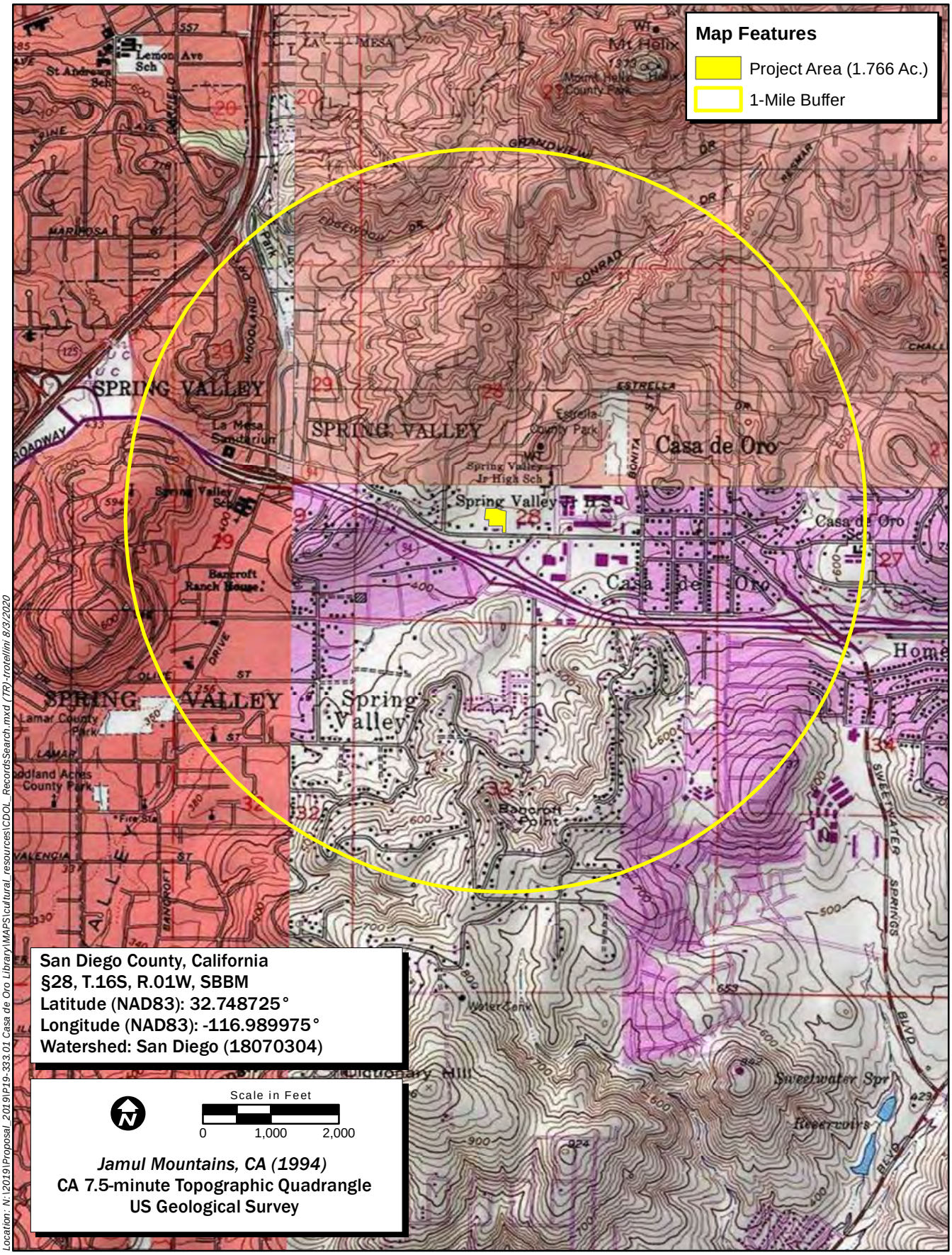

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Virgil Perez, Chairperson
Iipay Nation of Santa Ysabel
P.O. Box 130
Santa Ysabel, CA, 92070

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Perez,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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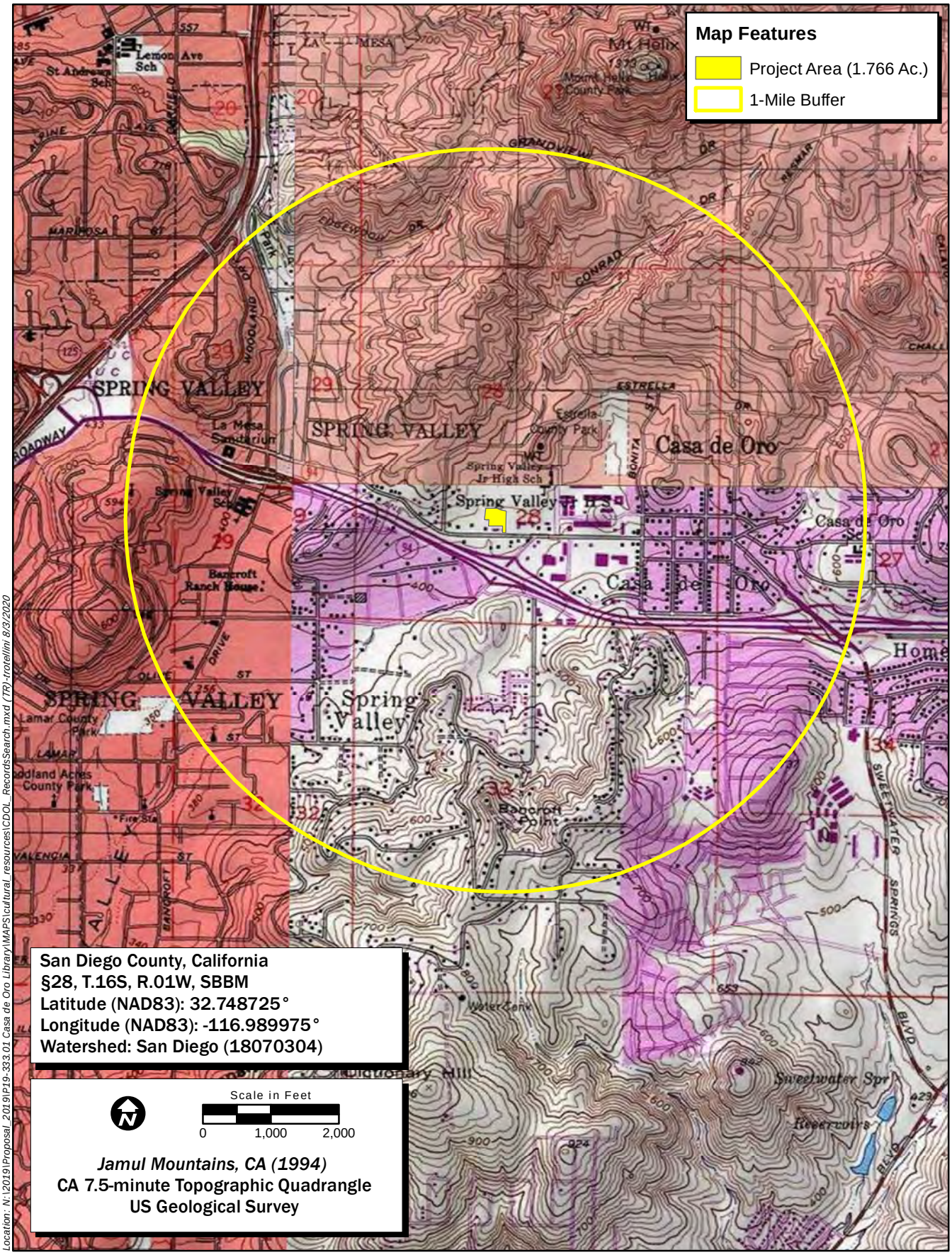

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P19-333.01 Casa de Oro Library

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Clint Linton, Director of Cultural Resources
Iipay Nation of Santa Ysabel
P.O. Box 507
Santa Ysabel, CA, 92070

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Director Linton,

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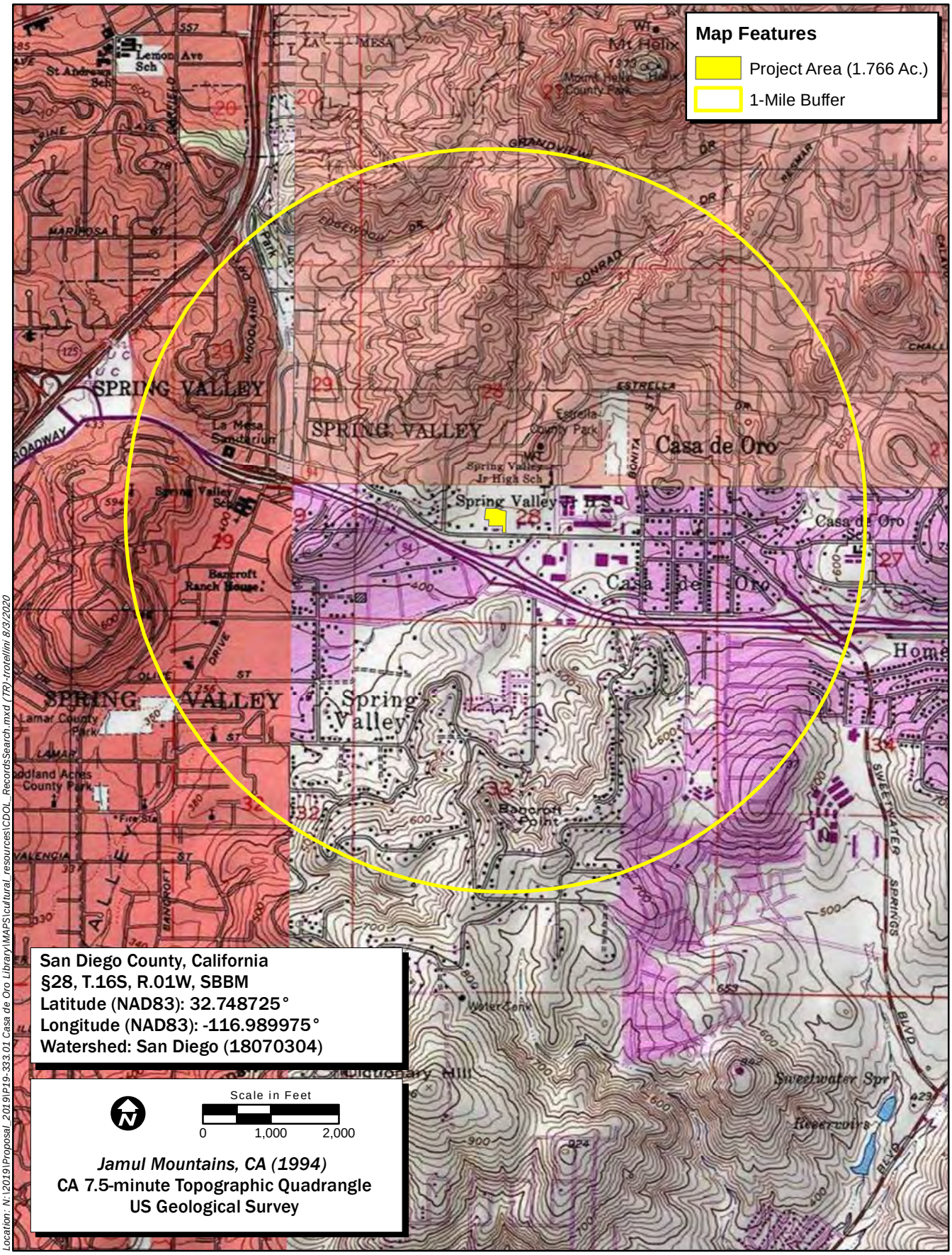

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Records Search

P19-333.01 Casa de Oro Library

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ENVIRONMENTAL CONSULTANTS

Cody Martinez, Chairperson
Sycuan Band of the Kumeyaay Nation
P.O. Box 1302
Boulevard, CA, 91905

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Martinez,

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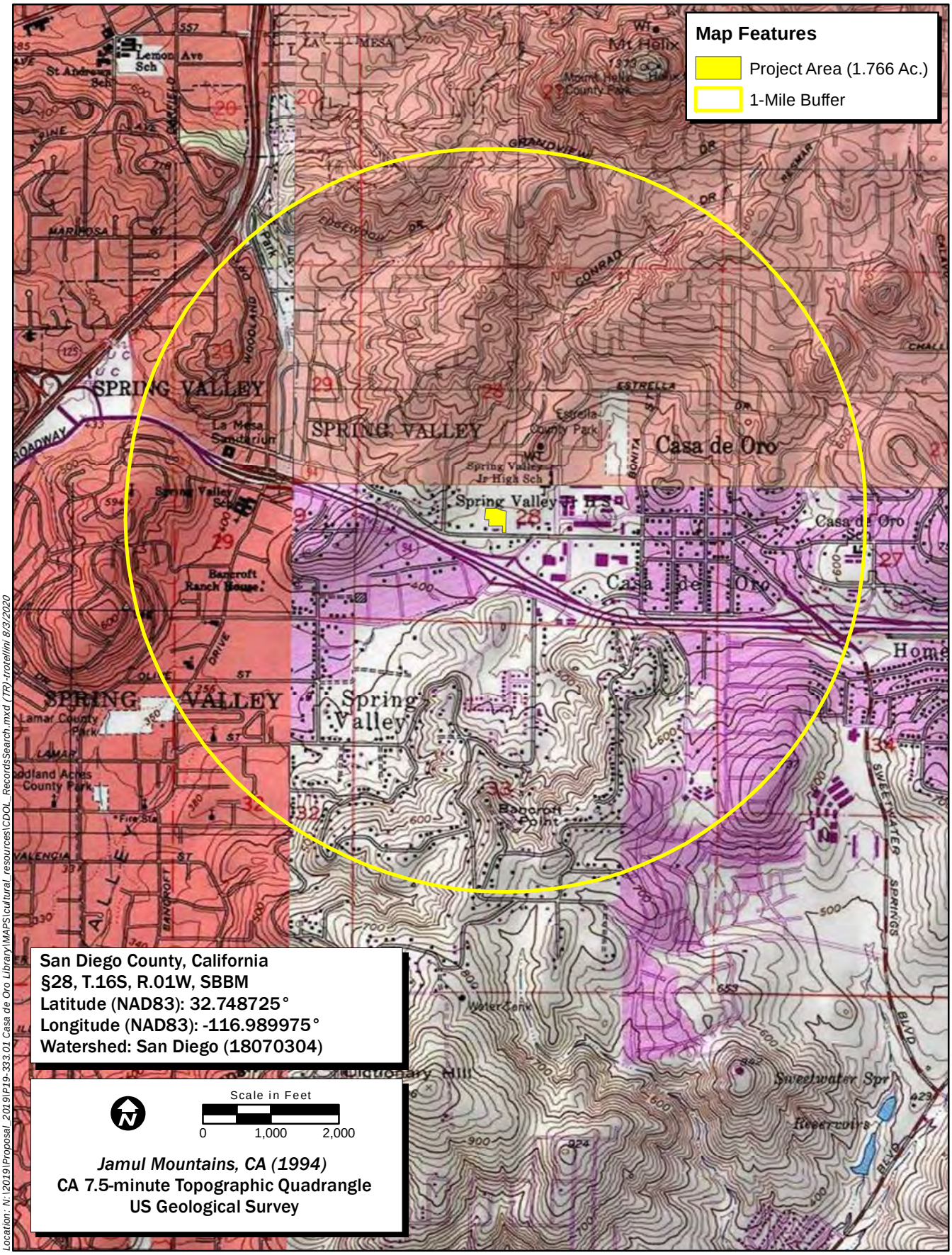

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P19-333.01 Casa de Oro Library

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John Christman, Chairperson
Viejas Band of Kumeyaay Indians
1 Viejas Grade Road
Alpine, CA, 91901

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Chairperson Christman,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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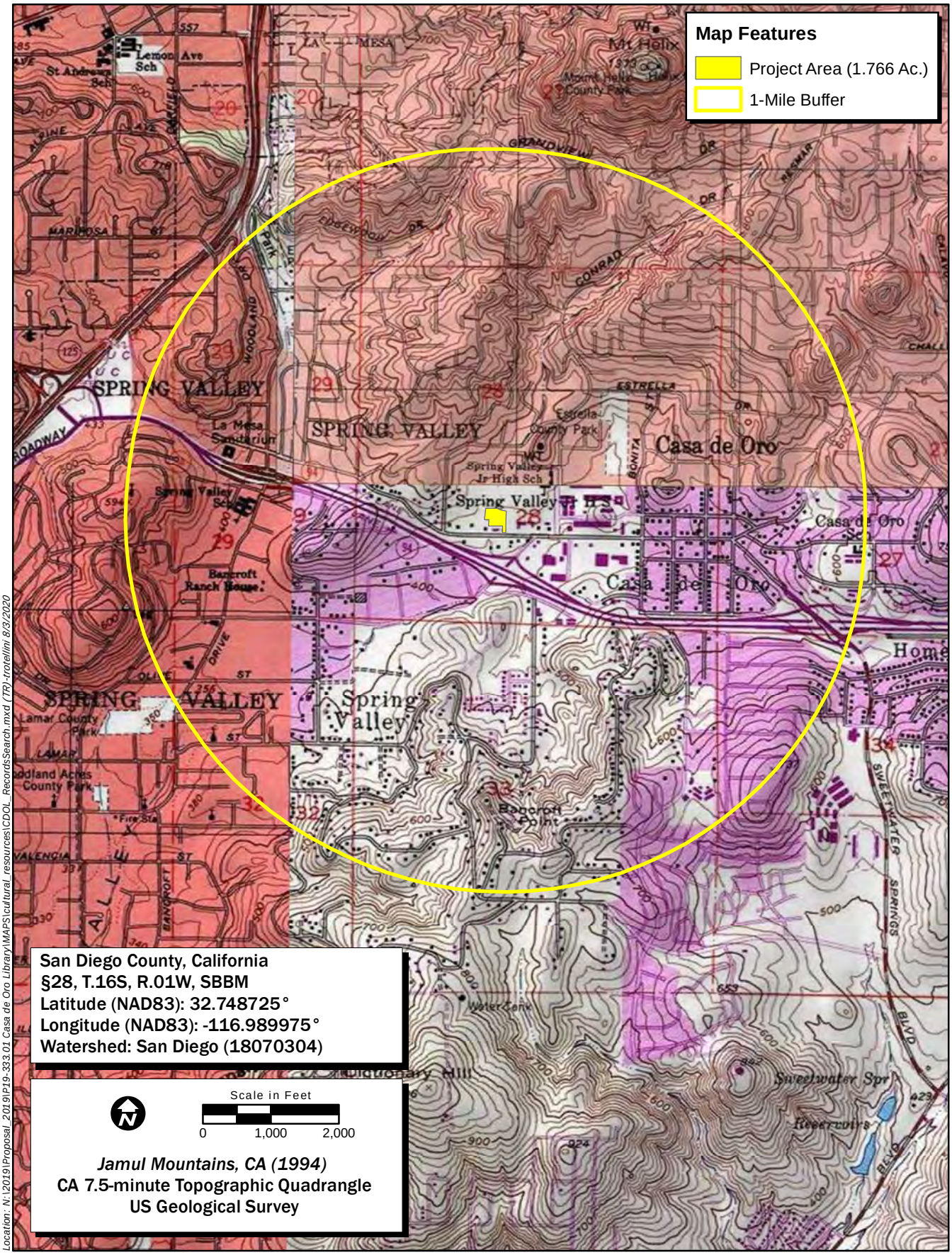

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Records Search

P19-333.01 Casa de Oro Library

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Ernest Pingleton, Tribal Historic Officer, Resource Management
Viejas Band of Kumeyaay Indians
1 Viejas Grade Road
Alpine, CA, 91901

Date: August 18, 2020
Project: Casa de Oro Branch Library

SUBJECT: ***Casa de Oro Branch Library Project in San Diego County, California***

Dear Officer Pingleton,

The County of San Diego Department of General Services proposes to construct a new building and facility for the Casa de Oro Branch Library. The proposed Library will service the local areas of Casa de Oro, Spring Valley, and Mount Helix in San Diego County.

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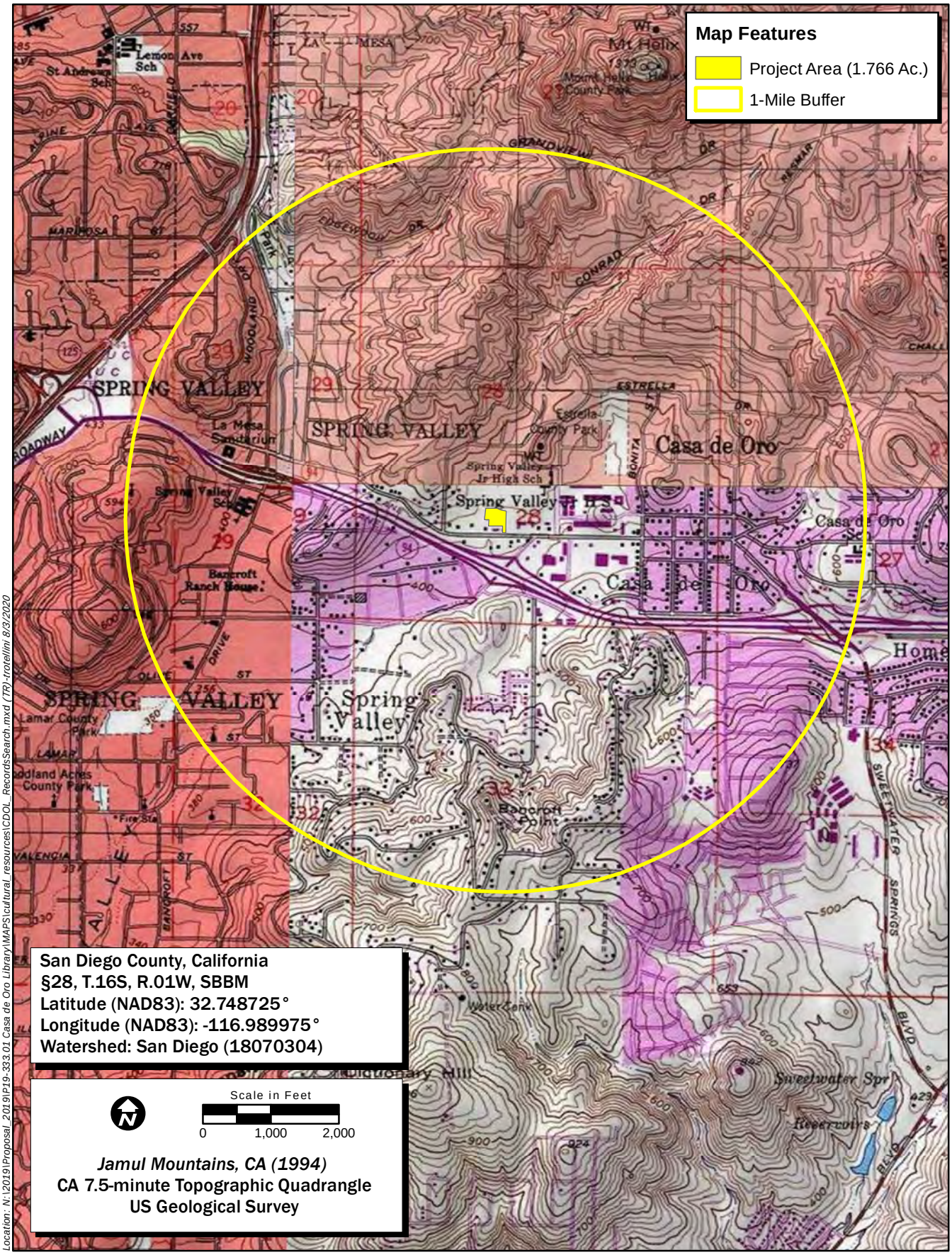

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Records Search

P19-333.01 Casa de Oro Library

SAN PASQUAL BAND OF MISSION INDIANS
SAN PASQUAL RESERVATION

TRIBAL COUNCIL

Stephen W. Cope
Chairman

Justin Quis Quis
Vice Chairman

Tilda M. Green
Secretary-Treasurer

David L. Toler
Councilman

Joe Chavez
Councilman

August 24, 2020

ECOP Consulting Inc.
Environmental Consultants
3838 Camino Del Rio North, Suite 370
San Diego Ca 92108

RE: Casa De Oro Branch Library Project

Sent via E-mail- Due to COVID -19

Dear Mr. O'Connor,

The San Pasqual Band of Mission Indians Tribal Historic Preservation Office has received your notification of the project referenced above. This letter constitutes our response on behalf of David L. Toler THPO Officer.

We have consulted our maps and determined that the project as described is not within the boundaries of the recognized San Pasqual Indian Reservation. It is, however, within the boundaries of the territory that the tribe considers its Traditional Use Area (TUA).
Furthermore, we would like to engage in formal government to government consultation under Section 106 of the NHPA so that San Pasqual can have a voice in the developing the measures that will be taken to protect these sites and mitigate any adverse impacts. We would appreciate being given access to any cultural resource reports that have been or will be generated during the environmental review process so we can contribute most effectively to the consultation process. We think there should be a Kumeyaay Monitors on all ground Disturbing activities. San Pasqual Band of Mission Indians can provide this service
We appreciate involvement with your initiative and look forward to working with you on future efforts. If you have questions or need additional information, please do not hesitate to contact me by telephone 760-651-5142 or by e-mail at Thpo@sanpasqualtribe.org please CC: Angelinag@sanpasqualtribe.org thank you.

Respectfully,

Angelina Gutierrez

Angelina Gutierrez
Tribal Historic Preservation Office, Monitor Supervisor
San Pasqual Band of Mission Indians

RED TAIL ENVIRONMENTAL

September 9, 2020

John O'Connor, Ph.D., RPA
ECORP Consulting, Inc.
3838 Camino Del Rio North, Suite 370
San Diego, CA 92108
joconnor@ecorpconsulting.com

Re: Native American Monitoring Confirmation for the Casa de Oro Library Project, San Diego, California

Dear Mr. O'Connor

Red Tail Environmental (Red Tail) provide a Kumeyaay Native American monitor for the archaeological survey for the Casa de Oro Library Project on September 9, 2020. The Native American monitoring was conducted by Anthony LaChappa under the direction of Clint Linton.

Regards,

Clint Linton, President
Red Tail Environmental

RED TAIL
ENVIRONMENTAL

September 28, 2020

John O'Connor, Ph.D., RPA
ECORP Consulting, Inc.
3838 Camino Del Rio North, Suite 370
San Diego, CA 92108
joconnor@ecorpconsulting.com

Re: Native American Monitoring Confirmation for the Addition to the Casa de Oro Library Project, San Diego, California

Dear Mr. O'Connor

Red Tail Environmental (Red Tail) provide a Kumeyaay Native American monitor for the archaeological survey for the addition to the Casa de Oro Library Project on September 28, 2020. The Native American monitoring was conducted by Shuuluk Linton under the direction of Clint Linton.

Regards,

Clint Linton, President
Red Tail Environmental

APPENDIX C

Project Area Photographs

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI#**

PHOTOGRAPH RECORD

Trinomial

Page 1 of 1 **Resource/Project Name:** Casa de Oro Library **Year** 2020
Camera: iphone 6 Lens Size:
Film Type and Speed: Digital Negatives Kept at: ECORP Consulting, Inc.

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
9	9			CDO-01 Historic-period commercial building, eastern facing façade	SW	IMG_1340
9	9			CDO-01 Historic-period commercial building, eastern and northern facing façades	South	IMG_1341
9	9			CDO-01 Historic-period commercial building, eastern facing façade	West	IMG_1342
9	9			CDO-01 Historic-period commercial building, eastern facing façade	NW	IMG_1343
9	9			CDO-01 Historic-period commercial building, eastern facing façade	NW	IMG_1344
9	9			CDO-01 Historic-period commercial building, southern facing façade	NE	IMG_1345
9	9			CDO-01 Historic-period commercial building, southern facing façade	North	IMG_1346
9	9			CDO-01 Historic-period commercial building, southeastern facing façade	NW	IMG_1347
9	9			CDO-01 Historic-period commercial building, eastern facing façade	SW	IMG_1348
9	9			CDO-01 Historic-period commercial building, eastern facing façade	West	IMG_1349
9	9			CDO-02 historic-period road segment, Campo Road	West	IMG_1350
9	9			CDO-02 historic-period road segment, Campo Road	NW	IMG_1351
9	9			CDO-02 historic-period road segment, Campo Road	NE	IMG_1352
9	9			CDO-02 historic-period road segment, Campo Road	East	IMG_1353
9	9			Southern Project Area	West	IMG_1354
9	9			Overview from northeast corner	SW	IMG_1355
9	9			Trailer and modern building overview	South	IMG_1356
9	9			Overview from northwest corner	SE	IMG_1357
9	9			Overview of southern project area	WSW	IMG_1358
9	9			Modern building overview	NE	IMG_1359
9	9			Overview of southern project area	WSW	IMG_1360
9	9			Overview from SW corner	NE	IMG_1361
9	9			Vegetation at SW corner of Project Area	SW	IMG_1362
9	28			Overview of additional Project Area	SW	IMG_1393
9	28			Western boundary of Project Area	S	IMG_1394
9	28			Modern drainage and fencing	SE	IMG_1395


IMG_1395


IMG_1340


IMG_1341


IMG_1342


IMG_1343


IMG_1344


IMG_1345


IMG_1346


IMG_1347


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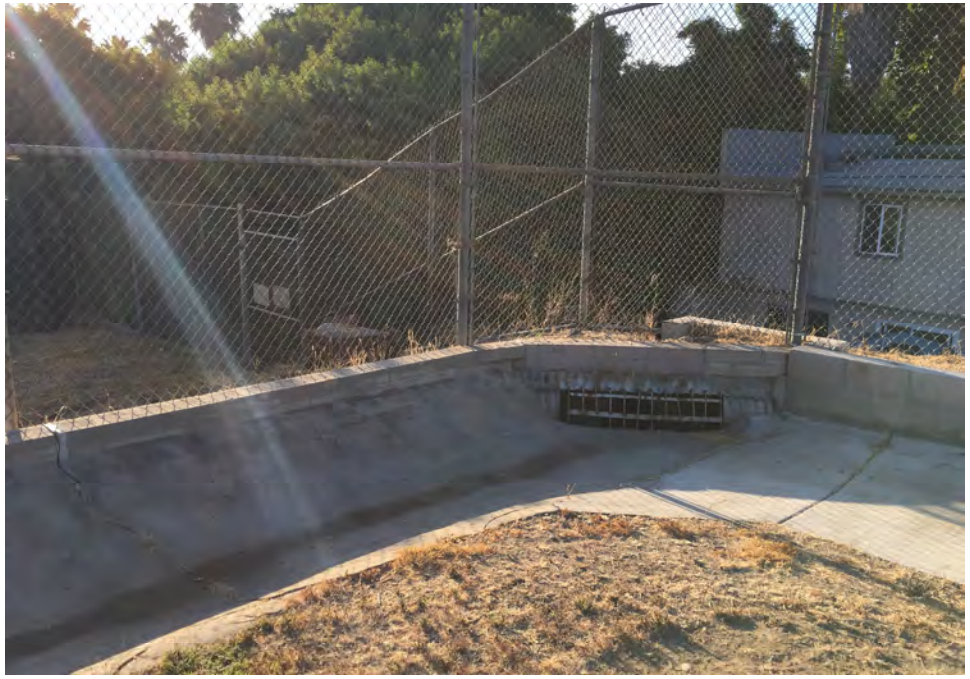
IMG_1393


IMG_1394


Smoothies Boba


PHO & Grill
International
Vietnamese Restaurant
Sandwiches
Smoothies Boba
OPEN FOR
TAKE OUT






Vietnamese Sandwiches
9610
OPEN FOR TAKE OUT
Vietnamese Sandwiches
Smoothies Boba


Vietnamese Sandwiches


PHO & Grill
International
Vietnamese Restaurant
Sandwiches
Smoothies Boba
OPEN FOR TAKE OUT


Vietnamese Sandwiches
PHO & Grill
International
Vietnamese Restaurant
Sandwiches


Pho & Grill
Smoothies Boba




Pho & Grill
Smoothies Boba


TAKE-OUT


PHO & Grill




PHO & Grill


PHO & Grill
International
Vietnamese Restaurant





















APPENDIX D

Confidential Cultural Resource Site Locations Map and Site Records (DPR 523)

This Attachment contains information on the specific location of cultural resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the specific location of pre-contact and historic sites is exempt from the Freedom of Information Act and California Public Records Act.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # P-37-039110
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** 9610 Campo Road

P1. Other Identifier: 9610 Campo Road
***P2. Location:** ☒ **Not for Publication** ☐ **Unrestricted** ***a. County:** San Diego
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Jamul Mountains, CA **Date:** 1994 **T16S**; **R1W**; NE ¼ of SW ¼ Section 28**;** S.B.**B.M.**
c. Address: 9610 Campo Road City: Spring Valley Zip: 91977
d. UTM: Zone: 11; NAD 1983; 500950mE, 3623378mN
e. Other Locational Data: The parcel is located north of the Highway 94 and Kenwood Drive interchange. The building is located on the north side of Campo Road. APN 500-170-41 Elevation: 430 feet

***P3a. Description:** This historic-period commercial building was constructed between the years 1964 and 1966, according to aerial photographs. The building currently houses a restaurant, but in the past, it was opened and operated as a Fosters Freeze location, a southern California originated ice cream shop, and later a produce store called Papitos Produce. The building is located on the north side of Campo Road, historically known as the Campo Highway. This building has a rectangular footprint and is oriented north-south along the long axis with a paved parking lot to the east. The building has undergone a remodel in 2011 and the 1960s Fosters Freeze features of the building has been removed along with any signage that would have accompanied the ice cream shop.

***P3b. Resource Attributes:** HP6. 1-3 story commercial building
***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: Overview photo of historic-period building, eastern façade. View NW, taken 9/9/2020

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**
John and Onie Lively
9628 Campo Road
Spring Valley, CA 91977

***P8. Recorded by:**
John O'Connor
ECORP Consulting, Inc.
3838 Camino Del Rio North, Suite 370, San Diego, CA 92108

***P9. Date Recorded:** 9/9/2020

***P10. Survey Type:** Property Visit

***P11. Report Citation:** ECORP Consulting, Inc. 2020. *Historic Technical Report for the Casa de Oro Library Project, Spring Valley, San Diego County, California*

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

*Resource Name or # 9180 Campo Road

B1. Historic Name: Fosters Freeze
B2. Common Name: Pho & Grill International Restaurant
B3. Original Use: Restaurant
B4. Present Use: Restaurant

***B5. Architectural Style:** Mid-Century Modern

***B6. Construction History:** The building's architecture is influenced by the Mid-Century Modern architectural style. The building has undergone a remodel in 2011 and the Fosters Freeze features have been removed.

According to aerial photographs, the building was constructed between the years 1964 and 1966. Campo Road, or also known as the Campo Highway prior to Highway 94 being constructed, predates the building as the road is present on aerial photographs taken in 1953. The 1953 and 1964 aerials show the transition of the parcels along Campo Road from agricultural properties into a commercial storefront. The 1966 aerial reveals the building present in its current location. The building has a long axis-oriented north/south with a parking lot to the east.

After a review of Google street view photographs and Commercial Alteration or Addition Permits from the County from 2011, the building underwent a major remodel. According to the permit the building was vacant prior to the remodel. The remodel included replacement of the roof, glass in all windows due to vandalism, and exterior posts a needed. The remodel also included changing the current bathroom to be ADA compliant and plans to change the wall from a double to single wall. The Google street view taken in May 2011 shows the building with the interior completely gutted and by October 2011 the new roof was constructed. The photograph also shows no windows and the removal of the blue awning that was common for Fosters Freeze locations. By the 2015 photographs the building looks to be in its current state.

See Continuation Sheet for Architectural Context.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features:** None

B9a. Architect: Unknown
b. Builder: Unknown

***B10. Significance: Theme:** Car culture, local importance, Fosters Freeze location **Area:** Spring Valley, San Diego County
Period of Significance: 1966 to 1980 **Property Type:** Commercial building **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

See Continuation Sheet for Evaluation.

B11. Additional Resource Attributes: None.

***B12. References:** ECORP Consulting, Inc. 2020. Historic Technical Report for the Casa de Oro Library Project, Spring Valley, San Diego County, California

B13. Remarks: None.

***B14. Evaluator:** Jeremy Adams

***Date of Evaluation:** 9/9/2020

(This space reserved for official comments.)

***P3a. Description (Cont.):** The original frame and post of the roadside sign currently accompanies the restaurant and is visible from the main road. The sign currently advertises the current tenant, Pho & Grill International Vietnamese Restaurant. Currently, the building is a 1,300 square foot, one-story commercial business building used as a restaurant and represents the modern style of architectural. The building has large windows on the eastern and southern facing façade which were replaced during the 2011 remodel. The original windows on the façade likely housed walk up windows which were common at Fosters Freeze locations as seen in existing locations. The building exterior has a smooth stucco siding with square tile wainscoting detailing on the exterior which were added to the building during the remodel. The building has an overhang that protrudes from the building on the eastern and southern facing façades. The roof was replaced and redesigned during the 2011 remodel.

***B10. Significance: (Cont.)**

Commercial Storefronts and Signs

A business sign or a storefront is a distinguishable entity that has the potential to possess individual historic character, identity, and significance. Signs are often depicted by the local community as more than simply advertisements of a business. Signs can also be viewed as elements of designs that contribute to the character, scale, and identity of a streetscape by means of graphic architecture. They are a visual illustration of a distinct period in history, including the history of the business, community, and the commercial corridor for which it is located. Although, the original Fosters Freeze signage is no longer present as this ice cream shop location has closed, the building located at 9610 Campo Road currently contains the original sign frame but now displays the name of the Vietnamese restaurant. As such, in order to properly evaluate the building at 9610 Campo Road, including the attached sign, a substantial historical context on signs and storefronts is provided. Due to the extensive history of storefront and sign advertising, the history below touches on relevant context that is applicable to the building at 9610 Campo Road.

Signs have been a way of advertising along main streets in Southern California as early as the area was established. The materials and functions of storefronts and signs have evolved throughout the decades. By the 1930s, signs and storefronts had changed in styles multiple times to accommodate the always progressing physical landscape, cultural and societal views, use of the automobile, advances in electricity and manufacturing, and other artistic likes and dislikes for each period (Treu 2012).

The Great Depression of the 1930s played a significant role on the developing commercial landscape as it relates to storefronts and signs. Due to the poor economy, apartments and commercial buildings were often left unoccupied on the floors above the street level. In a major attempt to heighten retail sales and increase foot traffic in commercial areas, businesses in the United States looked to the modern designs of European storefronts and commercial districts. European shops, particularly those designed in the late 1920s by French architect Rene Herbst, utilized the skillfully integrated signs on the building facades that foreshadowed the visual aspects of moderne architecture (Treu 2012).

One of the primary influences taken from European commercial design was the use of the entire façade as an advertisement. The design of the storefront was intended to carry a unique characteristic that was uniform across the entire façade that matched the sales objective of the shop. European designers began to utilize all aspects of the storefront including windows, doorways, and ornamentation in the overall advertising scheme to match with the signs in a cohesive graphic and architectural display. Such changes brought about the use of large store display windows, awning covers, multiple materials such as brick, metal, and lights, decorative detail, matching color and architectural themes whose focal point was typically the sign or front entrance. As such, European commercial shop designs were more focused on architecture and art as the advertising focus. Shops in the United States were desperate for the success of European commercial districts and, therefore, many followed suit (Treu 2012). Buildings that reflected the European architectural styles first appeared along commercial corridors, namely near highways and major travel routes, in American cities like Los Angeles in the late 1920s and early 1930s (Treu 2012).

By the mid-1930s and early 1940s, commercial architecture in the United States began a complicated split in physical advertising schemes. Many businesses began designing their buildings following the example of the European storefronts, using artistic designs that included integration of decorative and elaborate signs. Other businesses, however, began to focus primarily on the contents within the store with very little graphic illustrations to draw in the consumer. These commercial buildings followed the graphic restraint theme of the International style of architecture. The International style of architecture also developed out of European moderne architectural thought and ultimately was a rejection of the artistic moderne architecture as described above. International style commercial buildings focused on large windows, rectilinear forms, and use of glass, steel, and concrete with almost no ornamentation or graphic illustrations. By the end of the 1930s, most commercial buildings being constructed or remodeled during this time took either the artistic approach of moderne architecture or the rejection of art and ornamentation approach of International style architecture (Treu 2012).

By the beginning of the 1940s, articles and ideas were appearing about expanding the role of the sign industry on the commercial landscape. Prior to the 1940s, most signs on storefronts did not project out from the building but rather were built into the design of the storefront, typically somewhat flush with the wall surface. These signs included simple designs such as striping, pictures, portholes, and basic lettering or visual effects on a flat surface. Eventually, a few graphic and industrial designers such as Charles Oppenheimer, John Albright, and George Meyers began to integrate the third dimension into their sign designs that subtly ventured into the area of architecture. One such primary focus was the projecting sign that jutted out over the sidewalk or street.

Simultaneously, with emphasis growing on the projecting sign, almost all other aspects of the façade of commercial buildings gave way to surface projections. These projections included walls, canopies, lettering, and signs that all rippled away from the building's façade. These projections were often designed in a fashion to give the appearance that the wall surface was moving or in motion. Motion was a prominent theme of the 1930s and 1940s with the vastly expanded use of the automobile and airplane throughout the world. The pioneering work of the early designers, particularly that of Meyers, led the 1940s commercial streetscape into a period of extensive use of surface projections that focused on the artistic design of the business façade and sign within the streetscape (Treu 2012).

Along with the rapid expansion of the projecting storefront features was the heavy utilization of the neon sign. Neon, or "new gas," is a rare gas similar to other rare gases such as argon and helium. It was originally discovered by English scientists Sir William Ramsay and William Travers in 1898. No real use came from the discovery until French scientist Georges Claude first developed a systematic method for liquefying the gas in 1902. Claude discovered that the gas was sensitive to electrical charges and produced a red color when charged. Claude eventually developed a very practical discharge tube that held the neon gas and connected to an electrode that, when charged, would light up all of the gas within the tube. It was not long until Claude, assisted by Count J. De Beaufort, conceived the idea of bending the tubes to form shapes and letters. Shortly after that innovation, the two scientists began combining other elements, such as mercury, with the gas to produce other brilliant colors making the shaped tubes a perfect advertising tool for attracting customers (Claus 1975).

The use of neon signs in the United States quickly took root, along with the development of artistic storefronts. In the 1920s and 1930s, neon signs could be individually manufactured with "vernacular" inflections by local companies specifically designed for the business purchasing it. In the 1920s, neon signs were originally expensive, being sold for an average of $400 a sign. Businesses often could not afford to purchase the signs outright, so many manufacturers leased signs instead. Even many years later, during World War II, gas and metal rationing kept neon sign prices high (Claus 1975).

The end of World War II brought another big change to the use and designs of neon signs. The end of wartime rationing caused prices for neon signs to drop significantly. The drop in prices brought a rapid resurgence of production of neon signs, particularly in commercial corridors of many cities. The end of World War II also led manufacturing back to the extensive production of automobiles, which, in turn, led to the need of businesses to capture the attention of automobile drivers from a distance. Post-World War II signs in cities were largely designed at highway-size scale, often dwarfing pedestrians walking below them. The intent of creating these massive signs was so they could be seen from a distance and on both sides of the major multi-lane roads within urban centers. Concurrent with advances in tube bending and the new affordability of these custom signs, many businesses had signs with neon installed during the 1940 and 1950s. By the late 1950s and early 1960s, however, advancements in plastics reduced the use of neon signs, as plastic became the aesthetic preference (Treu 2012).

The decade of the 1960s was primarily characterized by the use of plastic lettering and signage due to its affordability and capability to be placed anywhere on the building and at any scale. Though plastics quickly took over the commercial landscape, the use of neon never fully disappeared due to the creative potential each business had with its sign-making. In addition, many storefronts that remodeled their façade to match a particular architectural style during the 1930s and 1940s, such as Art/Streamline Moderne, Art Deco, Googie, or International style, often kept their original signs in place because they matched the complete look and design of the building. Currently, original Fosters Freeze signage is no longer present at the building on Campo Road.

Architectural Context

The following summary of the architectural style elements, character-defining features, and brief history of the Mid-Century Modern architecture is included for frame of reference and to assist with understanding the architectural style and merit of the building. The information identified during archival research suggests that the architectural style and design of the building, storefront, and sign was a result of the historical influences of commercial development and advertising of its period

The Mid-Century Modern period of architecture generally references those buildings and structures that were built between the 1930s and 1970 and includes a variety of sub-styles including styles such as Streamline Moderne, International, Googie, and Contemporary to name a few. Mid-Century Modern architecture was popular among local architects with a variety of examples in most major cities in California. In particular, the commercial industry often employed styles from this period in the design and construction of stores, restaurants, and other shopping centers due to the visual appeal. Mid-Century Modern styles emerged prior to World War II but most sub-styles matured during the postwar period, spurred largely by the economic prosperity of the nation which coincided with a construction boom. One of the primary objectives of Mid-Century Modern architectural styles is the appearance of "forward thinking" design. Specific characteristics of buildings constructed during this period include use of new materials and building techniques, integration of indoor and outdoor spaces, and functional floor plans.

Originally this building was one of the many Fosters Freeze locations. Fosters Freeze is a soft-serve ice cream shop opened by George Foster and the first location was built in 1946 in Inglewood, California (Fosters Freeze 2020). The historic-period Fosters Freeze buildings represent the Moderne style of architecture and contained blue roofs, wide canopies, walk-up windows, outdoor seating, and distinctive signage to attract passing vehicle traffic. The Googie architecture is a Mid-Century Modern style originating in Southern California that became popular in the late 1940s until the mid-1960s. Googie got its name from architect John Launter, student of Frank Lloyd Wright, who designed a coffee shop in West Hollywood, which was named Googie's in 1949. The Googie's

coffee shop was located on the Sunset Strip and was demolished in 1989. Googie's coffee shop had a bold design, specifically using steel, which was a rationed material during the war period and only became readily available for commercial building construction during the postwar period. The Googie style was developed from the futuristic architecture of Streamline Moderne, which was popular in the 1930s. After the 1960s, the Googie style of architectural became less desirable while modern architecture transitioned away from bold shapes to straight, clean lines. Exaggerated versions of the Googie style of architecture were echoed on *The Jetsons* cartoons, McDonald's arches, Mel's Drive-ins, and within Disneyland's Tomorrowland.

The building located at 9610 Campo Road, including the original signage, was constructed within the period of car culture and heavy use of automobile advertising for the commercial industry in southern California. The post-WWII period of construction in San Diego County followed this same pattern, attempting to cater to modern and "trendy" popular culture, including car culture. The original sign historically was a visual landmark for car traffic. By the end of the 1960s, the car culture phenomenon was significantly declining with the modernization of roads and freeways throughout California which bypassed commercial corridors. The construction of Highway 94 in the late-1960s led to the decline of the commercial corridor along Campo Road. The building and signage were modified when the Fosters Freeze business at this location closed and the building was later converted into a retail space. The building was later substantially remodeled in 2011, and the sign was replaced for the current occupant. Also, the windows were replaced with fixed windows and no longer represented the walk-up ice cream shop feeling.

By 1950, there were over 360 store Fosters Freeze locations in California (Golob 2017). Another Fosters Freeze location is in Spring Valley and was built prior to the Campo Road location around 1964. The Elkelton Boulevard location is a walk-up style eatery with wraparound windows on the exterior for ordering and displays the Foster's Freeze "Old Fashion" sign. The Elkelton Boulevard location has a large canopy overhang that has likely been replacement and originally the building had a flat roof. The Elkelton Boulevard location currently still operates as a Fosters Freeze. The Campo Road location received a remodel in 2011 and no longer operates as a Fosters Freeze location.

Evaluation

Historical and archival research for the former Foster Freeze location (9610 Campo Road) and commercial building has successfully resulted in a construction and use history for the building. Archival research specifically for the building utilized building permits, city directories, other City records, and aerial and street photographs. These records showed the building was constructed north of Campo Road between 1964 and 1966. The building underwent many minor repairs and a substantial structural remodel in 2011. Historical research also adequately catalogued the history of Spring Valley and San Diego County and the surrounding community and civic context, so that the building could be placed within its relevant historical context.

Following is an evaluation of the building using NRHP and CRHR eligibility criteria.

The building at 9610 Campo Road in Spring Valley was originally constructed as a local Fosters Freeze location built between 1964 and 1966 and was modified for the use as a produce store and later a restaurant. It is associated with the automobile culture of commercial development during the period of the 1950s and 1960s. It is also associated with the use of roadside signs and storefront advertising during that same period for commercial corridors.

The original Fosters Freeze ice cream shop and storefront, including the original signage, was constructed within the period of car culture and heavy use of automobile advertising for the commercial industry in southern California. The post-WWII period of construction in Spring Valley and neighboring communities followed this same pattern, attempting to cater to modern and "trendy" popular culture, including car culture. The building and signage were modified in the 2000s, and eventually became the Vietnamese Restaurant it is today in 2011. By the end of the 1960s, the car culture phenomenon was significantly declining with the modernization of roads and freeways throughout California which bypassed commercial corridors. The construction of Highway 94 south of the Project Area between 1966 and 1968 led to the decline of the commercial corridor along Campo Road, historically known as Campo Highway.

Though the building maintains an association with the commercial development of automobile culture and a sign and storefront advertising, neither the original construction nor the remodeled additions or alterations to the building hold any historical significance through association with those contexts. The building itself, or its modifications or alterations, has not made a significant contribution to the history of commercial development, car culture, or advertising and has not made a significant contribution to the broad patterns of history. Merely being associated with those contexts is not enough to contribute in a significant way to those historic contexts. The building must be shown to have been significant within the established contexts in history. This building, including signage and its alterations and modifications, is not significantly associated with historical events and has not made a significant contribution to the broad patterns of history and is not eligible under CRHR Criterion 1 or NRHP Criterion A.

Several individuals have owned and operated businesses in the building through the years. Historical and archival records and focused research on each of the individuals suggest they did not have a direct or significant historical impact or influence in history that is represented through this building. Therefore, the building, including signage and its alterations and modifications, is not associated with the lives of persons significant in the past and is not eligible under CRHR Criterion 2 or NRHP Criterion B.

The building at 9610 Campo Road was originally constructed as a Foster Freeze location in the mid-1960s. It was modified, for restaurant, in the 2000s, including additions and alterations to the signage. The building was originally designed with elements of

Mid-Century Modern architecture and was likely based off a prototype for Fosters Freeze at the time. The Mid-Century Modern elements of the building are the large picture windows across the façade, overhang, and signage. The layout and structure of the original building is not obvious from its current exterior appearance but can be differentiated upon review of historical records.

The building is associated with the period of commercial construction that emphasized automobile advertising and contains many characteristics that represent that period of Mid-Century Modern architecture. The building characteristics, however, do not embody the type, period, or method of construction of commercial architecture. In order to embody the distinctive characteristics, the building components must have been conceived with the design style as its primary appearance during the period of significance and contain a cohesive original structure that is distinguishable among other building types as a good representative of that style. This building contains many popular elements of Mid-Century Modern architecture, such as large eye-capturing structural elements on the roof or disconnected from the building, often made of steel, and futuristic details and starbursts on the exterior of the building or on the signage.

The layout of the building has changed several times, including additions and alterations that post-date the period of significance of Mid-Century Modern architecture, which was primarily between 1949 and the early 1960s. Additionally, the signage throughout the building is missing its original components making it more difficult to link to the period of commercial development and advertising. Overall, the building does contain several character-defining features of Mid-Century Modern architecture and was constructed towards the end of the period of popularity of that style. However, it does not contain a few important elements that clearly distinguish the building as a Googie style from other Mid-Century Modern styles, such as large structural elements or futuristic details on the exterior of the building or signage. The geometric patterned walls, large picture windows, and even neon signage are all prominent features of other Mid-Century Modern architectural styles, namely the artistic styles of Art Deco, Contemporary, and Streamline Modern. The building is a product of the later years of the period of popularity for storefront and neon sign advertising along commercial corridors. Overall, the building does not embody the distinctive characteristics of Mid-Century Modern -style of architecture, nor represent the work of a master, nor poses high artistic values, and its components lack individual distinction among other Mid-Century Modern buildings. In addition, the building was substantial remodeled in 2011 including Therefore, the building, including signage and its alterations and modifications, is not eligible under CRHR Criterion 3 or NRHP Criterion C.

Archival research potential for the building has been exhausted, and the building's history is documented in the archival record and summarized herein. There is no potential for the building and all of its components to provide additional information that is not already represented in the archival record. Therefore, based on known and available information, the building, including signage and its alterations and modifications, is not eligible under CRHR Criterion 4 or NRHP Criteria D.

The site visit revealed that the building is in fair condition because of the recent remodel and several components of the original building have lost integrity. As mentioned above, the original structure of the building is masked by the additions that were added in 2011. The remodel was construction and designed to match the Mid-Century Modern style. These additions give a misleading appearance to the age of some portions of the building. The building has not been moved and retains integrity of location. However, the building no longer retains integrity of materials, workmanship, setting, and feeling. The building currently serves as a commercial purpose as a restaurant, which was its original design. The setting and feeling of the commercial corridor and car culture has completely disappeared.

Regardless of integrity, the building is evaluated as not eligible for the NRHP or CRHR**.**

San Diego County Local Register of Historical Resources (Local Register) Criteria: The following is an evaluation of the building against the County of San Diego's Historical Resource Criteria. The evaluation has been included to help the County determine if the building is an Historical Resource in accordance with CEQA.

Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage.

The building at 9610 Campo Road contains character-defining features that do contribute to the City of Spring Valley's architectural history. As a commercial building, it was designed during a period of popularity of Mid-Century Modern architecture that led architects to design buildings specifically catering to automobile advertising in commercial structures. During the post-WWII period, Spring Valley was a growing city and automobile advertising, especially the use of neon signs, was a significant and important part of the City's commercial growth. Though the signage and other architectural elements do not embody the historical elements of the period as described in the CRHR evaluation, they do reflect special elements of the City of Spring Valley's architectural history as is described in the local criteria. Therefore, the building does meet Historical Resources Designation Criteria 1.

Is associated with the lives of persons important to the history of San Diego County or its communities;
The archival record shows that the building is identified as one of many franchised location of the locally known ice cream shop, Fosters Freeze; however, nothing in the archival record shows that many owners made a significant contribution to local, state, or national history. In addition, this building no longer is identified as a Fosters Freeze location and has been remodeled in a restaurant building. Lastly, many individuals, both historically significant and not, have likely eaten at the building while it was a Fosters Freeze location; however, simply eating at a restaurant does not qualify a building to be significantly associated with the individual's productive life. Therefore, the building does not meet Historical Resources Designation Criteria 2.

Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
The building does not meet Historical Resources Designation Criteria 3, which is similar to CRHR Criterion 3/ NRHP Criterion C (see the evaluation for these criteria above).

Has yielded, or may be likely to yield, information important in prehistory or history.
The building does not meet Historical Resources Designation Criteria 4, which is similar to CRHR Criterion 4/ NRHP Criterion D (see the evaluation for these criteria above).

San Diego County RPO Criteria: The building located at 9610 Campo Road does not any criteria of the RPO.



CDO-01; Commercial building, southeastern facade (view northwest; September 9, 2020).



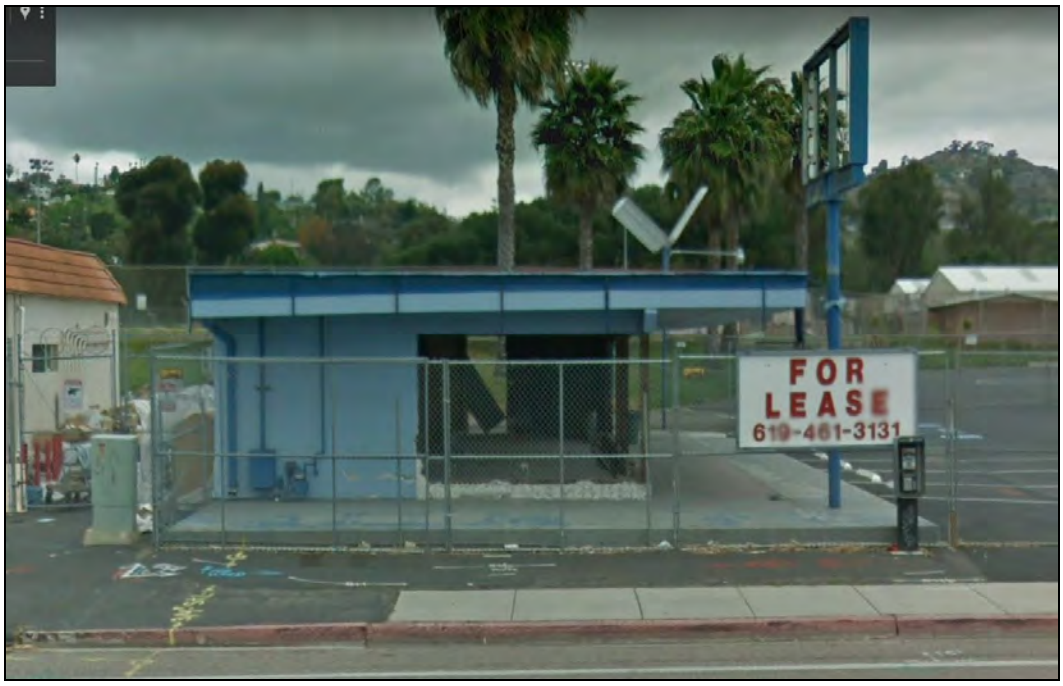
CDO-01; Commercial building, southeastern facade (view northwest; September 9, 2020).



CDO-01; Commercial building, northern facade (view south; September 9, 2020).



CDO-01; Commercial building, Google Earth street view taken in January 2008.



CDO-01; Commercial building, Google Earth street view taken in May 2011 prior to remodel.



CDO-01; Commercial building, Google Earth street view taken in October 2011 during remodel.

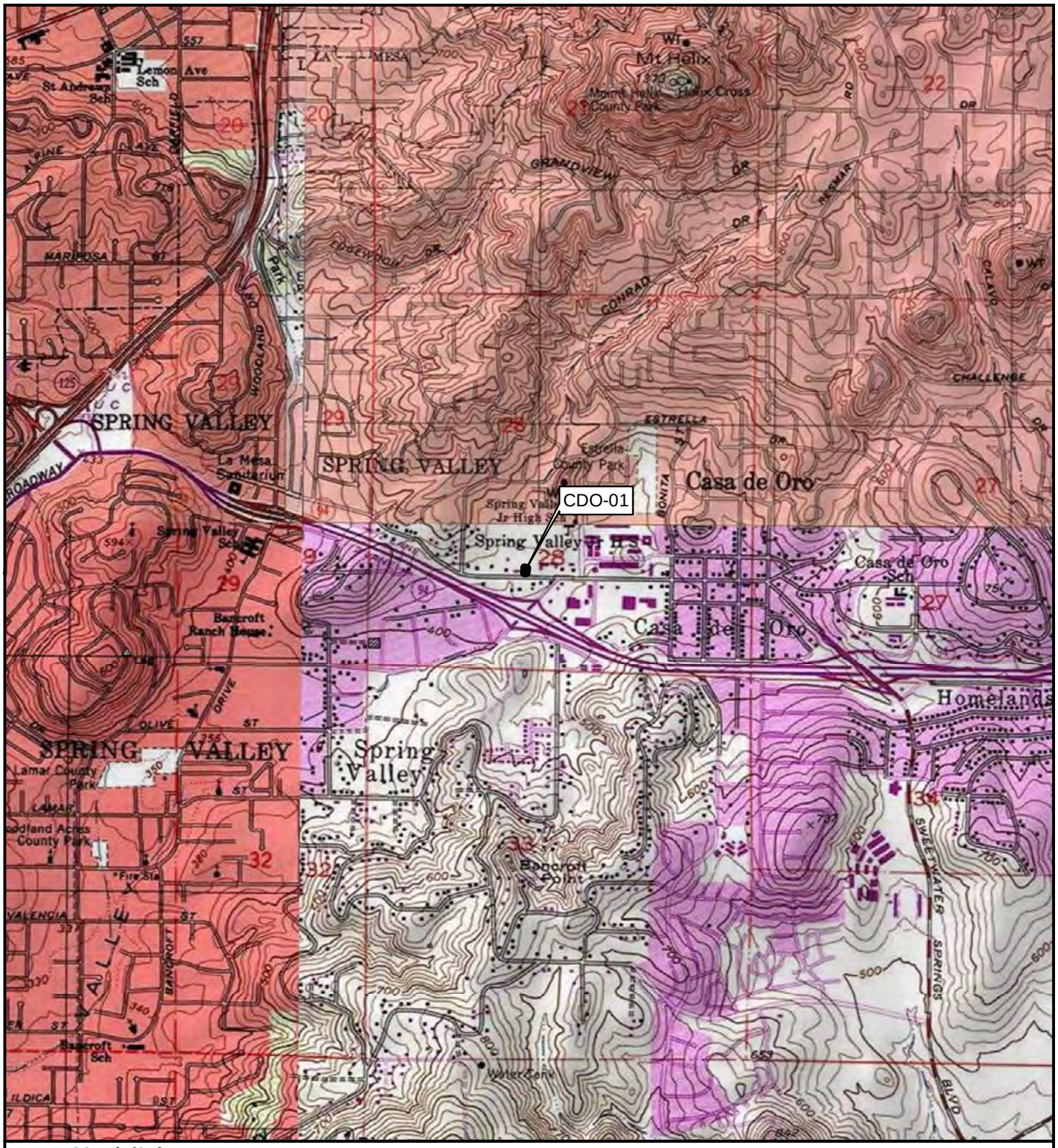
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #P-37-039110
HRI #
Trinomial

Page 11 **of** 11 ***Resource Name or #:** CDO-01

***Map Name:** Jamul Mountains, CA ***Scale:** 1:24,000 ***Date of Map:** 1994



Location: N:\2020\2020-137.01 Casa de Oro Library\MAPS\cultural_resources\DPR_Loc_CDO-01.mxd *(J. mguidry 9/16/2020*

DPR 523K (1/95)

***Required Information**

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # P-37-039111 HRI # Trinomial NRHP Status Code
Other Listings Review Code	Reviewer Date

 *Resource Name or #: Campo Road

P1. Other Identifier: Campo Road Segment

***P2. Location:** ☒ **Not for Publication** ☐ **Unrestricted** ***a. County:** San Diego

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Jamul Mountains, CA **Date:** 1994 **T16S**; **R1W**; NE ¼ of SW ¼ Section 28**;** S.B.**B.M.**

c. Address: Campo Road City: Spring Valley Zip:

d. UTM: Zone: 11; NAD 1983; 500953mE, 3623358mN

e. Other Locational Data: The segment of road is located north of the Highway 94 and Kenwood Drive interchange. Elevation: 430 feet

***P3a. Description:** CDO-02 is an historic-period road known today as Campo Road. The road today is a four-lane road alignment that runs east to west. Historically the road was known and labeled as Campo Highway. The road is a paved asphalt road that runs adjacent to developed parcels within San Diego County. Campo Highway was replaced with Highway 94 in the late 1960s and then was known as Campo Road. The route began as a main stagecoach route between San Diego and Yuma, Arizona. Paving of Campo Road began in the late 1920s.

Campo Highway, today's Campo Road, first appears south of the Project Area beginning on aerial photographs taken 1953. The roadway was renamed and was replaced by Highway 94 is the late 1960s. Aerial photographs from 1966 and 1968 shows the construction of the interchange of Highway 94 and Kenwood Drive located southeast of the Project Area and by 1971 the interchange was completed. As a result of the development of the development of Highway 94, traffic on Campo Road within the Project area was lessen to local traffic only.

***P3b. Resource Attributes:** HP37. Highway/Trail (Road)

***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: Overview photo of Campo Road View NW, taken 9/9/2020

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**
John and Onie Lively
9628 Campo Road
Spring Valley, CA 91977

***P8. Recorded by:**
John O'Connor
ECORP Consulting, Inc.
3838 Camino Del Rio North, Suite 370, San Diego, CA 92108

***P9. Date Recorded:** 9/9/2020

***P10. Survey Type:** Property Visit

***P11. Report Citation:** ECORP Consulting, Inc. 2020. *Historic Technical Report for the Casa de Oro Library Project, Spring Valley, San Diego County, California*

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

Evaluation of CDO-02

Resource CDO-02 consists of a short segment of the historic-period road alignment known as Campo Road. Review of historical topographic maps and aerials indicate that the road was likely constructed in the early 1900s with improvements in several decades through the 1900s.

As a result of archival research, this road was not identified in available historical documentation as having any significant historical associations and was not identified to have been associated with the Good Roads Movement. The road was originally developed for as a stagecoach route between San Diego and Yuma, Arizona, but the road today does not imbody the historic route. This road was bypassed when Highway 94 was constructed in the 1960s. As such, the resource is not associated with any specific historic event or activity and is, therefore, not eligible under NRHP Criterion A or CRHR Criterion 1.

Similarly, the lack of historical documentation for this resource makes it clear that no specific individuals or groups of people significant in history are linked with this road. The resource does not demonstrate any association with the lives of persons significant in history and is, therefore, not eligible under NRHP Criterion B or CRHR Criterion 2.

This resource is currently a paved road that follows the similar alignment as it did when it was originally constructed prior to 1920. The original road may have been originally a dirt road which, through decades of maintenance and repairs, was converted to the paved road it is today. The road as it was originally, including its years of maintenance and changes, and as it is now, does not have any significant historical associations and its historical use, construction, improvement, and maintenance is typical among roads. It is not uniquely artistic or designed with any distinctive engineering characteristics. Therefore, this resource does not embody any distinctive characteristics of a type, period, or method of road construction; nor does it possess any artistic value. In addition, no archival evidence, or physical aspect of the road, indicates that the resource represents the work of a master road grader or specific construction crew or company. Therefore, this resource is not eligible under NRHP Criterion C or CRHR Criterion 3.

The information potential in historic roads lies in its alignment and route. The alignment and route of this road may not have been accurately mapped in historic times and therefore is not represented in the archival record. In a sense, a lot of historic-period roads only exist on historic maps as dashed approximated lines, and were it not for their physical presence on the landscape, we would have no other accurate record of its connectivity between points A and B. This road, however, was recorded relatively accurately in historical topographic maps and, thus the information regarding its historical route is provided in the archival record. Furthermore, this resource does not possess the potential for subsurface archaeological deposits, and, accordingly, was not tested. The resource does not possess the potential to yield any additional information regarding the relationship or functionality of roads or provide any information that isn't already represented in the archival record and, therefore, is not eligible under NRHP Criterion D or CRHR Criterion 4.

San Diego County Local Register of Historical Resources (Local Register) Criteria: The following is an evaluation of the building against the County of San Diego's Historical Resource Criteria. The evaluation has been included to help the County determine if the road segment is an Historical Resource in accordance with CEQA.

Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage.
Campo Road was originally constructed as Campo Highway in 1900s and was stagecoach route between San Diego and Yuma, Arizona. The road was later paved in the 1920s and bypassed/rerouted by Highway 94 in the late 1960s. The road was named Campo Road because it was simply the road to Campo. The early road offered a route through the County and therefore, the building does meet Historical Resources Designation Criteria 1.

Is associated with the lives of persons important to the history of San Diego County or its communities;
The archival record shows that the road is not significantly associated with the individual's productive life. Therefore, the building does not meet Historical Resources Designation Criteria 2.

Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
The building does not meet Historical Resources Designation Criteria 3, which is similar to CRHR Criterion 3/ NRHP Criterion C (see the evaluation for these criteria above).

Has yielded, or may be likely to yield, information important in prehistory or history.
The building does not meet Historical Resources Designation Criteria 4, which is similar to CRHR Criterion 4/ NRHP Criterion D (see the evaluation for these criteria above).

San Diego County RPO Criteria: The Campo Road segment does not any criteria of the RPO.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

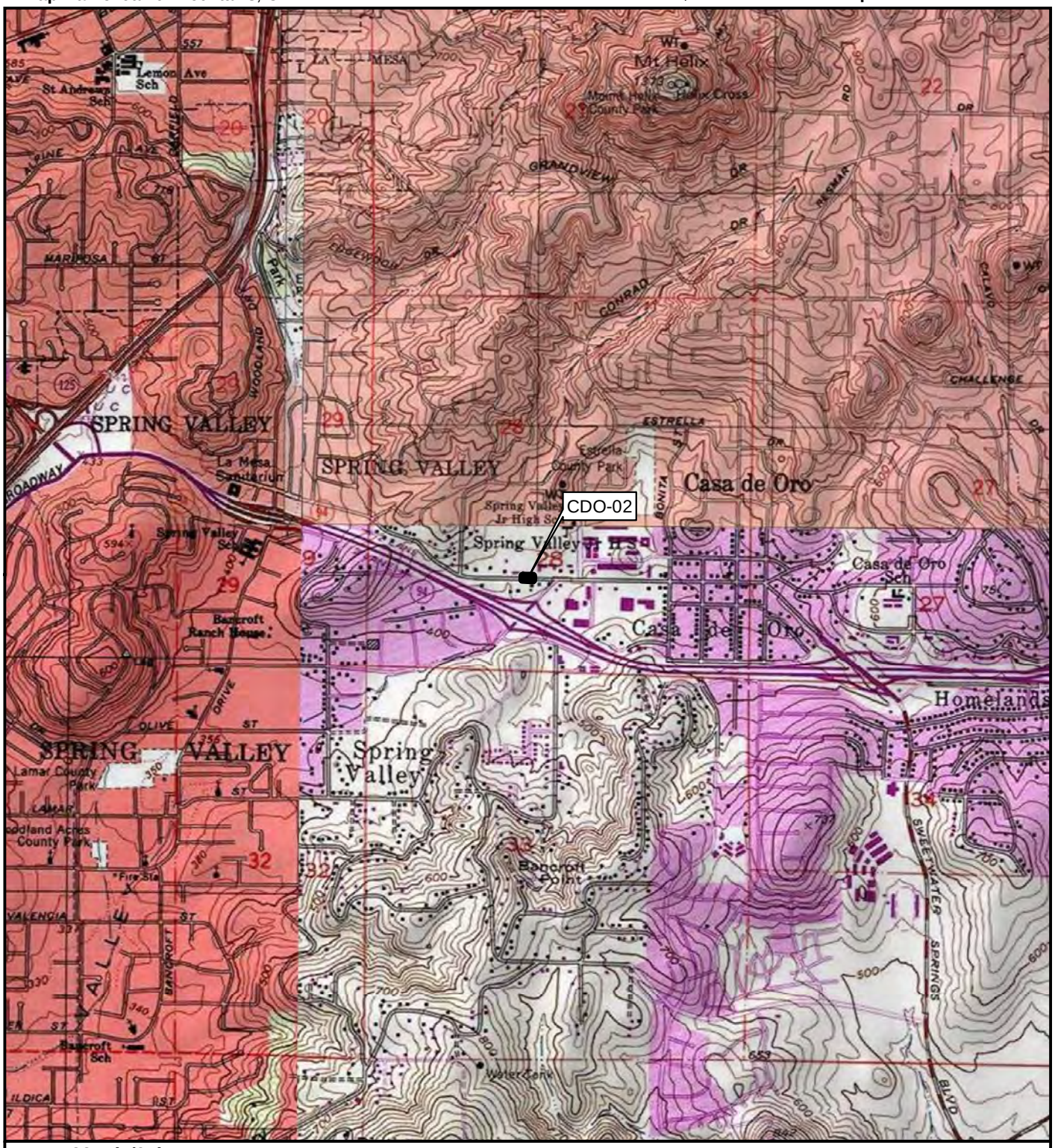
Primary # P37-039111
HRI #
Trinomial

***Resource Name or #:** CDO-02

***Map Name:** Jamul Mountains, CA

***Scale:** 1:24,000

***Date of Map:** 1994



Location: N:\2020\2020-137.01 Casa de Oro Library\MAPS\cultural_resources\DPR_Loc_CDO-02.mxd *jmguidry 9/16/2020*

DPR 523K (1/95)

***Required Information**

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

APPENDIX D-1
PRELIMINARY GEOTECHNICAL INVESTIGATION

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PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED CASA DE ORO LIBRARY
3838 CONRAD DRIVE
SPRING VALLEY, CALIFORNIA

Prepared for:

COUNTY OF SAN DIEGO DEPARTMENT OF GENERAL SERVICES
ATTENTION: MR. WAYNE YEAGER
5560 OVERLAND AVENUE, #410
SAN DIEGO, CALIFORNIA 92123

Prepared by:

CONSTRUCTION TESTING & ENGINEERING, INC.
1441 MONTIEL ROAD, SUITE 115
ESCONDIDO, CALIFORNIA 92026

CTE JOB NO.: 10-15617G

September 30, 2020

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APPENDIX B EXPLORATION LOGS
APPENDIX C LABORATORY METHODS AND RESULTS
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APPENDIX E RESULTS OF PERCOLATION TESTING
APPENDIX F LIQUEFACTION EVALATION

1.0 INTRODUCTION AND SCOPE OF SERVICES

1.1 Introduction

Construction Testing and Engineering, Inc. (CTE) has completed a geotechnical investigation and report providing preliminary conclusions for the proposed Casa de Oro Library in Spring Valley, California. It is understood that the proposed development is to consist of a new 13,000 square foot Library Structure with parking, flatwork, utilities, and other associated improvements. CTE has performed this work in general accordance with the terms of proposal G-5002 dated June 23, 2020. Preliminary geotechnical recommendations for excavations, fill placement, and foundation design for the proposed improvements are presented herein.

1.2 Scope of Services

The scope of services provided included:

- Review of readily available geologic and geotechnical reports.
- Coordination of utility mark-out and location.
- Excavation of exploratory borings and soil sampling utilizing a truck-mounted drill rig and manual excavation equipment.
- Laboratory testing of selected soil samples.
- Percolation Testing
- Description of site geology and evaluation of potential geologic hazards.
- Preparation of this preliminary geotechnical investigation report.

2.0 SITE DESCRIPTION

The subject site is located north of Campo Road and West of Kenwood Drive in the southern portion of the Spring Valley Academy campus in Spring Valley, California (Figure 1). The site is bounded by a school bus parking lot to the east, Campo Road to the south, Spring Valley Academy to the

north, and a soccer field to the west. Existing site conditions are illustrated on Figures 1 and 2. The site currently consists of a softball field with a small asphaltic area in the south where the proposed Casa de Oro Library will be constructed. Based on reconnaissance and review of site topography, the site generally descends gradually to the south with elevations ranging from approximately 440 feet above mean sea level (msl) in the north to 435 feet (msl) in the south.

3.0 FIELD INVESTIGATION AND LABORATORY TESTING

3.1 Field Investigation

CTE conducted a field investigation on September 2, 2020 that included a visual reconnaissance and excavation of four exploratory borings. Borings B-1 through B-4 were excavated with a CME 75 track-mounted drill rig equipped with eight-inch-diameter, hollow-stem augers. The borings extended to a maximum depth of approximately 31.5 feet below the ground surface (bgs) in Boring B-2. Relatively undisturbed soil samples were collected by driving Standard Penetration Test (SPT) and Modified California samplers, and bulk samples were collected from the drill cuttings.

The soils from the exploratory borings were logged in the field by a CTE Geologist, and were classified in general accordance with the Unified Soil Classification System via visual and tactile methods. The field descriptions have been modified, where appropriate, to reflect laboratory test results. Boring logs, including descriptions of the soils encountered, are included in Appendix B. The approximate locations of the borings are presented on Figure 2.

3.2 Laboratory Testing

Laboratory tests were conducted on selected soil samples for classification purposes, and to evaluate physical properties and engineering characteristics. Laboratory tests included: In-place Moisture and Density, Modified Proctor and Moisture Content, Expansion Index, Grain Size Analysis, Atterberg Limits, Consolidation, Chemical Characteristics, and R-Value. Test descriptions and laboratory test results are included in Appendix C.

4.0 PERCOLATION TESTING

Percolation Tests P-1 through P-4 were performed within the limits of the proposed improvement area, and were distributed for the purpose of a general site infiltration feasibility analysis. The percolation test holes were excavated to depths of approximately three to five feet bgs. The approximate locations of the percolation test holes are presented on Figure 2, Exploration Location Map. The evaluation was performed in general accordance with Appendix C of the BMP Design Manual for the City of San Diego "Geotechnical and Groundwater Investigation Requirements", dated February 2016.

4.1 Percolation Test Methods

The shallow borehole percolation methodology was used to establish percolation rates. This is considered an acceptable method of percolation testing, as stated in the Model BMP Design Manual, San Diego Region, Appendix D (February, 2016). The percolation test procedure was completed in general accordance with the County of San Diego Department of Environmental Health (DEH),

Version 2010 guidelines. The percolation rates account for both lateral and vertical flow through the tested section.

4.2 Calculated Infiltrated Rate

As per the San Diego Region BMP design documents (2016) infiltration rates are to be evaluated using the Porchet Method. San Diego BMP design documents utilized the Porchet Method through guidance of the County of Riverside (2011). The intent of calculating the infiltration rate is to take into account bias inherent in percolation test borehole sidewall infiltration that would not occur at a basin bottom where such sidewalls are not present.

The infiltration rate (I_t) is derived by the equation:

$$I_t = \frac{\Delta H\ \pi r2\ 60}{\Delta t(\pi r2 + 2\pi r H_{avg})} = \frac{\Delta H\ 60\ r}{\Delta t(r + 2H_{avg})}$$

Where:

I_t = tested infiltration rate, inches/hour
ΔH = change in head over the time interval, inches
Δt = time interval, minutes
* r = effective radius of test hole
H_{avg} = average head over the time interval, inches

Percolation test details are presented in Table 4.2 below. The civil engineer of record should determine an appropriate factor of safety to be applied via completion of Worksheet I-9 of County of San Diego "Best Management Practice Design Manual", Appendix D or other approved methods.

TABLE 4.2
RESULTS OF PERCOLATION TESTING WITH FACTOR OF SAFETY APPLIED

Test Location	Test Depth (inches)	Case	Geologic Unit	Percolation Rate (inches per hour)	Infiltration Rate (inches per hour)	Infiltration Rate with FOS of 2 Applied (inches per hour)
P-1	60	Case III	Qudf/Qya	0.125	0.019	0.009
P-2	38	Case III	Qya	0.125	0.029	0.014
P-3	60	Case III	Qya	0.375	0.055	0.028
P-4	42	Case III	Qya	2.125	0.436	0.218

NOTES Water level was measured from a fixed point at the top of the hole.
Weather was sunny and warm during percolation testing.
Qudf = Quaternary Undocumented Fill
Qya = Quaternary Young Alluvial Flood Plain Deposits
The test holes were eight inches in diameter.

5.0 GEOLOGY

5.1 General Setting

Spring Valley is located within the Peninsular Ranges physiographic province that is characterized by northwest-trending mountain ranges, intervening valleys, and predominantly northwest trending regional faults. The greater San Diego Region can be further subdivided into the coastal plain area, central mountain–valley area and eastern mountain and valley area. The site is located within the central mountain–valley area that generally comprises the western edge of the Peninsular Range Batholith (PRB) and generally consists of Cretaceous igneous rocks and localized Jurassic igneous rocks. The PRB contains remnant blocks of pre-Cretaceous metamorphic rocks that are locally covered with post-Cretaceous volcanic rocks, and marine and non-marine deposits. Throughout the batholith, colluvium and alluvium are present on mountain slopes and intervening valleys.

5.2 Geologic Conditions

Based on the regional geologic map prepared by Todd (2004), the near surface geologic unit that underlies the site consists of Quaternary Young Alluvial Flood-Plain Deposits. Based on field observations, Quaternary Undocumented Fill was observed overlying Quaternary Young Alluvial Flood-Plain Deposits with Tertiary Mission Valley Formation encountered at depth. Descriptions of the geologic and soil units encountered during the investigation are presented below.

5.2.1 Quaternary Undocumented Fill

Where observed, the Previously Placed Fill generally consists of loose to medium dense, brown, clayey fine to medium grained sand with soft to medium stiff, dark brown fine to medium grained sandy clay. Exploratory excavations encountered the previously placed fill to a maximum observed depth of approximately 3.0 feet (bgs). Localized areas with deeper fill may be encountered during site excavations and grading.

5.2.2 Quaternary Young Alluvial Flood-Plain Deposits

The Quaternary Young Alluvial Flood-Plain Deposits generally consist of medium stiff to stiff, reddish brown, fine to medium grained sandy clay and loose to medium dense, brown silty fine to medium grained sand. This unit was observed to depths of approximately 21.0 to 26.0 feet below ground surface (bgs).

5.2.3 Tertiary Mission Valley Formation

Tertiary Mission Valley Formation was observed to the maximum explored depth in each of the exploratory borings. Where observed, these materials generally consist of very dense,

pale gray sandstone that excavates to silty fine grained sand. This underlying geologic unit is anticipated at depth throughout the site.

5.3 Groundwater Conditions

Groundwater was observed in borings B-1, B-2, and B-3 at the time of drilling and was measured at depths ranging from approximately eight (8) to 10 feet bgs. Groundwater conditions are anticipated to vary, especially during and after periods of sustained precipitation or irrigation. Therefore, subsurface water could potentially impact site excavations. During earthwork for the proposed improvements, removal of collected water from excavations may be necessary.

Site drainage should be designed, installed, and maintained as per the recommendations of the project civil engineer.

5.4 Geologic Hazards

Geologic hazards that were considered to have potential impacts to site development were evaluated based on field observations, literature review, and laboratory test results. It appears that geologic hazards at the site are primarily limited to those caused by shaking from earthquake-generated ground motions. The following paragraphs discuss the geologic hazards considered and their potential risk to the site.

5.4.1 Surface Fault Rupture

In accordance with the Alquist-Priolo Earthquake Fault Zoning Act, (ACT), the State of California established Earthquake Fault Zones around known active faults. The purpose of

the ACT is to regulate the development of structures intended for human occupancy near active fault traces in order to mitigate hazards associated with surface fault rupture. According to the California Geological Survey (Special Publication 42, Revised 2018), a fault that has had surface displacement within the last 11,700 years is defined as a Holocene-active fault and is either already zoned or pending zonation in accordance with the ACT. There are several other definitions of fault activity that are used to regulate dams, power plants, and other critical facilities, and some agencies designate faults that are documented as older than Holocene (last 11,700 years) and younger than late Quaternary (1.6 million years) as potentially active faults that are subject to local jurisdictional regulations.

Based on the site reconnaissance and review of referenced literature, the site is not located within a local or State-designated Earthquake Fault Zone, no known active fault traces underlie or project toward the site, and no known potentially active fault traces project toward the site. Therefore fault surface rupture potential is considered to be low at the subject site.

5.4.2 Local and Regional Faulting

The United States Geological Survey (USGS), with support of State Geological Surveys, and reviewed published work by various researchers, have developed a Quaternary Fault and Fold Database of faults and associated folds that are believed to be sources of earthquakes with magnitudes greater than 6.0 that have occurred during the Quaternary (the past 1.6 million years). The faults and folds within the database have been categorized into four

Classes (Class A-D) based on the level of evidence confirming that a Quaternary fault is of tectonic origin and whether the structure is exposed for mapping or inferred from fault related deformational features. Class A faults have been mapped and categorized based on age of documented activity ranging from Historical faults (activity within last 150 years), Latest Quaternary faults (activity within last 15,000 years), Late Quaternary (activity within last 130,000 years), to Middle to late Quaternary (activity within last 1.6 million years). The Class A faults are considered to have the highest potential to generate earthquakes and/or surface rupture, and the earthquake and surface rupture potential generally increases from oldest to youngest. The evidence for Quaternary deformation and/or tectonic activity progressively decreases for Class B and Class C faults. When geologic evidence indicates that a fault is not of tectonic origin it is considered to be a Class D structure. Such evidence includes joints, fractures, landslides, or erosional and fluvial scarps that resemble fault features, but demonstrate a non-tectonic origin.

The nearest known Class A fault is the La Nacion fault zone (<1.6 million years), which is approximately 9.0 kilometers west of the site. The attached Figure 4 shows regional faults and seismicity with respect to the subject site.

5.4.3 Liquefaction and Seismic Settlement Evaluation

Liquefaction occurs when saturated fine-grained sands or silts lose their physical strengths during earthquake-induced shaking and behave like a liquid. This is due to loss of point-to-point grain contact and transfer of normal stress to the pore water. Liquefaction

potential varies with water level, soil type, material gradation, relative density, and probable intensity and duration of ground shaking. Seismic settlement can occur with or without liquefaction; it results from densification of loose soils.

Based on the noted subsurface conditions, the site is located in an area of potential liquefaction susceptibility and, therefore, a quantitative evaluation of liquefaction and seismic settlement was performed as summarized herein. Input parameters for the liquefaction evaluation were based on the Maximum Considered Earthquake (MCE, 2% probability of exceedance with a 50-year period). A code-based acceleration value (PGA_M) was obtained in accordance with ASCE 7-16 Equation 11.8-1. In order to quantify site liquefaction susceptibility, the computer program SPTLIQ was utilized. The following data were also considered for the analysis:

- Based on direct measurement during the recent subsurface exploration, groundwater was encountered at a depth ranging from approximately 8 to 9 feet bgs. Given the available information, a conservative high groundwater depth of 5 feet bgs was modeled for the liquefaction analysis.
- As indicated, the code-based PGA_M value (0.427g) obtained using ASCE 7-16 Section 11.8.3 was used for the liquefaction evaluation.
- Based on the area tectonic framework and probable seismic hazard deaggregation for PGA (USGS Unified Hazard Tool), the modal contributing magnitude of 6.89 was used for the analysis.

Three borings were analyzed using the PGA and magnitude values obtained. The conservative results of the evaluation based on SPT methods indicate that potential dynamic settlement at the site could approach a total of up to approximately 4.5 inches. Based on the

findings, potential differential dynamic settlements are anticipated to be on the order of 3.0 inches.

Surface effects associated with liquefaction-related settlement can consist of sand boils, soil strength loss, and associated phenomena. In general, the potential for surface manifestations is related to the continuity and thickness of liquefiable layers compared to depth of overlying non-liquefiable material (Ishihara, 1985). Given the depth and distribution of the potential liquefiable layers, significant surface effects are generally not anticipated but cannot be entirely precluded based on the current observed site conditions.

The potential hazard associated with lateral spreading is generally anticipated to be low, based on the lack of significant slopes or free faces adjacent to the site.

Structural design should accommodate the total and differential dynamic settlements provided above in addition to the anticipated static settlement. The preliminary liquefaction evaluation results are provided in Appendix F.

5.4.4 Tsunamis and Seiche Evaluation

According to http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/InundationMaps/Pages/Statewide_Maps.aspx the site is not located within a tsunami inundation zone based on its elevation above sea level. Damage resulting from oscillatory waves (seiches) is considered unlikely due to the absence of large nearby confined bodies of water.

5.4.5 Landsliding

According to mapping by Tan (1995), the site is considered only "Marginally Susceptible" to landsliding. In addition, landslides are not mapped in the site area and were not encountered during the recent field exploration. Based on the preliminary investigation findings, landsliding is not considered to be a significant geologic hazard at the relatively flat-lying site.

5.4.6 Flooding

Based on Federal Emergency Management Agency mapping (FEMA 2012), site improvement areas are located within Zone X, which is defined as: "Areas determined to be outside the 0.2% annual chance floodplain". Therefore, subject to the review of the project civil engineer, the potential for flooding at the site is generally considered to be low.

5.4.7 Compressible and Expansive Soils

Based on observed site conditions and investigation findings, the loose alluvial deposits may be potentially compressible in their current condition.

Based on laboratory analysis, geologic observation, and the generally granular nature of site soils, the near-surface materials are generally anticipated to exhibit a low expansion potential (Expansion Index of 50 or less). However, clayey soils are present in the site area and verification of expansion potential should be performed during site excavations and grading.

5.4.8 Corrosive Soils

Testing of representative site soils is being performed to evaluate the potential corrosive effects on concrete foundations and buried metallic utilities. Soil environments detrimental to concrete generally have elevated levels of soluble sulfates and/or pH levels less than 5.5. According to the American Concrete Institute (ACI) Table 318 4.3.1, specific guidelines have been provided for concrete where concentrations of soluble sulfate (SO_4) in soil exceed 0.10 percent by weight. These guidelines include low water/cement ratios, increased compressive strength, and specific cement-type requirements. A minimum resistivity value less than approximately 5,000 ohm-cm and/or soluble chloride levels in excess of 200 ppm generally indicate a corrosive environment for buried metallic utilities and untreated conduits.

Chemical test results indicate that near-surface soils at the site present a negligible corrosion potential for Portland cement concrete. Based on resistivity testing, we anticipate that the site soils will be interpreted to have a moderate corrosivity potential to buried metallic improvements. As such, it will likely be prudent for buried utilities to utilize plastic piping and/or conduits, where feasible. However, CTE does not practice corrosion engineering. Therefore, if corrosion of improvements is of more significant concern, a qualified corrosion engineer could be consulted.

6.0 SEISMIC DESIGN CRITERIA

The seismic ground motion values listed in the table below were derived in accordance with the ASCE 7-16 Standard that is incorporated into the 2019 California Building Code. This was accomplished by establishing the Site Class based on the soil properties at the site, and calculating site coefficients and parameters using the using the SEAOC-OSHPD U.S. Seismic Design Maps application. Seismic ground motion values are based on the approximate site coordinates of 32.74913° latitude and –117.98828° longitude and the understanding that the fundamental period for the proposed structure will be 0.5 seconds or less. These values are intended for the design of structures to resist the effects of earthquake ground motions.

TABLE 6.0
SEISMIC GROUND MOTION VALUES (CODE-BASED)
2019 CBC AND ASCE 7-16

PARAMETER	VALUE	2019 CBC/ASCE 7-16 REFERENCE
Site Class	D	ASCE 16, Chapter 20
Mapped Spectral Response Acceleration Parameter, S_S	0.785	Figure 1613.2.1 (1)
Mapped Spectral Response Acceleration Parameter, S_1	0.285	Figure 1613.2.1 (2)
Seismic Coefficient, F_a	1.186	Table 1613.2.3 (1)
Seismic Coefficient, F_v	N/A	Table 1613.2.3 (2)
MCE Spectral Response Acceleration Parameter, S_{MS}	0.931	Section 1613.2.3
MCE Spectral Response Acceleration Parameter, S_{M1}	N/A	Section 1613.2.3
Design Spectral Response Acceleration, Parameter S_{DS}	0.621	Section 1613.2.5(1)
Design Spectral Response Acceleration, Parameter S_{D1}	N/A	Section 1613.2.5 (2)
Peak Ground Acceleration PGA_M	0.427	ASCE 16, Section 11.8.3

7.0 CONCLUSIONS

Undocumented Fill was observed at the surface beneath the proposed improvement area to a depth of approximately 3.0 feet bgs. Alluvial soils were observed beneath the fill and extended to depths ranging from approximately 21 to 26 feet bgs. This alluvial unit was found to be potentially susceptible to liquefaction and seismic settlement. Very dense Mission Valley Formation was observed beneath the alluvial soils. Groundwater was encountered at depths ranging from approximately 8.0 to 10.0 feet bgs at the time of investigation.

The site may be subject to strong ground shaking in the event of an earthquake on a regional fault. As noted, the site is considered to be potentially susceptible to liquefaction and seismically induced settlement based on the presence of poorly consolidated soils and relatively shallow depth to groundwater.

Laboratory results indicate that the representative tested soils have a negligible corrosion potential for concrete improvements and moderate corrosion potential for buried metallic improvements.

Based on the investigation findings, the site is generally considered feasible for construction from a geotechnical standpoint, provided the design and construction are appropriate for the potential geological hazards. Remedial excavation, re-compaction, deep foundations, soil improvement, and/or specialized structural design may be required in order to mitigate potential effects associated with dynamic settlement at the site.

It is anticipated that additional field exploration, laboratory testing, quantitative liquefaction evaluation, and engineering analysis will be required by others for final project design and construction.

8.0 LIMITATIONS OF INVESTIGATION

The field evaluation, laboratory testing, and geotechnical analysis is presented in this preliminary report have been conducted according to current engineering practice and the standard of care exercised by the reputable geotechnical consultants performing similar tasks in the area. No other warranty, expressed or implied, is made regarding the conclusions and opinions expressed in this report. Variations may exist and conditions not observed or described in this report may be encountered during further investigation and/or construction.

The percolation test results were obtained in accordance with County standards. However, it should be noted that percolation test results can significantly vary laterally and vertically due to slight changes in soil type, degree of weathering, secondary mineralization, and other physical and chemical variabilities. As such, the test results are considered to be an estimate of percolation and converted infiltration rates for design purposes. No guarantee is made based on the percolation testing related to the actual functionality or longevity of associated infiltration basins or other BMP devices designed from the presented infiltration rates.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

CTE's conclusions and preliminary recommendations are based on an analysis of the observed conditions. If conditions different from those described in this report are encountered, this office should be notified and additional recommendations, if required, will be provided.

CTE appreciates this opportunity to be of service on this project. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Respectfully submitted,

CONSTRUCTION TESTING & ENGINEERING, INC.









Dan T. Math, GE #2665
Principal Engineer

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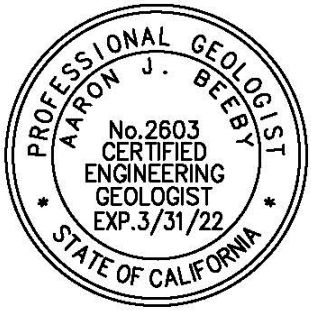
Principal Engineering Geologist

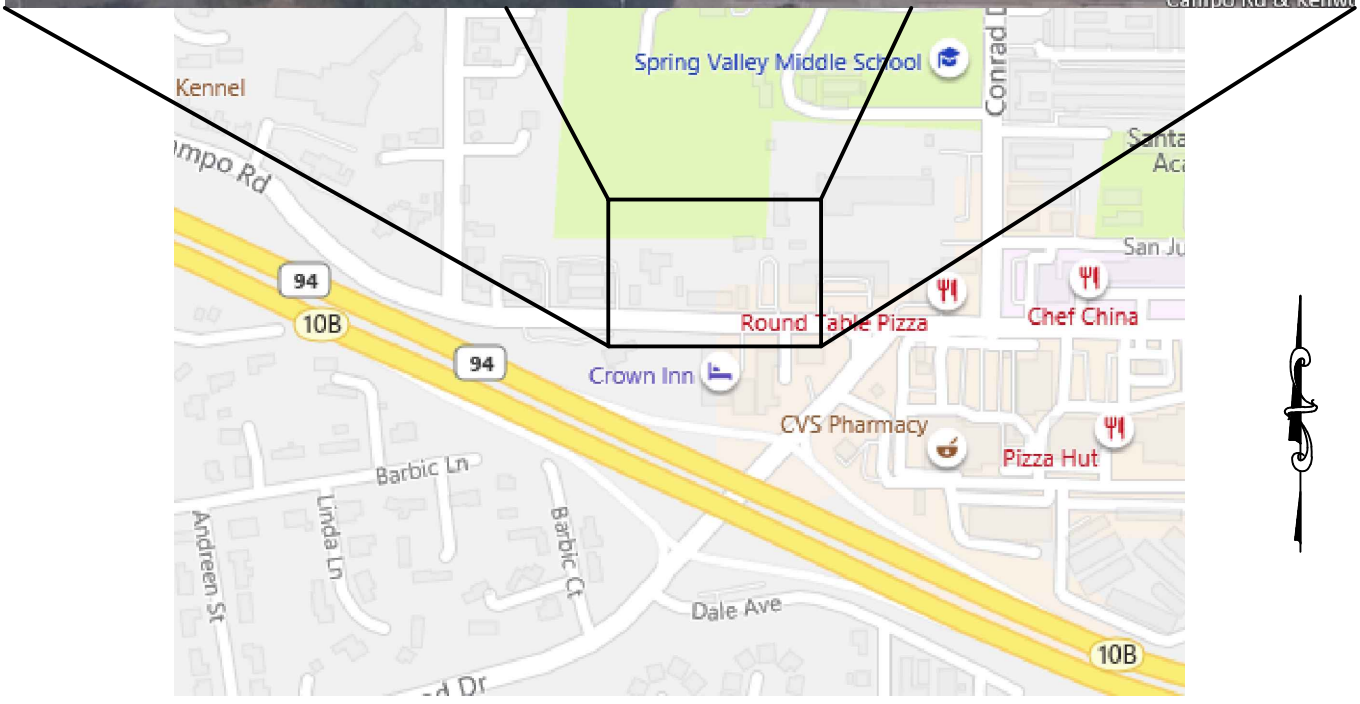




Aaron J. Beeby, CEG #2603
Certified Engineering Geologist

AJB/JFL/DTM:ach





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SITE INDEX MAP

PROPOSED CASA DE ORO LIBRARY
3838 CONRAD DRIVE
SPRING VALLEY, CALIFORNIA

SCALE:	DATE:
AS SHOWN	9/20
CTE JOB NO.: 10-15617G	FIGURE: 1

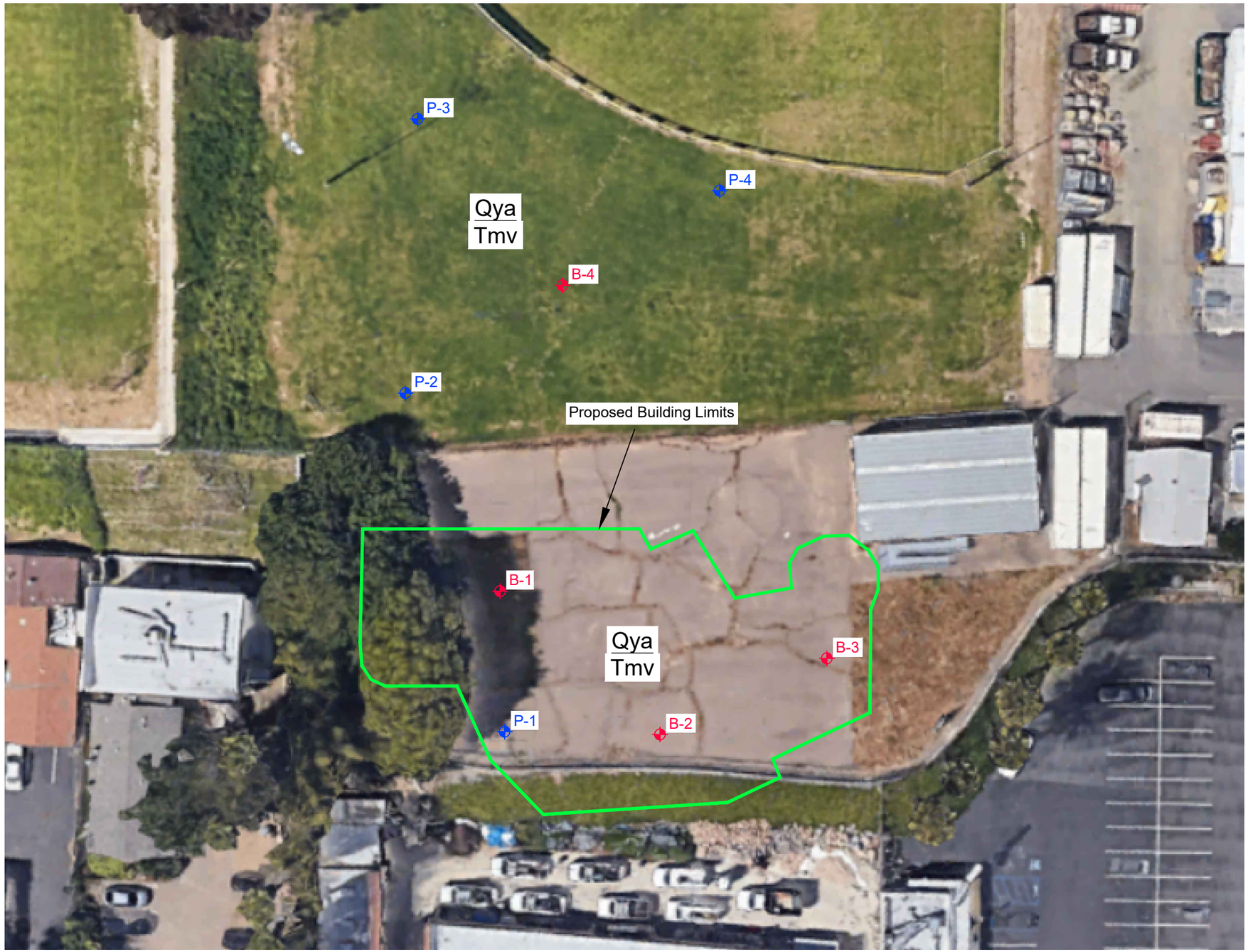
20’ 0 10’ 20’

EXPLANATION

B-4 APPROXIMATE BORING LOCATION

P-4 APPROXIMATE PERCOLATION TEST LOCATION

Qya / Tmv YOUNG ALLUVIAL FLOOD PLAIN DEPOSITS OVER MISSION VALLEY FORMATION



S:\Projects\10-15617G\DWG\Fig 2.dwg

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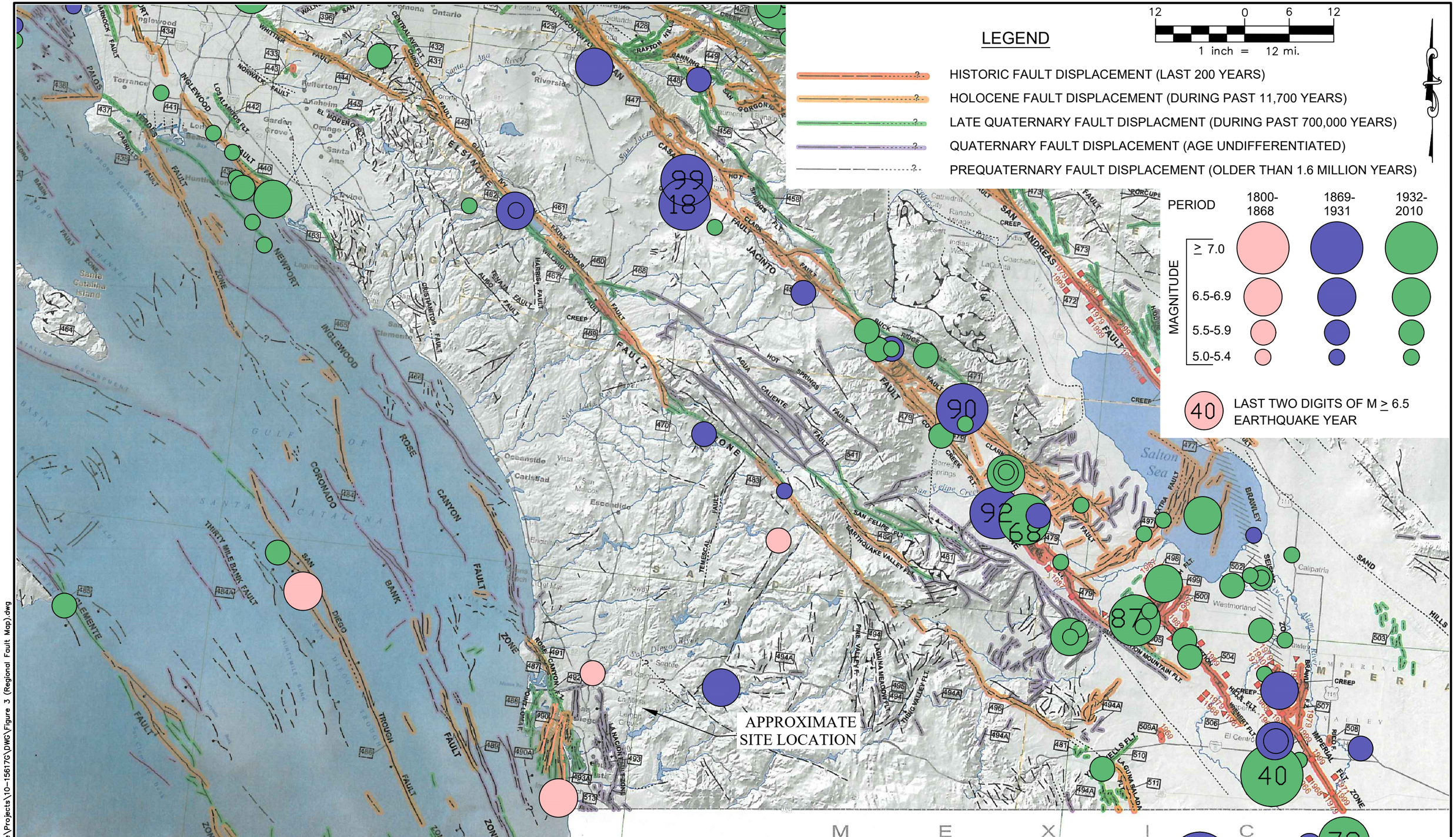
GEOLOGIC/EXPLORATION LOCATION MAP
PROPOSED CASA DE ORO LIBRARY
3838 CONRAD DRIVE
SPRING VALLEY, CALIFORNIA

CTE JOB NO: 10-15617G
SCALE: 1” ~ 40’
DATE: 9/20
FIGURE: 2



NOTES: FAULT ACTIVITY MAP OF CALIFORNIA, 2010, CALIFORNIA GEOLOGIC DATA MAP SERIES MAP NO. 6;
EPICENTERS OF AND AREAS DAMAGED BY M≥5 CALIFORNIA EARTHQUAKES, 1800–1999 ADAPTED AFTER TOPPOZADA, BRANUM, PETERSEN, HALLSTORM, CRAMER, AND REICHLE, 2000, CDMG MAP SHEET 49
REFERENCE FOR ADDITIONAL EXPLANATION; MODIFIED WITH CISN AND USGS SEISMIC MAPS

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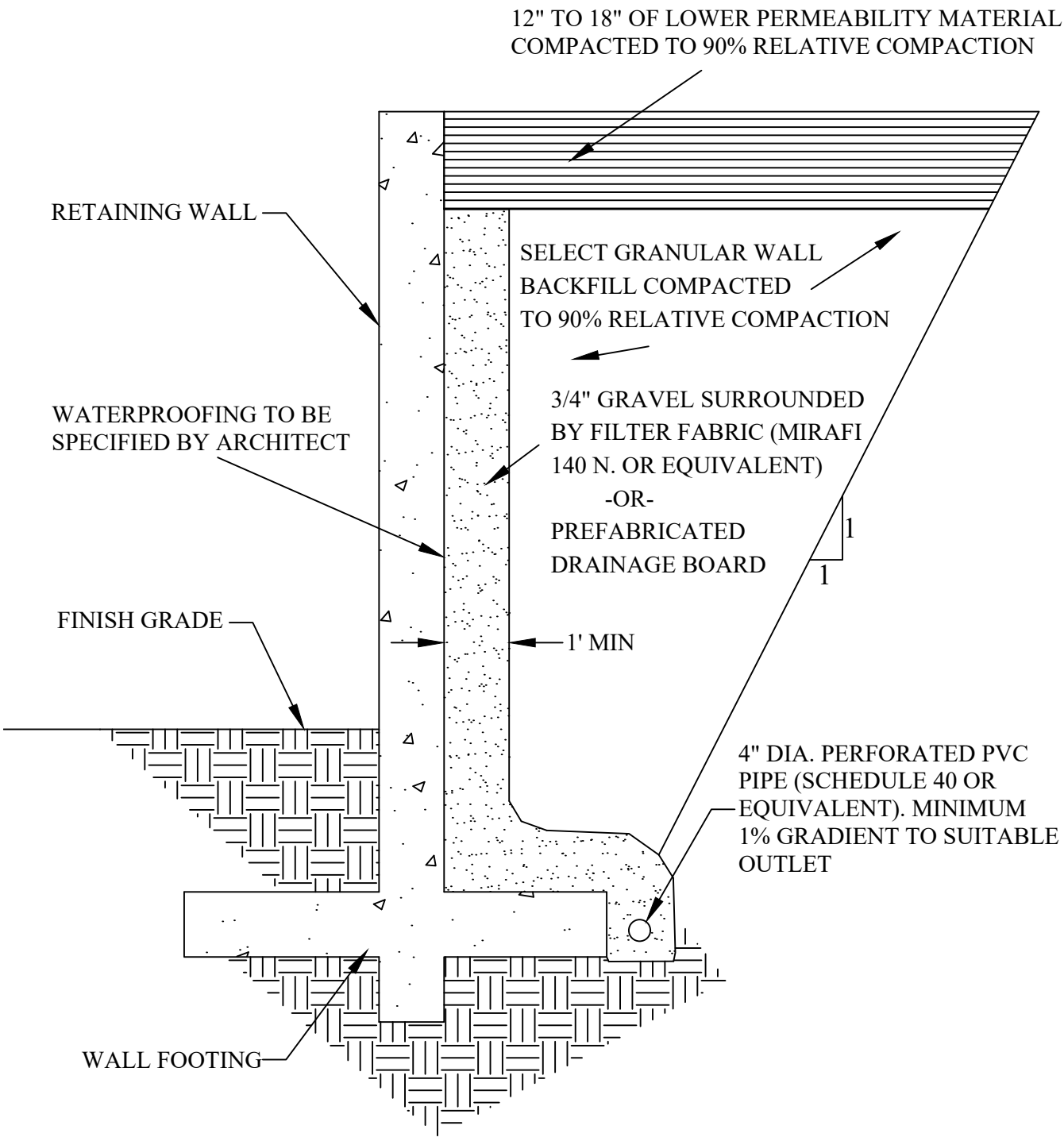
REGIONAL FAULT AND SEISMICITY MAP

PROPOSED CASA DE ORO LIBRARY
3838 CONRAD DRIVE
SPRING VALLEY, CALIFORNIA

CTE JOB NO: 10-15617G
SCALE: 1 inch = 12 miles
DATE: 9/20
FIGURE: 3

\\file01\CTE Share\Projects\10-15617G\DWG\Figure 3 (Regional Fault Map).dwg



*CONCEPTUAL DRAWING

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RETAINING WALL DRAINAGE DETAIL

SCALE:	DATE:
NO SCALE	9/20
CTE JOB NO.:	FIGURE:
10-15617G	4

APPENDIX A

REFERENCES

REFERENCES

1. American Society for Civil Engineers, 2016, “Minimum Design Loads for Buildings and Other Structures,” ASCE/SEI 7-16.

2. ASTM, 2002, “Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort,” Volume 04.08

3. California Building Code, 2019, “California Code of Regulations, Title 24, Part 2, Volume 2 of 2,” California Building Standards Commission, published by ICBO, June.

4. California Division of Mines and Geology, CD 2000-003 “Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region,” compiled by Martin and Ross.

5. California Geological Survey, 2009, Tsunami Inundation Map for Emergency Planning, State of California, County of San Diego.

6. FEMA, 2012, Flood Insurance Rate Map, Panel 1666 of 2375 Map Number 06073C1666G, San Diego County, California and Incorporated Areas

7. Frankel, A.D., Petersen, M.D., Mueller, C.S., Haller, K.M., Wheeler, R.L., Leyendecker, E.V., Wesson, R.L. Harmsen, S.C., Cramer, C.H., Perkins, D.M., and Rukstales, K.S., 2002, Documentation for the 2002 update of the National Seismic Hazard Maps: U.S. Geological Survey Open-File Report 02-420, 33 p.

8. Hart, Earl W., and Bryant, William A., Revised 2018, “Fault-Rupture Hazard Zones in California, Alquist Priolo, Special Studies Zones Act of 1972,” California Division of Mines and Geology, Special Publication 42.

9. Jennings, Charles W., 1994, “Fault Activity Map of California and Adjacent Areas” with Locations and Ages of Recent Volcanic Eruptions.

10. San Diego, County of, February 2016, “Storm Water Design Manual” Appendix D, Approved Infiltration Rate Assessment Methods for Selection of Storm Water BMPs.

11. SEAOC, Blue Book-Seismic Design Recommendations, “Seismically Induced Lateral Earth Pressures on Retaining Structures and Basement Walls,” Article 09.10.010, October 2013.

12. Seed, H.B., and R.V. Whitman, 1970, “Design of Earth Retaining Structures for Dynamic Loads,” in Proceedings, ASCE Specialty Conference on Lateral Stresses in the Ground and Design of Earth-Retaining Structures, pp. 103-147, Ithaca, New York: Cornell University.

13. Tan, Siang S., 1995, “Landslide Hazards in the Southern Part of the San Diego Metropolitan Area, San Diego County, California,” Jamul Mountains Quadrangle, California Division of Mines and Geology Open File Report 95-03, Map No. 33, Plate 33F.

14. Todd, V.R., 2004, “Preliminary Geologic Map of the El Cajon 30’ X 60’ Quadrangle, Southern California, Version 1.0,” USGS Open File Report 2004-1361.

15. Wood, J.H. 1973, Earthquake-Induced Soil Pressures on Structures, Report EERL 73-05. Pasadena: California Institute of Technology.

APPENDIX B

EXPLORATION LOGS

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DEFINITION OF TERMS

PRIMARY DIVISIONS			SYMBOLS	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OF NO FINES
		GRAVELS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS < 5% FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES	SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50		ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SLIGHTLY PLASTIC CLAYEY SILTS
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY, SANDY, SILTS OR LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTY CLAYS
HIGHLY ORGANIC SOILS			PT	PEAT AND OTHER HIGHLY ORGANIC SOILS

GRAIN SIZES

BOULDERS	COBBLES	GRAVEL		SAND			SILTS AND CLAYS
		COARSE	FINE	COARSE	MEDIUM	FINE	

12" 3" 3/4" 4 10 40 200

CLEAR SQUARE SIEVE OPENING U.S. STANDARD SIEVE SIZE

ADDITIONAL TESTS

(OTHER THAN TEST PIT AND BORING LOG COLUMN HEADINGS)

MAX- Maximum Dry Density
GS- Grain Size Distribution
SE- Sand Equivalent
EI- Expansion Index
CHM- Sulfate and Chloride Content , pH, Resistivity
COR - Corrosivity
SD- Sample Disturbed
PM- Permeability
SG- Specific Gravity
HA- Hydrometer Analysis
AL- Atterberg Limits
RV- R-Value
CN- Consolidation
CP- Collapse Potential
HC- Hydrocollapse
REM- Remolded
PP- Pocket Penetrometer
WA- Wash Analysis
DS- Direct Shear
UC- Unconfined Compression
MD- Moisture/Density
M- Moisture
SC- Swell Compression
OI- Organic Impurities

FIGURE: BL1

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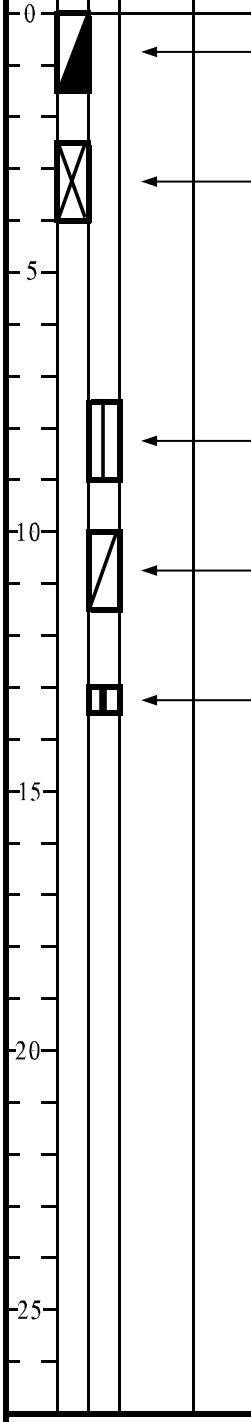
PROJECT: | DRILLER: | SHEET: of
CTE JOB NO: | DRILL METHOD: | DRILLING DATE:
LOGGED BY: | SAMPLE METHOD: | ELEVATION:

BORING LEGEND

Depth (Feet) | Bulk Sample | Driven Type | Blows/Foot | Dry Density (pcf) | Moisture (%) | U.S.C.S. Symbol | Graphic Log | DESCRIPTION | Laboratory Tests



Block or Chunk Sample

Bulk Sample

Standard Penetration Test

Modified Split-Barrel Drive Sampler (Cal Sampler)

Thin Walled Army Corp. of Engineers Sample

Groundwater Table

Soil Type or Classification Change

? ——— ? ——— ? ——— ? ——— ? ——— ? ——— ? —

Formation Change [(Approximate boundaries queried (?)]

"SM"

Quotes are placed around classifications where the soils exist in situ as bedrock

FIGURE: BL2

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PROJECT:	CASA DE ORO LIBRARY (PW)	DRILLER:	BAJA EXPLORATION	SHEET:	1 of 2
CTE JOB NO:	10-15617G	DRILL METHOD:	HOLLOW-STEM AUGER	DRILLING DATE:	9/2/2020
LOGGED BY:	DJT	SAMPLE METHOD:	RING, SPT and BULK	ELEVATION:	~438'

BORING: B-1

Depth (Feet)	Sample Bulk	Sample Driven	Type	Blows/6"	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0							SC-CL		**QUATERNARY UNDOCUMENTED FILL:** Loose to medium dense, slightly moist, brown, clayey fine to medium grained SAND with CLAY, trace gravel	
							SM		**QUATERNARY YOUNG ALLUVIUM:** Medium dense, slightly moist, tannish brown, silty fine to coarse grained SAND with dense cobbles and boulders.	
5				17 15 17			CL/SC		Stiff, slightly moist, brown, fine to medium grained sandy CLAY with clayey SAND.	
10				3 3 3		▼	SP		Loose, wet, brown, poorly-graded fine to coarse grained SAND.	
15				1 2 3			SM-CL		Loose, wet, brown, silty fine to medium grained SAND, with clay.	
20				1 3 5			SP		Loose, wet, brown, poorly-graded, fine to coarse grained SAND.	
25										

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PROJECT:	CASA DE ORO LIBRARY (PW)	DRILLER:	BAJA EXPLORATION	SHEET:	2 of 2
CTE JOB NO:	10-15617G	DRILL METHOD:	HOLLOW-STEM AUGER	DRILLING DATE:	9/2/2020
LOGGED BY:	DJT	SAMPLE METHOD:	RING, SPT and BULK	ELEVATION:	~438'

BORING: B-1

Depth (Feet)	Sample: Bulk	Sample: Driven	Type	Blows/6"	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
25				4 10 20			SP		Loose, wet, brown, poorly-graded, fine to coarse grained SAND.	
							SM/SC		**RESIDUAL SOIL:** Medium dense to dense, moist, yellowish-brown, silty to clayey fine to medium grained SAND, oxidized.	
									Total Depth: 26.5' Groundwater Encountered at Approximately 9' Backfilled with Bentonite/Concrete Mix	
30										
35										
40										
45										
50										

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PROJECT:	CASA DE ORO LIBRARY (PW)	DRILLER:	BAJA EXPLORATION	SHEET:	1 of 2
CTE JOB NO:	10-15617G	DRILL METHOD:	HOLLOW-STEM AUGER	DRILLING DATE:	9/2/2020
LOGGED BY:	DJT	SAMPLE METHOD:	RING, SPT and BULK	ELEVATION:	~436'

BORING: B-2

Depth (Feet)	Sample Bulk	Sample Driven Type	Blows/6"	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		AC = 0-2" **QUATERNARY UNDOCUMENTED FILL:** Loose to medium dense, slightly moist, tannish brown, silty fine to coarse grained SAND with trace gravel and clay. Gravel encountered at 2'	
						SC		**QUATERNARY YOUNG ALLUVIUM:** Loose to medium dense, slightly moist, reddish brown clayey fine to medium grained SAND.	
5			5 5 5						
					▼	SM		Loose, wet, brown, sitly fine to medium grained SAND, trace gravel.	
10			3 5 8						
						SM/SC/CL		Loose to medium dense, wet, brown, clayey to silty fine to coarse grained SAND with interbedded stiff CLAY.	
15			2 3 7					Clay seam at 16.5'	
20			6 12 16					Clay seam at 21'	
25									

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PROJECT:	CASA DE ORO LIBRARY (PW)	DRILLER:	BAJA EXPLORATION	SHEET:	2	of	2
CTE JOB NO:	10-15617G	DRILL METHOD:	HOLLOW-STEM AUGER	DRILLING DATE:			9/2/2020
LOGGED BY:	DJT	SAMPLE METHOD:	RING, SPT and BULK	ELEVATION:			~436'

BORING: B-2

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/6"	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
25			7 22 24			SM/SC/CL		Loose to medium dense, wet, brown, clayey to silty fine to coarse grained SAND with interbedded stiff CLAY.	
						CL		**RESIDUAL SOIL:** Very stiff, moist brown CLAY	
						"SM"		**TERTIARY MISSION VALLEY FORMATION:** Very dense, dry, pale blue, SANDSTONE, highly weathered. Excavates as silty fine grained SAND.	
30			6 50						
								Total Depth: 31.0' Groundwater Encountered at Approximately 8' Backfilled with Bentonite/Concrete Mix	
35									
40									
45									
50									

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PROJECT:	CASA DE ORO LIBRARY (PW)	DRILLER:	BAJA EXPLORATION	SHEET:	1 of 2
CTE JOB NO:	10-15617G	DRILL METHOD:	HOLLOW-STEM AUGER	DRILLING DATE:	9/2/2020
LOGGED BY:	DJT	SAMPLE METHOD:	RING, SPT and BULK	ELEVATION:	~437'

BORING: B-3

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/6"	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						CL		AC = 0-2" **QUATERNARY UNDOCUMENTED FILL:** Soft to medium stiff, slgihtly moist, dark brown, fine to medium grained sandy CLAY.	
						CL		**QUATERNARY YOUNG ALLUVIUM:** Medium stiff, moist, reddish-brown, fine to medium grained sandy CLAY, trace cobble.	
5			3 3 3						
						SM		Loose to meidum dense, slightly moist, dark brown silty fine to meidum grained SAND.	
					▼	SC-CL		Medium dense, wet, brown, clayey fine to medium grained SAND with interbedded CLAY.	
10			1 5 8						
						SM		Medium dense, wet, brown, sitly fine to medium grained SAND, trace clay.	
15			1 7 9						
						CL		Stiff, wet, reddish brown, CLAY.	
20			7 11 13			SM/SC		**RESIDUAL SOIL:** Medium dense, moist, pale brown to gray, silty to clayey SAND.	
						"SM"		**TERTIARY MISSION VALLEY FORMATION:** Very dense, dry, pale gray, silty fine to medium grained SANDSTONE.	
25									

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PROJECT:	CASA DE ORO LIBRARY (PW)	DRILLER:	BAJA EXPLORATION	SHEET:	2 of 2
CTE JOB NO:	10-15617G	DRILL METHOD:	HOLLOW-STEM AUGER	DRILLING DATE:	9/2/2020
LOGGED BY:	DJT	SAMPLE METHOD:	RING, SPT and BULK	ELEVATION:	~437'

BORING: B-3

Depth (Feet)	Sample Bulk	Sample Driven	Type	Blows/6"	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
25				16 30 44			"SM"		Very dense, dry, pale gray, silty fine to medium grained SANDSTONE.	
									Total Depth: 26.5' Groundwater Encountered at Approximately 9' Backfilled with Bentonite/Concrete Mix	
30										
35										
40										
45										
50										

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PROJECT:	CASA DE ORO LIBRARY (PW)	DRILLER:	BAJA EXPLORATION	SHEET:	1	of	2
CTE JOB NO:	10-15617G	DRILL METHOD:	HOLLOW-STEM AUGER	DRILLING DATE:			9/2/2020
LOGGED BY:	DJT	SAMPLE METHOD:	RING, SPT and BULK	ELEVATION:			~438.'

BORING: B-4

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/6"	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0	X					CL		Topsoil: 0-6" **QUATERNARY YOUNG ALLUVIUM:** Soft to medium stiff, slgihtly moist, dark brown, fine to medium grained sandy CLAY.	
5			4 3 2			SM		Loose, moist, brown silty fine to coarse grained SAND.	
								Total Depth: 6.5' No Groundwater Encountered Backfilled with Bentonite/Concrete Mix	
10									
15									
20									
25									

APPENDIX C

LABORATORY METHODS AND RESULTS

APPENDIX C
LABORATORY METHODS AND RESULTS

Laboratory Testing Program

Laboratory tests were performed on representative soil samples to detect their relative engineering properties. Tests were performed following test methods of the American Society for Testing Materials or other accepted standards. The following presents a brief description of the various test methods used.

Classification

Soils were classified visually according to the Unified Soil Classification System. Visual classifications were supplemented by laboratory testing of selected samples according to ASTM D2487. The soil classifications are shown on the Exploration Logs in Appendix B.

In-Place Moisture/Density

The in-place moisture content and dry unit weight of selected samples were determined using relatively undisturbed chunk soil samples.

Modified Proctor

Laboratory maximum dry density and optimum moisture content were evaluated according to ASTM D 1557, Method A. A mechanically operated rammer was used during the compaction process.

Expansion Index

Expansion testing was performed on selected samples of the matrix of the on-site soils according to ASTM D 4829.

Resistance "R" Value

The resistance "R"-value was measured by the California Test. 301. The graphically determined "R" value at an exudation pressure of 300 pounds per square inch is the value used for pavement section calculation.

Particle-Size Analysis

Particle-size analyses were performed on selected representative samples according to ASTM D 422.

Atterberg Limits

The procedure of ASTM D4518-84 was used to measure the liquid limit, plastic limit and plasticity index of representative samples.

Chemical Analysis

Soil materials were collected with sterile sampling equipment and tested for Sulfate and Chloride content, pH, Corrosivity, and Resistivity.

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EXPANSION INDEX TEST

ASTM D 4829

LOCATION	DEPTH (feet)	EXPANSION INDEX	EXPANSION POTENTIAL
B-3	0-5	38	Low

IN-PLACE MOISTURE AND DENSITY

LOCATION	DEPTH (feet)	% MOISTURE	DRY DENSITY
B-2	10	11.4	119.8

SULFATE

LOCATION	DEPTH (feet)	RESULTS ppm
B-2	0-5	28.9

CHLORIDE

LOCATION	DEPTH (feet)	RESULTS ppm
B-2	0-5	ND

p.H.

LOCATION	DEPTH (feet)	RESULTS
B-2	0-5	8.23

RESISTIVITY

CALIFORNIA TEST 424

LOCATION	DEPTH (feet)	RESULTS ohms-cm
B-2	0-5	7980

ATTERBERG LIMITS

LOCATION	DEPTH (feet)	LIQUID LIMIT	PLASTICITY INDEX	CLASSIFICATION
B-1	15	Non-Plastic	Non-Plastic	Non-Plastic
B-1	25	Non-Plastic	Non-Plastic	Non-Plastic
B-2	10	Non-Plastic	Non-Plastic	Non-Plastic
B-2	15	Non-Plastic	Non-Plastic	Non-Plastic
B-2	20	26	9	CL
B-2	25	28	13	CL
B-3	10	22	8	CL
B-3	20	39	21	CL

MODIFIED PROCTOR

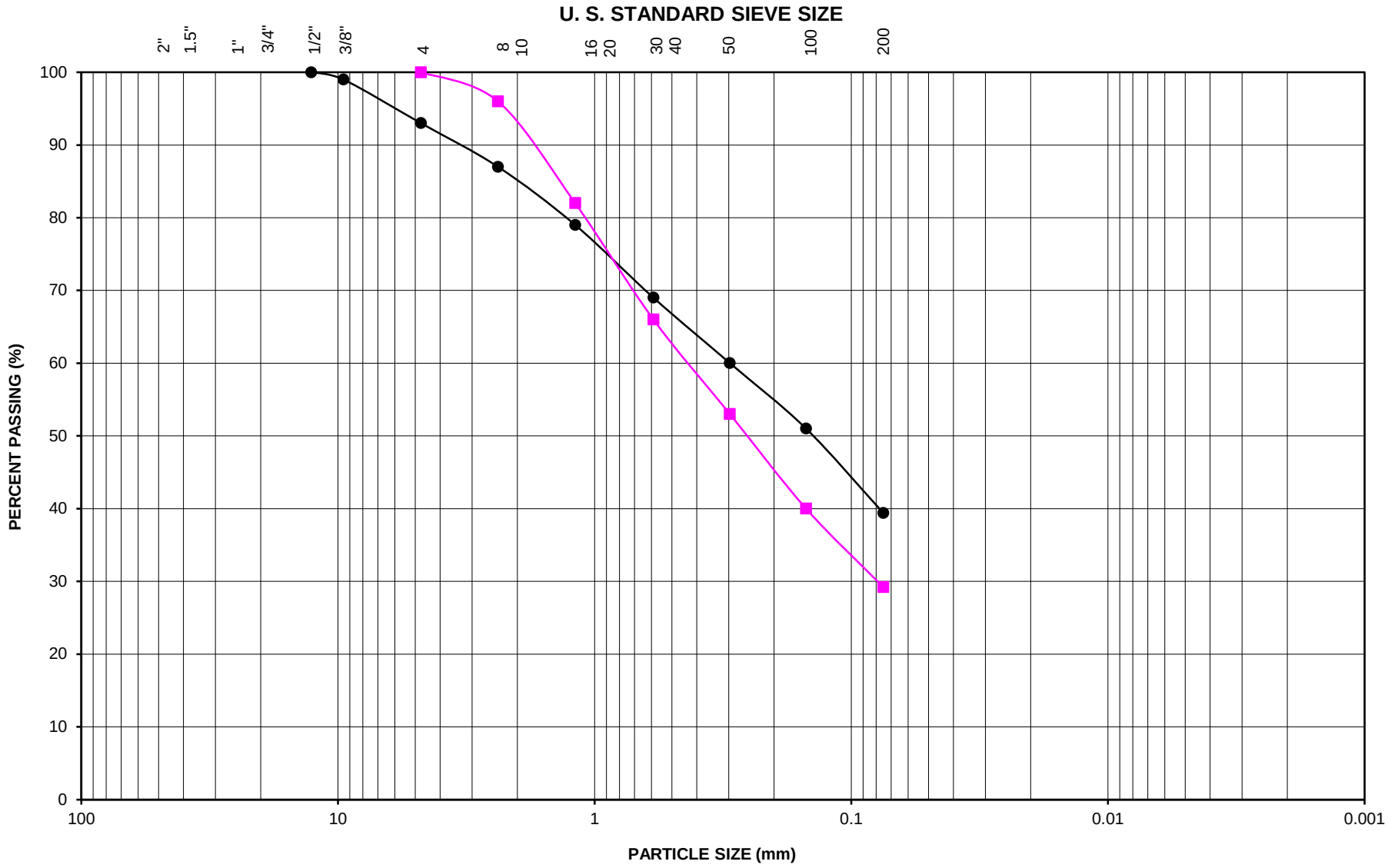
ASTM D 1557

LOCATION	DEPTH (feet)	MAXIUM DRY DENSITY (PCF)	OPTIMUM MOISTURE (%)
B-3	0-5	121.1	13.1

RESISTANCE "R"-VALUE

CALTEST 301

LOCATION	DEPTH (feet)	R-VALUE
B-4	0-5	12



PARTICLE SIZE ANALYSIS

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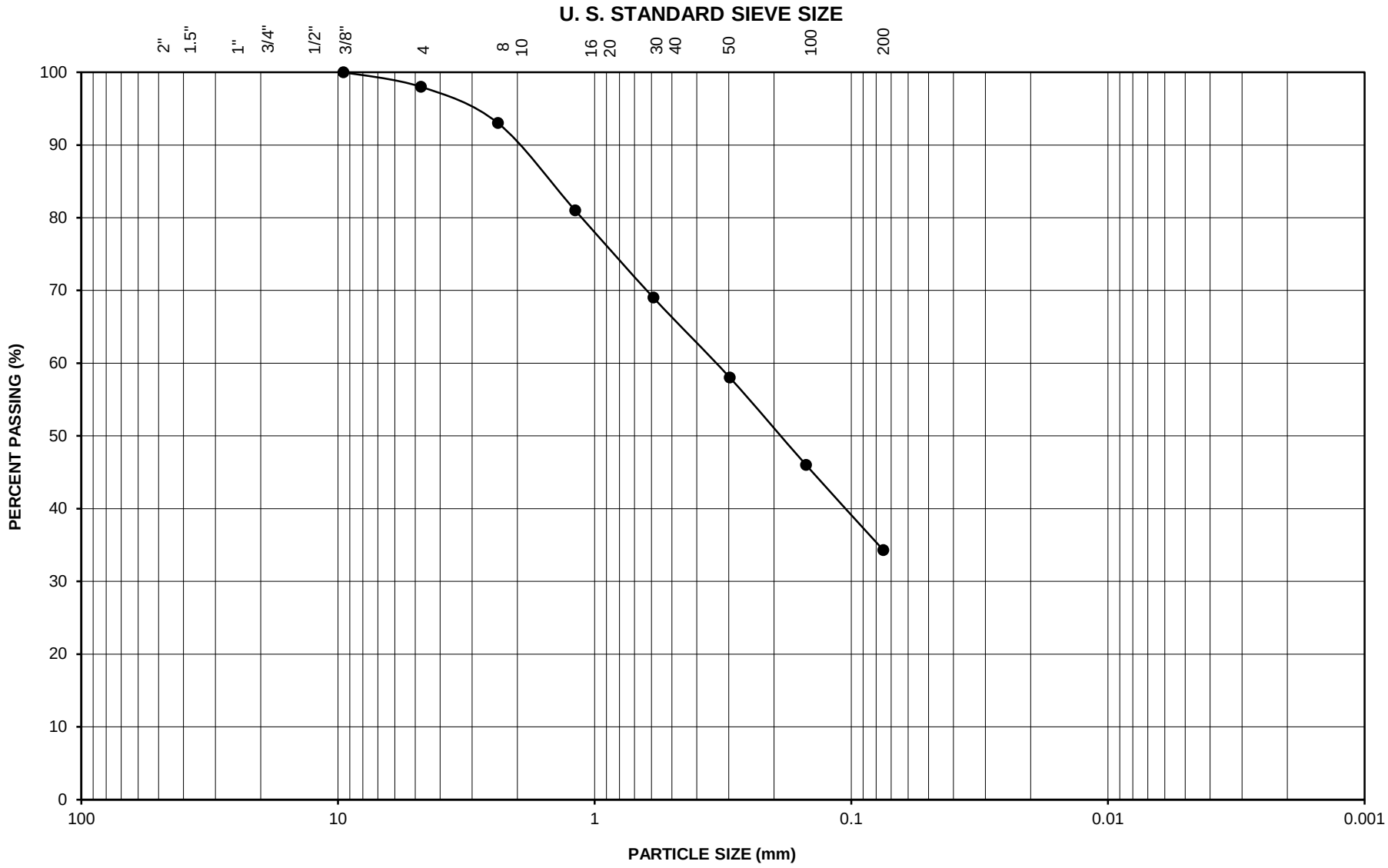
Sample Designation	Sample Depth (feet)	Symbol	Liquid Limit (%)	Plasticity Index	Classification
B-2	5	●			SC
B-2	15	■			SM/SC
CTE JOB NUMBER:		10-15617G		FIGURE:	C-1



PARTICLE SIZE ANALYSIS

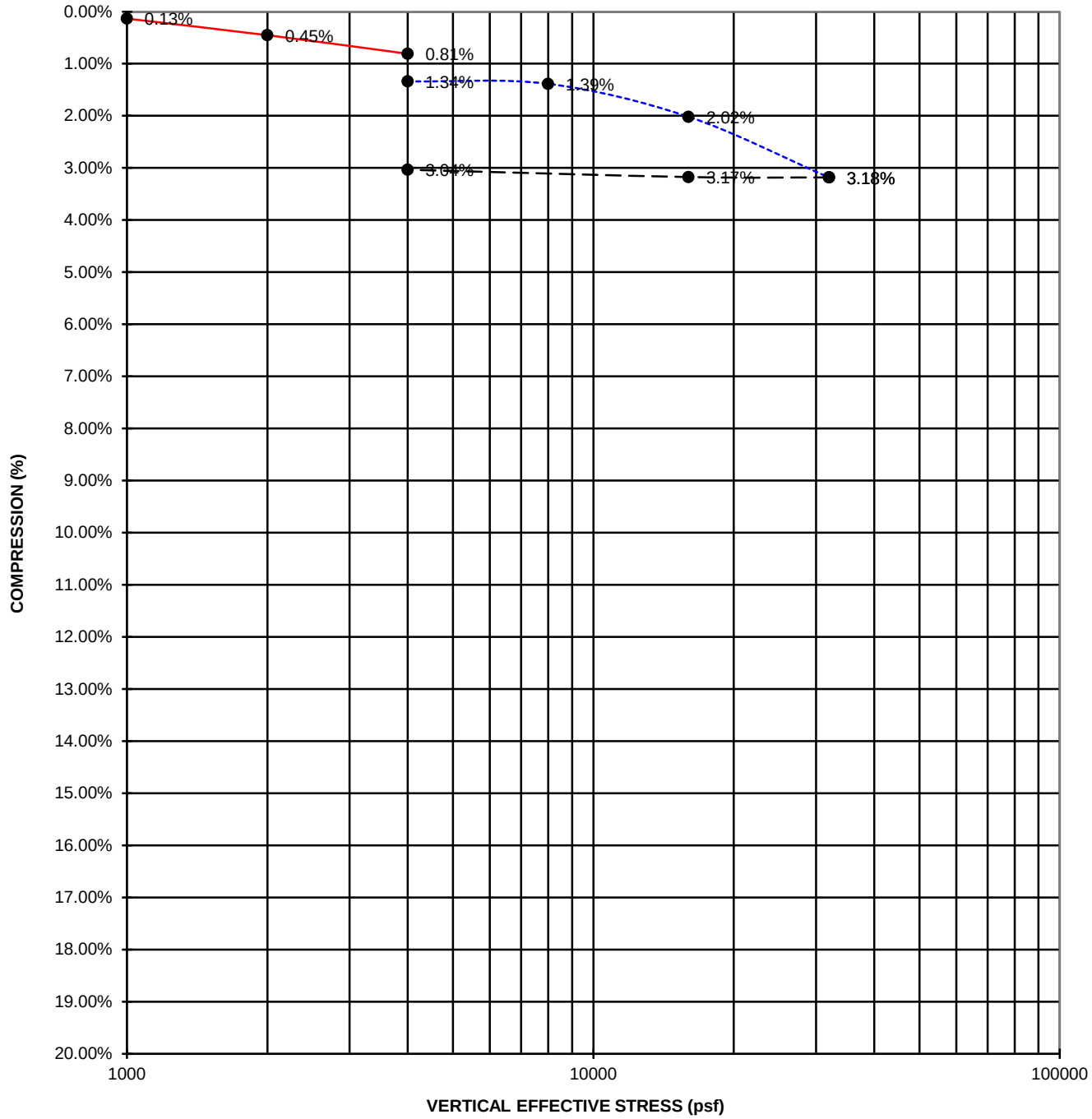
CTE INC.
Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

Sample Designation	Sample Depth (feet)	Symbol	Liquid Limit (%)	Plasticity Index	Classification
B-2	25	●			SM/SC

CTE JOB NUMBER: 10-15617G FIGURE: C-2

Construction Testing & Engineering, Inc.

Inspection | Testing | Geotechnical | Environmental & Construction Engineering | Civil Engineering | Surveying



Consolidation Test ASTM D2435

Project Name:	Casa De Oro Library				
Project Number:	10-15617G	Sample Date:	9/2/2020	Initial Moisture (%):	11.4
Lab Number:	31213	Test Date:	9/10/2020	Final Moisture (%):	9.6
Sample Location:	B-2 @ 10'	Tested By:	JH	Initial Dry Density (PCF):	119.8
Sample Description:	Moderate Brown (SM)			Final Dry Density (PCF):	123.6

APPENDIX D

STANDARD SPECIFICATIONS FOR GRADING

Section 1 - General

Construction Testing & Engineering, Inc. presents the following standard recommendations for grading and other associated operations on construction projects. These guidelines should be considered a portion of the project specifications. Recommendations contained in the body of the previously presented soils report shall supersede the recommendations and or requirements as specified herein. The project geotechnical consultant shall interpret disputes arising out of interpretation of the recommendations contained in the soils report or specifications contained herein.

Section 2 - Responsibilities of Project Personnel

The geotechnical consultant should provide observation and testing services sufficient to general conformance with project specifications and standard grading practices. The geotechnical consultant should report any deviations to the client or his authorized representative.

The Client should be chiefly responsible for all aspects of the project. He or his authorized representative has the responsibility of reviewing the findings and recommendations of the geotechnical consultant. He shall authorize or cause to have authorized the Contractor and/or other consultants to perform work and/or provide services. During grading the Client or his authorized representative should remain on-site or should remain reasonably accessible to all concerned parties in order to make decisions necessary to maintain the flow of the project.

The Contractor is responsible for the safety of the project and satisfactory completion of all grading and other associated operations on construction projects, including, but not limited to, earth work in accordance with the project plans, specifications and controlling agency requirements.

Section 3 - Preconstruction Meeting

A preconstruction site meeting should be arranged by the owner and/or client and should include the grading contractor, design engineer, geotechnical consultant, owner’s representative and representatives of the appropriate governing authorities.

Section 4 - Site Preparation

The client or contractor should obtain the required approvals from the controlling authorities for the project prior, during and/or after demolition, site preparation and removals, etc. The appropriate approvals should be obtained prior to proceeding with grading operations.

Clearing and grubbing should consist of the removal of vegetation such as brush, grass, woods, stumps, trees, root of trees and otherwise deleterious natural materials from the areas to be graded. Clearing and grubbing should extend to the outside of all proposed excavation and fill areas.

Demolition should include removal of buildings, structures, foundations, reservoirs, utilities (including underground pipelines, septic tanks, leach fields, seepage pits, cisterns, mining shafts, tunnels, etc.) and other man-made surface and subsurface improvements from the areas to be graded. Demolition of utilities should include proper capping and/or rerouting pipelines at the project perimeter and cutoff and capping of wells in accordance with the requirements of the governing authorities and the recommendations of the geotechnical consultant at the time of demolition.

Trees, plants or man-made improvements not planned to be removed or demolished should be protected by the contractor from damage or injury.

Debris generated during clearing, grubbing and/or demolition operations should be wasted from areas to be graded and disposed off-site. Clearing, grubbing and demolition operations should be performed under the observation of the geotechnical consultant.

Section 5 - Site Protection

Protection of the site during the period of grading should be the responsibility of the contractor. Unless other provisions are made in writing and agreed upon among the concerned parties, completion of a portion of the project should not be considered to preclude that portion or adjacent areas from the requirements for site protection until such time as the entire project is complete as identified by the geotechnical consultant, the client and the regulating agencies.

Precautions should be taken during the performance of site clearing, excavations and grading to protect the work site from flooding, ponding or inundation by poor or improper surface drainage. Temporary provisions should be made during the rainy season to adequately direct surface drainage away from and off the work site. Where low areas cannot be avoided, pumps should be kept on hand to continually remove water during periods of rainfall.

Rain related damage should be considered to include, but may not be limited to, erosion, silting, saturation, swelling, structural distress and other adverse conditions as determined by the geotechnical consultant. Soil adversely affected should be classified as unsuitable materials and should be subject to overexcavation and replacement with compacted fill or other remedial grading as recommended by the geotechnical consultant.

The contractor should be responsible for the stability of all temporary excavations. Recommendations by the geotechnical consultant pertaining to temporary excavations (e.g., backcuts) are made in consideration of stability of the completed project and, therefore, should not be considered to preclude the responsibilities of the contractor. Recommendations by the geotechnical consultant should not be considered to preclude requirements that are more restrictive by the regulating agencies. The contractor should provide during periods of extensive rainfall plastic sheeting to prevent unprotected slopes from becoming saturated and unstable. When deemed appropriate by the geotechnical consultant or governing agencies the contractor shall install checkdams, desilting basins, sand bags or other drainage control measures.

In relatively level areas and/or slope areas, where saturated soil and/or erosion gullies exist to depths of greater than 1.0 foot; they should be overexcavated and replaced as compacted fill in accordance with the applicable specifications. Where affected materials exist to depths of 1.0 foot or less below proposed finished grade, remedial grading by moisture conditioning in-place, followed by thorough recompaction in accordance with the applicable grading guidelines herein may be attempted. If the desired results are not achieved, all affected materials should be overexcavated and replaced as compacted fill in accordance with the slope repair recommendations herein. If field conditions dictate, the geotechnical consultant may recommend other slope repair procedures.

Section 6 - Excavations

6.1 Unsuitable Materials

Materials that are unsuitable should be excavated under observation and recommendations of the geotechnical consultant. Unsuitable materials include, but may not be limited to, dry, loose, soft, wet, organic compressible natural soils and fractured, weathered, soft bedrock and nonengineered or otherwise deleterious fill materials.

Material identified by the geotechnical consultant as unsatisfactory due to its moisture conditions should be overexcavated; moisture conditioned as needed, to a uniform at or above optimum moisture condition before placement as compacted fill.

If during the course of grading adverse geotechnical conditions are exposed which were not anticipated in the preliminary soil report as determined by the geotechnical consultant additional exploration, analysis, and treatment of these problems may be recommended.

6.2 Cut Slopes

Unless otherwise recommended by the geotechnical consultant and approved by the regulating agencies, permanent cut slopes should not be steeper than 2:1 (horizontal: vertical).

The geotechnical consultant should observe cut slope excavation and if these excavations expose loose cohesionless, significantly fractured or otherwise unsuitable material, the materials should be overexcavated and replaced with a compacted stabilization fill. If encountered specific cross section details should be obtained from the Geotechnical Consultant.

When extensive cut slopes are excavated or these cut slopes are made in the direction of the prevailing drainage, a non-erodible diversion swale (brow ditch) should be provided at the top of the slope.

6.3 Pad Areas

All lot pad areas, including side yard terrace containing both cut and fill materials, transitions, located less than 3 feet deep should be overexcavated to a depth of 3 feet and replaced with a uniform compacted fill blanket of 3 feet. Actual depth of overexcavation may vary and should be delineated by the geotechnical consultant during grading, especially where deep or drastic transitions are present.

For pad areas created above cut or natural slopes, positive drainage should be established away from the top-of-slope. This may be accomplished utilizing a berm drainage swale and/or an appropriate pad gradient. A gradient in soil areas away from the top-of-slopes of 2 percent or greater is recommended.

Section 7 - Compacted Fill

All fill materials should have fill quality, placement, conditioning and compaction as specified below or as approved by the geotechnical consultant.

7.1 Fill Material Quality

Excavated on-site or import materials which are acceptable to the geotechnical consultant may be utilized as compacted fill, provided trash, vegetation and other deleterious materials are removed prior to placement. All import materials anticipated for use on-site should be sampled tested and approved prior to and placement is in conformance with the requirements outlined.

Rocks 12 inches in maximum and smaller may be utilized within compacted fill provided sufficient fill material is placed and thoroughly compacted over and around all rock to effectively fill rock voids. The amount of rock should not exceed 40 percent by dry weight passing the 3/4-inch sieve. The geotechnical consultant may vary those requirements as field conditions dictate.

Where rocks greater than 12 inches but less than four feet of maximum dimension are generated during grading, or otherwise desired to be placed within an engineered fill, special handling in accordance with the recommendations below. Rocks greater than four feet should be broken down or disposed off-site.

7.2 Placement of Fill

Prior to placement of fill material, the geotechnical consultant should observe and approve the area to receive fill. After observation and approval, the exposed ground surface should be scarified to a depth of 6 to 8 inches. The scarified material should be conditioned (i.e. moisture added or air dried by continued discing) to achieve a moisture content at or slightly above optimum moisture conditions and compacted to a minimum of 90 percent of the maximum density or as otherwise recommended in the soils report or by appropriate government agencies.

Compacted fill should then be placed in thin horizontal lifts not exceeding eight inches in loose thickness prior to compaction. Each lift should be moisture conditioned as needed, thoroughly blended to achieve a consistent moisture content at or slightly above optimum and thoroughly compacted by mechanical methods to a minimum of 90 percent of laboratory maximum dry density. Each lift should be treated in a like manner until the desired finished grades are achieved.

The contractor should have suitable and sufficient mechanical compaction equipment and watering apparatus on the job site to handle the amount of fill being placed in consideration of moisture retention properties of the materials and weather conditions.

When placing fill in horizontal lifts adjacent to areas sloping steeper than 5:1 (horizontal: vertical), horizontal keys and vertical benches should be excavated into the adjacent slope area. Keying and benching should be sufficient to provide at least six-foot wide benches and a minimum of four feet of vertical bench height within the firm natural ground, firm bedrock or engineered compacted fill. No compacted fill should be placed in an area after keying and benching until the geotechnical consultant has reviewed the area. Material generated by the benching operation should be moved sufficiently away from

the bench area to allow for the recommended review of the horizontal bench prior to placement of fill.

Within a single fill area where grading procedures dictate two or more separate fills, temporary slopes (false slopes) may be created. When placing fill adjacent to a false slope, benching should be conducted in the same manner as above described. At least a 3-foot vertical bench should be established within the firm core of adjacent approved compacted fill prior to placement of additional fill. Benching should proceed in at least 3-foot vertical increments until the desired finished grades are achieved.

Prior to placement of additional compacted fill following an overnight or other grading delay, the exposed surface or previously compacted fill should be processed by scarification, moisture conditioning as needed to at or slightly above optimum moisture content, thoroughly blended and recompacted to a minimum of 90 percent of laboratory maximum dry density. Where unsuitable materials exist to depths of greater than one foot, the unsuitable materials should be over-excavated.

Following a period of flooding, rainfall or overwatering by other means, no additional fill should be placed until damage assessments have been made and remedial grading performed as described herein.

Rocks 12 inch in maximum dimension and smaller may be utilized in the compacted fill provided the fill is placed and thoroughly compacted over and around all rock. No oversize material should be used within 3 feet of finished pad grade and within 1 foot of other compacted fill areas. Rocks 12 inches up to four feet maximum dimension should be placed below the upper 10 feet of any fill and should not be closer than 15 feet to any slope face. These recommendations could vary as locations of improvements dictate. Where practical, oversized material should not be placed below areas where structures or deep utilities are proposed. Oversized material should be placed in windrows on a clean, overexcavated or unyielding compacted fill or firm natural ground surface. Select native or imported granular soil (S.E. 30 or higher) should be placed and thoroughly flooded over and around all windrowed rock, such that voids are filled. Windrows of oversized material should be staggered so those successive strata of oversized material are not in the same vertical plane.

It may be possible to dispose of individual larger rock as field conditions dictate and as recommended by the geotechnical consultant at the time of placement.

The contractor should assist the geotechnical consultant and/or his representative by digging test pits for removal determinations and/or for testing compacted fill. The contractor should provide this work at no additional cost to the owner or contractor's client.

Fill should be tested by the geotechnical consultant for compliance with the recommended relative compaction and moisture conditions. Field density testing should conform to ASTM Method of Test D 1556-00, D 2922-04. Tests should be conducted at a minimum of approximately two vertical feet or approximately 1,000 to 2,000 cubic yards of fill placed. Actual test intervals may vary as field conditions dictate. Fill found not to be in conformance with the grading recommendations should be removed or otherwise handled as recommended by the geotechnical consultant.

7.3 Fill Slopes

Unless otherwise recommended by the geotechnical consultant and approved by the regulating agencies, permanent fill slopes should not be steeper than 2:1 (horizontal: vertical).

Except as specifically recommended in these grading guidelines compacted fill slopes should be over-built two to five feet and cut back to grade, exposing the firm, compacted fill inner core. The actual amount of overbuilding may vary as field conditions dictate. If the desired results are not achieved, the existing slopes should be overexcavated and reconstructed under the guidelines of the geotechnical consultant. The degree of overbuilding shall be increased until the desired compacted slope surface condition is achieved. Care should be taken by the contractor to provide thorough mechanical compaction to the outer edge of the overbuilt slope surface.

At the discretion of the geotechnical consultant, slope face compaction may be attempted by conventional construction procedures including backrolling. The procedure must create a firmly compacted material throughout the entire depth of the slope face to the surface of the previously compacted firm fill intercore.

During grading operations, care should be taken to extend compactive effort to the outer edge of the slope. Each lift should extend horizontally to the desired finished slope surface or more as needed to ultimately established desired grades. Grade during construction should not be allowed to roll off at the edge of the slope. It may be helpful to elevate slightly the outer edge of the slope. Slough resulting from the placement of individual lifts should not be allowed to drift down over previous lifts. At intervals not

exceeding four feet in vertical slope height or the capability of available equipment, whichever is less, fill slopes should be thoroughly dozer trackrolled.

For pad areas above fill slopes, positive drainage should be established away from the top-of-slope. This may be accomplished using a berm and pad gradient of at least two percent.

Section 8 - Trench Backfill

Utility and/or other excavation of trench backfill should, unless otherwise recommended, be compacted by mechanical means. Unless otherwise recommended, the degree of compaction should be a minimum of 90 percent of the laboratory maximum density.

Within slab areas, but outside the influence of foundations, trenches up to one foot wide and two feet deep may be backfilled with sand and consolidated by jetting, flooding or by mechanical means. If on-site materials are utilized, they should be wheel-rolled, tamped or otherwise compacted to a firm condition. For minor interior trenches, density testing may be deleted or spot testing may be elected if deemed necessary, based on review of backfill operations during construction.

If utility contractors indicate that it is undesirable to use compaction equipment in close proximity to a buried conduit, the contractor may elect the utilization of light weight mechanical compaction equipment and/or shading of the conduit with clean, granular material, which should be thoroughly jetted in-place above the conduit, prior to initiating mechanical compaction procedures. Other methods of utility trench compaction may also be appropriate, upon review of the geotechnical consultant at the time of construction.

In cases where clean granular materials are proposed for use in lieu of native materials or where flooding or jetting is proposed, the procedures should be considered subject to review by the geotechnical consultant. Clean granular backfill and/or bedding are not recommended in slope areas.

Section 9 - Drainage

Where deemed appropriate by the geotechnical consultant, canyon subdrain systems should be installed in accordance with CTE's recommendations during grading.

Typical subdrains for compacted fill buttresses, slope stabilization or sidehill masses, should be installed in accordance with the specifications.

Roof, pad and slope drainage should be directed away from slopes and areas of structures to suitable disposal areas via non-erodible devices (i.e., gutters, downspouts, and concrete swales).

For drainage in extensively landscaped areas near structures, (i.e., within four feet) a minimum of 5 percent gradient away from the structure should be maintained. Pad drainage of at least 2 percent should be maintained over the remainder of the site.

Drainage patterns established at the time of fine grading should be maintained throughout the life of the project. Property owners should be made aware that altering drainage patterns could be detrimental to slope stability and foundation performance.

Section 10 - Slope Maintenance

10.1 - Landscape Plants

To enhance surficial slope stability, slope planting should be accomplished at the completion of grading. Slope planting should consist of deep-rooting vegetation requiring little watering. Plants native to the southern California area and plants relative to native plants are generally desirable. Plants native to other semi-arid and arid areas may also be appropriate. A Landscape Architect should be the best party to consult regarding actual types of plants and planting configuration.

10.2 - Irrigation

Irrigation pipes should be anchored to slope faces, not placed in trenches excavated into slope faces.

Slope irrigation should be minimized. If automatic timing devices are utilized on irrigation systems, provisions should be made for interrupting normal irrigation during periods of rainfall.

10.3 - Repair

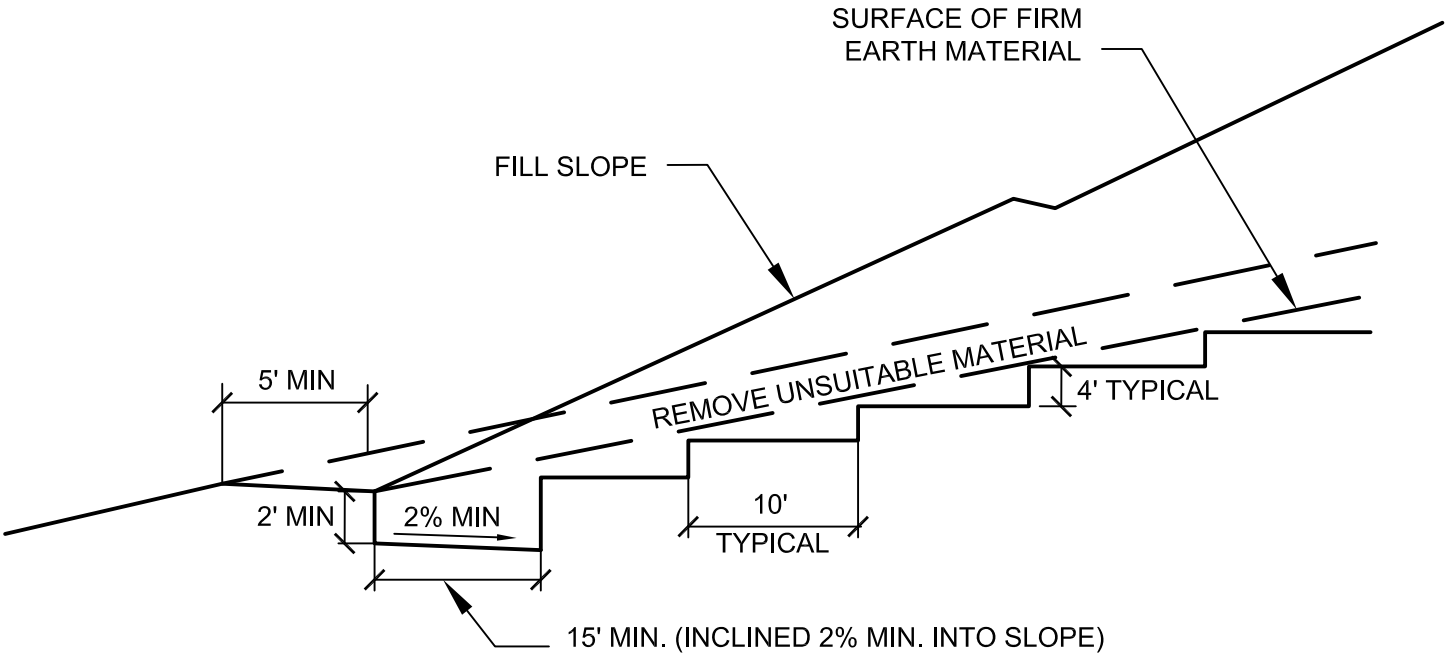
As a precautionary measure, plastic sheeting should be readily available, or kept on hand, to protect all slope areas from saturation by periods of heavy or prolonged rainfall. This measure is strongly recommended, beginning with the period prior to landscape planting.

If slope failures occur, the geotechnical consultant should be contacted for a field review of site conditions and development of recommendations for evaluation and repair.

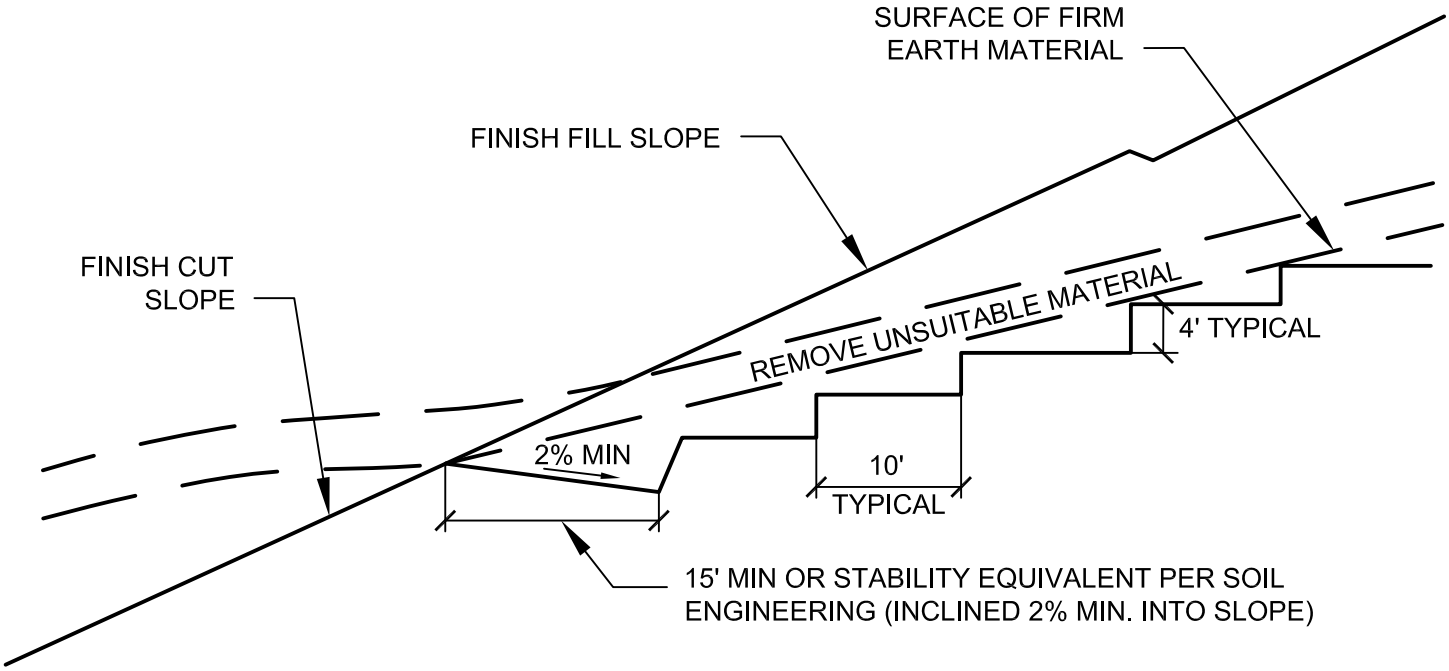
If slope failures occur as a result of exposure to period of heavy rainfall, the failure areas and currently unaffected areas should be covered with plastic sheeting to protect against additional saturation.

In the accompanying Standard Details, appropriate repair procedures are illustrated for superficial slope failures (i.e., occurring typically within the outer one foot to three feet of a slope face).

BENCHING FILL OVER NATURAL

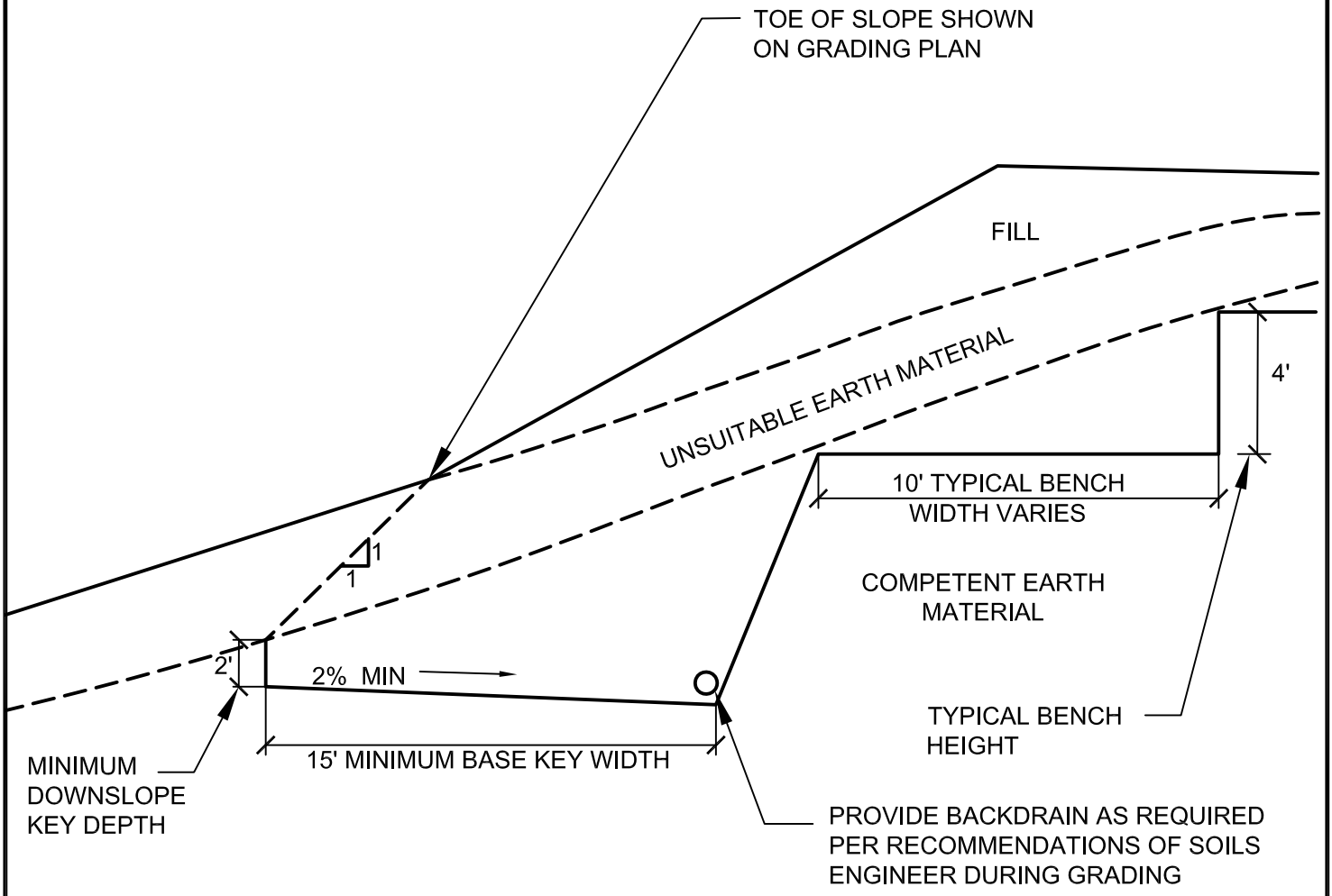


BENCHING FILL OVER CUT



NOT TO SCALE

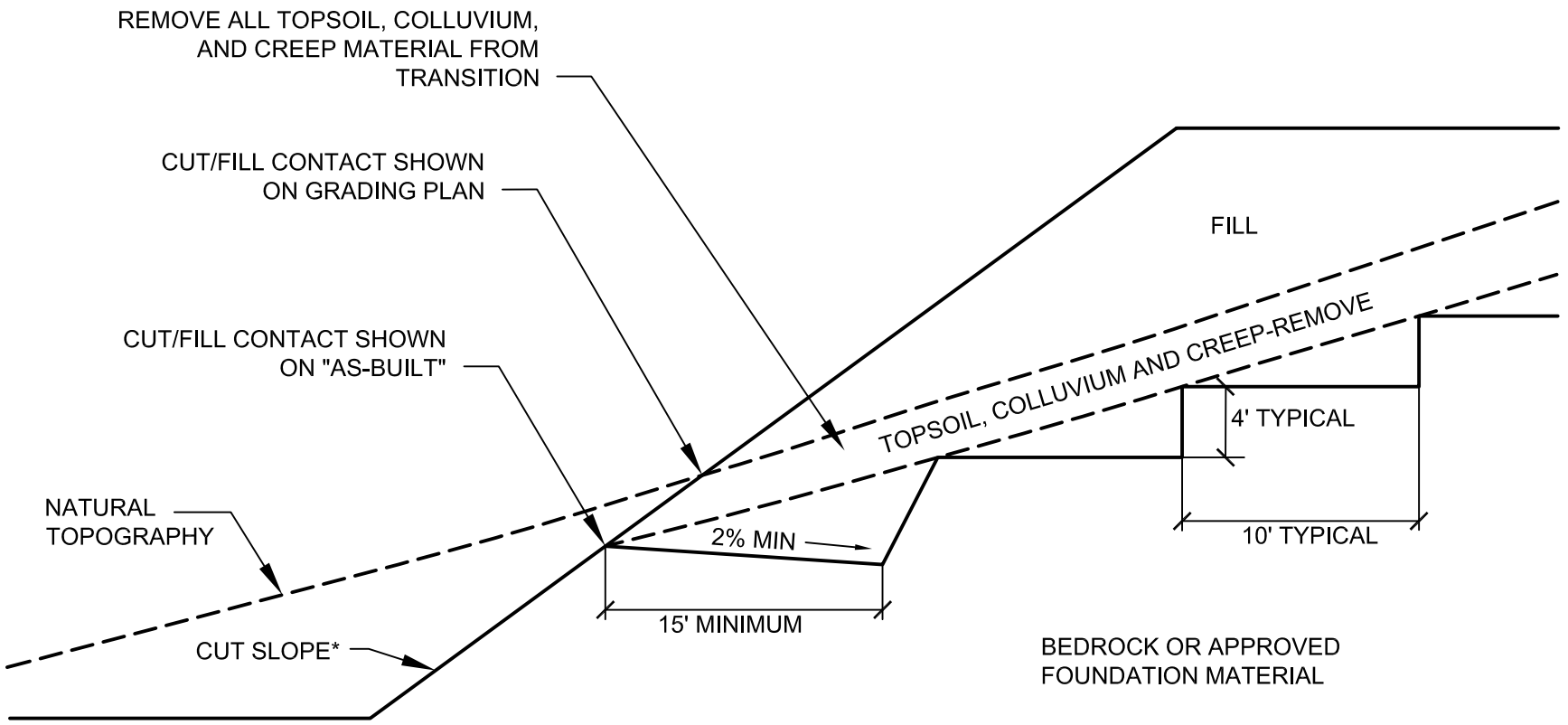
BENCHING FOR COMPACTED FILL DETAIL



WHERE NATURAL SLOPE GRADIENT IS 5:1 OR LESS, BENCHING IS NOT NECESSARY. FILL IS NOT TO BE PLACED ON COMPRESSIBLE OR UNSUITABLE MATERIAL.

NOT TO SCALE

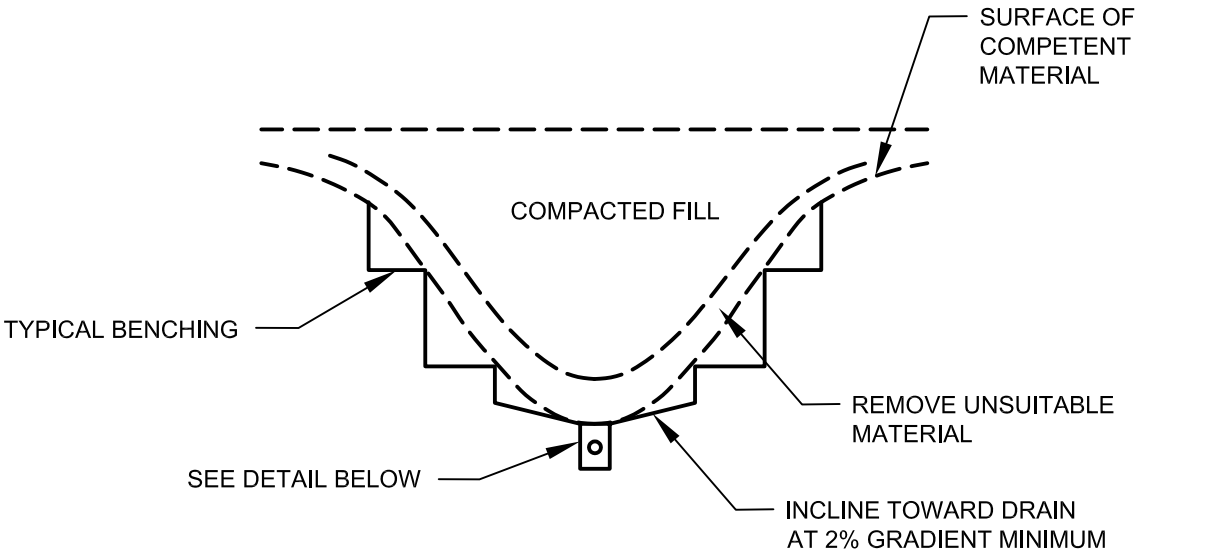
FILL SLOPE ABOVE NATURAL GROUND DETAIL



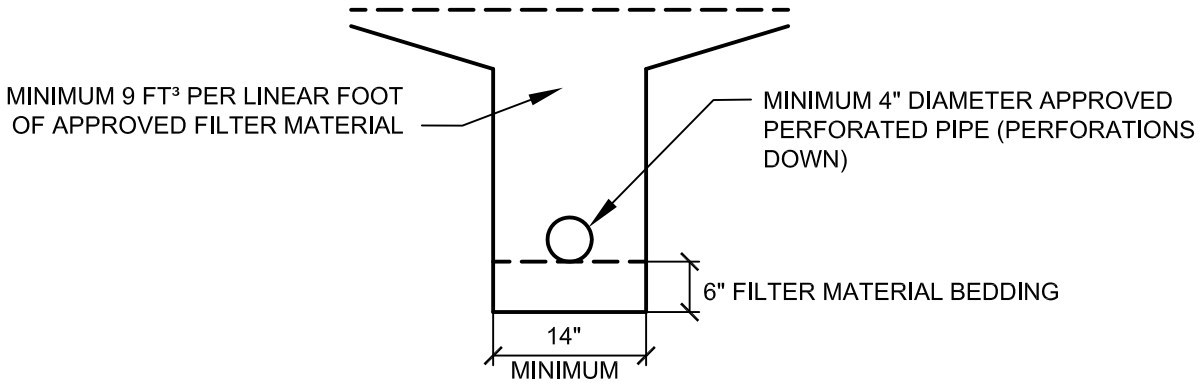
*NOTE: CUT SLOPE PORTION SHOULD BE MADE PRIOR TO PLACEMENT OF FILL

NOT TO SCALE

FILL SLOPE ABOVE CUT SLOPE DETAIL



DETAIL



CALTRANS CLASS 2 PERMEABLE MATERIAL
FILTER MATERIAL TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUAL:

SIEVE SIZE	PERCENTAGE PASSING
1"	100
¾"	90-100
⅜"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

APPROVED PIPE TO BE SCHEDULE 40 POLY-VINYL-CHLORIDE (P.V.C.) OR APPROVED EQUAL. MINIMUM CRUSH STRENGTH 1000 psi

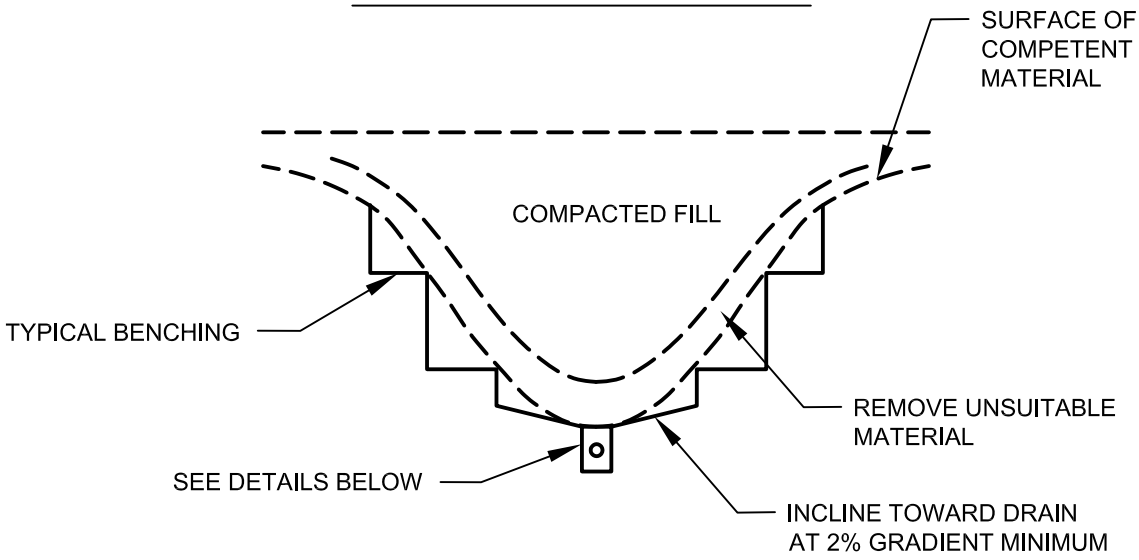
PIPE DIAMETER TO MEET THE FOLLOWING CRITERIA, SUBJECT TO FIELD REVIEW BASED ON ACTUAL GEOTECHNICAL CONDITIONS ENCOUNTERED DURING GRADING

LENGTH OF RUN	PIPE DIAMETER
INITIAL 500'	4"
500' TO 1500'	6"
> 1500'	8"

NOT TO SCALE

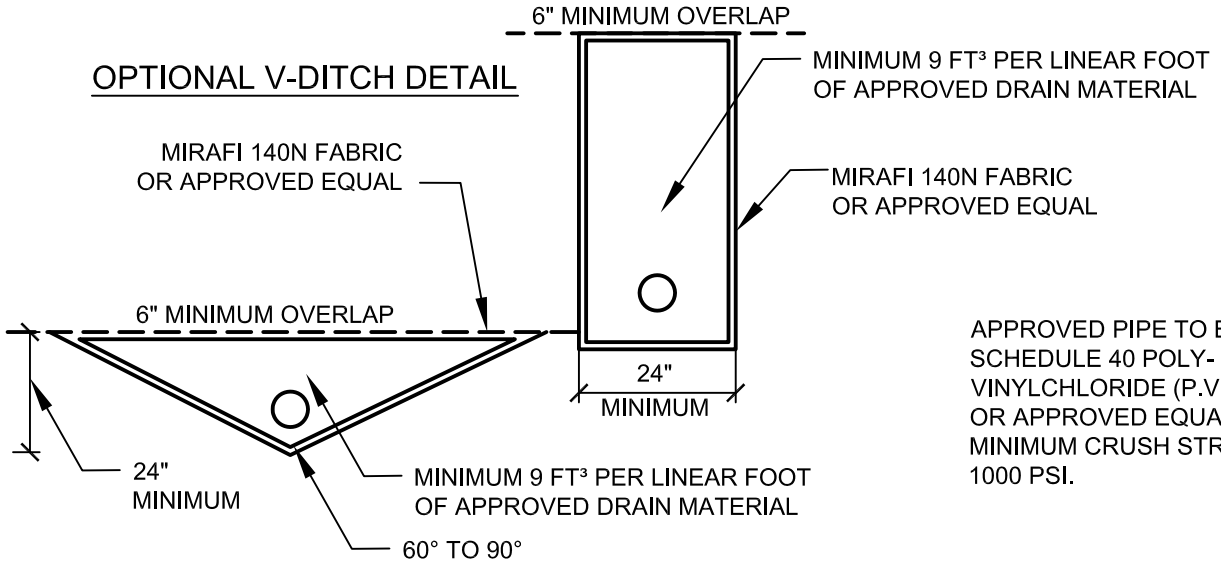
TYPICAL CANYON SUBDRAIN DETAIL

CANYON SUBDRAIN DETAILS



TRENCH DETAILS

OPTIONAL V-DITCH DETAIL



APPROVED PIPE TO BE SCHEDULE 40 POLY-VINYLCHLORIDE (P.V.C.) OR APPROVED EQUAL. MINIMUM CRUSH STRENGTH 1000 PSI.

DRAIN MATERIAL TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUAL:

SIEVE SIZE	PERCENTAGE PASSING
1 ½"	88-100
1"	5-40
¾"	0-17
⅜"	0-7
NO. 200	0-3

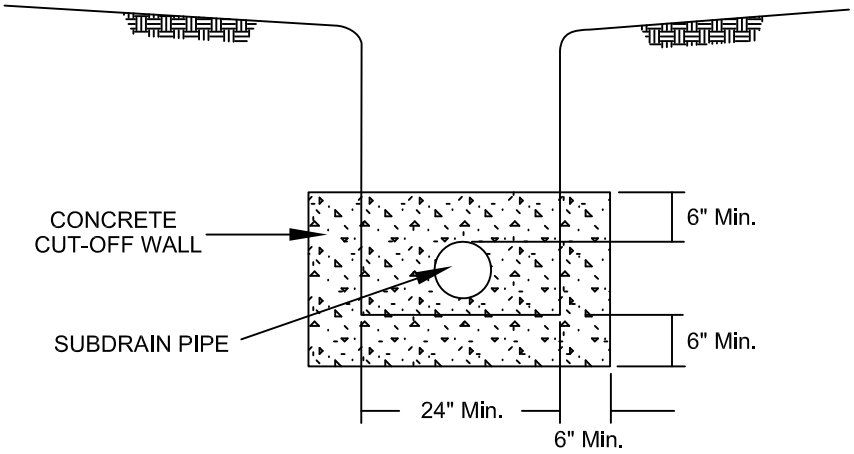
PIPE DIAMETER TO MEET THE FOLLOWING CRITERIA, SUBJECT TO FIELD REVIEW BASED ON ACTUAL GEOTECHNICAL CONDITIONS ENCOUNTERED DURING GRADING

LENGTH OF RUN	PIPE DIAMETER
INITIAL 500'	4"
500' TO 1500'	6"
> 1500'	8"

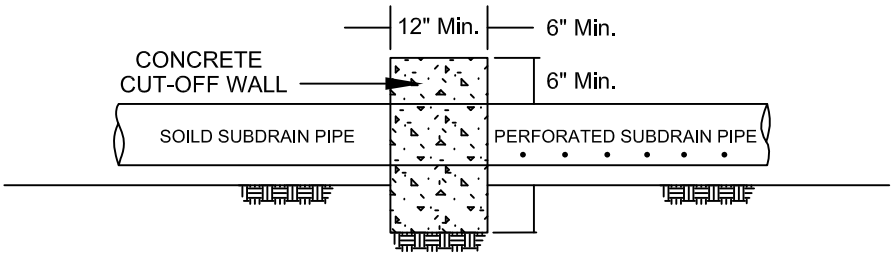
NOT TO SCALE

GEOFABRIC SUBDRAIN

FRONT VIEW



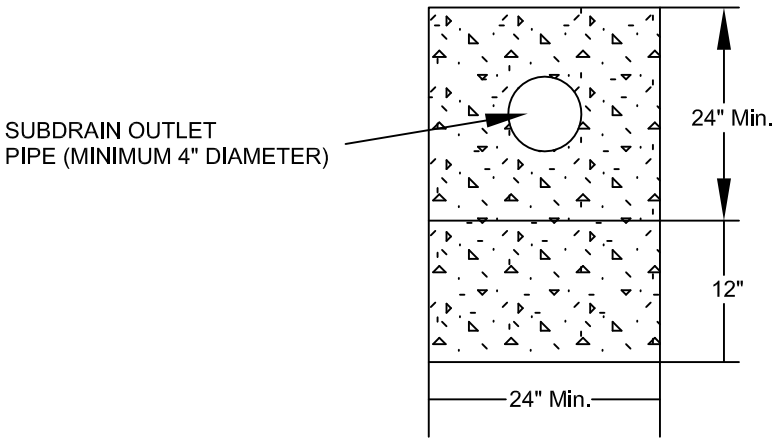
SIDE VIEW



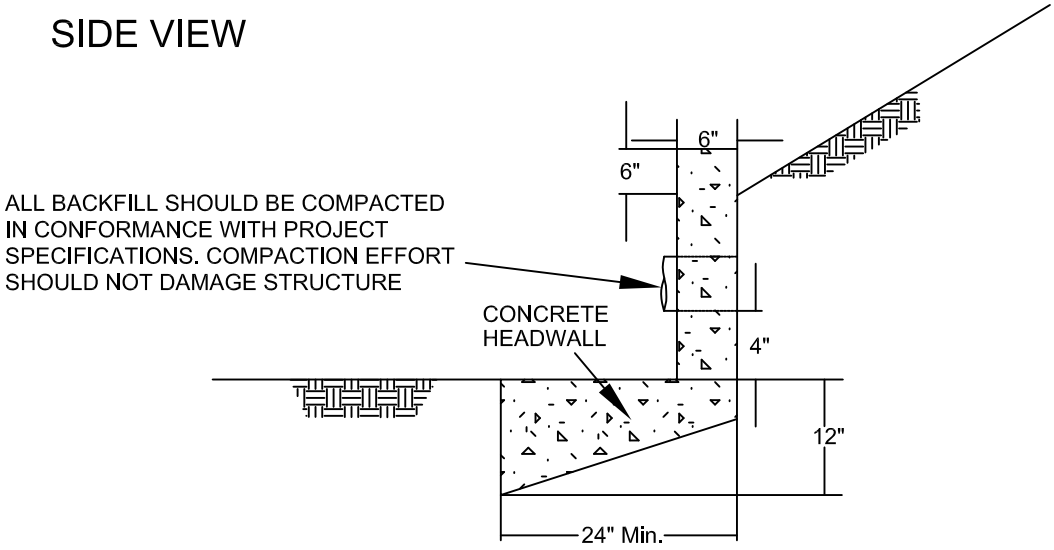
NOT TO SCALE

RECOMMENDED SUBDRAIN CUT-OFF WALL

FRONT VIEW



SIDE VIEW



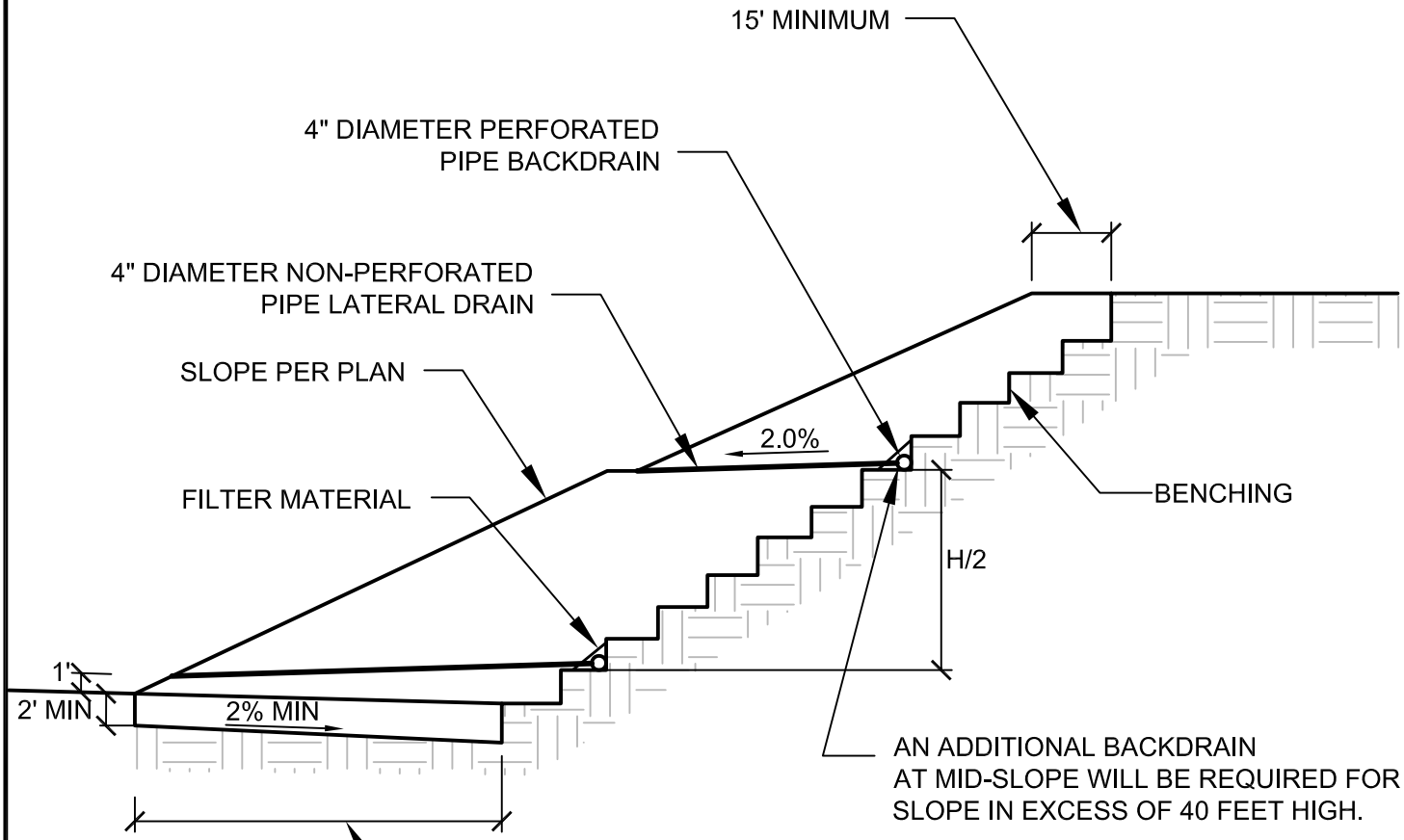
NOTE: HEADWALL SHOULD OUTLET AT TOE OF SLOPE
OR INTO CONTROLLED SURFACE DRAINAGE DEVICE

ALL DISCHARGE SHOULD BE CONTROLLED

THIS DETAIL IS A MINIMUM DESIGN AND MAY BE
MODIFIED DEPENDING UPON ENCOUNTERED
CONDITIONS AND LOCAL REQUIREMENTS

NOT TO SCALE

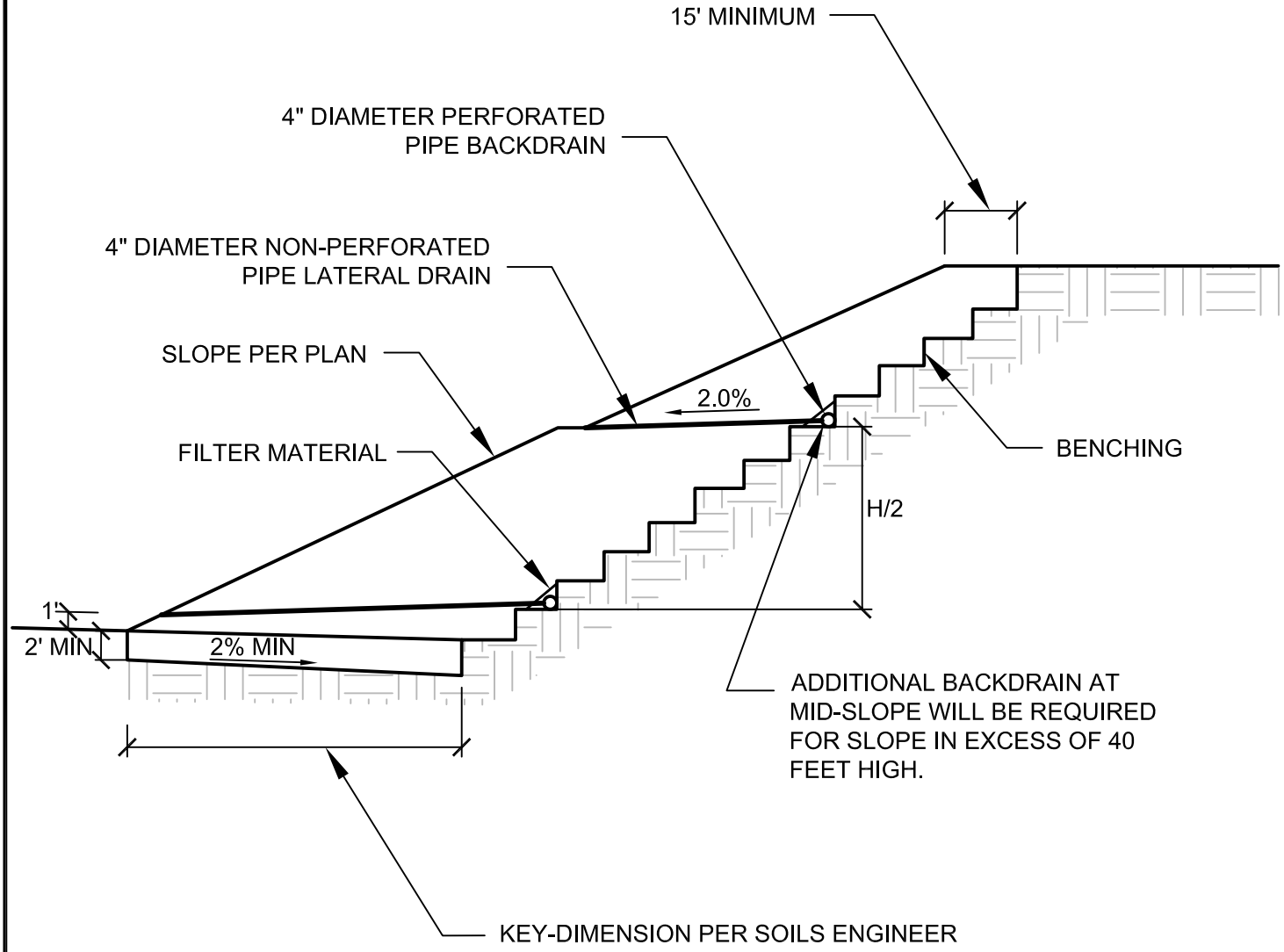
TYPICAL SUBDRAIN OUTLET HEADWALL DETAIL



DIMENSIONS ARE MINIMUM RECOMMENDED

NOT TO SCALE

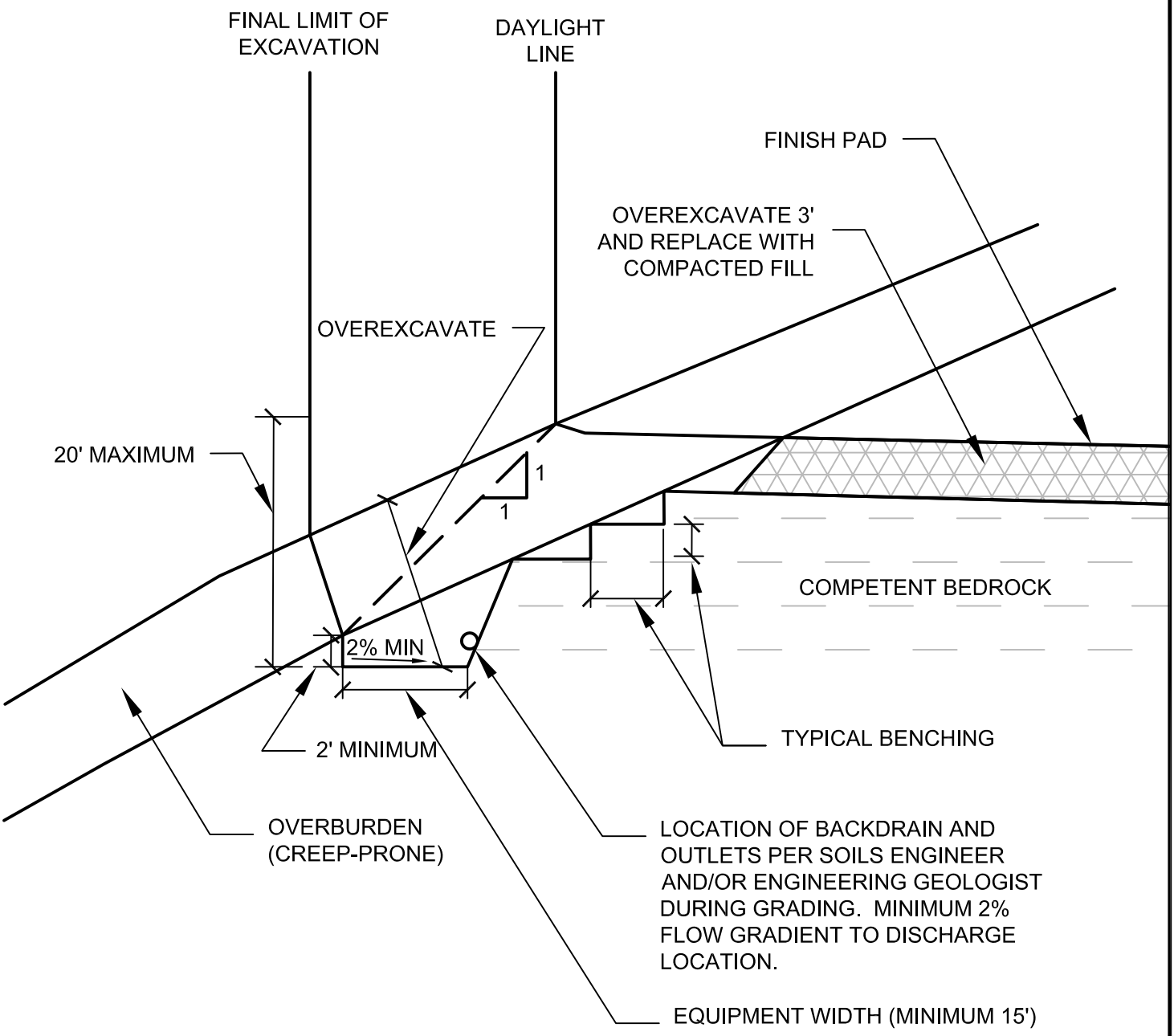
TYPICAL SLOPE STABILIZATION FILL DETAIL



DIMENSIONS ARE MINIMUM RECOMMENDED

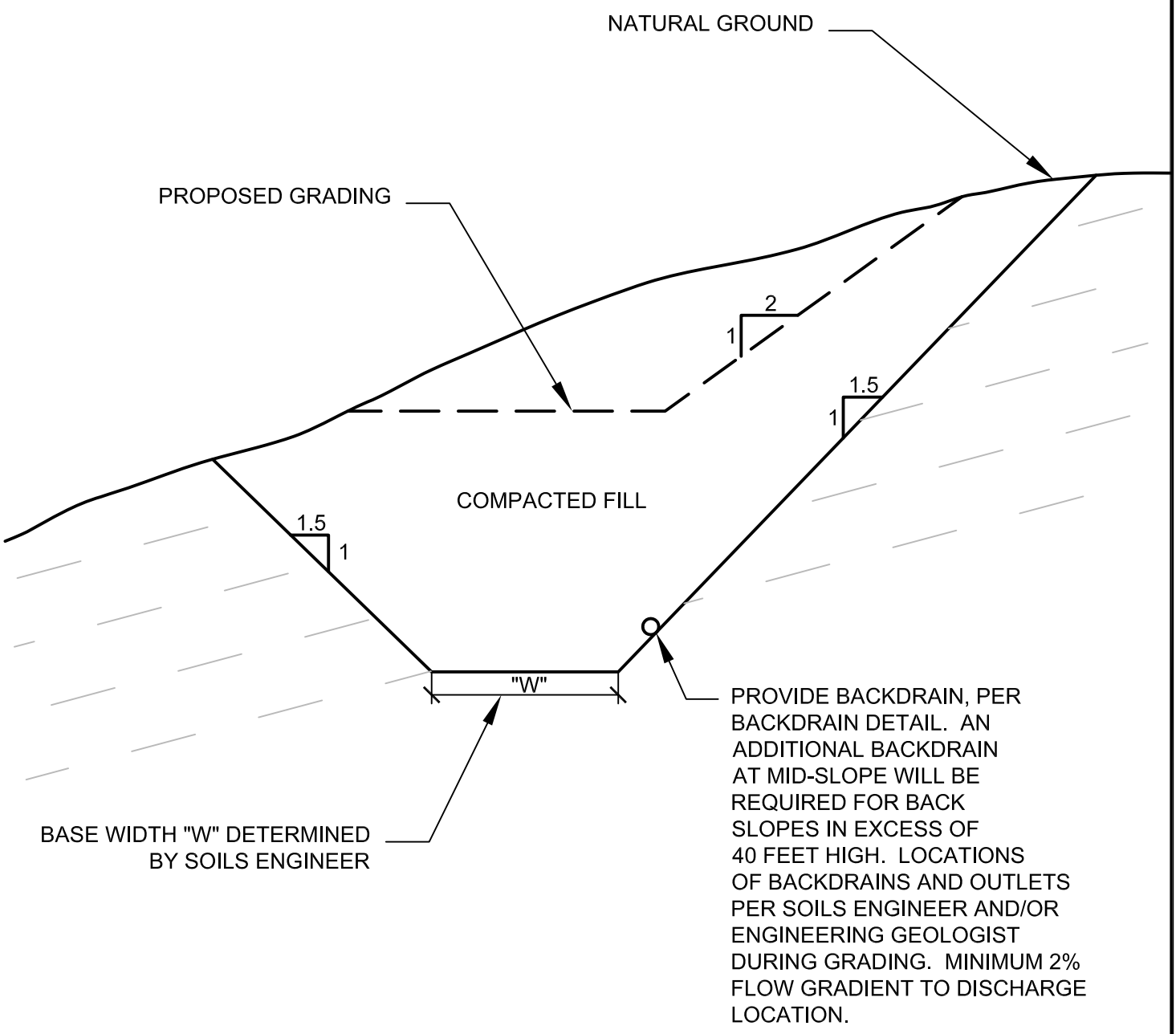
NOT TO SCALE

TYPICAL BUTTRESS FILL DETAIL



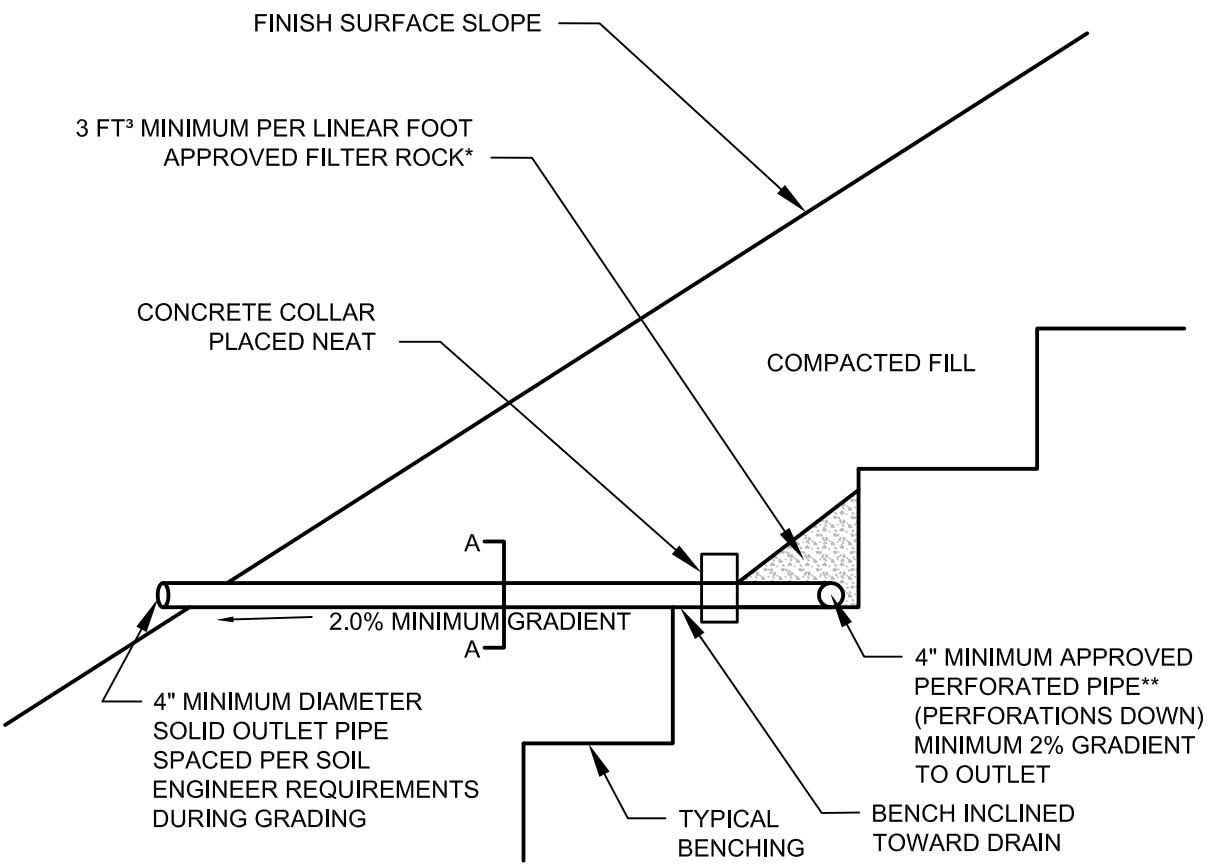
NOT TO SCALE

DAYLIGHT SHEAR KEY DETAIL

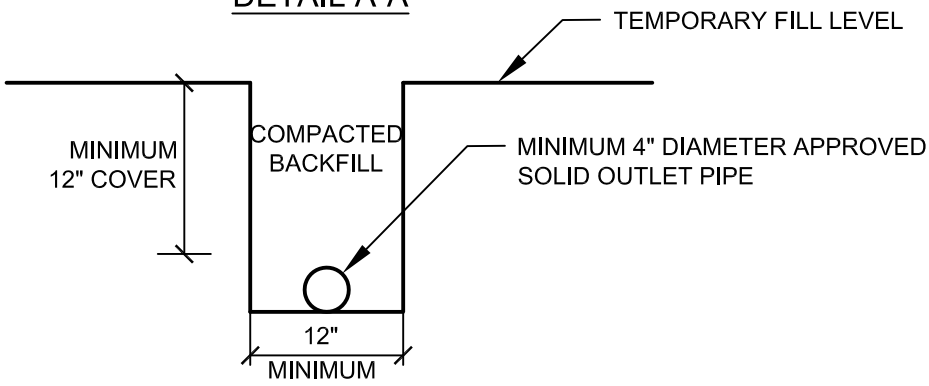


NOT TO SCALE

TYPICAL SHEAR KEY DETAIL



DETAIL A-A



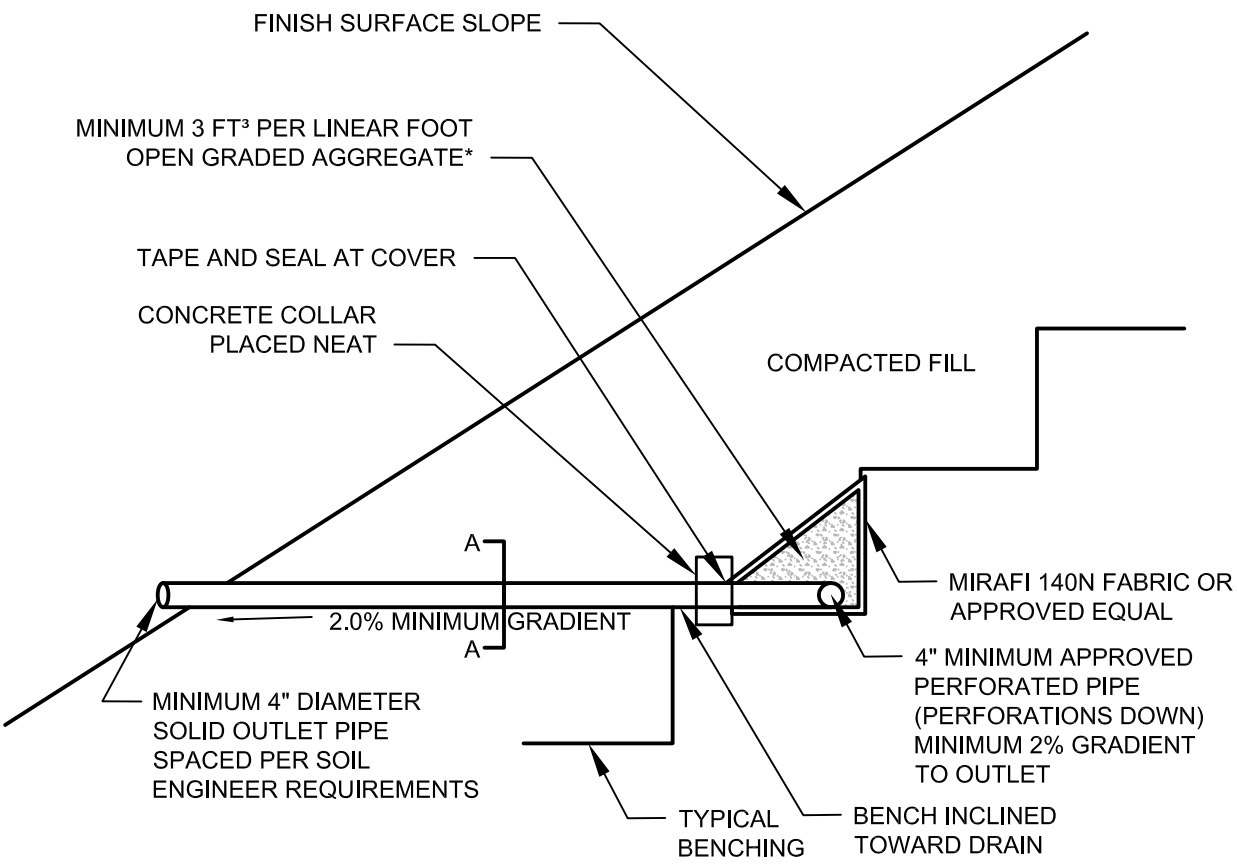
**APPROVED PIPE TYPE:
SCHEDULE 40 POLYVINYL CHLORIDE
(P.V.C.) OR APPROVED EQUAL.
MINIMUM CRUSH STRENGTH 1000 PSI

*FILTER ROCK TO MEET FOLLOWING
SPECIFICATIONS OR APPROVED EQUAL:

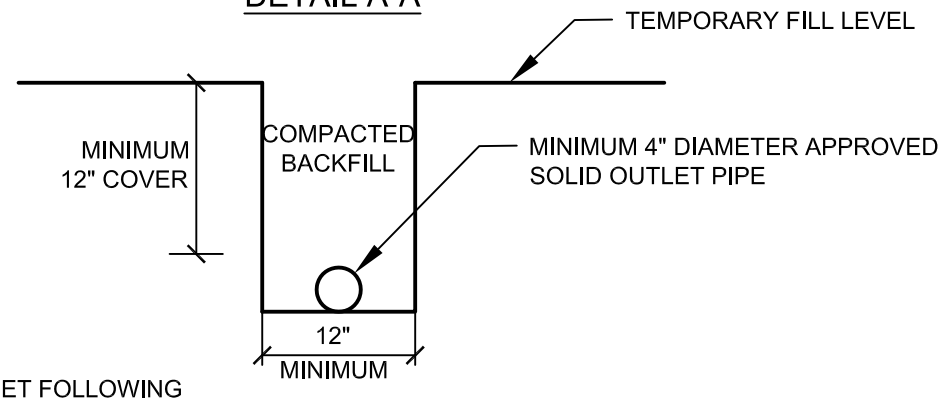
SIEVE SIZE	PERCENTAGE PASSING
1"	100
¾"	90-100
⅜"	40-100
NO. 4	25-40
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

NOT TO SCALE

TYPICAL BACKDRAIN DETAIL



DETAIL A-A

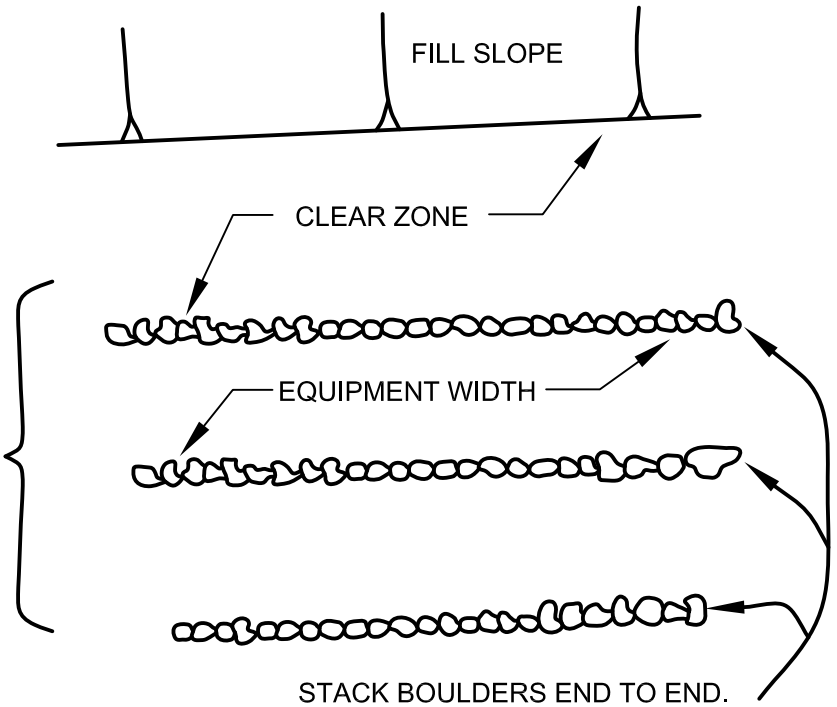


*NOTE: AGGREGATE TO MEET FOLLOWING SPECIFICATIONS OR APPROVED EQUAL:

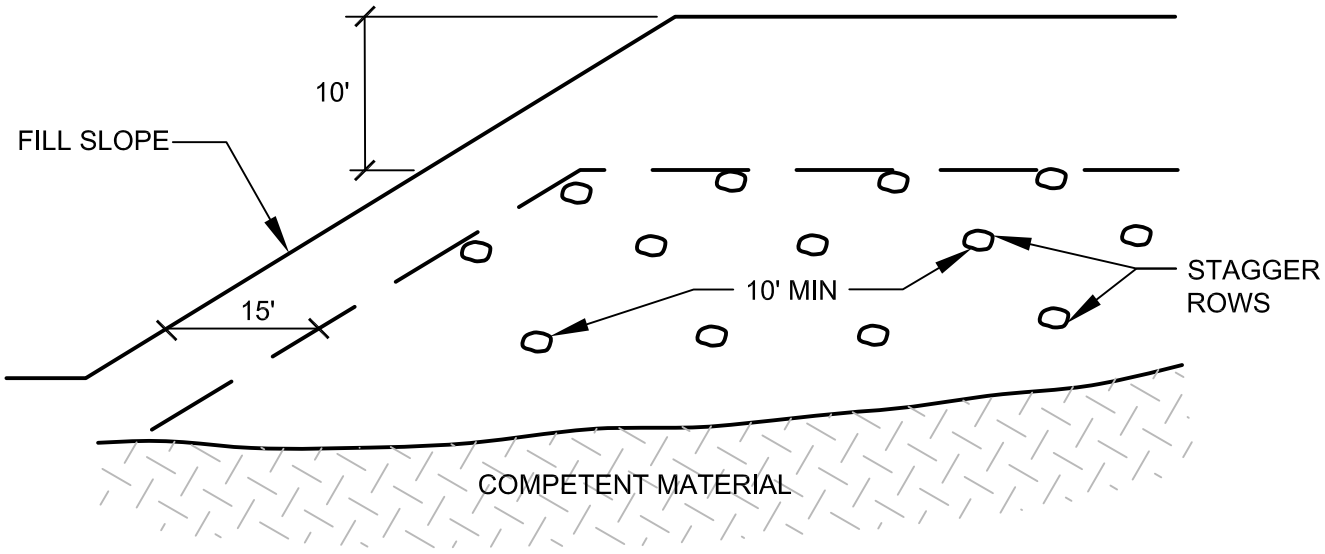
SIEVE SIZE	PERCENTAGE PASSING
1 ½"	100
1"	5-40
¾"	0-17
⅜"	0-7
NO. 200	0-3

NOT TO SCALE

BACKDRAIN DETAIL (GEOFRABIC)

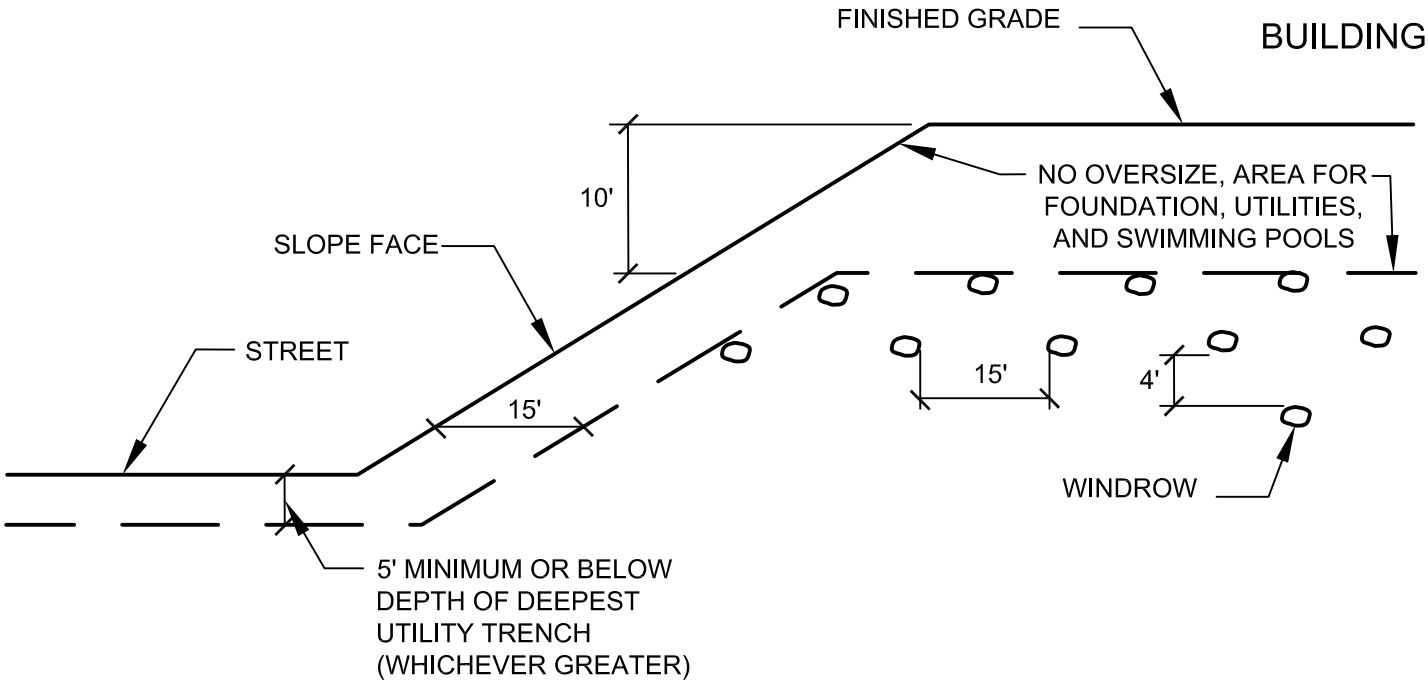


SOIL SHALL BE PUSHED OVER ROCKS AND FLOODED INTO VOIDS. COMPACT AROUND AND OVER EACH WINDROW.

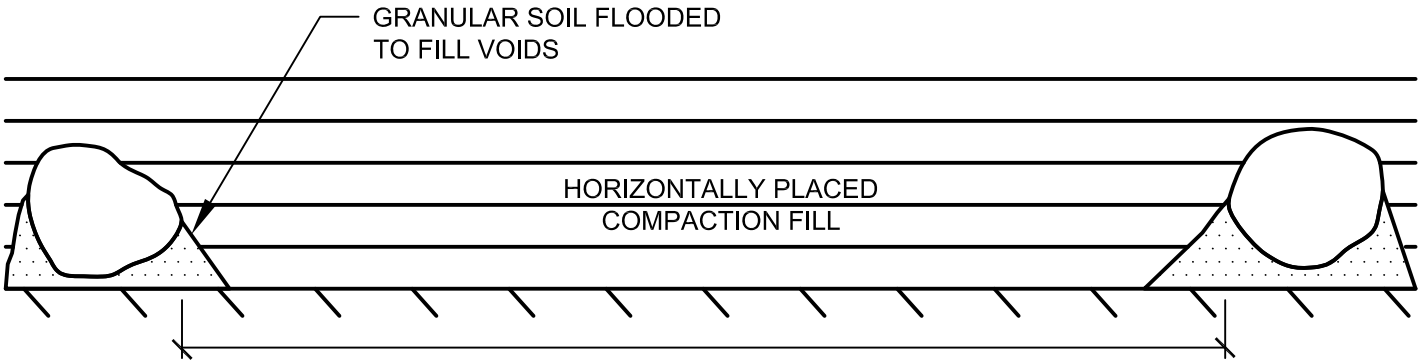


NOT TO SCALE

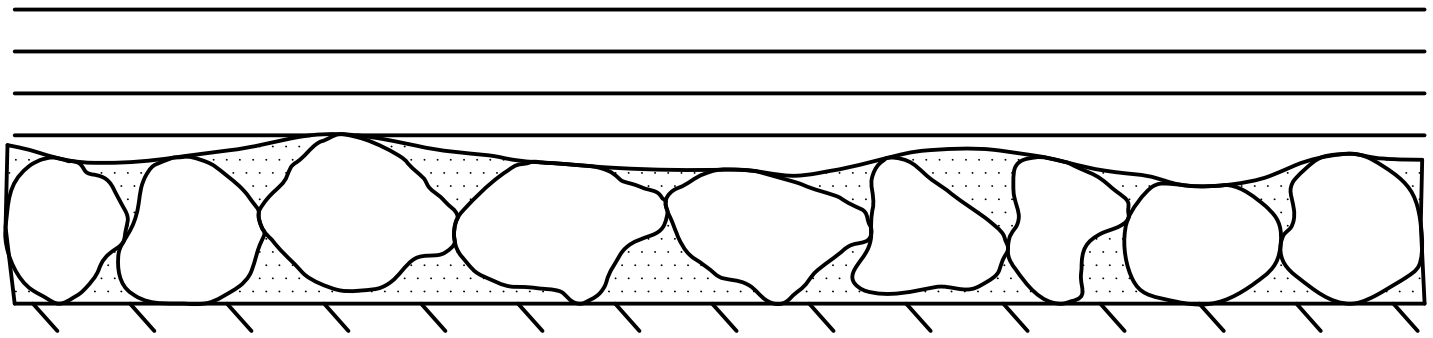
ROCK DISPOSAL DETAIL



TYPICAL WINDROW DETAIL (EDGE VIEW)



PROFILE VIEW

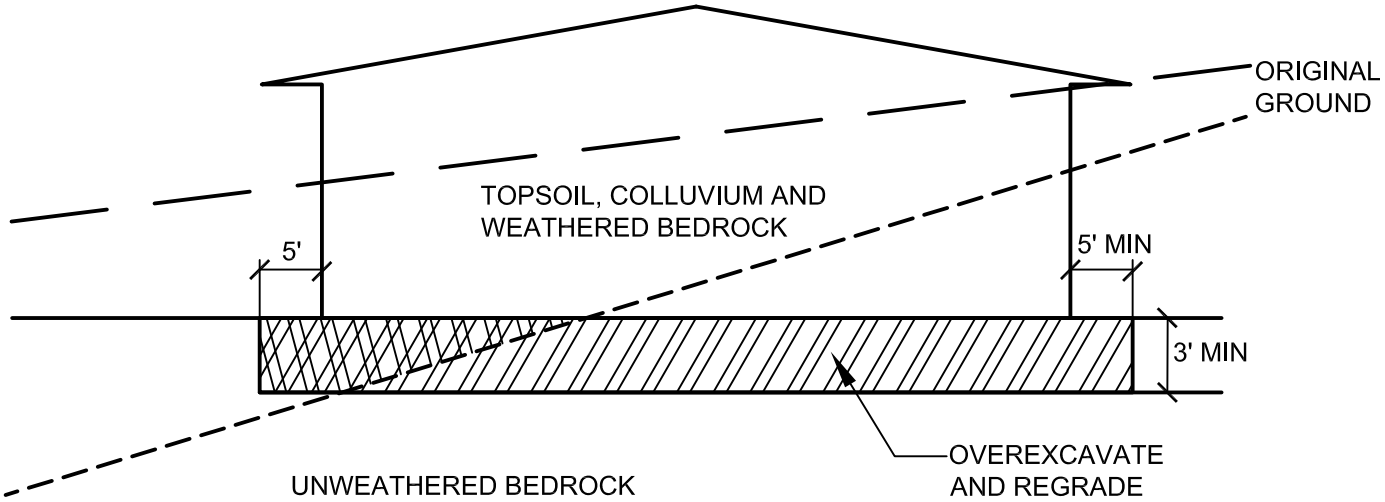


NOT TO SCALE

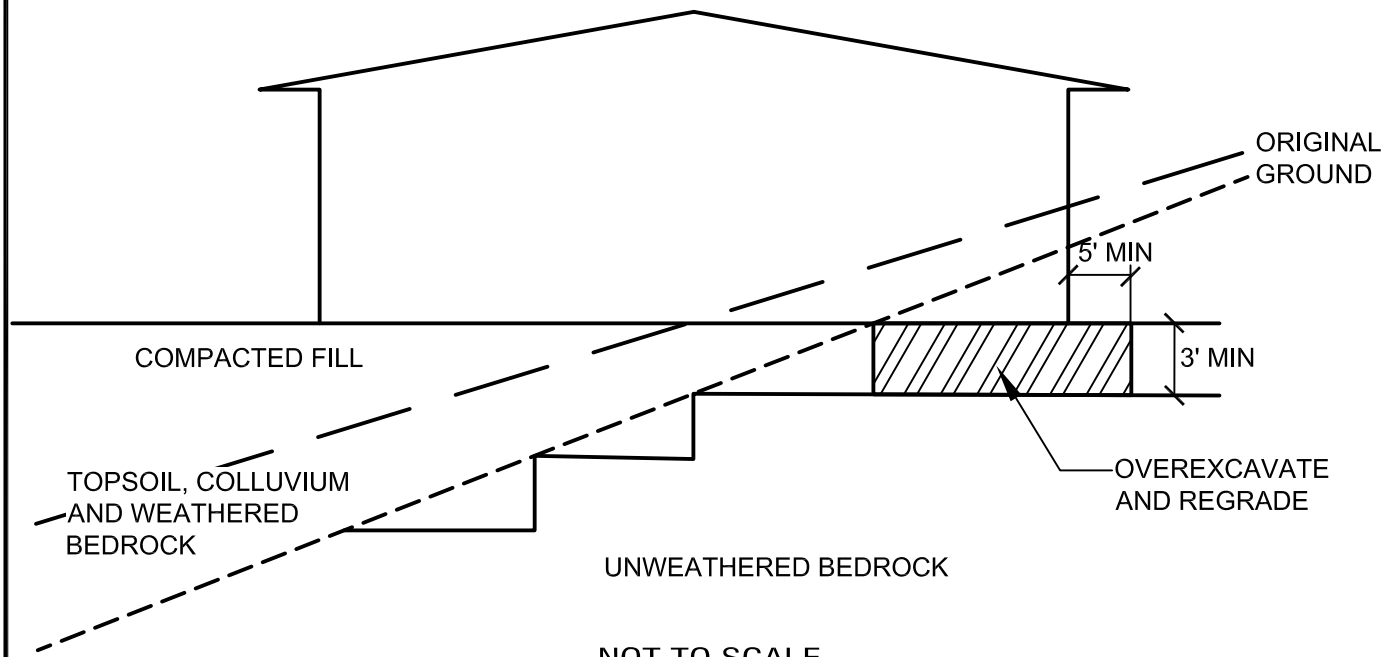
ROCK DISPOSAL DETAIL

GENERAL GRADING RECOMMENDATIONS

CUT LOT



CUT/FILL LOT (TRANSITION)



NOT TO SCALE

TRANSITION LOT DETAIL

APPENDIX E

RESULTS OF PERCOLATION TESTING

Project: Casa de Oro Library

Project No.: 10-15617G — Tables E-1 to E-4

Percolation Field Data and Calculated Rates

P-1 — **Total Depth:** 60 inches

Time	Test Interval Time	Test Refill	Water Level Initial/Start	Water Level End/Final	Incremental Water Level Change	Percolation Rate	Percolation Rate
	(minutes)	Depth /Inches	Depth /Inches	Depth /Inches	(inches)	inches/minute	inches/hour
7:10:00	Initial	None	48.19	initial	-		
7:40:00	30	NO	48.19	48.19	0.00	0.000	0.000
8:10:00	30	NO	48.19	48.25	0.06	0.002	0.125
8:40:00	30	NO	48.25	48.31	0.06	0.002	0.125
9:10:00	30	NO	48.31	48.38	0.06	0.002	0.125
9:40:00	30	NO	48.38	48.44	0.06	0.002	0.125
10:10:00	30	NO	48.44	48.44	0.00	0.000	0.000
10:40:00	30	NO	48.44	48.50	0.06	0.002	0.125
11:10:00	30	NO	48.50	48.56	0.06	0.002	0.125

P-2 — **Total Depth:** 38 inches

Time	Test Interval Time	Test Refill	Water Level Initial/Start	Water Level End/Final	Incremental Water Level Change	Percolation Rate	Percolation Rate
	(minutes)	Depth /Inches	Depth /Inches	Depth /Inches	(inches)	inches/minute	inches/hour
7:15:00	Initial	None	30.50	initial	-		
7:45:00	30	NO	30.50	30.69	0.188	0.006	0.375
8:15:00	30	NO	30.69	30.88	0.188	0.006	0.375
8:45:00	30	NO	30.88	31.00	0.125	0.004	0.250
9:15:00	30	NO	31.00	31.13	0.125	0.004	0.250
9:45:00	30	NO	31.13	31.19	0.063	0.002	0.125
10:15:00	30	NO	31.19	31.25	0.063	0.002	0.125
10:45:00	30	NO	31.25	31.31	0.063	0.002	0.125
11:15:00	30	NO	31.31	31.38	0.063	0.002	0.125

P-3 — **Total Depth:** 60 inches

Time	Test Interval Time	Test Refill	Water Level Initial/Start	Water Level End/Final	Incremental Water Level Change	Percolation Rate	Percolation Rate
	(minutes)	Depth /Inches	Depth /Inches	Depth /Inches	(inches)	inches/minute	inches/hour
7:20:00	Initial	None	47.81	initial	-		
7:50:00	30	NO	47.81	48.38	0.56	0.019	1.125
8:20:00	30	48.0625	48.38	48.88	0.50	0.017	1.000
8:50:00	30	NO	48.06	48.50	0.44	0.015	0.875
9:20:00	30	47.6875	48.50	49.00	0.50	0.017	1.000
9:50:00	30	NO	47.69	47.94	0.25	0.008	0.500
10:20:00	30	NO	47.94	48.13	0.19	0.006	0.375
10:50:00	30	NO	48.13	48.31	0.19	0.006	0.375
11:20:00	30	NO	48.31	48.50	0.19	0.006	0.375

P-4 — **Total Depth:** 42 inches

Time	Test Interval Time	Test Refill	Water Level Initial/Start	Water Level End/Final	Incremental Water Level Change	Percolation Rate	Percolation Rate
	(minutes)	Depth /Inches	Depth /Inches	Depth /Inches	(inches)	inches/minute	inches/hour
7:25:00	Initial	None	35.25	initial	-		
7:55:00	30	NO	35.25	36.19	0.94	0.031	1.875
8:25:00	30	35.25	36.19	38.25	2.06	0.069	4.125
8:55:00	30	NO	35.25	36.25	1.00	0.033	2.000
9:25:00	30	34.25	36.25	37.38	1.13	0.038	2.250
9:55:00	30	NO	34.25	35.25	1.00	0.033	2.000
10:25:00	30	34.4375	35.25	36.31	1.06	0.035	2.125
10:55:00	30	33.75	34.44	35.50	1.06	0.035	2.125
11:25:00	30	NO	33.75	34.81	1.06	0.035	2.125

Percolation Rate Conversion P-1

		Inches
Time Interval,	Δt =	30
Final Depth of Water,	D_f =	48.56
Test Hole Radius,	r =	4
Initial Depth to Water,	D_0 =	48.50
Total Depth of Test Hole,	D_T =	60

H_o =	11.5	in
H_f =	11.4375	in
$\Delta H = \Delta D$ =	0.0625	in
H_{avg} =	11.46875	in
I_t =	0.019	in/hr

Percolation Rate Conversion P-2

		Inches
Time Interval,	Δt =	30
Final Depth of Water,	D_f =	31.38
Test Hole Radius,	r =	4
Initial Depth to Water,	D_0 =	31.31
Total Depth of Test Hole,	D_T =	38

H_o =	6.6875	in
H_f =	6.625	in
$\Delta H = \Delta D$ =	0.0625	in
H_{avg} =	6.65625	in
I_t =	0.029	in/hr

Percolation Rate Conversion P-3

		Inches
Time Interval,	Δt =	30
Final Depth of Water,	D_f =	48.50
Test Hole Radius,	r =	4
Initial Depth to Water,	D_0 =	48.31
Total Depth of Test Hole,	D_T =	60

H_o =	11.6875	in
H_f =	11.5	in
$\Delta H = \Delta D$ =	0.1875	in
H_{avg} =	11.59375	in
I_t =	0.055	in/hr

Percolation Rate Conversion P-4

		Inches
Time Interval,	Δt =	30
Final Depth of Water,	D_f =	34.81
Test Hole Radius,	r =	4
Initial Depth to Water,	D_0 =	33.75
Total Depth of Test Hole,	D_T =	42

H_o =	8.25	in
H_f =	7.19	in
$\Delta H = \Delta D$ =	1.06	in
H_{avg} =	7.72	in
I_t =	0.436	in/hr

TABLE

RESULTS OF PERCOLATION TESTING WITH FACTOR OF SAFETY APPLIED

Test Location	Test Depth (inches)	Case	Soil Type* (USCS Classification)	Percolation Rate (inches per hour)	Infiltration Rate (inches per hour)	Infiltration Rate with FOS of 2 Applied (inches per hour)
P-1	60	III	CL/SM	0.125	0.019	0.009
P-2	38	III	SC/CL	0.125	0.029	0.014
P-3	60	III	CL/SM	0.375	0.055	0.028
P-4	42	III	SC/CL	2.125	0.436	0.218

APPENDIX F

LIQUEFACTION EVALATION

SIMPLIFIED LIQUEFACTION HAZARDS ASSESSMENT USING STANDARD PENETRATION TEST (SPT) DATA

(Copyright © 2015, 2019, SPTLIQ, All Rights Reserved; By: InfraGEO Software)

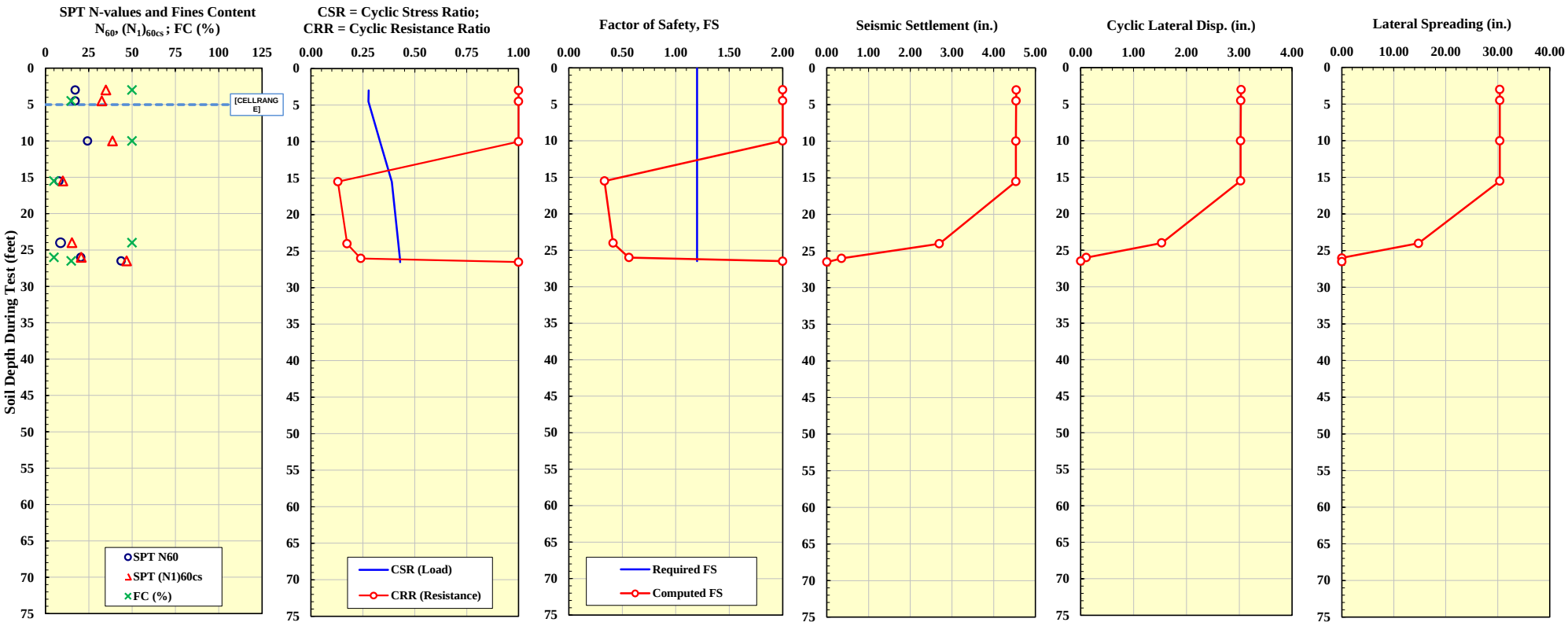
PROJECT INFORMATION	
Project Name	CASA DE ORO LIBRARY (PW)
Project No.	10-15617G
Project Location	3838 CONRAD DRIVE, SPRING VALLEY, CA
Analyzed By	DJT
Reviewed By	

TOPOGRAPHIC CONDITIONS		
Ground Slope, S	N/A	
Free Face (L/H) Ratio	6.60	H = 10.00 feet

GROUNDWATER LEVEL DATA	
GWL Depth Measured During Test	8.00 feet
GWL Depth Used in Design	5.00 feet

BORING DATA	
Boring No.	B-1
Ground Surface Elevation	438.00 feet
Proposed Grade Elevation	438.00 feet
Borehole Diameter	8.00 inches
Hammer Weight	140.00 pounds
Hammer Drop	30.00 inches
Hammer Energy Efficiency Ratio, ER	80.00 %
Hammer Distance to Ground Surface	5.00 feet

SEISMIC DESIGN PARAMETERS	
Earthquake Moment Magnitude, M_w	6.89
Peak Ground Acceleration, A_{max}	0.43 g
Required Factor of Safety, FS	1.20



Analysis Methods Used ==>>

Liquefaction Triggering:
Boulanger-Idriss (2014)

Seismic Settlements:
Above GWL: Pradel (1998)
Below GWL: Ishihara and Yoshimine (1992)

Cyclic Lateral Displacements:
Above GWL: Pradel (1998)
Below GWL: Tokimatsu and Asaka (1998)

Lateral Spreading:
Zhang et al. (2004)

SIMPLIFIED LIQUEFACTION HAZARDS ASSESSMENT USING STANDARD PENETRATION TEST (SPT) DATA

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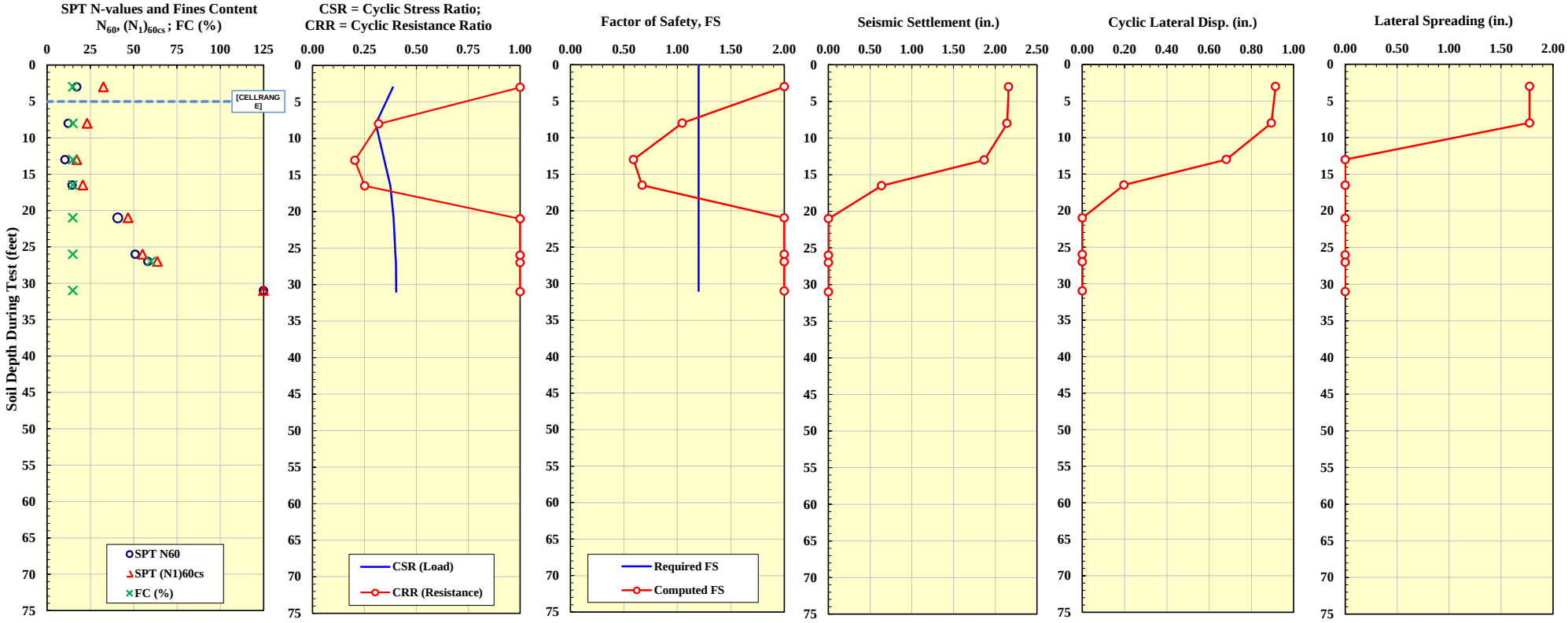
PROJECT INFORMATION	
Project Name	CASA DE ORO LIBRARY (PW)
Project No.	10-15617G
Project Location	3838 CONRAD DRIVE, SPRING VALLEY, CA
Analyzed By	DJT
Reviewed By	

TOPOGRAPHIC CONDITIONS		
Ground Slope, S	N/A	
Free Face (L/H) Ratio	8.00	H = 5.00 feet

GROUNDWATER LEVEL DATA	
GWL Depth Measured During Test	8.00 feet
GWL Depth Used in Design	5.00 feet

BORING DATA	
Boring No.	B-2
Ground Surface Elevation	436.00 feet
Proposed Grade Elevation	438.00 feet
Borehole Diameter	8.00 inches
Hammer Weight	140.00 pounds
Hammer Drop	30.00 inches
Hammer Energy Efficiency Ratio, ER	80.00 %
Hammer Distance to Ground Surface	5.00 feet

SEISMIC DESIGN PARAMETERS	
Earthquake Moment Magnitude, M_w	6.89
Peak Ground Acceleration, A_{max}	0.43 g
Required Factor of Safety, FS	1.20



Analysis Methods Used ==>>

Liquefaction Triggering:
Boulanger-Idriss (2014)

Seismic Settlements:
Above GWL: Pradel (1998)
Below GWL: Ishihara and Yoshimine (1992)

Cyclic Lateral Displacements:
Above GWL: Pradel (1998)
Below GWL: Tokimatsu and Asaka (1998)

Lateral Spreading:
Zhang et al. (2004)

SIMPLIFIED LIQUEFACTION HAZARDS ASSESSMENT USING STANDARD PENETRATION TEST (SPT) DATA

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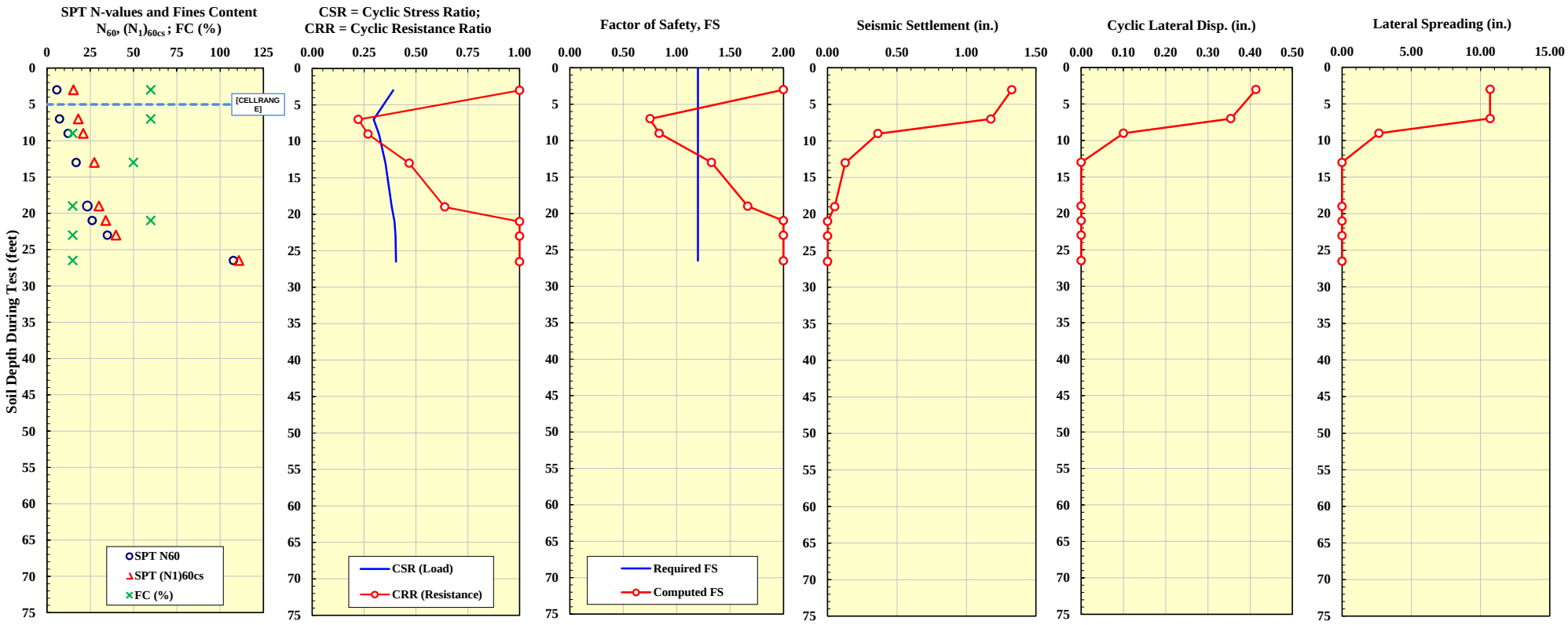
PROJECT INFORMATION	
Project Name	CASA DE ORO LIBRARY (PW)
Project No.	10-15617G
Project Location	3838 CONRAD DRIVE, SPRING VALLEY, CA
Analyzed By	DJT
Reviewed By	

TOPOGRAPHIC CONDITIONS		
Ground Slope, S	N/A	
Free Face (L/H) Ratio	2.50	H = 6.00 feet

GROUNDWATER LEVEL DATA	
GWL Depth Measured During Test	8.00 feet
GWL Depth Used in Design	5.00 feet

BORING DATA	
Boring No.	B-3
Ground Surface Elevation	436.00 feet
Proposed Grade Elevation	438.00 feet
Borehole Diameter	8.00 inches
Hammer Weight	140.00 pounds
Hammer Drop	30.00 inches
Hammer Energy Efficiency Ratio, ER	80.00 %
Hammer Distance to Ground Surface	5.00 feet

SEISMIC DESIGN PARAMETERS	
Earthquake Moment Magnitude, M_w	6.89
Peak Ground Acceleration, A_{max}	0.43 g
Required Factor of Safety, FS	1.20



Analysis Methods Used ==>>

Liquefaction Triggering:
Boulanger-Idriss (2014)

Seismic Settlements:
Above GWL: Pradel (1998)
Below GWL: Ishihara and Yoshimine (1992)

Cyclic Lateral Displacements:
Above GWL: Pradel (1998)
Below GWL: Tokimatsu and Asaka (1998)

Lateral Spreading:
Zhang et al. (2004)

APPENDIX D-2
PALEONTOLOGICAL RESOURCES TECHNICAL REPORT

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PALEOSERVICES
SAN DIEGO NATURAL HISTORY MUSEUM

Paleontological Resources Technical Report

Casa de Oro Branch Library
Spring Valley
San Diego County, California

October 23, 2020

Prepared for:

Michael Baker International
9755 Clairemont Mesa Boulevard
San Diego, CA 92124

Prepared by:

Department of PaleoServices
San Diego Natural History Museum
P.O. Box 121390
San Diego, California 92112-1390

Katie M. McComas, M.S., Paleontological Report Writer & GIS Specialist
Thomas A. Deméré, Ph.D., Principal Paleontologist

thenat | SAN DIEGO NATURAL HISTORY MUSEUM

Executive Summary

This technical report provides an assessment of paleontological resources at the proposed Casa de Oro Branch Library project (Proposed Project) site in the community of Spring Valley in southeastern unincorporated San Diego County, California. The purpose of this report is to identify and summarize paleontological resources that occur in the vicinity of the Proposed Project site, identify Proposed Project elements (if any) that may negatively impact paleontological resources, and provide, if necessary, recommendations to reduce any potential negative impacts to less than significant levels. The report includes the results of a review of the relevant paleontological and geological literature and an institutional records search conducted at the San Diego Natural History Museum (SDNHM).

The Proposed Project site lies within the Valle de Oro Community Plan Area, and is comprised of portions of Assessor's Parcel Numbers 500-170-10, -11, and -41. The Proposed Project site is bordered to the south by Campo Road and existing commercial and residential development, to the north and west by sports fields of the Spring Valley Academy middle school, and to the east by the La Mesa Spring Valley School District maintenance yard. The Proposed Project would construct a new approximately 13,000 square-foot (SF) library facility with access off Campo Road, 52 surface parking spaces, landscaping, and fencing. Anticipated earthwork would include preparation of and/or back filling of the site's retaining walls and ADA and driveway ramping, removal and recompaction (to 12 inches) of foundation and parking areas, vegetation removal, and excavation for subgrade utilities and storm drains.

Published geologic mapping for the Project site indicates the site is underlain at the surface by Holocene-age (less than approximately 11,700 years old) young alluvium, which typically transitions downward in the subsurface into older, Pleistocene-age alluvium. The preliminary site-specific geotechnical investigation report prepared for the Project indicates that these deposits are present to depths of 21 to 26 feet below ground surface (bgs), where they are underlain by strata of the middle Eocene-age Mission Valley Formation. Undocumented artificial fill measuring up to 3 feet thick is also locally present overlying the Holocene alluvium.

The results of the paleontological records search and literature review indicate that fossils have not been documented from Holocene-age or Pleistocene-age sedimentary deposits within a 5-mile radius of the Proposed Project site. However, fossils are known from Pleistocene-age sedimentary deposits at numerous locations in coastal San Diego County, and have yielded impressive collections of terrestrial vertebrates including pond turtle, passenger pigeon, hawk, mole, rabbit, gopher, squirrel, capybara, wolf, horse, camel, deer, bison, mastodon, mammoth, and ground sloth. Fluvial deposits of the Mission Valley Formation, meanwhile, have produced a diverse assemblage of terrestrial mammals, as well as fossilized wood, while the marine deposits have yielded a diverse fossil assemblage consisting of marine microfossils (e.g., foraminifers), invertebrates (e.g., clams, snails, crustaceans, sand dollars, sea urchins), and vertebrates (e.g., sharks, rays, bony fishes).

Following the County of San Diego paleontological sensitivity guidelines, the sedimentary deposits that occur within the Proposed Project site are assigned a low paleontological sensitivity at depths of less than 10 feet bgs (where they are assumed to be Holocene in age), a moderate paleontological sensitivity at depths greater than 10 feet bgs (where the strata may have been deposited during the Pleistocene), and a high paleontological sensitivity at depths greater than 21 feet bgs (where strata of the Mission Valley Formation are present). As such, Project-related earthwork that would extend greater than 10 feet bgs has the potential to impact paleontological resources. However, as currently proposed, earthwork is anticipated to extend to depths of only 5 feet bgs. Therefore, construction of the Proposed Project is not anticipated to result in impacts to paleontological resources and implementation of a paleontological mitigation program is not recommended. In the unlikely event that fossils are unearthed during construction (i.e., an inadvertent discovery), mitigation measures are provided to ensure proper collection and treatment of the fossils.

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1.0 Introduction

1.1 Project Description

This technical report provides an assessment of paleontological resources for the proposed Casa de Oro Branch Library project (Proposed Project) site, located in the community of Spring Valley in southeastern unincorporated San Diego County, California (Figure 1). The Proposed Project site lies within the Valle de Oro Community Plan Area, and is comprised of portions of Assessor's Parcel Numbers 500-170-10, -11, and -41. The Proposed Project site is bordered to the south by Campo Road and existing commercial and residential development, to the north and west by sports fields of the Spring Valley Academy middle school, and to the east by the La Mesa Spring Valley School District maintenance yard. The Proposed Project would construct a new approximately 13,000 square-foot (SF) library facility with access off Campo Road, 52 surface parking spaces, landscaping, and fencing. Anticipated earthwork would include preparation of and/or back filling of the site's retaining walls and ADA and driveway ramping, removal and recompaction (to 12 inches) of foundation and parking areas, vegetation removal, and excavation for subgrade utilities and storm drains, with excavation anticipated to extend to maximum depths of 5 feet below ground surface (bgs).

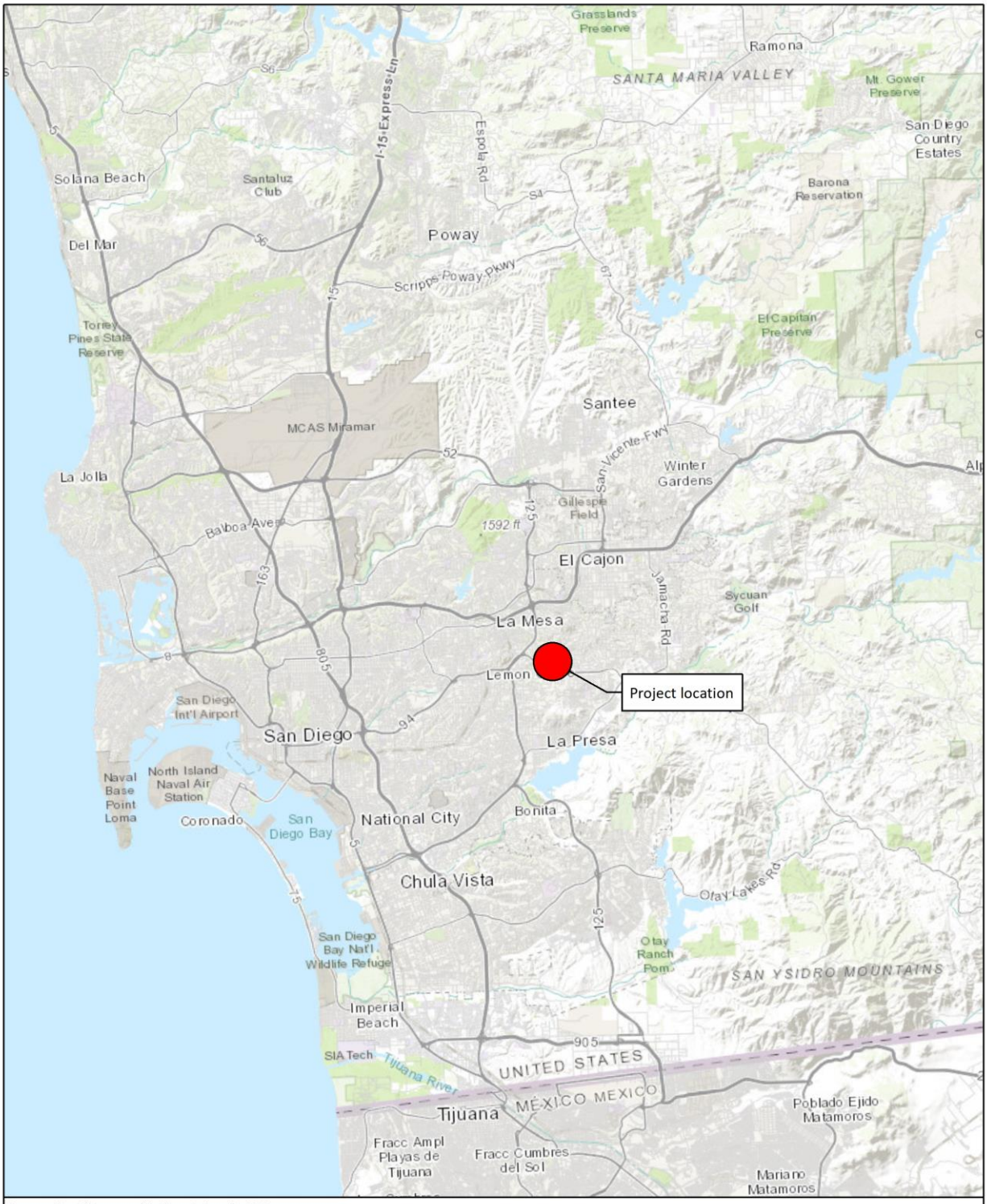
1.2 Scope of Work

Because the Proposed Project site occurs in an area partially underlain by native sedimentary deposits, a paleontological resource assessment was conducted in order to evaluate whether the proposed Project has the potential to negatively impact paleontological resources. It addresses potential impacts to paleontological resources that may occur during construction of the Proposed Project by summarizing existing paleontological resource data at the Project site, discussing the significance of these resources, examining potential Project-related impacts to paleontological resources, and, if necessary, suggesting mitigation measures to reduce impacts to paleontological resources to less than significant levels. The report includes the results of a literature review of relevant geological and paleontological reports and an institutional records search of the paleontological collections at the San Diego Natural History Museum (SDNHM). This report was prepared by Katie M. McComas and Thomas A. Deméré of the Department of PaleoServices, SDNHM.

1.3 Definition of Paleontological Resources

As defined here, paleontological resources (i.e., fossils) are the buried remains and/or traces of prehistoric organisms (i.e., animals, plants, and microbes). Body fossils such as bones, teeth, shells, leaves, and wood, as well as trace fossils such as tracks, trails, burrows, and footprints, are found in the geologic units/formations within which they were originally buried. The primary factor determining whether an object is a fossil or not is not how the organic remain or trace is preserved (e.g., "petrified"), but rather the age of the organic remain or trace. Although typically it is assumed that fossils must be older than ~11,700 years (i.e., the generally accepted end of the last glacial period of the Pleistocene

Epoch), organic remains older than recorded human history and/or older than middle Holocene (about 5,000 radiocarbon years) can also be considered to represent fossils (SVP, 2010).



Fossils are considered important scientific and educational resources because they serve as direct and indirect evidence of prehistoric life and are used to understand the history of life on Earth, the nature of past environments and climates, the membership and structure of ancient ecosystems, and the pattern and process of organic evolution and extinction. In addition, fossils are considered to be non-renewable resources because typically the organisms they represent no longer exist. Thus, once destroyed, a particular fossil can never be replaced.

Finally, paleontological resources can be thought of as including not only the actual fossil remains and traces, but also the fossil collecting localities and the geologic units containing those localities. The locality includes both the geographic and stratigraphic context of fossils—the place on the earth and stratum (deposited during a particular time in earth's history) from which the fossils were collected. Localities themselves may persist for decades, in the case of a fossil-bearing outcrop that is protected from natural or human impacts, or may be temporarily exposed and ultimately destroyed, as is the case for fossil-bearing strata uncovered by erosion or construction. Localities are documented with a set of coordinates and a measured stratigraphic section tied to elevation detailing the lithology of the fossil-bearing stratum as well as overlying and underlying strata. This information provides essential context for any future scientific study of the recovered fossils.

1.3.1 Definition of Significant Paleontological Resources

The California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.) dictates that a paleontological resource is considered significant if it "has yielded, or may be likely to yield, information important in prehistory or history" (Section 15064.5, [a][3][D]). The Society of Vertebrate Paleontology (SVP) has further defined significant paleontological resources as consisting of "fossils and fossiliferous deposits[…]consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information" (SVP, 2010).

1.4 Regulatory Framework

Paleontological resources are considered scientifically and educationally significant nonrenewable resources; they are protected under a variety of laws, regulations, and ordinances. The Project site is located in an unincorporated area of San Diego County, California. As such, state and local regulations are applicable to the Project.

1.4.1 State

The California Environmental Quality Act (CEQA, Public Resources Code Section 21000 *et seq.*) protects paleontological resources on both state and private lands in California. This act requires the identification of environmental impacts of a proposed project, the determination of significance of the impacts, and the identification of alternative and/or mitigation measures to reduce adverse environmental impacts. The Guidelines for the Implementation of CEQA (Title 14, Chapter 3, California Code of Regulations: 15000 *et seq*.) outlines these necessary procedures for complying with CEQA. Paleontological resources are specifically included as a question in the CEQA Environmental Checklist (Section 15023, Appendix G): "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature." Also applicable to paleontological resources

is the checklist question: “Does the project have the potential to… eliminate important examples of major periods of California history or pre-history.” If significant paleontological resources may be impacted within a given project site, CEQA provides that “a lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures” (Section 15064.5, [b][4]).

Other state requirements for paleontological resource management are included in the Public Resources Code (Chapter 1.7), Section 5097.5 and 30244. These statutes prohibit the removal of any paleontological site or feature on public lands without permission of the jurisdictional agency, defines the removal of paleontological sites or features as a misdemeanor, and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public (state) lands.

1.4.3 Local

The County of San Diego primarily addresses management of paleontological resources through CEQA. In addition, Section 87.430 of the County’s Grading Ordinance specifically establishes procedures for the mitigation of potential impacts to paleontological resources during earthwork operations. Detailed guidelines for determining significance and mitigation procedures for paleontological resources are provided by the County’s Department of Public Works (Stephenson et al., 2009).

2.0 Methods

2.1 Paleontological Records Search and Literature Review

A paleontological records search was conducted at the SDNHM in order to determine if any documented fossil collection localities occur within the Proposed Project site or immediate surrounding area. The SDNHM records search involved examination of the paleontological database for any records of known fossil collection localities from sedimentary deposits similar to those underlying the Proposed Project site within an approximately 1-mile radius.

Additionally, a review was conducted of relevant published geologic maps (e.g., Todd, 2004), published geological and paleontological reports (e.g., Deméré et al., 2013; Golz and Lillegraven, 1977; Jefferson, 1991), and other relevant literature (e.g., unpublished paleontological mitigation reports). This approach was followed in recognition of the direct relationship between paleontological resources and the geologic units within which they are entombed. Knowing the geologic history of a particular area and the fossil productivity of geologic units that occur in that area, makes it is possible to predict where fossils may, or may not, be encountered.

2.2 Paleontological Resource Assessment Criteria

Impacts to paleontological resources are typically assigned a paleontological sensitivity rating based on the resource potential of an impacted geologic unit. The County of San Diego has developed their own guidelines for assigning paleontological sensitivity (Stephenson et al., 2009), which includes a five-tiered

scale of High Sensitivity, Moderate Sensitivity, Low Sensitivity, Marginal Sensitivity, or Zero Sensitivity ratings. An expanded description of each paleontological sensitivity rating, as outlined by the County (Stephenson et al., 2009) is provided below.

2.2.1 High Sensitivity

Geologic units with high sensitivity have produced, or are likely to produce, significant vertebrate, invertebrate, or paleobotanical remains. High sensitivity geologic units may contain fossil materials that are rare, well-preserved, critical for stratigraphic or paleoenvironmental interpretation, and/or provide important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups.

2.2.2 Moderate Sensitivity

Moderate sensitivity is assigned to geologic units known to contain paleontological localities with fossil material that is poorly preserved, common elsewhere, or stratigraphically unimportant.

2.2.3 Low Sensitivity

Low sensitivity is assigned to geologic units that, based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce important fossil remains. Typically, low sensitivity units produce fossil remains in low abundance, or only produce common/widespread invertebrate fossils whose taphonomy, phylogeny, and ecology is already well understood.

2.2.4 Marginal Sensitivity

Marginal sensitivity is assigned to geologic units that are composed either of volcaniclastic (derived from volcanic sources) or metasedimentary rocks, but that nevertheless have a limited probability for producing fossils from certain formations at localized outcrops.

2.2.5 Zero Sensitivity

Geologic units with no sensitivity are either entirely igneous in origin and therefore do not contain fossil remains, or are moderately to highly metamorphosed and thus any contained fossil remains have been destroyed. Artificial fill materials also have no sensitivity, because the stratigraphic and geologic context of any contained organic remains (i.e., fossils) has been lost.

2.3 Paleontological Impact Analysis

Direct impacts to paleontological resources occur when earthwork activities (e.g., mass grading, trenching), cut into the geologic units within which fossils are buried, and physically destroy the fossil remains. As such, only earthwork activities that will disturb potentially fossil-bearing sedimentary deposits (i.e., those rated with a high or moderate paleontological sensitivity) have the potential to significantly impact paleontological resources. Paleontological mitigation typically is recommended to reduce any negative impacts to paleontological resources to less than significant levels.

The purpose of the impact analysis is to determine which (if any) of the proposed Project-related earthwork activities may disturb potentially fossil-bearing geologic units, and where and at what depths this earthwork will occur. The paleontological impact analysis involved analysis of available project

documents, and comparison with geological and paleontological data gathered during the records search and literature review.

3.0 Results

3.1 Results of the Records Search and Literature Review

The Proposed Project site lies within the San Diego Coastal Plain, a local geomorphic region lying west of the Peninsular Ranges that is characterized by elevated Quaternary marine and fluvial terraces that have been dissected by modern, generally west-flowing streams and rivers. Along the coastal plain, the Mesozoic basement rocks of the Jurassic-Cretaceous Santiago Peak Volcanics and the Cretaceous Peninsular Ranges Batholith are nonconformably overlain by a "layer cake" sequence of sedimentary rocks of late Cretaceous, Eocene, Oligocene, Miocene, Pliocene, and Pleistocene age (Givens and Kennedy, 1976; Hanna, 1926; Kennedy, 1975; Kennedy and Moore, 1971; Kennedy and Peterson, 1975; Peterson and Kennedy, 1974; Walsh and Deméré, 1991). More recently, alluvial sediments of Pleistocene and Holocene age filled in the ancient river valleys with alluvium transported from the east by local rivers and streams.

3.1.1 Project Geology

As mapped by Todd (2004), young alluvium underlies the entire Proposed Project site at the surface (Figure 2). These deposits are generally considered to be Holocene in age (less than about 11,700 years old), but presumably transition downsection (i.e., at depth) into older, Pleistocene-age deposits. The depth of this temporal transition is conservatively estimated to occur at 10 feet or more bgs. The site-specific geotechnical investigation report indicates that these deposits consist of fine- to medium-grained sandy clay and silty fine- to medium-grained sand, and are present to depths of 21 to 26 feet bgs, where they are underlain by silty fine-grained sandstone strata of the middle Eocene-age (approximately 43 million years old) Mission Valley Formation (CTE, 2020). Also present within the Proposed Project site are previously placed undocumented fill deposits, locally measuring up to 3 feet thick (CTE, 2020).

3.1.2 Project Paleontology

No fossils are currently documented within a one-mile radius of the Proposed Project site. The lack of recorded fossil collection localities from Holocene alluvial deposits is primarily due to their relatively young geologic age and the recognition that organic remains preserved in such deposits are conspecific with organisms living in the area today.

Fossils have been collected from older, Pleistocene-age alluvial sediments at numerous locations in coastal San Diego County, and have yielded impressive collections of terrestrial vertebrates including pond turtle, passenger pigeon, hawk, mole, rabbit, gopher, squirrel, capybara, wolf, horse, camel, deer, bison, mastodon, mammoth, and ground sloth (Chandler, 1982; Deméré et al., 2013; Guthrie, 2012; Jefferson, 1991; Majors, 1993; SDNHM unpublished paleontological collections data).

Fluvial deposits of the Mission Valley Formation have yielded a diverse assemblage of terrestrial mammals, including opossums, insectivores, bats, rodents, primates, artiodactyls, and perissodactyls

(Golz and Lillegraven, 1977; Walsh, 1996), as well as fossilized wood (SDNHM unpublished paleontological collections data), while the marine deposits have yielded a diverse fossil assemblage consisting of marine microfossils (e.g., foraminifers), invertebrates (e.g., clams, snails, crustaceans, sand dollars, sea urchins), and vertebrates (e.g., sharks, rays, bony fishes) (Deméré and Walsh, 1993).

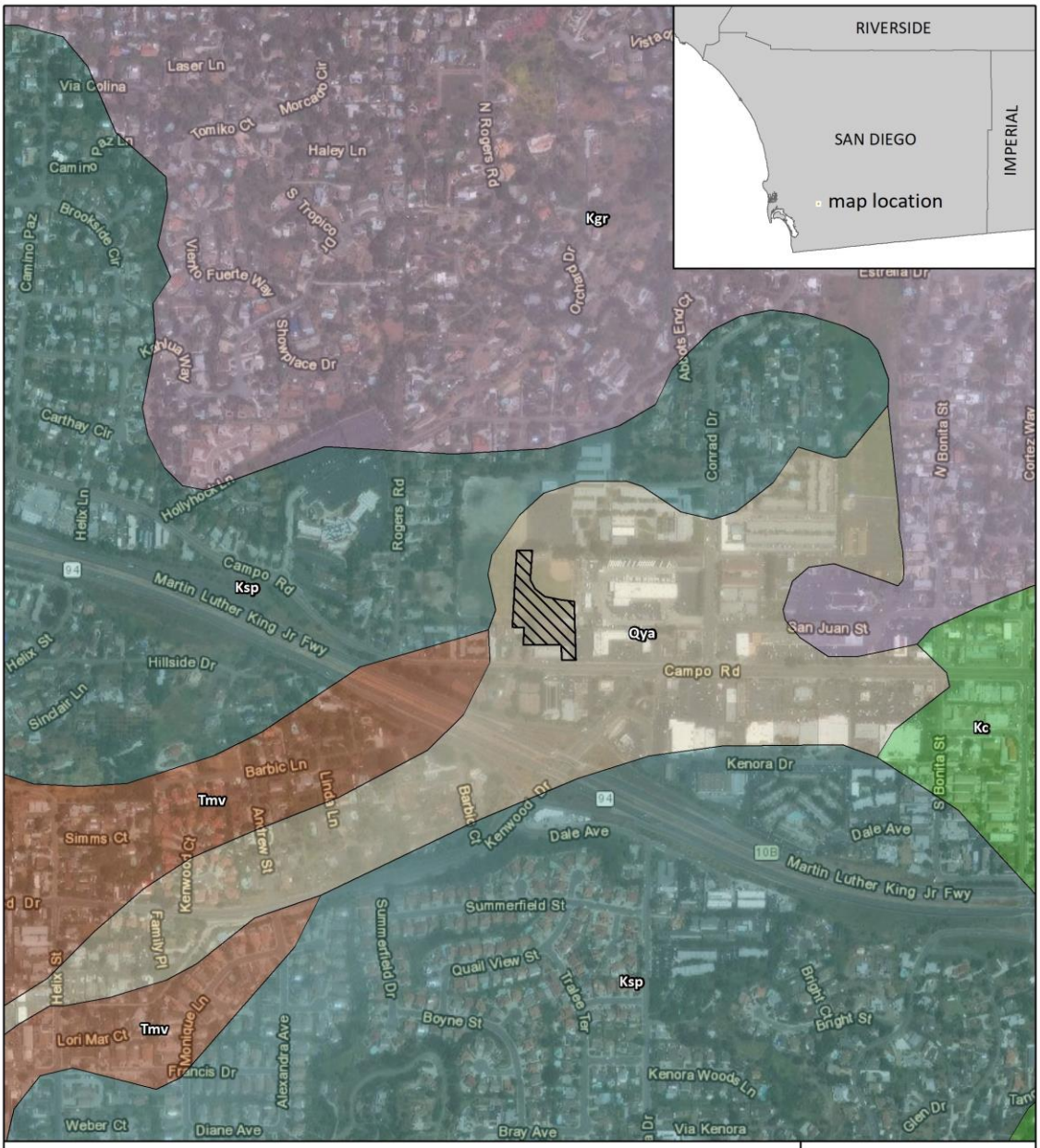


Figure 2: Geologic Map, Casa de Oro Branch Library, San Diego County, California

3.2 Results of the Paleontological Resource Assessment

Following the County of San Diego paleontological sensitivity guidelines, as outlined in Section 2.2, Holocene-age young alluvium underlying the Project site is assigned a low paleontological sensitivity. This rating is based on the relatively young age of these deposits and the recognition that organic remains preserved in such deposits are conspecific with organisms living in the area today. However, as mentioned above, the Holocene-age sediments likely transition in the subsurface into older, Pleistocene-age deposits, at depths that may be as shallow as 10 feet bgs (see Section 3.1.1). Pleistocene sedimentary deposits located at depth within the Proposed Project site are assigned a moderate paleontological sensitivity based on the occurrence of scientifically significant vertebrate fossils in similar deposits in western San Diego County. The Mission Valley Formation, meanwhile, is assigned a high paleontological sensitivity based on the recovery of diverse and scientifically significant assemblages of terrestrial vertebrates and marine organisms from this geologic unit.

Because the contact between Holocene-age deposits and older, Pleistocene-age deposits may be as shallow as 10 feet bgs, the alluvial deposits underlying the Proposed Project site are specifically assigned a low paleontological sensitivity from 0–10 feet bgs, where they are assumed to be Holocene in age, a moderate paleontological sensitivity at depths greater than 10 feet bgs, where they may be Pleistocene in age, and a high paleontological sensitivity at depths greater than 21 feet bgs, where the Mission Valley Formation is present (Figure 3).

3.3 Results of the Paleontological Impact Analysis

While the specific locations and dimensions of earthwork for the Proposed Project are currently undefined, construction of the library building, which will be located in the southern portion of the Proposed Project site, is anticipated to require excavations extending to a maximum depth of 5 feet bgs. Based on the above assessment (Section 3.2), only Project-related earthwork that would extend greater than 10 feet bgs has the potential to impact paleontological resources. Therefore, construction of the Proposed Project is not anticipated to result in impacts to paleontological resources.



Figure 3: Paleontological Sensitivity Map, Casa de Oro Branch Library, San Diego County, California

4.0 Recommendations & Conclusions

Implementation of a paleontological mitigation program is not recommended for the Proposed Project because Proposed Project-related earthwork, as currently outlined, is not anticipated to negatively impact paleontological resources (i.e., earthwork will not extend deep enough to impact geologic units with moderate or high paleontological sensitivity). However, in the unlikely event that fossils are unearthed during earthwork activities (i.e., an inadvertent discovery), the following measures should be implemented.

MM PALEO-1: Upon discovery of an unearthed fossil, earthwork in the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered, and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.

MM PALEO-2: Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository along with associated field notes, photographs, and compiled fossil locality data. For projects in San Diego County, the recommended designated repository is the San Diego Natural History Museum. Donation of the fossils should be accompanied by financial support for specimen storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.

5.0 References

Chandler, R.M. 1982. A second record of Pleistocene passenger pigeons from California. Condor 84: 242.

Construction Testing & Engineering, Inc. (CTE). 2020. Preliminary geotechnical investigation, proposed Casa de Oro Library, 3838 Conrad Drive, Spring Valley, California. Prepared for County of San Diego Department of General Services. Dated 30 September 2020.

Deméré, T.A., and Walsh, S.L. 1993. Paleontological Resources, County of San Diego. Prepared for the San Diego Planning Commission: 1–68.

Deméré, T.A., K.A. Randall, B.O. Riney, and S.A. Siren. 2013. Discovery of remains of an extinct giant bison (*Bison latifrons*) in upper Pleistocene (Rancholabrean) fluvial strata in the San Luis Rey River Valley, San Diego County, California, USA. In, B.J. Olson (ed.) San Luis Rey on Display: geoscience in northern San Diego County. San Diego Association of Geologists 2013 Field Trip Guidebook. Sunbelt Publications, San Diego. pp. 123–144.

Givens, C.R. and M.P. Kennedy. 1976. Middle Eocene mollusks from northern San Diego County, California. Journal of Paleontology 50: 954–974.

Golz, D.J., and J.A. Lillegraven. 1977. Summary of known occurrences of terrestrial vertebrates from Eocene strata of southern California. University of Wyoming, Contributions to Geology 15: 43–64.

Guthrie, D.A. 2012. Avian material from Rancho del Oro, a Pleistocene locality in San Diego County, California. Bulletin of the Southern California Academy of Sciences, 109(1).

Hanna, M.A. 1926. Geology of the La Jolla quadrangle, California. University of California Publications in Geological Sciences, 16: 187–246.

Jefferson, G.T. 1991. A catalog of late Quaternary vertebrates from California. Natural History Museum of Los Angeles County, Technical Reports 7: 1–129.

Kennedy, M.P. 1975. Geology of the San Diego metropolitan area, California. Section A - Western San Diego metropolitan area. California Division of Mines and Geology, Bulletin 200:9-39.

Kennedy, M.P., and G.W. Moore. 1971. Stratigraphic relations of upper Cretaceous and Eocene formations, San Diego coastal area, California. American Association of Petroleum Geologists, Bulletin 55: 709–722.

Kennedy, M.P., and G.L. Peterson. 1975. Geology of the San Diego metropolitan area, California. Section B, Eastern San Diego metropolitan area. California Division of Mines and Geology, Bulletin 200: 45–56.

Majors, C.P. 1993. Preliminary report on a late Pleistocene vertebrate assemblage from Bonita, San Diego County, California. In, R.G. Dundas and D.J. Long (eds.), New Additions to the Pleistocene Vertebrate Record of California. PaleoBios 15: 63–77.

Peterson, G.L., and M.P. Kennedy. 1974. Lithostratigraphic variations in the Poway Group near San Diego, California. San Diego Society of Natural History, Transactions 17: 251–258.

San Diego Natural History Museum (SDNHM) unpublished paleontological collections data and field notes.

Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology, p. 1-11.

Stephenson, B., and seven others. 2009. County of San Diego Guidelines for determining significance of paleontological resources. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, 46 p.

Todd, V.R. 2004. Preliminary geologic map of the El Cajon 30' x 60' quadrangle, southern California. USGS Open-File Report 2004-1361.

Walsh, S.L. 1996. Middle Eocene mammal faunas of San Diego County, California. In, D.R. Prothero and R.J. Emry (eds.). The Terrestrial Eocene-Oligocene Transition in North America. Cambridge University Press: 75–119.

Walsh, S.L., and T.A. Deméré. 1991. Age and stratigraphy of the Sweetwater and Otay Formations, San Diego County, California. In, P.L. Abbott and J.A. May (eds.), Eocene Geologic History San Diego Region. Society of Economic Mineralogists and Paleontologists, Pacific Section 68: 131–148.

APPENDIX E
PHASE I ENVIRONMENTAL SITE ASSESSMENT

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PHASE I ENVIRONMENTAL SITE ASSESSMENT

Casa de Oro Branch Library

Community of Spring Valley,

Unincorporated San Diego County, State of California

Prepared in General Accordance with:
ASTM E 1527-13
Standard Practice for Environmental Site Assessments

Prepared for:
County of San Diego
Department of General Services
5560 Overland Avenue, Suite 410
San Diego, CA 92123

Prepared by:
Michael Baker International
5 Hutton Centre Drive, Suite 500
Santa Ana, California 92707

October 2020

JN 179854

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

Casa de Oro Branch Library

Community of Spring Valley
State of California

Prepared in General Accordance with:
ASTM E 1527-13 Standard Practice for Environmental Site Assessments

For:

County of San Diego
Department of General Services
5560 Overland Avenue, Suite 410
San Diego, CA 92123
Attn: Marc Cass

By:

Michael Baker
INTERNATIONAL

5 Hutton Centre Drive, Suite 500
Santa Ana, California 92707

October 23, 2020

JN 179854

Michael Baker
INTERNATIONAL

We Make a Difference

October 23, 2020 179854

Marc Cass
County of San Diego
5560 Overland Avenue, Suite 410
San Diego, CA 92123

SUBJECT: Phase I Environmental Site Assessment for the Casa de Oro Branch Library, located in the Community of Spring Valley, unincorporated San Diego County, California

Dear Mr. Cass:

Michael Baker International (Michael Baker) is pleased to submit this Phase I Environmental Site Assessment (ESA) for the above referenced project, herein referenced as the "subject site." The goal of this Phase I ESA is to identify recognized environmental conditions (RECs) associated with the subject site. This Phase I ESA has been prepared for the sole use of the **County of San Diego**, for the above-referenced subject site. Neither this Phase I ESA, nor any of the information contained herein, shall be used or relied upon for any purpose by any person or entity other than the **County of San Diego.**

The Phase I ESA was prepared using methods consistent with the ASTM International (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments, the scope of services, and inherent limitations presented in our proposal. The Phase I ESA is not intended to present specific quantitative information as to the actual presence of hazardous substances on or adjacent to the subject site, but is to identify RECs based on available information.

Should you or your staff have any questions or concerns after reviewing the enclosed report, please do not hesitate to contact me at 949/855-5747.

Sincerely,

Kristen Bogue
Environmental Professional
Planning/Environmental Sciences

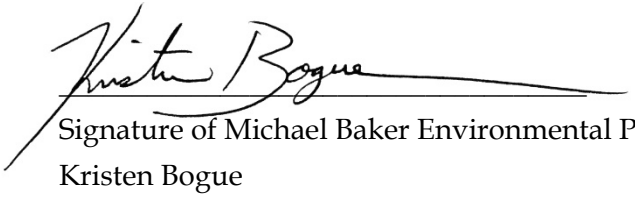
Danielle Regimbal
Environmental Specialist
Planning/Environmental Sciences

STATEMENT OF ENVIRONMENTAL PROFESSIONAL

I [We] declare that, to the best of my[our] professional knowledge and belief, I[we] meet the definition of Environmental Professional as defined in §312.10 of Title 40, Code of Federal Regulations (CFR) 312 and I[we] have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I[we] have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Signature of Michael Baker Environmental Specialist
Danielle Regimbal



Signature of Michael Baker Environmental Professional
Kristen Bogue

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LIST OF ACRONYMS

AAI	All Appropriate Inquiries
ACM	Asbestos Containing Materials
APN	Assessor's Parcel Number
AST	Aboveground Storage Tank
ATSDR	Agency for Toxic Substances and Disease Registry
AULs	Activity and Use Limitations
bgs	Below ground surface
BTEX	Ethylbenzene and xylenes
CalGEM	California Department of Conservation, Geologic Energy Management Division
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System (maintained by the Environmental Protection Agency)
CFR	Code of Federal Regulations
CORRACTS	facilities subject to Corrective Action under RCRA
CPSC	United States Consumer Product Safety Commission
CREC	Conditional Recognized Environmental Condition
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DTSC	Department of Toxic Substances Control
EDR	Environmental Data Resources, Inc.
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act (also known as SARA Title III), 42 U.S.C. §§11001-11050 et seq.)
ERNS	emergency response notification system
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FOIA	U.S. Freedom of Information Act (5 U.S.C. §552 as amended by Public Law No. 104-231, 110 Stat.)
FR	Federal Register
GIS	Geographic Information System
GWET	Groundwater extraction and treatment system
HREC	Historical Recognized Environmental Condition
HWTS	Hazardous Waste Tracking System

ICs	Institutional Controls
kg	Kilogram
LBP	Lead Based Paints
lbs	Pounds
LUFT	Leaking Underground Fuel Tank
LUST	Leaking Underground Storage Tank
MGP	Manufactured gas plant
MSDS	Material Safety Data Sheet
msl	Mean sea level
NCP	National Contingency Plan
NFA	No Further Action
NFRAP	Former CERCLIS sites where no further remedial action is planned under CERCLA
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
PAH	Polycyclic aromatic hydrocarbon (also known as polyaromatic hydrocarbons or polynuclear aromatic hydrocarbons [PNA])
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethene (also known as perchloroethylene [perc])
pCi/L	picocuries per liter
perc	Perchloroethylene (also known as tetrachloroethene [PCE])
PNA	Polynuclear aromatic hydrocarbon (also known as polycyclic aromatic hydrocarbons [PAH] or polyaromatic hydrocarbons)
REC	Recognized Environmental Condition
RCRA	Resource Conservation and Recovery Act (as amended, 42 U.S.C. §§6901 et seq.)
RWQCB	Regional Water Quality Control Board
SBBM	San Bernardino Base and Meridian
SCS	Soil Conservation Service
SVE	Soil Vapor Excavation
SWRCB	State Water Resources Control Board
TCE	Trichloroethene
TPH	Total petroleum hydrocarbons
TPH-d	Total petroleum hydrocarbons as diesel
TPH-g	Total petroleum hydrocarbons as gasoline
TPH-mo	Total petroleum hydrocarbons as motor oil
TRI	Toxics Release Inventory
TSDF	Treatment, storage, or disposal facility for hazardous waste and certain industrial waste

USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile organic compounds

EXECUTIVE SUMMARY

Michael Baker has performed a Phase I ESA in conformance with the scope and limitations of ASTM E 1527-13 Standard Practice of the Casa de Oro Branch Library property located at Assessor's Parcel Numbers (APNs) 500-170-10-00, -11-00, and -41-00, community of Spring Valley, unincorporated San Diego County, California, the subject site. Any exceptions to, or deletions from, this practice are described in Section 6.3, *Limiting Conditions/Deviations*, of this Phase I ESA. This Phase I ESA has revealed no evidence of RECs in connection with the subject site.

Section 6.1, *Findings and Opinions*, documents Michael Baker's findings and opinions as to whether or not a REC (or Conditional Recognized Environmental Condition [CREC]) is present at the subject site.

SECTION 1.0
INTRODUCTION

1.1 PURPOSE

The purpose of conducting this Phase I Environmental Site Assessment (ESA) is to identify Recognized Environmental Conditions (RECs) as defined by the ASTM International (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments (Standard Practice). The ASTM E 1527-13 Standard Practice defines the term REC as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not RECs."

This Phase I ESA was conducted in accordance with the ASTM E 1527-13 Standard Practice and satisfies the requirements of 40 Code of Federal Regulations (CFR) Part 312 titled *Standards and Practices for All Appropriate Inquiries*, as required under Section 101(35)(B)(ii) and (iii) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The purpose of conducting an All Appropriate Inquiries (AAI) investigation into the previous ownership and uses of a property is to meet the provisions necessary for the innocent landowner, contiguous property owner, or bona fide prospective purchaser to qualify for certain landowner liability protections under CERCLA. To assist in understanding the terminology contained in this Phase I ESA, a glossary of terms associated with the ASTM E 1527-13 Standard Practice is provided in Appendix A, *ASTM Terminology*.

1.2 DETAILED SCOPE OF SERVICES

This scope of work follows the ASTM E 1527-13 Standard Practice. The ASTM E 1527-13 Standard Practice outlines a procedure for completing Phase I ESAs that includes review of Federal, tribal, State, and local government records; site reconnaissance; interviews with current owners, operators, occupants, and government officials; and report preparation. This practice does not include any testing or sampling of materials (for example, soil, water, air, building materials, etc.). This Phase I ESA is not intended to provide specific qualitative or quantitative information as to the actual presence of hazardous substances at the subject site, but is to merely identify the potential presence based on available information.

1.3 SIGNIFICANT ASSUMPTIONS

Unless stated otherwise in this Phase I ESA, Michael Baker assumes that groundwater flow follows the topography of the subject site and general vicinity.

In lieu of reasonably available public information pertaining to groundwater contamination, Michael Baker assumes that groundwater plume dimensions are within the 90th percentile of plumes determined by research conducted as part of ASTM E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in real Estate Transactions, which described in detail in Table 1-1, *Groundwater Plume Dimension Assumptions*.

Table 1-1
Groundwater Plume Dimension Assumptions

Chemical Contamination	Length of Plume Up-Gradient From Source	Length of Plume Down-Gradient from Source	Maximum Width of Plume From Source
Chemical of Concern	100 feet	1,760 feet	365 feet
Petroleum Hydrocarbon Chemical of Concern			
With Free Product	100 feet	528 feet	165 feet
Dissolved	100 feet	528 feet	95 feet
Notes: These dimension assumptions are based on research conducted as part of ASTM E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in real Estate Transactions, which has determined that 90 percent of plumes are these dimensions or less.			
Source: Anthony J. Buonicore, *Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources*, Paper 2011-A-301-AWMA, June 2011.			

1.4 LIMITATIONS, DEVIATIONS, AND EXCEPTIONS

Based upon evaluation of the documented land use as demonstrated in the resources reviewed as part of this Phase I ESA, the subject site appears to have consisted of a rural residential structure since prior to 1901. As such, Michael Baker was unable to identify the first use of the subject site. Further, Michael Baker was unable to obtain specific property land use information of the subject site, within a five-year interval, from 1955 to 1964. From 1955 to 1964, all on-site structures were demolished and the subject site has been graded. No indicators of potential hazardous materials were noted in relation to the on-site structures and no evidence of other development was noted. Thus, this limitation is not considered a significant data gap.

Michael Baker did not observe the interior of the on-site structures. However, these on-site structures are associated with institutional uses (La Mesa-Spring Valley School District) and commercial uses (Pho & Grill International Restaurant) and are not anticipated to involve the storage/use/handling of hazardous materials or waste. This deviation is not considered a significant data gap.

Michael Baker did not interview occupants/operators of the Phase I ESA. Notwithstanding, based on files reviewed, it is the opinion of Michael Baker that these interviews would not likely increase the knowledge of the Environmental Professional such that the conclusions of this Phase I ESA would change. Thus, it is the opinion of Michael Baker that this deviation is not a significant data gap.

No other limitations, deviations, or exceptions were encountered during the preparation of this Phase I ESA. Further, no additional scope items, or items outside of the scope of a Phase I ESA E 1527-13 Standard Practice, were conducted as part of this Phase I ESA.

1.5 USER RESPONSIBILITIES

This Phase I ESA does not satisfy continuing obligations under CERCLA liability protections provided for innocent landowners, bona fide prospective purchasers, and contiguous property owners, which includes, but is not limited to, duties required after property acquisition (i.e., compliance with land use restrictions and institutional controls, undertaking "reasonable steps" with respect to hazardous substances releases, compliance with other obligations such as reporting obligations and information requests, etc.).

ASTM E 1527-13 Standard Practice defines the user as "the party seeking to use Practice E 1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager." The purpose of this section is to describe tasks to be performed by the user that will help identify the possibility of recognized environmental conditions in connection with the subject site. These tasks do not require the technical expertise of an environmental professional and are not required to be performed by environmental professional performing a Phase I ESA. The user questionnaire utilized within this Phase I ESA is optional to the user and aids the environmental professional in gathering information from the user that may be material to identifying RECs (refer to Section 2.0, *User Provided Information*, for a discussion of the User Questionnaire conducted as part of this Phase I ESA). It should be noted that the following tasks are required, by the user of this Phase I ESA, to satisfy the requirements of conducting all appropriate inquiries.

1.5.1 REVIEW TITLE AND JUDICIAL RECORDS FOR ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS (AULS)

To meet the requirements of 40 CFR 312.20 and 312.25, a search for the existence of environmental liens and AULs that are filed or recorded against the property must be conducted. Environmental liens and AULs are legally distinct instruments and have very different purposes and both can commonly be found within recorded land title records (e.g., County Recorder/Registry of Deeds). The types of title reports that may disclose environmental liens and AULs include Preliminary Title Reports, Title Commitments, Condition of Title, and Title Abstracts. Chain of title reports will not normally disclose environmental liens or AULs. Environmental liens and AULs that are imposed by judicial authorities may be recorded or filed in judicial records only. In jurisdictions where environmental liens or AULs are only recorded or filed in judicial records, the judicial records must be searched for environmental liens and AULs. Any environmental liens and AULs known to the user should be reported to the environmental professional conducting a Phase I Environmental Site Assessment. Unless added by a change in the scope of work to be performed by the environmental professional (refer to Section 1.4, *Limitations, Deviations, and Exceptions*), this practice does not impose on the environmental professional the responsibility to undertake a review of recorded land title records and judicial records for environmental liens or activity and use limitations. The user should either (1) engage a title company or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens or activity and use limitations currently recorded against or relating to the property, or (2) negotiate such an engagement of a title company or title professional as an addition to the scope of work to be performed by the environmental professional.

1.5.1.1 Reasonably Ascertainable Title and Judicial Records for Environmental Liens and Activity and Use Limitations

Environmental liens and AULs that are recorded or filed in any place other than recorded land title records are not considered to be reasonably ascertainable unless applicable Federal, tribal, State, or local statues, or regulations specify a place other than recorded land title records for recording or filing of environmental liens and AULs.

1.5.2 SPECIALIZED KNOWLEDGE OR EXPERIENCE OF THE USER

Users must take into account their specialized knowledge to identify conditions indicative of releases or threatened releases. If the user has any specialized knowledge or experience that is material to RECs in connection with the property, the user should communicate any information

based on such specialized knowledge or experience to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance.

1.5.3 ACTUAL KNOWLEDGE OF THE USER

If the user has actual knowledge of any environmental lien or AULs encumbering the property or in connection with the property, the user should communicate such information to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance.

1.5.4 REASON FOR SIGNIFICANTLY LOWER PURCHASE PRICE

In a transaction involving the purchase of a parcel of commercial real estate, the user shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The user should try to identify an explanation for a lower price which does not reasonably reflect fair market value if the property were not contaminated, and make a written record of such explanation. Among the factors to consider will be the information that becomes known to the user pursuant to the Phase I ESA. The ASTM E 1527-13 Standard Practice does not require that a real estate appraisal be obtained in order to ascertain fair market value of the property. The user should inform the environmental professional if the user believes that the purchase price of the property is lower than the fair market value due to contamination. The user is not required to disclose the purchase price to the environmental professional.

1.5.5 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

Commonly known or reasonably ascertainable information within the local community about the property must be taken into account by the user. If the user is aware of any commonly known or reasonably ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, the user should communicate such information to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance. The user must gather such information to the extent necessary to identify conditions indicative of releases or threatened releases of hazardous substances or petroleum products.

1.5.6 DEGREE OF OBVIOUSNESS

The user must consider the degree of obviousness of the presence or likely presence of releases or threatened releases at the property and the ability to detect releases or threatened releases by appropriate investigation including the information collected under the following sections within this Phase I ESA:

- Section 1.5.1, *Review Title and Judicial Records for Environmental Liens and Activity and Use Limitations (AULs)*;
- Section 1.5.2, *Specialized Knowledge or Experience of the User*;
- Section 1.5.4, *Reason for Significantly Lower Purchase Price*;
- Section 1.5.5, *Commonly Known or Reasonably Ascertainable Information*;
- Section 3.2, *Standard Environmental Records Sources*;
- Section 3.4, *Historical Use Information on the Subject Site and Adjoining Properties*;
- Section 4.0, *Site Reconnaissance*; and
- Section 5.0, *Interviews*.

1.5.7 OTHER

Either the user shall make known to the environmental professional the reason why the user wants to have the Phase I ESA performed or, if the user does not identify the purpose of the Phase I ESA, the environmental professional shall assume the purpose is to qualify for an LLP to CERCLA liability and state this in the report.

1.6 SPECIAL TERMS AND CONDITIONS

No special terms and conditions were identified for this scope of work.

1.7 USER RELIANCE

The information and opinions rendered in this Phase I ESA are exclusively for use by the County of San Diego. Michael Baker will not distribute or publish this report without the consent of the County of San Diego, except as required by law or court order. The information and opinions expressed in this Phase I ESA are given in response to Michael Baker's scope of services and limitations indicated above, and should be considered and implemented only in light of the scope of services and limitations. The services provided by Michael Baker in completing this Phase I ESA were consistent with normal standards of the profession. No warranty, expressed or implied, is made.

SECTION 2.0
USER PROVIDED INFORMATION

Per ASTM E 1527-13, the user of the Phase I ESA has an obligation to answer all questions posed by the User Questionnaire, provided by Michael Baker on August 27, 2020, in good faith, to the extent of his or her actual knowledge or to designate a key site manager to do so. If answers to questions are unknown or partially unknown to the user or such key site manager, this section shall not thereby be deemed incomplete.

The County of San Diego is the user of this Phase I ESA and has requested this Phase I ESA for the purposes of the California Environmental Quality Act (CEQA) compliance and property transaction. Michael Baker received the User Questionnaire from Mr. Marc Cass, Environmental Project Manager with the County of San Diego, on October 20, 2020. The following sections discuss the findings of the User Questionnaire.

2.1 PREVIOUS DOCUMENTS

Other than the Casa De Oro Branch Library Hydrology & Water Quality Technical Memorandum, the user did not provide Michael Baker with previous documents.

2.2 LITIGATION/ADMINISTRATIVE PROCEEDINGS

The user did not provide any information pertaining to any pending, threatened, or past litigation and/or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property during the course of this Phase I ESA.

2.3 GOVERNMENTAL NOTICES

The user did not provide any information pertaining to any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products during the course of this Phase I ESA.

2.4 ENVIRONMENTAL LIENS

The user did not provide any environmental lien information during the course of this Phase I ESA.

2.5 ACTIVITY AND USE LIMITATIONS

The user did not provide any activity and use limitation information during the course of this Phase I ESA.

2.6 SPECIALIZED KNOWLEDGE OR EXPERIENCE

The user did not provide any specialized knowledge or experience related to the subject site during the course of this Phase I ESA.

2.7 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The user did not provide any commonly known or reasonably ascertainable information during the course of this Phase I ESA.

2.8 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The user stated that the subject site was being purchased for fair market value and did not report valuation reduction for environmental issues.

2.9 DEGREE OF OBVIOUSNESS

The user did not disclose any obvious indicators that point to the presence or likely presence of releases at the property during the course of this Phase I ESA.

2.10 REASON FOR PERFORMING PHASE I

This Phase I ESA has been requested by the County of San Diego and is being performed for the purposes of CEQA compliance and property transaction.

SECTION 3.0
RECORDS REVIEW

3.1 PHYSICAL SETTING SOURCES

Physical setting sources typically provide information regarding geologic, hydrogeologic, hydrologic, or topographic characteristics of a property. The following information is primarily based on review of the United States Geological Survey (USGS) *Jamal Mountains, El Cajon,* and *National City* Quadrangles, dated 2018, and a site inspection conducted by Michael Baker on September 15, 2020. Other miscellaneous resources utilized within this section and throughout the Phase I ESA are referenced in Section 7.0, *References.*

3.1.1 SUBJECT SITE DESCRIPTION

3.1.1.1 Location

The subject site (Assessor's Parcel Numbers [APNs] 500-170-10-00, -11-00, and -41-00) is located within the community of Spring Valley, unincorporated San Diego County, California (Section 28, Township 16 South [T.16S], Range 1 West [R.1W], San Bernardino Base and Meridian [SBBM]). Specifically, the subject site is located north of Campo Road, between Rodgers Road and Conrad Drive; refer to Exhibit 1, *Regional Vicinity*, and Exhibit 2, *Site Vicinity*.

3.1.1.2 Current Use(s) of the Subject Site

The subject site consists of institutional and commercial uses; refer to Exhibit 3, *Subject Site*.

3.1.1.3 Description of On-Site Structures and Roads

Three structures are located on the subject site. Two structures are associated with the La Mesa – Spring Valley School District (LMSVSD) and are located on the eastern portion of the subject site. It should be noted that these structures appear to consist of a storage unit and a mobile structure. One commercial structure is situated on the southern portion of the subject site, located at 9610 Campo Road, and is currently occupied by Pho & Grill International restaurant. No roads are located on the subject site.



NOT TO SCALE

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09/2020 JN 179854

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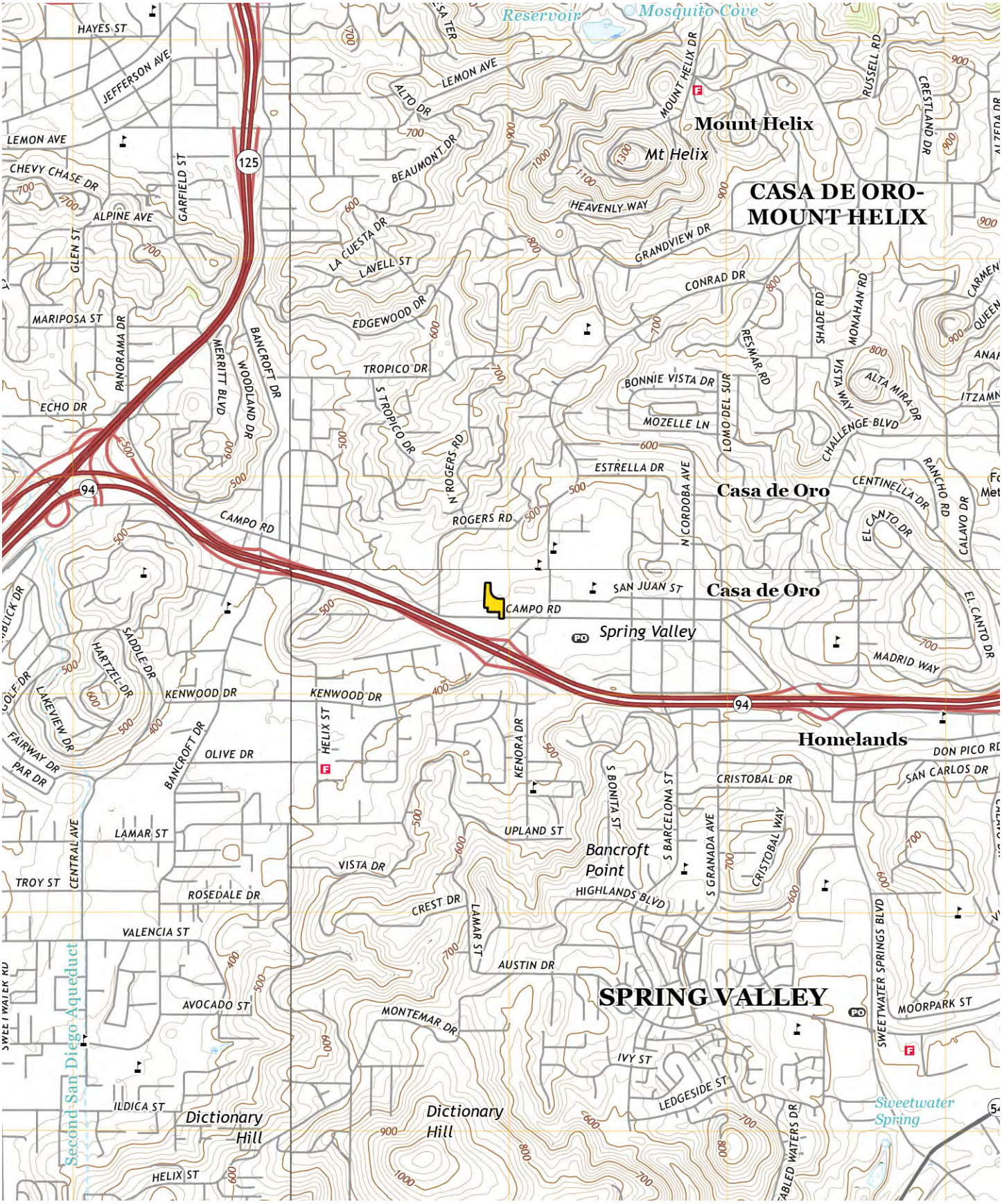
PHASE I ENVIRONMENTAL SITE ASSESSMENT

Regional Vicinity

Exhibit 1



Subject Site

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Site Vicinity

Exhibit 2



Source: Google Earth Pro, September 2020

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SUBJECT SITE

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Subject Site

Exhibit 3

3.1.2 TOPOGRAPHY

The USGS maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that impact the spread of contamination. Additionally, the maps depict topography through color and contour lines and are helpful in determining elevations and site latitude and longitude.

Based on the USGS *Jamal Mountains, El Cajon,* and *National City* Quadrangles, dated 2018, on-site topography ranges from approximately 420 to 440 feet above mean sea level (msl) and generally slopes down-gradient to the west and southwest. State Route 94 (SR-94) is located to the south of the subject site. Based on USGS, Campo Road aligns the southern portion of the subject site. A school is noted to the northwest of the subject site. No on-site pits, ponds, or lagoons were noted on-site on this topographical map.

3.1.3 CURRENT USES OF ADJOINING PROPERTIES

For the scope of this Phase I ESA, properties are defined and categorized based upon their physical proximity to the subject site. An adjoining property is considered any real property or properties the border of which is contiguous or partially contiguous with that of the subject site, or that would be contiguous or partially contiguous with that of the subject site but for a street, road, or other public thoroughfare separating them. The following is a detailed description of each adjoining land use observed on September 15, 2020:

- North: Institutional uses (Spring Valley Middle School) are located to the north of the subject site.
- East: Commercial (Casa de Oro Professional Center) and institutional (LMSVSD Operations Center) uses are located to the east of the subject site.
- South: Commercial and residential uses are located to the south of the subject site.
- West: Residential and institutional (St. Mary Protectress Ukrainian Orthodox Church) uses are located to the west of the subject site.

3.1.4 GEOLOGIC CONDITIONS

3.1.4.1 Geology

The USGS Geological Map Index was searched by EDR for available Geological Maps that cover the subject site and surrounding areas. These Geological Maps indicate geological formations that are overlaid on a topographic map. Some maps focus on specific issues (i.e., bedrock,

sedimentary rocks, etc.) while others may identify artificial fills (including landfills). Geological maps can be effective in estimating permeability and other factors that influence the spread of contamination.

Based on the EDR GeoCheck Report, the land consists of a stratified sequence from the Mesozoic era. According to *Safari Highlands Ranch and Citywide SOI Update Draft Environmental Impact Report*, dated October 2017, there are four major rock types that occur in San Diego County: (1) Cretaceous Age crystalline and Upper Jurassic metavolcanics; (2) Mesozoic Age metamorphic rocks; (3) Tertiary Age sedimentary rocks; and (4) recent alluvium.

3.1.4.2 Soils

The U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) Soil Survey Maps were searched for available soils within the subject site. One (1) soil unit, Visalia sandy loam, is located on the subject site and is described as the following (refer to Appendix C, *Documentation*):

- Visalia sandy loam, 2 to 5 percent slopes (VaB): The landform for this soil is alluvial fans and the parent material is alluvium derived from granite. Slopes are 2 to 5 percent. Visalia sandy loam is well drained. Runoff class is very low. There is no frequency of flooding or ponding associated with this soil.

3.1.4.3 Radon

Radon is a radioactive gas that is found in certain geologic environments and is formed by the natural breakdown of radium, which is found in the earth's crust. Radon is an invisible, odorless, inert gas that emits alpha particles, known to cause lung cancer. Radon levels are highest in basements (areas in close proximity to the soil) that are poorly ventilated. A radon survey was not included within the scope of this investigation. According to the "U.S. EPA Map of Radon Zones," the County of San Diego is located within Zone 3, which has a predicted average indoor screening level of less than 2.0 picocuries per liter (pCi/L). EPA recommends remedial actions when radon levels are greater than 4.0 pCi/L.

3.1.5 BIOLOGICAL SETTING

The biotic community that exists on-site includes ornamental landscaping and disturbed vegetated areas.

3.1.6 DRAINAGE/HYDROLOGY

3.1.6.1 Drainage

Drainage on the subject site is accomplished by overland sheet flow and infiltration. Flows within paved surfaces are conveyed into catch basins via curb and gutter and into the storm drain system. A concrete drainage ditch is located along the northern and western portion of the subject site. The drainage ditch connects to a culvert in the southwestern portion of the subject site which accommodates overland sheetflow from the northern and western portions of the subject site. Drainage in the unpaved areas of the subject site are accomplished via infiltration within the on-site vegetated and grass areas.

3.1.6.2 Flood Hazards

Flood Prone Area Maps published by the USGS show areas prone to 100-year floods overlaid on a topographical map. These maps are not considered the official Federal Emergency Management Agency (FEMA) flood maps; therefore, in cases where a property is located immediately adjacent to or within the flood prone boundary, a FEMA map should be obtained. According to the EDR Database search and the FEMA Flood Insurance Rate Maps (FIRM), the subject site is not located within a 100-year flood zone (refer to the Appendix B, *Database Records Searches*, and Appendix C).

3.1.6.3 Groundwater

Michael Baker assumes groundwater flow would follow the slope of the ground surface elevations towards the nearest open body of water or intermittent stream. Based on surface elevations in the subject site vicinity, groundwater flow on-site is expected to generally be in a western direction, ultimately flowing southwest towards the Pacific Ocean. According to the *Report – Additional Subsurface Environmental Investigation at the La Mesa Spring Valley School District*, dated March 2000, the depth to groundwater is approximately 5 feet below ground surface (bgs) in the project vicinity.

3.1.6.4 Water Wells

The USGS Well Database and State Well Database were searched by EDR. According to the EDR Well search, no water wells are located within the boundaries of the subject site or within one mile of the subject site.

3.2 STANDARD ENVIRONMENTAL RECORDS SOURCES

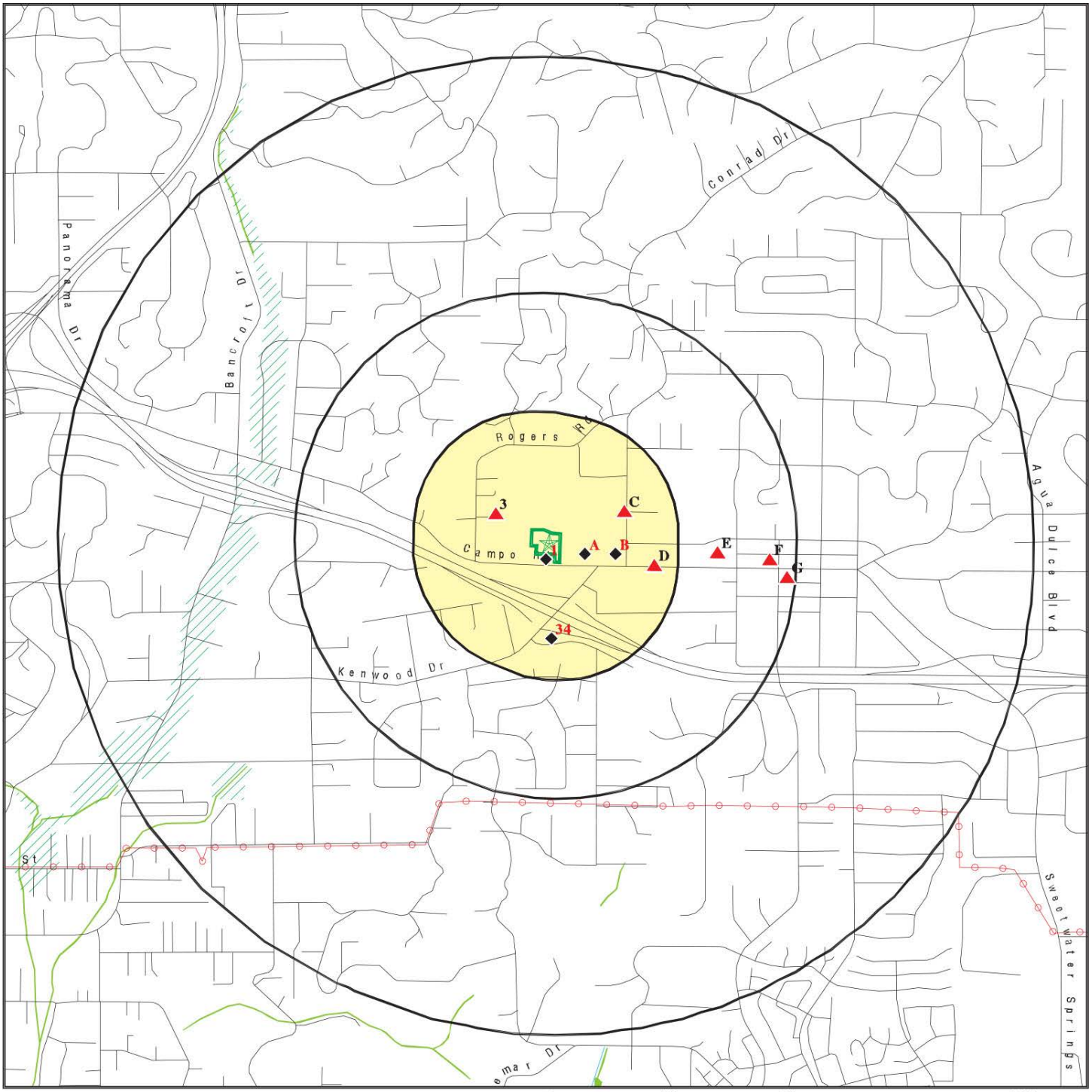
The governmental sources have been searched by EDR (at the request of Michael Baker) for sites within the subject site and within an approximate one-mile radius of the subject site boundaries. Upon completion of their search, EDR provided Michael Baker with their findings dated August 18, 2020. Michael Baker makes no claims as to the completeness or accuracy of the referenced sources. Our review of EDR's findings can only be as current as their listings and may not represent all known or potential hazardous waste or contaminated sites. To reduce the potential for omitting possible hazardous material sites on the subject site and within the surrounding area, sites may be listed in this report if there is any doubt as to the location because of discrepancies in map location, zip code, address, or other information. Refer to Appendix B for a listing and description of the Federal, tribal, State, and local records searched.

3.2.1 SUBJECT SITE

The lists that were reviewed did not report any regulatory properties within the boundaries of the subject site (refer to Exhibit 4, *Overview Map*). No known corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed on the subject site. The subject site has not been under investigation for violation of any environmental laws, regulations, or standards, as identified in the databases reported by EDR (refer to Appendix B).

3.2.2 OFF-SITE PROPERTIES

The lists that were reviewed reported multiple listed regulatory sites located within a one-mile radius of the subject site that were listed in one or more of the regulatory databases identified in Appendix B. For a complete list of sites identified and their status, refer to Appendix B. The following is a discussion of reported off-site properties.



CASA DE ORO BRANCH LIBRARY
PHASE I ENVIRONMENTAL SITE ASSESSMENT

Overview Map

Michael Baker INTERNATIONAL

09/2020 JN 179854

Exhibit 4

Adjoining Properties

There are four reported sites of concern adjoining the subject site. Refer to Table 3-1, *Database Summaries*, for a description of the regulatory databases reported for sites of concern. Refer to Table 3-2, *Identified Regulatory Sites of Concern*, for further evaluation of the adjoining regulatory property.

Table 3-1
Database Summaries

Database	Description
AST	A listing of aboveground storage tank petroleum storage tank locations.
CERS	List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs. Update quarterly.
CERS HAZ WASTE	List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs. Update quarterly.
CERS TANKS	List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.
CIWQS	The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.
Cortese	The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).
CPS-SLIC	Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.
ECHO	Enforcement & Compliance History Information (ECHO) provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide. Update quarterly.
EDR Hist Auto	EDR Exclusive Historical Auto Stations: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.
EMI	The sites for the list contain toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Table 3-1 (continued)
Database Summaries

Database	Description
ENVIROSTOR	The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites. Update quarterly.
FINDS	Facility Index System (FINDS) contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System). Update quarterly.
HAZNET	Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.
HIST CORTESE	The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.
HIST UST	The Hazardous Substance Storage Container Database (HIST UST) is a historical listing of UST sites. No update planned. Refer to local/county source for current data.
HWTS	DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.
LUST	Leaking Underground Storage Tank (LUST) Sites are included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.
NPDES	A listing of wastewater discharge permits.
RCRA NonGen/NLR	RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Table 3-1 (continued)
Database Summaries

Database	Description
RCRA-SQG	RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Update quarterly.
SAN DIEGO CO LOP	A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.
San Diego Co. HMMD	The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)
SAN DIEGO CO. SAM	The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.
SEMS-ARCHIVE	SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site. Update quarterly.
SWEEPS UST	Statewide Environmental Evaluation and Planning System (SWEEPS): this underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.
UST	A list of registered underground storage tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program. Update semi-annually.
Source: Environmental Data Resources, Inc., *EDR Radius Map with GeoCheck*, dated August 18, 2020; refer to Appendix B, *Database Records Searches*.	

Table 3-2
Identified Regulatory Sites of Concern

EDR Map ID#[1]	Site Name/Address	Direction from Subject Site	Regulatory Database[3]	EDR Site Status	File Review?[2]
1	GRASS DOCTOR LANDSCAPE INC 9600 CAMPO ROAD STE C	Adjoining subject site to west/south	**RCRA NonGen / NLR**	Reported non-generator with no violations found.	**NO** Files were requested from the RWQCB, DTSC, and San Diego DEH. However, no files were available for review at the time of this Phase I ESA.
A2	ONI LIVELY TRUST 9628 CAMPO ROAD	Adjoining subject site to east	**RCRA NonGen / NLR**	Reported non-generator with no violations found.	**YES** Michael Baker reviewed files maintained online by the San Diego DEH.
A4	HILDERBRAND GRANT 9660 CAMPO ROAD	Adjacent approximately 418 feet east of subject site	EDR Hist Auto	Historical gasoline service station in 1969.	**NO** File review not required pursuant to ASTM E 1527-13. Notwithstanding, files were requested from the RWQCB, DTSC, San Diego DEH. However, no files were available for review at the time of this Phase I ESA.

Table 3-2 (continued)
Identified Regulatory Sites of Concern

EDR Map ID#[1]	Site Name/Address	Direction from Subject Site	Regulatory Database[3]	EDR Site Status	File Review?[2]
B5 B6 B7 B8 B9 B10 B11 B12	SHELL SERVICE STATION, GAS DEPOT/QWIK KORNE QWIK KORNER, LOU'S SHELL SERVICE, GAS DEPOT/QWIK KORNE, LOU S SHELL SERVICE 9663 CAMPO ROAD	Adjacent approximately 460 feet southeast of subject site	**LUST**, **SWEEPS UST**, **HIST UST**, EMI, SAN DIEGO CO. SAM, **RCRA NonGen / NLR**, **UST**, **HIST UST**, **CPS-SLIC**, San Diego Co. HMMD, **CERS HAZ WASTE**, **CERS TANKS**, **Cortese**, **HIST CORTESE**, SAN DIEGO CO LOP, **CERS**, HWTS, EDR Hist Auto	Reported LUST leaked gasoline to groundwater. Case was referred to the Water Board and closed on 6/23/87. Case was reopened in 1998 due to hydrocarbon contaminated soils. Soil remediation occurred. Residual groundwater impacts limited to MTBE were reported. Case was closed on 8/9/16. Four (4) USTs reported in SWEEPS UST database used for M.V. fuel. Listed in the EMI database from 2000 to 2006. SAN DIEGO CO. SAM reported impacted drinking water aquifer in 1999. Reported non-generator with no violations found. Seven (7) historical USTs reported in HIST UST database used for product fuel and waste oil. Gasoline release to soil reported in CPS-SLIC database. Case closed in 1987. Administrative and operational violations reported in San Diego Co. HMMD database, including poor management of secondary containment and spill prevention. Listed as hazardous waste generator in CERS HAZ WASTE database. Listed in Cortese database as closed case LUST cleanup site. Reported in SAN DIEGO CO LOP oversight program. Listed as cleanup program site in CERS database with administrative and operational violations reported. Reported in HWTS database; last act in 2019. Listed as historical gasoline service station from 1969 to 2002.	**YES** Michael Baker reviewed files maintained online by the RWQCB and San Diego DEH.

Table 3-2 (continued)
Identified Regulatory Sites of Concern

EDR Map ID#[1]	Site Name/Address	Direction from Subject Site	Regulatory Database[3]	EDR Site Status	File Review?[2]
C27 C28 C29 C30 C31	LMSVSD OPERATIONS CENTER, LA MESA-SPRING VALLEY SCHOOL DISTRICT, SPRING VALLEY MIDDLE SCHOOL 3838 CONRAD DRIVE	Adjoining subject site to east	**LUST**, SAN DIEGO CO. SAM, **CPS-SLIC**, **AST**, San Diego Co. HMMD, **CERS HAZ WASTE**, **SWEEPS UST**, **HIST UST**, **CERS TANKS**, **Cortese**, **HIST CORTESE**, NPDES, SAN DIEGO CO LOP, CIWQS, **CERS**, **RCRA NonGen / NLR**	Diesel release to soil reported in LUST and SAN DIEGO CO. SAM databases. Case closed in 2001. Listed as Cleanup Program Site in CPS-SLIC database. Case closed in 1988. Listed in AST database. Listed in San Diego Co. HMMD database with inspection violations reported. Listed as hazardous waste generator in CERS HAZ WASTE database. Three (3) USTs containing M.V. fuel and petroleum reported in SWEEPS UST database. Listed in Cortese database as closed case LUST cleanup site. Industrial permits reported in NPDES database. Reported in SAN DIEGO CO LOP oversight program. Stormwater industrial permits listed in CIWQS database. Listed as Leaking Underground Storage Tank Cleanup Site in CERS database with administrative and operational violations found. The LUST databased reported an unidentified substance release to aquifer in 1987 (case closed in 1988) and a gasoline release to soil in 1988 (case closed date not reported). Reported non-generator with no violations found.	**YES** Michael Baker reviewed files maintained online by the RWQCB, DTSC and San Diego DEH.
C32 C33	SPRING VALLEY MIDDLE SCHOOL 3900 CONRAD DRIVE	Adjoining subject site to north	**LUST**, **HIST CORTESE**	Diesel release to soil reported in LUST database. Case closed date not reported. Listed in HIST CORTESE database.	**YES** Michael Baker reviewed files maintained online by the DTSC.

Notes:
1. EDR Map ID # correlates to Exhibit 4, *Overview Map*
2. Refer to Section 3.3, *File Record Reviews*, for a discussion of files reviewed, if applicable.
3. **BOLD** indicates ASTM Standard Practice E 1527-13, Section 8.2.1, standard federal, state, and tribal environmental records sources that should include a file review.

Source: Environmental Data Resources, Inc., *EDR Radius Map with GeoCheck*, dated August 18, 2020; refer to Appendix B, *Regulatory Databases Searches*.

Adjacent Properties

There are two regulatory sites reported adjacent to the subject site. Refer to Table 3-1 for a description of the regulatory databases reported for adjacent sites of concern. Refer to Table 3-2 for further evaluation of these adjacent regulatory properties of concern. Refer to Appendix B, for a complete listing of all adjacent properties noted.

3.2.3 UNMAPPED PROPERTIES

According to EDR's ESA Report Desktop Reference, dated 1996, some reported sites are unmappable as exact locations remain undefined. Listings in publicly available records, which do not have adequate address information, are not generally considered practically reviewable.

For the purposes of this Phase I ESA, practically reviewable is defined as information provided in a manner and in a form that yields information without the need for extraordinary analysis of irrelevant data. Although the location of these sites may be unknown, the site and detail information are often available through EDR.

Michael Baker's review of Unmapped Properties consisted of a verification, based solely on the professional judgment of the Environmental Professional, that the subject site is not listed (i.e., referenced by name or street address) and a review to identify if any of the Unmapped Properties cause a likely potential to create an REC within the boundaries of the subject site. No listed Unmapped Properties appear to be located within the boundaries of the subject site. Also, potentially contaminated groundwater underlying the subject site as a result of the reported Unmapped Properties is considered to be unlikely due to the anticipated distance from the subject site, gradient, and/or the status of the identified sites.

3.3 FILE RECORD REVIEWS

If the subject site or any of the adjoining properties are identified on one or more of the standard environmental record sources, pertinent regulatory files and/or records associated with the listing should be reviewed. The purpose of the regulatory file review is to obtain sufficient information to assist the environmental professional in determining if a REC, HREC, CREC, or a de minim is condition exists at the property in connection with the listing. If, in the environmental professional's opinion, such a review is not warranted, the environmental professional must explain the justification for not conducting the regulatory file review.

Michael Baker requested files for all properties listed in Table 3-2 from the following agencies:

- San Diego Regional Water Quality Control Board (RWQCB): Michael Baker reviewed available RWQCB records through GeoTracker online database on September 11, 2020.

- Department of Toxic Substances Control (DTSC): Michael Baker reviewed available DTSC records online through the Hazardous Waste Tracking System (HWTS) database on September 11, 2020.

- San Diego County Department of Environmental Health (San Diego DEH): Michael Baker received and reviewed available digital San Diego DEH records on September 11, 2020.

Based on the responses received from these agencies, no public records are available for review for the following requested properties:

- 9600 Campo Road; and
- 9660 Campo Road.

However, files are available for review for the remainder of the properties requested from one or more of these agencies, which are described as follows (refer to Section 3.3.1, *File Reviews Conducted*, for a description of the files reviewed):

- **Oni Lively Trust (9628 Campo Road):** This facility adjoins the subject site to the east. Files maintained online by the San Diego DEH were reviewed.

- **Shell Service Station (9663 Campo Road):** This facility is located approximately 460 feet southeast of the subject site. Files maintained online by the RWQCB and the San Diego DEH were reviewed.

- **LMSVSD Operations Center (3838 Conrad Drive):** This facility adjoins the subject site to the east. Files maintained online by the RWQCB, DTSC, and San Diego DEH were reviewed.

- **Spring Valley Middle School (3900 Conrad Drive):** This property is adjoining the subject site to the north. Files maintained online by the DTSC were reviewed.

3.3.1 File Reviews Conducted

3.3.1.1 Oni Lively Trust (9628 Campo Road)

This property (adjoining the subject site to the east) appears to consist of commercial uses and was historically occupied by Oni Lively Trust. The RCRA NonGen/NLR database reported the Oni Lively Trust as a non-generator not presently generating hazardous waste with no violations found. However, based on San Diego DEH files reviewed, the site was previously occupied by Dr. Song Family Dentistry and generated biomedical waste. The San Diego DEH reported administrative-related hazardous waste violations (e.g., manifest copies retained for 3 years) associated with Dr. Song Family Dentistry.

3.3.1.2 Shell Service Station (9663 Campo Road)

This property (approximately 460 feet southeast of the subject site) is currently occupied by Qwik Korner Gas Station and was historically occupied by Shell Service Station. In 1985, one groundwater monitoring well was installed in the vicinity of the used oil UST. Sampling results indicated no impacts and the case was closed in 1987. During a 1999 Phase II Site Assessment, hydrocarbon contaminated soils were noted near the USTs. As a result, all four USTs, piping,

and dispensers were removed and replaced with three gasoline USTs. Approximately 880 cubic yards of soil was disposed off-site. Between 2000 and 2013, soil and groundwater sampling activities were conducted. Soil sampling results indicated soil impacts were limited to the immediate area surrounding the former UST and fuel dispenser island. Approximately 234 cubic yards of contaminated soil remains on the site.

Groundwater was reported approximately 5.6 to 6.0 feet bgs and flows southwest. Groundwater sampling results indicated residual MTBE concentrations above regulatory thresholds. Groundwater monitoring data determined the dissolved MTBE plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation. Therefore, San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated August 9, 2016.

Based on the UST Case Closure Summary, dated August 5, 2016, the nearest groundwater monitoring well (MW-1) is located approximately 470 feet southeast of the subject site. The UST Case Closure Summary indicated that MW-1 detected MTBE at a concentration of approximately 2.1 micrograms per liter (µg/L), which is below regulatory thresholds.

3.3.1.3 LMSVSD Operations Center (3838 Conrad Drive)

This property (adjoining the subject site to the east) is currently occupied by LMSVSD Operations Center. Three USTs were formerly located at the LMSVSD Operations Center site and were used to operate the school district's buses and maintenance vehicles. During a routine UST test in 1987, soil contamination was observed in the vicinity of a 2,000-gallon waste oil UST. Decontamination was conducted on January 28, 1988. Soil and groundwater sampling occurred during removal of the waste oil UST on January 29, 1988. The soil and groundwater sampling results were not indicative of hydrocarbon contamination. The San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated March 10, 1988. In 1995, a hydraulic line leaked petroleum hydrocarbons to soil. The visually stained soil was excavated and verification sampling beneath the hydraulic line was conducted. Sampling results indicated that contamination did not extend beyond the footprint of the building, with the exception of the westernmost extent which migrated beneath the concrete surface west of the building.

In order to comply with the 1998 Technical Standards and Corrective Action UST requirements (i.e. 40 CFR Part 280), one 12,000-gallon gasoline UST and one 6,000 gallon diesel UST were removed. Between 1998 and 2000, soil and groundwater sampling activities were conducted in the vicinity of the USTs. Soil sampling results were reported at non-detectable concentrations for all hydrocarbons constituents. Groundwater sampling results indicated elevated hydrocarbon concentrations. As a result, the San Diego DEH reported that 7 drums of soil and 6 drums of groundwater were removed from the site. Subsequent groundwater sampling results indicated

hydrocarbon concentrations below regulatory thresholds. The San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated December 24, 2001.

The San Diego DEH reported this facility as a hazardous waste generator with the following violations observed: administrative-related hazardous waste violations (e.g., hazardous waste labeling and manifest copies retained for 3 years), training procedure violations (e.g., training records unavailable), UST monitoring requirement violations (e.g., dispenser meter not calibrated annually), and violations of hazardous waste storage.

3.3.1.4 Spring Valley Middle School (3900 Conrad Drive)

This property (adjoining the subject site to the north) is currently occupied by Spring Valley Middle School. Prior to 1988, the Spring Valley Middle School site contained a diesel UST for the purposes of fueling a boiler room at the site. In order to comply with the 1998 Technical Standards and Corrective Action UST requirements (i.e. 40 CFR Part 280), one 2,500-gallon diesel UST was removed. Soil and groundwater sampling activities were conducted in the vicinity of the UST to determine the extent of contamination. Soil sampling results were reported at non-detectable concentrations for all hydrocarbons constituents. With the exception of one groundwater sample collected from monitoring well (MID B2), groundwater sampling results were reported at non-detectable concentrations for all hydrocarbons constituents. The San Diego DEH reported that 7 drums of soil and 6 drums of groundwater were removed from the site. Additional groundwater monitoring wells were installed and sampled between 1999 and 2000. Groundwater sampling results indicated hydrocarbon concentrations below regulatory thresholds. The San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated December 24, 2001.

3.4 HISTORICAL USE INFORMATION ON THE SUBJECT SITE AND ADJOINING PROPERTIES

The objective of consulting historical sources is to develop a history of the previous uses of the property and surrounding area, in order to help identify the likelihood of past uses having led to RECs in connection with the property. The Environmental Professional shall exercise professional judgment and consider the possible releases that might have occurred at a property in light of the historical uses and, in concert with other relevant information gathered as part of the Phase I ESA process, use this information to assist in identifying RECs (discussed in Section 6.0, *Evaluation*, of this Phase I ESA).

The standard sources identified by ASTM E 1527-13 include aerial photographs, fire insurance maps, property tax files, recorded land title records (a chain-of-title), historical USGS topographic

maps, local street directories, building department records, zoning/land use records, prior assessments, and other historical sources (i.e., any source or sources, other than those listed, that are credible to a reasonable person and that identify past uses of the property). The focus is on usage rather than ownership, which is why a chain-of-title is not sufficient by itself.

3.4.1 METHODOLOGY AND LIMITING CONDITIONS

3.4.1.1 Methodology

Data failure (a subset of a data gap) occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the historical source review objectives have not been met.

USES OF THE PROPERTY

Per ASTM E 1527-13 Standard Practice, historical uses "shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier." This task requires reviewing only as many of the standard historical sources as are necessary and both reasonably ascertainable and likely to be useful.

Historical information for the subject site was obtained back to 1901, at which time the subject site consisted of a rural residential structure. Sources reviewed have been cited throughout this section and are referenced in Section 7.0, *References*, of this Phase I ESA.

INTERVALS

Review of standard historical sources at less than approximately five-year intervals is not required by ASTM E 1527-13 Standard Practice. If the specific use of the property appears unchanged over a period longer than five years, then it is not required by ASTM E 1527-13 Standard Practice to research the use during that period.

Michael Baker was unable to obtain specific property land use information of the subject site, within a five-year interval, from 1955 to 1964. From 1955 to 1964, all on-site structures were demolished and the subject site has been graded. No other substantial development or changes occurred at the subject site. No evidence of other uses during this time were noted for the surrounding area.

USES OF PROPERTIES IN SURROUNDING AREA

Uses in the area surrounding the property shall be identified in the Phase I ESA, but this task is only required to the extent that this information is revealed in the course of researching the property itself. If the environmental professional uses sources that include the surrounding area, surrounding uses should be identified to a distance determined at the discretion of the environmental professional. Factors to consider in making this determination include, but are not limited to:

- The extent to which information is reasonably ascertainable;
- The time and cost involved in reviewing surrounding uses;
- The extent to which information is useful, accurate, and complete in light of the purpose of the records review;
- The likelihood of the information being significant to RECs in connection with the property;
- The extent to which potential concerns are obvious;
- Known hydrogeologic/geologic conditions that may indicate a high probability of hazardous substances or petroleum products migration to the property;
- How recently local development has taken place;
- Information obtained from interviews and other sources; and
- Local good commercial and customary practice.

Surrounding land uses have been noted throughout the Phase I ESA, as applicable, and are referenced accordingly.

3.4.1.2 Limiting Conditions

Michael Baker did not encounter any limiting conditions that limited the historical use review during the course of this Phase I ESA.

3.4.2 STANDARD HISTORICAL SOURCES

3.4.2.1 Historical Uses Summary

Based upon evaluation of the documented land use as demonstrated in the resources reviewed as part of this Phase I ESA, the subject site appears to have consisted of a rural residential structure since prior to 1901. Auxiliary structures associated with rural residential uses are visible on the western portion of the subject site by 1949. Sometime between 1955 and 1964, all on-site structures were demolished and the subject site was graded. By 1966 a commercial structure and

parking lot were constructed on the southern portion of the subject site (APN 500-170-41). By 2005, the subject site appears to consist of a grass area associated with a baseball field, as well as a small structure and associated paved area. Since 2005, the subject site has remained unchanged and similar to current conditions.

Development in the general vicinity of the subject site appears to have begun in the early 1900s, at which time rural structures and roadways are visible. In the late 1940s, agriculture uses were observed to the north and west of the subject site. Residential, institutional, and commercial development in the surrounding vicinity of the subject site appears to have occurred from the 1950s to current day. Refer to Table 3-3, *Historical Uses Summary*.

Table 3-3
Historical Uses Summary

Year	On-Site Use	Surrounding Uses	Source
1893	The subject site is unmapped.	Vacant land uses are noted to the north and rural roadways are observed to the northeast of the subject site.	USGS Topographic Maps
1901, 1903, 1904	The subject site appears to consist of a rural residential structure.	The surrounding area appears to consist of vacant land, as well as sparse rural residential structures and associated roadways.	USGS Topographic Maps
1939	The subject site is unmapped.	Development has increased to the north of the subject site.	USGS Topographic Maps
1942	A blue line stream is identified along the eastern portion of the subject site.	Campo Road is identified as a primary highway.	USGS Topographic Maps
1947	No changes noted.	No changes noted.	USGS Topographic Maps
1948	No changes noted.	No changes noted.	USGS Topographic Maps
1949	Auxiliary structures associated with rural residential uses are visible on the western portion of the subject site.	Agricultural uses are observed in the vicinity of the subject site. Structures associated with agricultural uses are identified adjoining the subject site immediately to the west.	Aerial Photographs
1953	No changes noted.	No changes noted.	Aerial Photographs
1955	No changes noted.	Spring Valley Jr. High School is identified to the north of the subject site.	USGS Topographic Maps
1964	The structure is no longer visible and grading has occurred at the subject site.	Commercial structures (including multiple gasoline service stations) appear to the east and southeast of the subject site.	Aerial Photographs
1966	A structure and parking lot appear on the southern portion of the subject site (APN 500-170-41).	A small structure and baseball field are observed immediately east of the subject site and a residential structure is visible immediately west of the subject site. State Route 94 construction is visible to the south of the subject site.	Aerial Photographs
1967	No changes noted.	State Route 94 is noted to the south of the subject site.	USGS Topographic Maps

Table 3-3 (continued)
Historical Uses Summary

Year	On-Site Use	Surrounding Uses	Source
1970	No changes noted.	No changes noted.	Aerial Photographs
1971	Fosters Freeze is listed at 9610 Campo Road (APN 500-170-41).	Spring Valley Jr. High School is listed at 3900 Conrad Drive. Commercial uses are listed at 9628 Campo Road. Lous Shell Service is listed at 9663 Campo Road. Juhnnys Richfield Services is listed at 9660 Campo Road.	City Directory
1975	No changes noted.	A residential use is listed at 9600 Campo Road.	USGS Topographic Maps City Directory
1979	No changes noted.	A commercial structure is observed immediately south/west of the subject site. The LMSVSD Operations Center is visible to the east of the subject site. Commercial and residential development has increased in the surrounding vicinity of the subject site. Commercial uses are listed at 9600 Campo Road.	Aerial Photographs City Directory
1982	No changes noted.	No changes noted.	City Directory
1985	No changes noted.	No changes noted.	Aerial Photographs
1986	No changes noted.	No changes noted.	City Directory
1989	No changes noted.	No changes noted.	Aerial Photographs
1991	No changes noted.	No changes noted.	USGS Topographic Maps
1992	No changes noted.	Commercial uses are listed at 9600 Campo Road.	City Directory
1994	No changes noted.	No changes noted.	USGS Topographic Maps
1995	No changes noted.	No changes noted.	Aerial Photographs City Directory
2000	Back in the Day Fish Grotto is listed at 9610 Campo Road (APN 500-170-41).	LMSVSD Operations Center is listed at 3838 Conrad Drive.	City Directory
2005	The subject site appears to consist of a grass area associated with a baseball field, as well as a small structure and associated paved area.	A sports field appears to the west of the subject site.	Aerial Photographs City Directory
2009	No changes noted.	No changes noted.	Aerial Photographs
2010	No changes noted.	Qwik Korner Gas Station is listed at 9663 Campo Road.	City Directory
2012	No changes noted.	No changes noted.	USGS Topographic Maps Aerial Photographs
2014	No changes noted.	No changes noted.	City Directory
2016	No changes noted.	No changes noted.	Aerial Photographs

Table 3-3 (continued)
Historical Uses Summary

Year	On-Site Use	Surrounding Uses	Source
2017	Pho International is listed at 9610 Campo Road (APN 500-170-41).	No changes noted.	City Directory

Notes:
Bold denotes an interval data gap, as described in Section 3.4.1.1, *Methodology*, *Intervals*.
Other sources reviewed, but that which did not include information pertaining to the subject site included the following: EDR Sanborn Map Report.

Source: Refer to Section 7, *References*, and Appendix C for full citation and documentation of sources utilized in this table.

3.4.2.2 Property Tax Files

Michael Baker searched the subject site for property data via CoreLogic and the legal description for the subject site. This data typically provides current property ownership information and includes information regarding on-site improvements, zoning, land use, transfer of last sale, and other miscellaneous structural improvements. Property information was available for the subject site via CoreLogic, RealQuest Property Data, as well as the *Spring Valley Community Planning Area Map*, dated 2017. RealQuest's property data for the subject site is included in Table 3-4, *Property Data Summary* (refer to Appendix C).

Table 3-4
Property Data Summary

Assessor Parcel Number	Acreage	Land Use
500-170-10 (No Address)	6.67[1]	Public/Semi-Public Facilities
500-170-11 (No Address)	6.67[1]	Public/Semi-Public Facilities
500-170-41 (9610 Campo Road)	0.15	General Commercial

Notes:
1. This acreage covers the entire APN. However, only a small portion of this acreage is on-site.

Source: CoreLogic, *RealQuest Property Data*, accessed on August 20, 2020; County of San Diego, *Spring Valley Community Planning Area Map*, dated 2017.

3.4.2.3 Zoning/Land Use Records

Zoning/land use records generally consist of records maintained by the local government in which the subject site is located. They indicate the uses permitted by the local government for particular zones within its jurisdiction. The records may consist of maps and/or written records. According to the *Spring Valley Community Planning Area Map*, dated 2017, the subject site is designated Public/Semi-Public Facilities and General Commercial. According to the County of

San Diego Zoning Map, dated 2019, the subject site is zoned Residential-Single (RS) and General Commercial (C36).

3.4.2.4 Oil and Gas Wells

Michael Baker reviewed the California Department of Conservation, Geologic Energy Management Division's (CalGEM) online mapping system, which indicates existing and historical oil and gas wells within the immediate vicinity of the subject site, on September 16, 2020. Current well status for any well indicated in the online mapping system should be confirmed at the appropriate Division of Oil and Gas District Office. According to CalGEM, no oil gas wells are located within the boundaries of the subject site and the subject site does not appear to be located within an oil/gas field. Additionally, no oil gas wells are located within a 0.25-mile distance from the subject site (refer to Appendix C).

3.4.2.5 Other Historical Sources

Other historical sources include miscellaneous maps, newspaper archives, and records in the files and/or personal knowledge of the property owner and/or occupants. According to the National Pipeline Mapping System, one east-west trending gas transmission line is located along Campo Road, which adjoins the subject site to the south. No other sources were reviewed during the course of this Phase I ESA.

SECTION 4.0
SITE RECONNAISSANCE

According to the ASTM E 1527-13 Standard Practice, the objective of the site reconnaissance is to obtain information indicating the likelihood of identifying RECs in connection with the subject site.

4.1 METHODOLOGY AND LIMITING CONDITIONS

4.1.1 METHODOLOGY

Michael Baker performed a visual observation of readily accessible areas of the subject site and immediately adjoining properties on September 15, 2020. Refer to Exhibit 5, *On-Site Photographs*, and Exhibit 6, *Off-Site Photographs*, for photographic documentation taken during the site visit. The subject site was viewed from all publicly accessible thoroughfares. If roads or paths with no apparent outlet are observed on the subject site, the use of the road or path was identified to determine whether it was likely to have been used as an avenue for disposal of hazardous substances or petroleum products.

4.1.2 LIMITING CONDITIONS

Michael Baker did not observe the interior of the on-site structures. No other limiting conditions were encountered as part of Michael Baker's site reconnaissance conducted on September 15, 2020.

4.2 ON-SITE OBSERVATIONS

4.2.1 DESCRIPTION OF ON-SITE USES

The subject site consists of institutional and commercial land uses.

4.2.2 DESCRIPTION OF ON-SITE STRUCTURES AND ROADS

Three structures are located on the subject site. Two structures are associated with the LMSVSD and are located on the eastern portion of the subject site. It should be noted that two of the three structures appear to consist of a storage unit and a mobile structure. The third commercial structure is located on the southern portion of the subject site and is currently occupied by Pho & Grill International restaurant. No roads are located on the subject site.



View of paved surface in southern portion of the subject site.



View of disturbed land and mobile structure in eastern portion of the subject site.



View of culvert in southwestern portion of the subject site.



View of restaurant in southern portion of the subject site.



View of Qwik Korner Gas Station to the southeast of the subject site.



View of commercial uses adjoining the subject site to the east.



View of church adjoining the subject site to the southwest.



View of commercial uses adjoining the subject site to the west and south.

4.2.3 DESCRIPTION OF PAST USES OF THE SUBJECT SITE

Past uses of the subject site appear to consist of rural residential uses. No evidence to suggest the presence of other past uses was noted during the site visit.

4.2.4 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS

Michael Baker did not observe hazardous substances or petroleum products on the subject site. No staining or evidence of leaking was observed.

4.2.5 CHEMICAL STORAGE TANKS (ASTS AND USTS)

During the site inspection the subject site was inspected for fill pipes, vent pipes, areas of abnormal or heavy staining, manways, manholes, access covers, concrete pads not homogenous with surrounding surfaces, concrete build-up areas potentially indicating pump islands, abandoned pumping equipment, or fuel pumps. Michael Baker did not observe any evidence of manholes or hazardous material storage that appeared to be associated with chemical storage tanks on the subject site during the September 15, 2020 site visit.

4.2.6 SPILLS

Michael Baker did not observe evidence of spills during the September 15, 2020 site inspection.

4.2.7 SOLID WASTE DISPOSAL

No indication of on-site solid waste disposal practices (i.e., landfills) was apparent during the September 15, 2020 site inspection.

4.2.8 UTILITIES

Typical utilities (associated with commercial and institutional uses) were observed within the boundaries of the subject site during the September 15, 2020 site inspection.

4.2.8.1 Polychlorinated Biphenyls (PCBs)

No power poles were observed within the boundaries of the subject site. However, an electric meter box was observed on the southeastern portion of the subject site. Additionally, the outdoor field lights associated with the school appeared to contain electrical voltage boxes and could

contain fluorescent light fixtures. Therefore, PCBs may be present in electrical equipment on the subject site.

4.2.8.2 Wells

No water wells were observed within the boundaries of the subject site during the September 15, 2020 site visit.

4.2.8.3 Potable Water Supply

Evidence of water utilities were noted during the site visit. The surrounding area appeared to be connected to the local water supply system.

4.2.8.4 Sewage Disposal System

Evidence of a sewage disposal system was indicated by a manhole cover located off-site within Campo Road to the south of the subject site. The subject site appears to be connected to the local sewer system. No evidence of on-site septic systems was noted.

4.2.8.5 Heating/Cooling

Typical heating/cooling systems (roof units) were noted on-site during the September 15, 2020 site visit.

4.2.9 DRAINS AND SUMPS

Typical curbs and gutters were noted along Campo Road during the September 15, 2020 site visit. A concrete drainage ditch was observed along the northern and western portion of the subject site. The drainage ditch appeared to connect to a culvert in the southwestern portion of the subject site.

4.2.10 PITS, PONDS, LAGOONS

No, pits, ponds, or lagoons were noted during the September 15, 2020 site visit. However, saturated soil was observed on the eastern portion of the subject site and may be associated with intermittent seeps from an elevated groundwater table (as groundwater is approximately 5 feet bgs, but fluctuates depending rain conditions).

4.2.11 LEAD-BASED PAINTS

Lead has long been used as a component of paint, primarily as a pigment and for its ability to inhibit and resist corrosion. Over time, as concern over the health effects associated with lead began to grow, health and environmental regulations were enacted to restrict the use of lead in certain products and activities in the U.S. In the last twenty-five years, lead-based paint (LBP), leaded gasoline, leaded can solder, and lead-containing plumbing materials were among the products that were gradually restricted or phased out of use. Based on a review of available historical documentation, the one on-site habitable commercial structure was constructed sometime prior to 1966. Thus, there is a potential for LBPs to be found on-site in association with the on-site commercial structure.

4.2.12 ASBESTOS-CONTAINING MATERIAL

Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products since prior to the 1940s and up until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. Asbestos containing materials (ACMs) are building materials containing more than one percent asbestos (some state and regional regulators impose a 0.1 percent threshold). Based on a review of available historical documentation, the on-site habitable commercial structure was constructed prior to 1966. Thus, there is a potential for ACMs to be found on-site as a result of building materials.

4.3 OFF-SITE OBSERVATIONS

An adjoining property is considered any real property or properties that the border of which is contiguous or partially contiguous with that of the subject site, or that would be contiguous or partially contiguous with that of the subject site but for a street, road, or other public thoroughfare separating them. An adjacent property is any real property located off-site, which is not adjoining. Visual observations of the publicly accessible portions of adjoining properties were conducted on September 15, 2020 as part of this Phase I ESA and are described below.

4.3.1 DESCRIPTION OF CURRENT AND PAST USES OF THE SURROUNDING AREA

Current uses surrounding the subject site primarily consist of commercial, residential, and institutional uses. Past uses consisted of agricultural, residential, and commercial uses.

4.3.2 DESCRIPTION OF CURRENT USES AND STRUCTURES AT ADJOINING PROPERTIES

Adjoining uses consist of institutional uses (i.e., Spring Valley Middle School and LMSVSD Operations Center) to the north and east; commercial uses to the east and south; a multi-family residential development to the west; and an institutional use (i.e., St. Mary Protectress Ukrainian Orthodox Church) to the southwest.

4.3.3 DESCRIPTION OF PAST USES AND STRUCTURES AT ADJOINING PROPERTIES

Based on the available documentation obtained, off-site adjoining uses appear to have historically consisted of residential, agricultural, and commercial uses (e.g., Oni Lively Trust).

4.3.4 OBSERVATIONS OF OFF-SITE PROPERTIES

4.3.4.1 Utilities

Typical utilities (e.g., pole-mounted and pad-mounted transformers, sewer, water facilities, electrical boxes, etc.) were noted within adjacent properties during the September 15, 2020 site visit. No staining or leaking was observed with respect to off-site utilities during the site visit. Off-site pole-mounted transformers appeared to be in fair condition.

4.3.4.2 Chemical Storage Tanks

Fuel islands, ASTs, and evidence of USTs were observed at the adjoining LMSVSD Operations Center and the adjacent Qwik Korner Gas Station during the September 15, 2020 site visit. No unusual or suspicious materials handling or storage practices were observed at off-site properties.

4.3.4.3 Hazardous Materials

During a preliminary observation of adjoining properties from public thoroughfares, no visible or physical evidence was observed to suggest that hazardous substances and/or petroleum-based material are handled/stored/used or have been recently released into the environment. No unusual or suspicious materials handling or storage practices were observed with respect to adjacent properties.

SECTION 5.0
INTERVIEWS

The ASTM E 1527-13 Standard Practice indicates that the objective of interviews is to obtain information indicating RECs in connection with the subject site. Interviews with past and present owners, operators, and occupants of the property consist of questions to be asked in the manner and of persons as described in the ASTM E 1527-13 Standard Practice. The content of questions to be asked shall attempt to obtain information about uses and conditions observed during the site reconnaissance as well as the documentation review. The content of questions to be asked of State and/or local government officials shall be decided in the discretion of the environmental professional(s) conducting the Phase I ESA, provided that the questions shall generally be directed towards identifying RECs in connection with the subject site.

5.1 PROPERTY OWNER

Michael Baker sent the User of this Phase I ESA a Property Owner Questionnaire on September August 27, 2020, to be provided to the property owner and returned to Michael Baker upon completion. Michael Baker received the Property Owner Questionnaires from Mr. John Lively and from Mr. Jason Brust on October 6, 2020.

APN 500-170-41-00 (9610 Campo Road)

Mr. Lively had been associated with the property for approximately 45 years and he performed management duties for the property. Mr. Lively was not aware of any environmental cleanup liens or activity use limitations in association with the subject site. Mr. Lively did not know of any chemicals that are present or were present on-site. He did not know of any spills or other chemical releases that have taken place on-site. He did not know of any hazardous wastes or used oil generated at the property. He did not know of any current or past registered or unregistered underground storage tanks in association with the subject site. Mr. Lively did not know of any hazardous substances or petroleum products that have been associated with the subject site. Mr. Lively stated that, based on his knowledge and experience related to the subject site, he did not know of any obvious indicators that point to the presence or likely presence of contamination at the subject site.

APNs 500-170-10-00 and 500-170-11-00 (No Address)

Mr. Brust had been associated with the property for approximately four years and he managed maintenance, repairs, and improvements for the property. Mr. Brust was not aware of any environmental cleanup liens or activity use limitations in association with the subject site. He stated that herbicides and gopher control pesticides have been used on the subject site, but did not know of any chemicals that are present or were present on-site. He did not know of any spills or other chemical releases that have taken place on-site. He did not know of any hazardous wastes or used oil generated at the property. Mr. Brust stated that the buildings on the subject site are connected to a sewer line. He did not know of any current or past registered or unregistered underground storage tanks in association with the subject site. Mr. Brust did not know of any hazardous substances or petroleum products that have been associated with the subject site. However, Mr. Brust stated that the adjoining property to the east (i.e. LMSVSD Operations Center) is used as a vehicle maintenance facility and includes a gasoline station, motor repair facility, and photo developing laboratory. Mr. Brust stated that, based on his knowledge and experience related to the subject site, he did not know of any obvious indicators that point to the presence or likely presence of contamination at the subject site.

5.2 KEY SITE MANAGER/OPERATOR

A key site manager, identified by the property owner, is a person with good knowledge of the uses and physical characteristics of the property. Often the Key Site Manager is the property manager, the chief physical plant supervisor, or head maintenance person. If the user is the current property owner, the user has an obligation to identify a key site manager, even if it is the user himself or herself.

The User identified Mr. Marc Cass, Environmental Project Manager, County of San Diego, as the Key Site Manager for the purposes of this analysis. Mr. Cass has provided Michael Baker with information pertaining to the subject site throughout this Phase I ESA, which has been referenced accordingly.

5.3 OCCUPANTS

There are occupants associated with the on-site commercial use (i.e., Pho & Grill International Restaurant). However, no interviews with occupants were conducted.

5.4 LOCAL GOVERNMENT OFFICIALS

The County of San Diego is the user of this Phase I ESA. Michael Baker received the User Questionnaire from Mr. Marc Cass, Environmental Project Manager with the County of San Diego, on October 20, 2020. Information pertaining to the subject site has been referenced throughout this Phase I ESA, including Section 2.0, *User Provided Information*.

Michael Baker contacted the County of San Diego Records Counter via email on September 22, 2020. However, the County of San Diego Records Counter has not responded to Michael Baker's inquiries at the time of this Phase I ESA.

5.5 OTHER PERSONS

No other persons were interviewed during the course of this Phase I ESA.

SECTION 6.0
EVALUATION

Michael Baker has performed a Phase I ESA in general conformance with the scope of services and limitations of ASTM E 1527-13 Standard Practice for the property located at APNs 500-170-10-00, -11-00, and -41-00, community of Spring Valley, unincorporated San Diego County, California, also known as the subject site within this Phase I ESA. Any exceptions to, or deletions from, this practice are described in the Section 6.3, *Limiting Conditions/Deviations*, of this report. This Phase I ESA has revealed the following in connection with the subject site.

6.1 FINDINGS AND OPINIONS

The following findings and opinions are based upon review of reasonable ascertainable referenced material available to Michael Baker during the preparation of this Phase I ESA, which included a review of historical aerial photographs, historical topographic maps, regulatory databases, and other documentation, as well as interviews and site reconnaissance.

6.1.1 CURRENT ON-SITE USES

The subject site consists of institutional and commercial uses. Three structures are located on the subject site

Commercial Uses

One commercial structure is currently located on the subject site and is occupied by Pho & Grill International Restaurant. This property has not reported the handling/storage/transport of hazardous materials or petroleum products. During a preliminary observation of this property from public thoroughfares, no visible or physical evidence was observed to suggest that a surface release of petroleum-based material occurred. No known corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed at this current on-site property. This commercial property has not been under investigation for violation on any environmental laws, regulations, or standards, as identified in the databases reported by EDR. Thus, no REC has resulted in this regard.

ACMs and LBPs

Based on historical aerial photographs reviewed by Michael Baker during the course of this Phase I ESA, the on-site habitable commercial structure appears to have been constructed prior to 1966

and may be associated with ACMs and LBPs. Michael Baker observed evidence of nominal flaking and peeling on the roofing trim of the commercial structure that would suggest a minimal release of LBPs. However, the nearest area of on-site bare soil is approximately 15 feet from the commercial structure. Therefore, due to the nominal release of LBPs and distance to on-site soils, this condition is considered de minimis and is not a REC at the time of this Phase I ESA. Further, it is acknowledged that Federal and State regulations govern the renovation and demolition of structures where ACMs and LBPs are present.

Institutional Uses

The subject site consists of portions of the Spring Valley Middle School including grass areas associated with the baseball field, two structures, a paved area, and disturbed vegetated areas. The structures appear to consist of a storage unit and a conference center mobile structure. Based on files reviewed, no release to soil, soil gas, or groundwater have been reported within on-site aeras of the Spring Valley Middle School. During a preliminary observation of this property, no visible or physical evidence was observed to suggest that a surface release of hazardous or petroleum-based material occurred. Thus, no REC has resulted in this regard.

Electrical Equipment

During the September 15, 2020 site inspection, electrical equipment was observed on the subject site. Specifically, an electric meter box was observed on the southeastern portion of the subject site. Additionally, the outdoor field lights associated with the Spring Valley Middle School baseball field appeared to contain electrical voltage boxes and could contain fluorescent light fixtures. Therefore, PCBs may be present in electrical equipment on the subject site. However, no staining or leaking was observed with respect to the on-site electrical equipment during the site visit. Thus, no REC has resulted in this regard.

6.1.2 PAST ON-SITE USES

Based upon evaluation of the documented land use as demonstrated in the resources reviewed as part of this Phase I ESA, the subject site appears to have consisted of a rural residential structure, since prior to 1901. By 1949, auxiliary structures associated with residential uses were constructed on the western portion of the subject site. Sometime between 1955 and 1964, all on-site structures were demolished and the subject site was graded, then a commercial structure and associated parking lot were constructed at the southern portion of the subject site (APN 500-170-41) by 1966. By 2005, a grass area associated with a baseball field, and a small storage structure and associated paved area were constructed in association with the adjoining school facility by 2005. Since 2005, the subject site has remained unchanged and similar to current conditions. The

following is a discussion of the findings and opinions made by Michael Baker for these past on-site uses.

Rural Residential Structure

Based on files reviewed, a rural residential structure was constructed on the subject site by 1901. By 1949, rural residential auxiliary structures were constructed on the western portion of the subject site. All on-site structures were demolished by 1964. As residential uses are not typically associated with the handling/storage or transport of hazardous materials it is the opinion of Michael Baker that the past on-site residential use has not resulted in a REC at the time of this Phase I ESA.

6.1.3 CURRENT ADJOINING PROPERTIES

Current adjoining uses primarily consist of institutional uses to the north and east, commercial uses to the east and south, and residential uses to the south/west. The following are Michael Baker's findings and opinions regarding current adjoining uses.

LMSVSD Operations Center (3838 Conrad Drive)

This property (adjoining the subject site to the east) is currently occupied by LMSVSD Operations Center. Three USTs were formerly located at the LMSVSD Operations Center site and were used to operate the school district's buses and maintenance vehicles. During a routine UST test in 1987, soil contamination was observed in the vicinity of a 2,000-gallon waste oil UST. Decontamination was conducted on January 28, 1988. Soil and groundwater sampling occurred during removal of the waste oil UST on January 29, 1988. The soil and groundwater sampling results were not indicative of hydrocarbon contamination. The San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated March 10, 1988. In 1995, a hydraulic line leaked petroleum hydrocarbons to soil. The visually stained soil was excavated and verification sampling beneath the hydraulic line was conducted. Sampling results indicated that contamination did not extend beyond the footprint of the building, with the exception of the westernmost extent which migrated beneath the concrete surface west of the building.

In order to comply with the 1998 Technical Standards and Corrective Action UST requirements (i.e. 40 CFR Part 280), one 12,000-gallon gasoline UST and one 6,000-gallon diesel UST were removed. Between 1998 and 2000, soil and groundwater sampling activities were conducted in the vicinity of the USTs. Soil sampling results were reported at non-detectable concentrations for all hydrocarbons constituents. Groundwater sampling results indicated elevated hydrocarbon

concentrations. As a result, the San Diego DEH reported that 7 drums of soil and 6 drums of groundwater were removed from the site. Subsequent groundwater sampling results indicated hydrocarbon concentrations below regulatory thresholds. The San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated December 24, 2001.

The San Diego DEH reported this facility as a hazardous waste generator with the following violations observed: administrative-related hazardous waste violations (e.g., hazardous waste labeling and manifest copies retained for 3 years), training procedure violations (e.g., training records unavailable), UST monitoring requirement violations (e.g., dispenser meter not calibrated annually), and violations of hazardous waste storage.

Based on files reviewed, soil contamination was located in the vicinity of the former USTs, which are located further than 100 feet from the subject site. Groundwater analytical results indicated that petroleum related constituents were detected below regulatory thresholds. Based on the above information, groundwater contamination is not anticipated and, as the site is closed, it is the opinion of Michael Baker that this current adjoining use has not resulted in a REC at the time of this Phase I ESA.

Spring Valley Middle School (3900 Conrad Drive)

This property (adjoining the subject site to the north) is currently occupied by Spring Valley Middle School. Prior to 1988, the Spring Valley Middle School site contained a diesel UST for the purposes of fueling a boiler room at the site. In order to comply with the 1998 Technical Standards and Corrective Action UST requirements (i.e. 40 CFR Part 280), one 2,500-gallon diesel UST was removed. Soil and groundwater sampling activities were conducted in the vicinity of the UST to determine the extent of contamination. Soil sampling results were reported at non-detectable concentrations for all hydrocarbons constituents. With the exception of one groundwater sample collected from monitoring well (MID B2), groundwater sampling results were reported at non-detectable concentrations for all hydrocarbons constituents. The San Diego DEH reported that 7 drums of soil and 6 drums of groundwater were removed from the site. Additional groundwater monitoring wells were installed and sampled between 1999 and 2000. Groundwater sampling results indicated hydrocarbon concentrations below regulatory thresholds. The San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated December 24, 2001.

Based on files reviewed, soil contamination was located in the vicinity of the former UST, which is located further than 100 feet from the subject site. Groundwater analytical results indicated that petroleum related constituents were detected below regulatory thresholds. Based on the above information, groundwater contamination is not anticipated and, as the site is closed, it is

the opinion of Michael Baker that this current adjoining use has not resulted in a REC at the time of this Phase I ESA.

Commercial Uses

Commercial uses adjoin the subject site to the east and south. These properties, other than that listed below, have not reported the handling/storage/transport of hazardous materials or petroleum products. During a preliminary observation of these properties from public thoroughfares, no visible or physical evidence was observed to suggest that a surface release of petroleum-based material occurred. No known corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed at these current adjoining properties. These commercial properties have not been under investigation for violation on any environmental laws, regulations, or standards, as identified in the databases reported by EDR. Thus, no REC has resulted in this regard.

Grass Doctor Landscape Inc. (9600 Campo Road)

This property (adjoining the subject site to the west/south) is currently the Grass Doctor. This facility has been reported in EDR as a non-generator with no violations found. No releases to soil, soil gas, or groundwater have been reported. During a preliminary observation of this property from public thoroughfares, no visible or physical evidence was observed to suggest that a surface release of hazardous materials has occurred. As this property is situated off-site and no releases to soil, soil gas, or groundwater have been reported, it is the opinion of Michael Baker that no REC has resulted.

Residential Uses

A multi-family residential use currently adjoins the subject site to the south/west. This property was not listed by EDR for the handling/storage/transport of hazardous materials. During a preliminary observation of this property from public thoroughfares, no visible or physical evidence was observed to suggest that a surface release of hazardous materials has occurred. As residential uses are not typically associated with the handling/storage or transport of hazardous materials it is the opinion of Michael Baker that the current adjoining residential use has not resulted in a REC at the time of this Phase I ESA.

6.1.4 PAST ADJOINING USES

Based on the available documentation obtained, adjoining uses appear to have historically consisted of agricultural and commercial uses (i.e. Oni Lively Trust). Based on the available documentation, interviews, and site reconnaissance conducted as part of this Phase I ESA, it is

the opinion of Michael Baker that past adjoining uses have not resulted in a REC at the subject site. Specific details supporting Michael Baker's opinions are detailed as follows.

Oni Lively Trust (9628 Campo Road)

This property (adjoining the subject site to the east) consists of commercial uses and was historically occupied by Oni Lively Trust. The RCRA NonGen/NLR database reported the Oni Lively Trust as a non-generator not presently generating hazardous waste with no violations found. However, based on San Diego DEH files reviewed, the site was previously occupied by Dr. Song Family Dentistry and generated biomedical waste. The San Diego DEH reported administrative-related hazardous waste violations (e.g., manifest copies retained for 3 years) associated with Dr. Song Family Dentistry. No releases to soil, soil gas, or groundwater have been reported. During a preliminary observation of this property from public thoroughfares, no visible or physical evidence was observed to suggest that a surface release of hazardous materials has occurred. As this property is situated off-site and no releases to soil, soil gas, or groundwater have been reported, it is the opinion of Michael Baker that no REC has resulted.

Past Adjoining Agricultural Uses

Based on the evaluation of the documented land use (as demonstrated in the resources reviewed as part of this Phase I ESA), adjoining uses to the west of the subject site appear to have been historically utilized for agricultural purposes in the 1940s through the 1970s. As adjoining uses were historically used for agriculture, it is likely that pesticides/herbicides were historically used. However, these adjoining historical agricultural uses were located off-site and are not anticipated to have impacted on-site surface soils, soil gas, surface water, or groundwater. Thus, the presence of residual herbicide/pesticide contamination in on-site surface soils as a result of the past adjoining agricultural uses is unlikely and no REC has resulted in this regard.

6.1.5 CURRENT AND PAST ADJACENT USES

Development in the general vicinity of the subject site appears to have begun in the early 1900s, at which time rural structures and roadways were developed. In the late 1940s, agriculture uses were observed to the north and west of the subject site. Residential, institutional, and commercial development in the surrounding vicinity of the subject site appears to have occurred from the 1950s to current day. Based on the regulatory database search, multiple off-site regulatory properties within a one mile radius of the subject site were identified. The reported adjacent regulatory properties are considered to have a low potential of affecting the subject site, due to the distance, anticipated groundwater flow direction, and/or the status of the identified sites,

with the exception of three adjacent regulatory properties, which require further consideration, discussed as follows.

Hilderbrand Grant (9660 Campo Road)

This property (approximately 840 feet southeast of the subject site) is currently occupied by Cotija's Taco Shop and was historically occupied by Hilderbrand Grant. This property was reported in EDR as a historical gasoline service station in 1969. No releases to soil, soil gas, or groundwater have been reported. During a preliminary observation of this property from public thoroughfares, no visible or physical evidence was observed to suggest that a surface release of petroleum-based material occurred. As this property is situated off-site and no releases to soil, soil gas, or groundwater have been reported and the site has since been redeveloped with a new restaurant structure, it is the opinion of Michael Baker that no REC has resulted.

Shell Service Station (9663 Campo Road)

This property (approximately 460 feet southeast of the subject site) is currently occupied by Qwik Korner Gas Station and was historically occupied by Shell Service Station. In 1985, one groundwater monitoring well was installed in the vicinity of the used oil UST. Sampling results indicated no impacts and the case was closed in 1987. During a 1999 Phase II Site Assessment, hydrocarbon contaminated soils were noted near the USTs. As a result, all four USTs, piping, and dispensers were removed and replaced with three gasoline USTs. Approximately 880 cubic yards of soil was disposed off-site. Between 2000 and 2013, soil and groundwater sampling activities were conducted. Soil sampling results indicated soil impacts were limited to the immediate area surrounding the former UST and fuel dispenser island. Approximately 234 cubic yards of contaminated soil remains on the site.

Groundwater was reported approximately 5.6 to 6.0 feet bgs and flows southwest. Groundwater sampling results indicated residual MTBE concentrations above regulatory thresholds. Groundwater monitoring data determined the dissolved MTBE plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation. Therefore, San Diego DEH determined that the conditions at the site did not pose a threat to human health and deemed no further action was required in a letter dated August 9, 2016.

Based on the UST Case Closure Summary, dated August 5, 2016, the nearest groundwater monitoring well (MW-1) is located approximately 470 feet southeast of the subject site. The UST Case Closure Summary indicated that MW-1 detected MTBE at a concentration of approximately 2.1 µg/L, which is below regulatory thresholds.

Based on files reviewed, soil contamination was located in the vicinity of the former USTs, which are located further than 400 feet cross/up-gradient from the subject site. Groundwater analytical

results indicated that petroleum related constituents were detected below regulatory thresholds at the nearest groundwater monitoring well (MW-1). Based on the above information, groundwater contamination is not anticipated and, as the site is closed, it is the opinion of Michael Baker that this adjacent use has not resulted in a REC at the time of this Phase I ESA.

6.1.6 DATA GAPS

A data gap is a lack of or inability to obtain information required by the ASTM E 1527-13 Standard Practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including but not limited to site reconnaissance (for example, an inability to conduct the site visit) and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.). A data gap by itself is not inherently significant. For example, if a property's historical use in not identified back to 1940 because of data failure, but the earliest source shows that the property was undeveloped, this data gap by itself would not be significant. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap. For example, if a building on the property is inaccessible during the site visit, and the Environmental Professional's experience indicates that such a building often involves activity that leads to an REC, the inability to inspect the building would be a significant data gap warranting comment.

No significant data gaps were noted during the course of the Phase I ESA. Refer to Section 6.3, *Limiting Conditions/Deviations*, below.

6.2 CONCLUSIONS

Michael Baker has performed a Phase I ESA in conformance with the scope and limitations of ASTM E 1527-13 Standard Practice of the Casa de Oro Branch Library property located at APNs 500-170-10-00, -11-00, and -41-00, community of Spring Valley, unincorporated San Diego County, California, the subject site. Any exceptions to, or deletions from, this practice are described in Section 6.3, *Limiting Conditions/Deviations*, of this Phase I ESA. This Phase I ESA has revealed no evidence of RECs in connection with the subject site.

6.3 LIMITING CONDITIONS / DEVIATIONS

Based upon evaluation of the documented land use as demonstrated in the resources reviewed as part of this Phase I ESA, the subject site appears to have consisted of a rural residential structure since prior to 1901. As such, Michael Baker was unable to identify the first use of the subject site. Further, Michael Baker was unable to obtain specific property land use information of the subject

site, within a five-year interval, from 1955 to 1964. From 1955 to 1964, all on-site structures were demolished and the subject site has been graded. No indicators of potential hazardous materials were noted in relation to the on-site structures and no evidence of other development was noted. Thus, this limitation is not considered a significant data gap.

Michael Baker did not observe the interior of the on-site structures. However, these on-site structures are associated with institutional uses (La Mesa-Spring Valley School District) and commercial uses (Pho & Grill International Restaurant) and are not anticipated to involve the storage/use/handling of hazardous materials or waste. This deviation is not considered a significant data gap.

Michael Baker did not interview occupants/operators of the Phase I ESA. Notwithstanding, based on files reviewed, the subject site has not been associated with hazardous materials. As such, it is the opinion of Michael Baker that these interviews would not likely increase the knowledge of the Environmental Professional such that the conclusions of this Phase I ESA would change. Thus, it is the opinion of Michael Baker that this deviation is not a significant data gap.

No other limitations, deviations, or exceptions were encountered during the preparation of this Phase I ESA. Further, no additional scope items, or items outside of the scope of a Phase I ESA E 1527-13 Standard Practice, were conducted as part of this Phase I ESA.

SECTION 7.0
REFERENCES

ASTM International, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation: E 1527-13.

CoreLogic, *RealQuest Property Data*, accessed on August 20, 2020.

County of San Diego, *Spring Valley Community Planning Area Map*, dated 2017.

County of San Diego Department of Environmental Health, files requested on August 25, 2020, response received on August 26, 2020.

California Department of Conservation, Geologic Energy Management Division (CalGEM), Well Finder Online Mapping System, accessed on-line on September 16, 2020, at https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-118.94276/37.12009/6.

Department of Toxic Substance Control, files requested on August 25, 2020, response received on August 28, 2020.

EDR City Directory Image Report, Environmental Data Resources, Inc., dated August 24, 2020.

EDR Historical Aerial Photographs, Environmental Data Resources, Inc., dated August 18, 2020.

EDR Historical Topo Map Report, Environmental Data Resources, Inc., dated August 18, 2020.

EDR Radius Map Report with GeoCheck, Environmental Data Resources, Inc., dated August 18, 2020.

Federal Emergency Management Agency, National Flood Insurance Program, *National Flood Hazard Layer FIRMette*, exported on August 27, 2020.

Mr. Jason Brust, *Interview*, Property Owner Representative, via Questionnaire received on October 6, 2020.

Mr. Marc Cass, *Interview*, User Representative, via Questionnaires received on October 20, 2020.

Mr. John Lively, *Interview*, Property Owner Representative, via Questionnaire received on October 6, 2020.

Regional Water Quality Control Board, San Diego Region, files requested on August 25, 2020.

Certified Sanborn Map Report, provided by EDR, via The Sanborn Library, LLC, dated August 18, 2020.

Site Visit, conducted on September 15, 2020.

United States Department of Agriculture, Natural Resources Conservation Service, *Web Soil Survey*, accessed on-line on August 26, 2020, at https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

United States Department of Transportation, National Pipeline Mapping System, accessed on-line on September 16, 2020, at https://www.npms.phmsa.dot.gov/.

United States Environmental Protection Agency, *Map of Radon Zones*, dated 1993, accessed on-line on September 16, 2020, at https://www.epa.gov/radon/find-information-about-local-radon-zones-and-state-contact-information#radonmap.

United States Geological Survey (USGS) Topographic Quadrangles, *Jamul Mountains, El Cajon,* and *National City*, dated 2018.

APPENDICES

APPENDIX A:
ASTM TERMINOLOGY

TERMINOLOGY

The following definitions and descriptions of terms are from the ASTM E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Abandoned property – property that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity thereon such that a reasonable person could believe that there was an intent on the part of the current owner to surrender rights to the property.

Activity and use limitations – legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property. See Note 1.

> NOTE 1 — the term AUL is taken from Guide E2091 to include both legal (that is, institutional) and physical (that is, engineering) controls within its scope. Other agencies, organizations, and jurisdictions may define or utilize these terms differently (for example, EPA and California do not include physical controls within their definitions of "institutional controls." Department of Defense and International County/City Management Association use "Land Use Controls." The term 'land use restrictions" is used but not defined in the Brownfields Amendments).

Actual knowledge – the knowledge actually possessed by an individual who is a real person, rather than an entity. Actual knowledge is to be distinguished from constructive knowledge that is knowledge imputed to an individual or entity.

Adjoining properties – any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them.

Aerial photographs – photographs taken from an aerial platform with sufficient resolution to allow identification of development and activities of areas encompassing the property. Aerial photographs are often available from government agencies or private collections unique to a local area.

All appropriate inquiry – that inquiry constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in CERCLA. 42 U.S.C. §9601(35)(B), that will qualify a party to a commercial real estate transaction for one of threshold criteria for satisfying the LLPs to CERCLA liability (42 U.S.C. §9601(35)(A) & (B), §9607(b)(3), §(9607(q); and §9607(r)), assuming compliance with other elements of the defense.

Approximate minimum search distance – the area for which records must be obtained and reviewed pursuant to Section 8 subject to the limitations provided in that section. This may include areas outside the property and shall be measured from the nearest property boundary. This term is used in lieu of radius to include irregularly shaped properties.

Bona fide prospective purchaser liability protection – (42 U.S.C. §9607(r) – a person may qualify as a bona fide prospective purchaser if, among other requirements, such person made "all appropriate inquiries into the previous ownership and uses of the facility in accordance with generally accepted good commercial and customary standards and practices." Knowledge of contamination resulting from all appropriate inquiry would not generally preclude this liability protection. A person must make all appropriate inquiries on or before the date of purchase. The facility must have been purchased after January 11, 2002.

Brownfields Amendments – amendments to CERCLA pursuant to the Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118 (2002), 42 U.S.C. §§9601 et. seq.

Building department records – those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demolish improvements on the property. Often building department records are located in the building department of a municipality or county.

Business environmental risk – a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of business

environmental risk issues may involve addressing one or more non-scope considerations, some of which are identified in Section 13.

Commercial real estate – any real property except a dwelling or property with no more than four dwelling units exclusively for residential use (except that a dwelling or property with no more than four dwelling units exclusively for residential use is included in this term when it has a commercial function, as in the building of such dwellings for profit). This term includes but is not limited to undeveloped real property and real property used for industrial, retail, office, agricultural, other commercial, medical, or educational purposes: property used for residential purposes that has more than four residential dwelling units; and property with no more than four dwelling units for residential use when it has a commercial function, as in the building of such dwellings for profit.

Commercial and real estate transaction – a transfer of title to or possession of real property or receipt of a security interest in real property, except that it does not include transfer of title to or possession of real property or the receipt of a security interest in real property or the receipt of a security interest in real property with respect to an individual dwelling or building containing fewer than five dwelling units, nor does it include the purchase of a lot or lots to construct a dwelling for occupancy by a purchaser, but a commercial real estate transaction does include real property purchased or leased by persons or entities in the business of building or developing dwelling units.

Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) – the list of sites compiled by EPA that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the National Priorities List.

Construction debris – concrete, brick, asphalt, and other such building materials discarded in the construction of a building or other improvement to property.

Contaminated public wells – public wells used for drinking water that have been designated by a government entity as contaminated by hazardous substances (for example, chlorinated solvents), or as having water unsafe to drink without treatment.

Contiguous property owner liability protection – (42 U.S.C. §9607(q) – a person may qualify for the contiguous property owner liability protection if, among other requirements, such person owns real property that is contiguous to, and that is or may be contaminated by hazardous substances from other real property that is not owned by that person. Furthermore, such person conducted all appropriate inquiries at the time of acquisition of

the property and did not know or have reason to know that the property was or could be contaminated by a release or threatened release from the contiguous property. The all appropriate inquiries must not result in knowledge of contamination. If it does, then such person did "know" or "had reason to know" of contamination and would not be eligible for the contiguous property owner liability protection. See Appendix X1 for the other necessary requirements that are beyond the scope of this practice.

Controlled recognized environmental condition – a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). (See Note 2). A condition considered by the environmental professional to be controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report. (See Note 3).

> Note 2 — For example, if a leaking underground storage tank has been cleaned up to a commercial use standard, but does not meet unrestricted residential cleanup criteria, this would be considered a controlled recognized environmental condition. The "control" is represented by the restriction that the property use remains commercial.
> Note 3 — A condition identified as a controlled recognized environmental condition does not imply that the environmental professional has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the required control that has been, or is intended to be implemented.

CORRACTS list – a list maintained by EPA of hazardous waste treatment, storage, or disposal facilities and other RCRA-regulated facilities (due to past interim status or storage of hazardous waste beyond 90 days) that have been notified by the U.S. Environmental Protection Agency to undertake corrective action under RCRA. The CORRACTS list is a subset of the EPA database that manages RCRA data.

Data failure – a failure to achieve the historical research objectives in 8.3.1 through 8.3.2.2 even after reviewing the standard historical sources 8.3.4.1 through 8.3.4.8 that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. See 8.3.2.3.

Data gap – a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.). See 12.7.

Demolition debris – concrete, brick, asphalt, and other such building materials discarded in the demolition of a building or other improvement to property.

De minimis condition – a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions.

Drum – a container (typically, but not necessarily, holding 55 gal (208 L) of liquid) that may be used to store hazardous substances or petroleum products.

Dry wells – underground areas where soil has been removed and replaced with pea gravel, coarse sand, or large rocks. Dry wells are used for drainage, to control storm runoff, for the collection of spilled liquids (intentional and non-intentional) and wastewater disposal (often illegal).

Due diligence – the process of inquiring into the environmental characteristics of a parcel of commercial real estate or other conditions, usually in connection with a commercial real estate transaction. The degree and kind of due diligence vary for different properties and differing purposes. See Appendix X1.

Dwelling – structure or portion thereof used for residential habitation.

Engineering controls (EC) – physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or groundwater on the property. Engineering controls are a type of activity and use limitation (AUL).

Environment – environment shall have the same meaning as the definition of environment in CERCLA 42 U.S.C. § 9601 (8). For additional background information, see Legal Appendix (Appendix X1) to section XI. 1.1 "Releases and Threatened Release."

Environmental compliance audit – the investigative process to determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations. This term should not be used to describe this practice, although an environmental compliance audit may include an environmental site assessment or, if prior audits are available, may be part of an environmental site assessment.

Environmental lien – a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 U.S.C. §§9607(1) & 9607(r) and similar state or local laws.

Environmental professional – a person meeting the education, training, and experience requirements as set forth in 40 CFR §312.10(b). For the convenience of the reader, this section is reprinted in Appendix X2. The person may be an independent contractor or an employee of the user.

Environmental site assessment (ESA) – the process by which a person or entity seeks to determine if a particular parcel of real property (including improvements) is subject to recognized environmental conditions. At the option of the user, an environmental site assessment may include more inquiry than that constituting all appropriate inquiries or, if the user is not concerned about qualifying for the LLPs, less inquiry than that constituting all appropriate inquiries. An environmental site assessment is both different from and often less rigorous than an environmental compliance audit.

ERNS list – EPA's emergency response notification system list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response center. Notification requirements for such releases or spills are codified in 40 CFR Parts 302 and 335.

Federal Register (FR) – publication of the United States government published daily (except for federal holidays and weekends) containing all proposed and final regulations and some other activities of the Federal Government. When regulations become final, they are included in the Code of Federal Regulations (CFR), as well as published in the Federal Register.

Fill dirt – dirt, soil, sand, or other earth, that is obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation or real

property. It does not include material that is used in limited quantities for normal landscaping activities.

Fire insurance maps – maps produced for private fire insurance map companies that indicate uses of properties at specified dates and that encompass the property. These maps are often available at local libraries, historical societies, private resellers, or from the map companies who produced them.

Good faith – the absence of any intention to seek an unfair advantage or to defraud another party; an honest and sincere intention to fulfill one's obligations in the conduct or transaction concerned.

Hazardous substance – a substance defined as a hazardous substance pursuant to CERCLA 42 U.S.C. §9601(14), as interpreted by EPA regulations and the courts: "(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. §§6901 et seq.) has been suspended by Act of Congress, (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. §7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)." (See Appendix X1.)

Hazardous waste – any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of RCRA, as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. §§6901-6992(k) has been suspended by Act of Congress). RCRA is sometimes also identified as the Solid Waste Disposal Act. RCRA defines a hazardous waste, at 42 U.S.C. §6903, as: "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may – (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B)

pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

Hazardous waste/contaminated sites – sites on which a release has occurred, or is suspected to have occurred, of any hazardous substance, hazardous waste, or petroleum products, and that release or suspected release has been reported to a government entity.

Historical recognized environmental condition – a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition.

IC/EC registries – databases of institutional controls or engineering controls that may be maintained by a federal, state or local environmental agency for purposes of tracking sites that may contain residual contamination and AULs. The names for these may vary from program to program and state to state, and include terms such as Declaration of Environmental Use Restriction database (Arizona), list of "deed restrictions" (California), environmental real covenants list (Colorado), brownfields site list (Indiana, Missouri, Pennsylvania), and the Pennsylvania Activity and Use Limitation (PA AUL) Registry.

Innocent landowner defense – (42 U.S.C. §§9601(35) and 9607(b)(3)) – a person may qualify as one of three types of innocent landowners: (i) a person who "did not know and had no reason to know" that contamination existed on the property at the time the purchaser acquired the property; (ii) a government entity which acquired the property by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; and (iii) a person who "acquired the facility by inheritance or bequest." To qualify for the first type of innocent landowner defense, such person must have made all appropriate inquiries on or before the date of purchase. Furthermore, the all appropriate inquiry must not have resulted in knowledge of the contamination. If it does, then such person did "know" or "had reason to know" of contamination and would not be eligible for the innocent landowner defense. See

Appendix X1 for the other necessary requirements that are beyond the scope of this practice.

Institutional controls (IC) – a legal or administrative restriction (for example, "deed restrictions," restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to (1) reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. An institutional control is a type of Activity and Use Limitation (AUL).

Interviews – those portions of this practice that are contained in Section 10 and 11 thereof and address questions to be asked of past and present owners, operators, and occupants of the property and questions to be asked of local government officials.

Key site manager – the person identified by the owner or operator of a property as having good knowledge of the uses and physical characteristics of the property. See 10.5.1.

Landfill – a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term solid waste disposal site and is also known as a garbage dump, trash dump, or similar term.

Landowner Liability Protections (LLPs) – landowner liability protections under CERCLA; these protections include the bona fide prospective purchaser liability protection, contiguous property owner liability protection, and innocent landowner defense from CERCLA liability. See 42 U.S.C. §§9601(35)(A), 9601(40), 9607(b), 9607(q), 9607(r).

Local government agencies – those agencies of municipal or county government having jurisdiction over the property. Municipal and county government agencies include but are not limited to cities, parishes, townships, and similar entities.

Local street directories – directories published by private (or sometimes government) sources that show ownership, occupancy, and/or use of sites by reference to street addresses. Often local street directories are available at libraries, or historical societies, and/or local municipal offices. See 8.3.4.6 of this practice.

LUST sites – state lists of leaking underground storage tank sites. RCRA gives EPA and states, under cooperative agreements with EPA, authority to clean up releases from UST systems or require owners and operators to do so. (42 U.S.C. §6991b).

Major occupants – those tenants, subtenants, or other persons or entities each of which uses at least 40% of the leasable area of the property or any anchor tenant when the property is a shopping center.

Material safety data sheet (MSDS) – written or printed material concerning a hazardous substance which is prepared by chemical manufacturers, importers, and employers for hazardous chemicals pursuant to OSHA's Hazard Communication Standard, 29 C.F.R. §1910.1200.

Material threat – A physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment. An example might include an aboveground storage tank system that contains a hazardous substance and which shows evidence of damage. The damage would represent a material threat if it is deemed serious enough that it may cause or contribute to tank integrity failure with release of contents to the environment.

Migrate/migration – for the purposes of this practice, "migrate" and "migration" refers to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurfaces, and vapor in the subsurface. See Note 4.

> Note 4 — Vapor migration in the subsurface is described in Guide E2600; however, nothing in this practice should be construed to require application of the Guide E2600 standard to achieve compliance with all appropriate inquiries.

National Contingency Plan (NCP) – the National Oil and Hazardous Substances Pollution Contingency Plan, found at 40 C.F.R. Part 300, that is the EPA's blueprint on how hazardous substances are to be cleaned up pursuant to CERCLA.

National Priorities List (NPL) – list compiled by EPA pursuant to CERCLA 42 U.S.C. §9605(a)(8)(B) of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System. See 40 C.F.R. Part 300.

Obvious – that which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while visually or physically observing the property.

Occupants – those tenants, subtenants, or other persons or entities using the property or a portion of the property.

Operator – the person responsible for the overall operation of a facility.

Other historical sources – any source or sources other than those designated in Sections 8.3.4.1 through 8.3.4.8 that are credible to a reasonable person and that identify past uses of the property. The term includes, but is not limited to: miscellaneous maps, newspaper archives, internet sites, community organizations, local libraries, historical societies, current owners or occupants of neighboring properties, and records in the files and/or personal knowledge of the property owner and/or occupants. See 8.3.4.9.

Owner – generally the fee owner of record of the property.

Petroleum exclusion – the exclusion from CERCLA liability provided in 42 U.S.C. §9601(14), as interpreted by the courts and EPA: "The term (hazardous substance) does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)."

Petroleum products – those substances included within the meaning of the petroleum exclusion to CERCLA, 42 U.S.C. §9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 U.S.C. §9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to Standard Definitions of Petroleum Statistics.)

Phase I Environmental Site Assessment – the process described in this practice.

Physical setting sources – sources that provide information about the geologic, hydrogeologic, hydrologic, or topographic characteristics of a property. See 8.2.4.

Pits, ponds, or lagoons – man-made or natural depressions in a ground surface that are likely to hold liquids or sludge containing hazardous substances or petroleum products. The likelihood of such liquids or sludge being present is determined by evidence of factors

associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an obvious wastewater discharge.

Practically reviewable – information that is practically reviewable means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the user can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the property or a geographic area in which the property is located are not generally practically reviewable. Most databases of public records are practically reviewable if they can be obtained from the source agency by the county, city, zip code, or other geographic area of the facilities listed in the record system. Records that are sorted, filed, organized, or maintained by the source agency only chronologically are not generally practically reviewable. Listings in publicly available records which do not have adequate address information to be located geographically are not generally considered practically reviewable. For large databases with numerous records (such as RCRA hazardous waste generators and registered underground storage tanks), the records are not practically reviewable unless they can be obtained from the source agency in the smaller geographic area of zip codes. Even when information is provided by zip code for some large databases, it is common for an unmanageable number of sites to be identified within a given zip code. In these cases, it is not necessary to review the impact of all of the sites that are likely to be listed in any given zip code because that information would not be practically reviewable. In other words, when so much data is generated that it cannot be feasibly reviewed for its impact on the property, it is not practically reviewable.

Property – the real property that is the subject of the environmental site assessment described in this practice. Real property includes buildings and other fixtures and improvements located on the property and affixed to the land.

Property tax files – the files kept for property tax purposes by the local jurisdiction where the property is located and may include records of past ownership, appraisals, maps, sketches, photos, or other information that is reasonably ascertainable and pertaining to the property. See 8.3.4.3.

Publicly available – information that is publicly available means that the source of the information allows access to the information by anyone upon request.

RCRA generators – those persons or entities that generate hazardous wastes, as defined and regulated by RCRA.

RCRA generators list – list kept by EPA of those persons or entities that generate hazardous wastes as defined and regulated by RCRA.

RCRA TSD facilities – those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA.

RCRA TSD facilities list – list kept by EPA of those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA.

Reasonably ascertainable – information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints, and (3) practically reviewable.

Recognized environmental conditions – the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

Recorded land title records – records of historical fee ownership, which may include leases, land contracts, and AULs on or of the property recorded in the place where land title records are, by law or custom, recorded for the local jurisdiction in which the property is located. (Often such records are kept by a municipal or county recorder or clerk.) Such records may be obtained from title companies or directly from the local government agency. Information about the title to the property that is recorded in a U.S. district court or any place other than where land title records are, by law or custom, recorded for the local jurisdiction in which the property is located, are not considered part of recorded land title records. See 8.3.4.4.

Records of emergency release notifications EPCRA – (42 U.S.C. §11004) – requires operators of facilities to notify their local emergency planning committee (as defined in EPCRA) and state emergency response commission (as defined in EPCRA) and state emergency response commission (as defined in EPCRA) of any release beyond the facility's boundary of any reportable quantity of any extremely hazardous substance. Often the local fire department is the local emergency planning committee. Records of such notifications are "Records of Emergency Release Notifications" (42 U.S.C. 11004).

Records review – that part that is contained in Section 8 of this practice which addresses records shall or may be reviewed.

Release – a release of any hazardous substance or petroleum product shall have the same meaning as the definition of "release" in CERCLA 42 U.S.C. § 9601(22)). For additional background information, see Legal Appendix (Appendix X1) to X1.1.1 "Releases and Threatened Release."

Report – the written report prepared by the environmental professional and constituting part of a "Phase I Environmental Site Assessment," as required by this practice.

Site reconnaissance – that part that is contained in Section 9 of this practice and addresses what should be done in connection with the site visit. The site reconnaissance includes, but is not limited to, the site visit done in connection with such a Phase I Environmental Site Assessment.

Site visit – the visit to the property during which observations are made constituting the site reconnaissance section of this practice.

Solid waste disposal site – a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term landfill and is also known as a garbage dump, trash dump, or similar term.

Solvent – a chemical compound that is capable of dissolving another substance and may itself be a hazardous substance, used in a number of manufacturing/industrial processes including but not limited to the manufacture of paints and coatings for industrial and household purpose, equipment clean-up, and surface degreasing in metal fabricating industries.

Standard environmental record sources – those records specified in Section 8.2.1.

Standard historical sources – those sources of information about the history of uses of property specified in Section 8.3.4.

Standard physical setting source – a current (USGS 7.5 Minute Topographic Map (if any) showing the area on which the property is located.

Standard practice – the activities set forth in this practice.

Standard sources – sources of environmental, physical setting, or historical records specified in section 8 of this practice.

State registered USTs – state lists of underground storage tanks required to be registered under Subtitle I, Section 9002 of RCRA.

Sump – a pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored.

TSD facility – treatment, storage, or disposal facility (see RCRA TSD facilities).

Underground injection – the emplacement or discharge of fluids into the subsurface by means of a well, improved sinkhole, sewage drain hole, subsurface fluid distribution system or other system, or groundwater point source.

Underground storage tank (UST) – any tank, including underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10% or more beneath the surface of the ground.

User – the party seeking to use Practice E1527 to complete and environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice as outlined in Section 6.

USGS 7.5 Minute Topographic Map – the map (if any) available from or produced by the United States Geological Survey entitled "USGS 7.5 Minute Topographic Map," and showing the property.

Visually and/or physically observed – during a site visit pursuant to this practice, this term means observations made by vision while walking through a property and the structures located on it and observations made by the sense of smell, particularly observations of noxious or foul odors. The term "walking through" is not meant to imply that disabled persons who cannot physically walk may not conduct a site visit; they may do so by the means at their disposal for moving through the property and the structures located on it.

Wastewater – water that (1) is or has been used in an industrial or manufacturing process, (2) conveys or has convey sewage, or (3) is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water originating on or passing through or adjacent to a site, such as stormwater flows, that has

not been used in industrial or manufacturing processes, has not been combined with sewage, or is not directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Zoning/land use records – those records of the local government in which the property is located indicating the uses permitted by the local government in particular zones within its jurisdiction. The records may consist of maps and/or written records. They are often located in the planning department of a municipality or county. See 8.3.4.8.

APPENDIX B:
DATABASE RECORDS SEARCHES

Casa Del Oro Library
9610 Campo Rd
Spring Valley, CA 91977

Inquiry Number: 6160544.2s
August 18, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

9610 CAMPO RD
SPRING VALLEY, CA 91977

COORDINATES

Latitude (North):	32.7486500 - 32° 44' 55.14''
Longitude (West):	116.9901470 - 116° 59' 24.52''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	500923.1
UTM Y (Meters):	3623232.5
Elevation:	438 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5629178 JAMUL MOUNTAINS, CA
Version Date:	2012
Northeast Map:	5622884 EL CAJON, CA
Version Date:	2012
Southwest Map:	5629176 NATIONAL CITY, CA
Version Date:	2012
Northwest Map:	5622828 LA MESA, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140530
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
9610 CAMPO RD
SPRING VALLEY, CA 91977

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	GRASS DOCTOR LANDSCA	9600 CAMPO RD STE C	RCRA NonGen / NLR	Lower	57, 0.011, SSW
A2	ONI LIVELY TRUST	9628 CAMPO RD.	RCRA NonGen / NLR	Lower	280, 0.053, ESE
3	GREELEY PAYNE	3847 ROGERS PL.	RCRA NonGen / NLR	Higher	442, 0.084, WNW
A4	HILDERBRAND GRANT	9660 CAMPO RD	EDR Hist Auto	Lower	493, 0.093, ESE
B5	SHELL SERVICE STATIO	9663 CAMPO RD	LUST, SWEEPS UST, HIST UST, EMI	Lower	514, 0.097, ESE
B6	GAS DEPOT/QWIK KORNE	9663 CAMPO RD	SAN DIEGO CO. SAM	Lower	514, 0.097, ESE
B7	QWIK KORNER	9663 CAMPO RD	RCRA NonGen / NLR	Lower	514, 0.097, ESE
B8	QWIK KORNER PETROLEU	9663 CAMPO RD	UST	Lower	514, 0.097, ESE
B9	QWIK KORNER	9663 CAMPO RD	RCRA NonGen / NLR	Lower	514, 0.097, ESE
B10	LOU'S SHELL SERVICE	9663 CAMPO RD	HIST UST	Lower	514, 0.097, ESE
B11	GAS DEPOT/QWIK KORNE	9663 CAMPO RD	LUST, CPS-SLIC, San Diego Co. HMMD, CERS HAZ...	Lower	514, 0.097, ESE
B12	LOU S SHELL SERVICE	9663 COMPO RD	EDR Hist Auto	Lower	514, 0.097, ESE
B13	LILLY'S PRECISION PR	3737 KENORA DRIVE SU	RCRA-SQG	Lower	577, 0.109, SE
B14	LILLY'S PRECISION PR	3737 KENORA DR STE A	RCRA NonGen / NLR	Lower	577, 0.109, SE
B15	LILLY'S PRECISION PR	3737 KENORA DR	San Diego Co. HMMD, CERS HAZ WASTE, HAZNET, CERS	Lower	577, 0.109, SE
B16	EXOTIC MATERIALS GRI	3737 KENORA DR	RCRA NonGen / NLR	Lower	577, 0.109, SE
B17	JOE BELL BICYCLE RES	3735 KENORA DR	RCRA NonGen / NLR	Lower	580, 0.110, SE
B18	JB BICYCLE REFINISHI	3735 KENORA DR	San Diego Co. HMMD, CERS HAZ WASTE, CERS	Lower	580, 0.110, SE
B19	HELIOTROPE GENERAL	3733 KENORA DR.	ENVIROSTOR	Lower	583, 0.110, SE
B20	DEERING BANJO CO INC	3733 KENORA DR	RCRA NonGen / NLR	Lower	583, 0.110, SE
B21	DEERING BANJO CO	3733 KENORA DR	San Diego Co. HMMD, CERS HAZ WASTE, CERS	Lower	583, 0.110, SE
B22	DEERING BANJO CO INC	3733 KENORA DR	SEMS-ARCHIVE, RCRA-SQG, San Diego Co. HMMD, FINDS,...	Lower	583, 0.110, SE
B23	ROGER MANNING TEXACO	9676 CAMPO RD	EDR Hist Auto	Lower	621, 0.118, East
B24	CVS PHARMACY #10919	9665 CAMPO RD	CERS HAZ WASTE, HAZNET, CERS, HWTS	Lower	652, 0.123, SE
B25	CVS PHARMACY #10919	9665 CAMPO RD	RCRA-LQG	Lower	652, 0.123, SE
B26	FRESH AND EASY *D	9665 CAMPO RD	RCRA NonGen / NLR	Lower	652, 0.123, SE
C27	L M S V OPERATIONS C	3838 CONRAD DR	LUST, SAN DIEGO CO. SAM, CPS-SLIC, AST, San Diego...	Lower	716, 0.136, East
C28	L.M.S.V. OPERATIONS	3838 CONRAD DR	HIST UST	Lower	716, 0.136, East
C29	LA MESA-SPRING VALLE	3838 CONRAD DR	LUST	Lower	716, 0.136, East
C30	LA MESA SPRING VALLE	3838 CONRAD DR	RCRA NonGen / NLR	Lower	716, 0.136, East
C31	SPRING VALLEY MIDDLE	3838 CONRAD DR	LUST	Lower	716, 0.136, East
C32	SPRING VALLEY MIDDLE	3900 CONRAD DR	LUST	Higher	762, 0.144, ENE
C33	SPRING VALLEY MIDDLE	3900 CONRAD	HIST CORTESE	Higher	762, 0.144, ENE
34	GAL CAB AUTO REPAIR	9612 DALE AVE #2	RCRA NonGen / NLR	Lower	855, 0.162, South
C35	AUTO ZONE #4155	9710 CAMPO RD	San Diego Co. HMMD, CERS HAZ WASTE, CERS	Lower	860, 0.163, East
C36	AUTOZONE #4155	9710 CAMPO RD	RCRA NonGen / NLR	Lower	860, 0.163, East
D37	CARQUEST AUTO PARTS	9748 CAMPO RD 9742	San Diego Co. HMMD, CERS HAZ WASTE, CHMIRS, CERS	Higher	1058, 0.200, East
D38	CARQUEST AUTO PARTS	9748 CAMPO RD	RCRA NonGen / NLR	Higher	1058, 0.200, East
D39	CIF HOLDINGS, L.P.	9762 CAMPO RD	RCRA NonGen / NLR	Higher	1145, 0.217, East

MAPPED SITES SUMMARY

Target Property Address:
9610 CAMPO RD
SPRING VALLEY, CA 91977

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
D40	SMR CHEVRON	9749 CAMPO RD	RCRA NonGen / NLR	Higher	1258, 0.238, ESE
D41	TLC CHEVRON	9749 CAMPO RD	SAN DIEGO CO. SAM, UST, San Diego Co. HMMD, SWEEPS...	Higher	1258, 0.238, ESE
D42	93694	9749 CAMPO RD	HIST UST	Higher	1258, 0.238, ESE
D43	TLC CHEVRON	9749 CAMPO RD	LUST, CPS-SLIC, HIST CORTESE, SAN DIEGO CO LOP	Higher	1258, 0.238, ESE
D44	SMR CHEVRON	9749 CAMPO RD	San Diego Co. HMMD, CERS HAZ WASTE, CERS TANKS,...	Higher	1258, 0.238, ESE
D45	CHEVRON SERVICE STAT	9749 CAMPO RD	LUST	Higher	1258, 0.238, ESE
E46	CREST KENNALS INC NT	9832 CAMPO RD	LUST, SAN DIEGO CO. SAM, San Diego Co. HMMD,...	Higher	1757, 0.333, East
E47	FORMER CREST RENTALS	9832 CAMPO RD	LUST	Higher	1757, 0.333, East
F48	JAMACHA PUMP STATION	9903 HY 94 CAMPO RD	SAN DIEGO CO. SAM, SAN DIEGO CO LOP, CERS	Higher	2181, 0.413, East
F49	ULTRAMAR STATION #1-	9932 CAMPO RD	SAN DIEGO CO. SAM, San Diego Co. HMMD, CERS HAZ...	Higher	2343, 0.444, East
F50	VALERO CORNER STORE	9932 CAMPO RD	LUST, HAZNET, HIST CORTESE, SAN DIEGO CO LOP,...	Higher	2343, 0.444, East
G51	THE DAIRY STORE	9951 CAMPO RD	LUST, HIST CORTESE	Higher	2544, 0.482, East
G52	FAST LANE DAIRY STOR	9951 CAMPO RD	LUST	Higher	2544, 0.482, East
G53	THE DAIRY STORE	9951 CAMPO RD	SAN DIEGO CO. SAM, UST, San Diego Co. HMMD, SWEEPS...	Higher	2544, 0.482, East

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Federal ERNS list

ERNS ---------- Emergency Response Notification System

EXECUTIVE SUMMARY

State- and tribal - equivalent NPL

RESPONSE State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST Underground Storage Tank Listing
INDIAN UST Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP Voluntary Cleanup Priority Listing
VCP Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT Waste Management Unit Database
SWRCY Recycler Database
HAULERS Registered Waste Tire Haulers Listing
INDIAN ODI Report on the Status of Open Dumps on Indian Lands
ODI Open Dump Inventory
DEBRIS REGION 9 Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL Delisted National Clandestine Laboratory Register
HIST Cal-Sites Historical Calsites Database
SCH School Property Evaluation Program
CDL Clandestine Drug Labs
San Diego Co. HMMD Hazardous Materials Management Division Database
Toxic Pits Toxic Pits Cleanup Act Sites
US CDL National Clandestine Laboratory Register
PFAS PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

CA FID UST Facility Inventory Database

EXECUTIVE SUMMARY

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
ECHO	Enforcement & Compliance History Information
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan

CUPA Listings - CUPA Resources List
DRYCLEANERS - Cleaner Facilities
EMI - Emissions Inventory Data
ENF - Enforcement Action Listing
Financial Assurance - Financial Assurance Information Listing
HAZNET - Facility and Manifest Data
ICE - ICE
HWP - EnviroStor Permitted Facilities Listing
HWT - Registered Hazardous Waste Transporter Database
MINES - Mines Site Location Listing
MWMP - Medical Waste Management Program Listing
NPDES - NPDES Permits Listing
PEST LIC - Pesticide Regulation Licenses Listing
PROC - Certified Processors Database
Notify 65 - Proposition 65 Records
UIC - UIC Listing
UIC GEO - UIC GEO (GEOTRACKER)
WASTEWATER PITS - Oil Wastewater Pits Listing
WDS - Waste Discharge System
WIP - Well Investigation Program Case List
MILITARY PRIV SITES - MILITARY PRIV SITES (GEOTRACKER)
PROJECT - PROJECT (GEOTRACKER)
WDR - Waste Discharge Requirements Listing
SAN DIEGO CO LOP - Local Oversight Program Listing
CIWQS - California Integrated Water Quality System
CERS - CERS
NON-CASE INFO - NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS - OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS - PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT - SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ - Well Stimulation Project (GEOTRACKER)
HWTS - Hazardous Waste Tracking System
MINES MRDS - Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP - EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner - EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF - Recovered Government Archive Solid Waste Facilities List
RGA LUST - Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 04/27/2020 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DEERING BANJO CO INC Site ID: 0900054 EPA Id: CAD020227526	***3733 KENORA DR***	***SE 0 - 1/8 (0.110 mi.)***	***B22***	***156***

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CVS PHARMACY #10919 EPA ID:: CAR000269357	9665 CAMPO RD	SE 0 - 1/8 (0.123 mi.)	B25	174

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/23/2020 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LILLY'S PRECISION PR EPA ID:: CAR000294090	3737 KENORA DRIVE SU	SE 0 - 1/8 (0.109 mi.)	B13	107
DEERING BANJO CO INC EPA ID:: CAD020227526	***3733 KENORA DR***	***SE 0 - 1/8 (0.110 mi.)***	***B22***	***156***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/27/2020 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HELIOTROPE GENERAL Facility Id: 37360060 Status: Refer: Other Agency	3733 KENORA DR.	SE 0 - 1/8 (0.110 mi.)	B19	144

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 13 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SPRING VALLEY MIDDLE Database: LUST REG 9, Date of Government Version: 03/01/2001 Status: Preliminary site assessment workplan submitted	3900 CONRAD DR	ENE 1/8 - 1/4 (0.144 mi.)	C32	244

Case Number: 9UT3725

TLC CHEVRON ***9749 CAMPO RD*** ***ESE 1/8 - 1/4 (0.238 mi.)*** ***D43*** ***279***
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Global Id: T0607300176

CHEVRON SERVICE STAT 9749 CAMPO RD ESE 1/8 - 1/4 (0.238 mi.) D45 337
Database: LUST REG 9, Date of Government Version: 03/01/2001
Closed Date: 5/4/93
Status: Case Closed
Case Number: 9UT1229

CREST KENNALS INC NT ***9832 CAMPO RD*** ***E 1/4 - 1/2 (0.333 mi.)*** ***E46*** ***338***
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Global Id: T0607302878

FORMER CREST RENTALS 9832 CAMPO RD E 1/4 - 1/2 (0.333 mi.) E47 342
Database: LUST REG 9, Date of Government Version: 03/01/2001
Closed Date: 2/11/00
Status: Case Closed
Case Number: 9UT59

VALERO CORNER STORE ***9932 CAMPO RD*** ***E 1/4 - 1/2 (0.444 mi.)*** ***F50*** ***388***
Database: LUST REG 9, Date of Government Version: 03/01/2001
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Status: Remedial action (cleanup) Underway
Global Id: T0607301121
Case Number: 9UT235

THE DAIRY STORE ***9951 CAMPO RD*** ***E 1/4 - 1/2 (0.482 mi.)*** ***G51*** ***400***
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Global Id: T0607301456

FAST LANE DAIRY STOR 9951 CAMPO RD E 1/4 - 1/2 (0.482 mi.) G52 405
Database: LUST REG 9, Date of Government Version: 03/01/2001
Status: Preliminary site assessment workplan submitted
Case Number: 9UT2704

Lower Elevation	Address	Direction / Distance	Map ID	Page

SHELL SERVICE STATIO ***9663 CAMPO RD*** ***ESE 0 - 1/8 (0.097 mi.)*** ***B5*** ***13***
Database: LUST REG 9, Date of Government Version: 03/01/2001
Closed Date: 6/23/87
Status: Preliminary site assessment workplan submitted
Status: Case Closed
Case Number: 9UT4006
Case Number: 9UT472

GAS DEPOT/QWIK KORNE ***9663 CAMPO RD*** ***ESE 0 - 1/8 (0.097 mi.)*** ***B11*** ***26***
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Global Id: T0607399215

L M S V OPERATIONS C ***3838 CONRAD DR*** ***E 1/8 - 1/4 (0.136 mi.)*** ***C27*** ***180***
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Global Id: T0607302492

Global Id: T0607302592

LA MESA-SPRING VALLE — 3838 CONRAD DR — E 1/8 - 1/4 (0.136 mi.) — C29 — 241
Database: LUST REG 9, Date of Government Version: 03/01/2001
Closed Date: 3/10/88
Status: Case Closed
Case Number: 9UT741

SPRING VALLEY MIDDLE — 3838 CONRAD DR — E 1/8 - 1/4 (0.136 mi.) — C31 — 243
Database: LUST REG 9, Date of Government Version: 03/01/2001
Status: Preliminary site assessment underway
Case Number: 9UT3835

SAN DIEGO CO. SAM: The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

A review of the SAN DIEGO CO. SAM list, as provided by EDR, and dated 03/23/2010 has revealed that there are 7 SAN DIEGO CO. SAM sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TLC CHEVRON	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D41***	***268***
Case Number: H05718-001 Case Number: H05718-002 Case Number: H05718-003 Facility Status: Closed Case				
CREST KENNALS INC NT	***9832 CAMPO RD***	***E 1/4 - 1/2 (0.333 mi.)***	***E46***	***338***
Case Number: H20867-001 Facility Status: Closed Case				
JAMACHA PUMP STATION	***9903 HY 94 CAMPO RD***	***E 1/4 - 1/2 (0.413 mi.)***	***F48***	***343***
Case Number: H20879-001 Facility Status: Closed Case				
ULTRAMAR STATION #1-	***9932 CAMPO RD***	***E 1/4 - 1/2 (0.444 mi.)***	***F49***	***344***
Case Number: H04860-001 Facility Status: Remedial Investigation				
THE DAIRY STORE	***9951 CAMPO RD***	***E 1/4 - 1/2 (0.482 mi.)***	***G53***	***406***
Case Number: H03567-001 Facility Status: Remedial Investigation				

Lower Elevation	Address	Direction / Distance	Map ID	Page
GAS DEPOT/QWIK KORNE	9663 CAMPO RD	ESE 0 - 1/8 (0.097 mi.)	B6	21
Case Number: H03233-002 Case Number: H03233-001 Facility Status: Remedial Investigation Facility Status: Closed Case				
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***
Case Number: H04394-003 Case Number: H04394-001 Case Number: H04394-002 Facility Status: Closed Case				

EXECUTIVE SUMMARY

CPS-SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CPS-SLIC list, as provided by EDR, has revealed that there are 3 CPS-SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TLC CHEVRON	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D43***	***279***
Database: CPS-SLIC, Date of Government Version: 05/13/2020				
Facility Status: Completed - Case Closed				
Global Id: T0608122135				
Global Id: T0608153644				

Lower Elevation	Address	Direction / Distance	Map ID	Page
GAS DEPOT/QWIK KORNE	***9663 CAMPO RD***	***ESE 0 - 1/8 (0.097 mi.)***	***B11***	***26***
Database: CPS-SLIC, Date of Government Version: 05/13/2020				
Facility Status: Completed - Case Closed				
Global Id: T0607302773				
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***
Database: CPS-SLIC, Date of Government Version: 05/13/2020				
Facility Status: Completed - Case Closed				
Global Id: T0607303003				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TLC CHEVRON	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D41***	***268***
Database: UST, Date of Government Version: 03/09/2020				
Facility Id: H05718				
Facility Id: 37-000-201285				

Lower Elevation	Address	Direction / Distance	Map ID	Page
QWIK KORNER PETROLEU	9663 CAMPO RD	ESE 0 - 1/8 (0.097 mi.)	B8	23
Database: UST, Date of Government Version: 03/09/2020				
Facility Id: 37-000-103233				

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***
Database: AST, Date of Government Version: 07/06/2016				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 04/20/2020 has revealed that there are 9 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARQUEST AUTO PARTS	***9748 CAMPO RD 9742***	***E 1/8 - 1/4 (0.200 mi.)***	***D37***	***260***
SMR CHEVRON	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D44***	***282***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GAS DEPOT/QWIK KORNE	***9663 CAMPO RD***	***ESE 0 - 1/8 (0.097 mi.)***	***B11***	***26***
LILLY'S PRECISION PR	***3737 KENORA DR***	***SE 0 - 1/8 (0.109 mi.)***	***B15***	***109***
JB BICYCLE REFINISHI	***3735 KENORA DR***	***SE 0 - 1/8 (0.110 mi.)***	***B18***	***136***
DEERING BANJO CO	***3733 KENORA DR***	***SE 0 - 1/8 (0.110 mi.)***	***B21***	***147***
CVS PHARMACY #10919	***9665 CAMPO RD***	***SE 0 - 1/8 (0.123 mi.)***	***B24***	***164***
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***
AUTO ZONE #4155	***9710 CAMPO RD***	***E 1/8 - 1/4 (0.163 mi.)***	***C35***	***246***

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 3 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TLC CHEVRON	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D41***	***268***
Status: A Tank Status: A Comp Number: 5718				

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL SERVICE STATIO	***9663 CAMPO RD***	***ESE 0 - 1/8 (0.097 mi.)***	***B5***	***13***

Status: A
Tank Status: A
Comp Number: 3233

L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***

Status: A
Tank Status: A
Comp Number: 4394

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 5 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
93694 Facility Id: 00000062489	9749 CAMPO RD	ESE 1/8 - 1/4 (0.238 mi.)	D42	278

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL SERVICE STATIO	***9663 CAMPO RD***	***ESE 0 - 1/8 (0.097 mi.)***	***B5***	***13***
LOU'S SHELL SERVICE Facility Id: 00000009583	9663 CAMPO RD	ESE 0 - 1/8 (0.097 mi.)	B10	24
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***
L.M.S.V. OPERATIONS Facility Id: 00000030279	3838 CONRAD DR	E 1/8 - 1/4 (0.136 mi.)	C28	240

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 04/20/2020 has revealed that there are 3 CERS TANKS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SMR CHEVRON	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D44***	***282***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GAS DEPOT/QWIK KORNE	***9663 CAMPO RD***	***ESE 0 - 1/8 (0.097 mi.)***	***B11***	***26***
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/23/2020 has revealed that

there are 16 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GREELEY PAYNE EPA ID:: CAC002976032	3847 ROGERS PL.	WNW 0 - 1/8 (0.084 mi.)	3	11
CARQUEST AUTO PARTS EPA ID:: CAL000403064	9748 CAMPO RD	E 1/8 - 1/4 (0.200 mi.)	D38	265
CIF HOLDINGS, L.P. EPA ID:: CAC003025886	9762 CAMPO RD	E 1/8 - 1/4 (0.217 mi.)	D39	266
SMR CHEVRON EPA ID:: CAL000283357	9749 CAMPO RD	ESE 1/8 - 1/4 (0.238 mi.)	D40	267

Lower Elevation	Address	Direction / Distance	Map ID	Page
GRASS DOCTOR LANDSCA EPA ID:: CAL000297416	9600 CAMPO RD STE C	SSW 0 - 1/8 (0.011 mi.)	1	9
ONI LIVELY TRUST EPA ID:: CAC003036419	9628 CAMPO RD.	ESE 0 - 1/8 (0.053 mi.)	A2	10
QWIK KORNER EPA ID:: CAL000315739	9663 CAMPO RD	ESE 0 - 1/8 (0.097 mi.)	B7	21
QWIK KORNER EPA ID:: CAL000403856	9663 CAMPO RD	ESE 0 - 1/8 (0.097 mi.)	B9	23
LILLY'S PRECISION PR EPA ID:: CAL000287130	3737 KENORA DR STE A	SE 0 - 1/8 (0.109 mi.)	B14	108
EXOTIC MATERIALS GRI EPA ID:: CAL000265269	3737 KENORA DR	SE 0 - 1/8 (0.109 mi.)	B16	133
JOE BELL BICYCLE RES EPA ID:: CAL000174234	3735 KENORA DR	SE 0 - 1/8 (0.110 mi.)	B17	134
DEERING BANJO CO INC EPA ID:: CAL000263364	3733 KENORA DR	SE 0 - 1/8 (0.110 mi.)	B20	145
FRESH AND EASY *D EPA ID:: CAP000187401	9665 CAMPO RD	SE 0 - 1/8 (0.123 mi.)	B26	178
LA MESA SPRING VALLE EPA ID:: CAL000033250	3838 CONRAD DR	E 1/8 - 1/4 (0.136 mi.)	C30	242
GAL CAB AUTO REPAIR EPA ID:: CAL000448044	9612 DALE AVE #2	S 1/8 - 1/4 (0.162 mi.)	34	245
AUTOZONE #4155 EPA ID:: CAL000379043	9710 CAMPO RD	E 1/8 - 1/4 (0.163 mi.)	C36	259

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 03/23/2020 has revealed that there are 6 Cortese sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TLC CHEVRON Cleanup Status: COMPLETED - CASE CLOSED	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D41***	***268***
CREST KENNALS INC NT	***9832 CAMPO RD***	***E 1/4 - 1/2 (0.333 mi.)***	***E46***	***338***

Cleanup Status: COMPLETED - CASE CLOSED

ULTRAMAR STATION #1-	***9932 CAMPO RD***	***E 1/4 - 1/2 (0.444 mi.)***	***F49***	***344***
Cleanup Status: COMPLETED - CASE CLOSED				
THE DAIRY STORE	***9951 CAMPO RD***	***E 1/4 - 1/2 (0.482 mi.)***	***G53***	***406***
Cleanup Status: COMPLETED - CASE CLOSED				

Lower Elevation	Address	Direction / Distance	Map ID	Page
GAS DEPOT/QWIK KORNE	***9663 CAMPO RD***	***ESE 0 - 1/8 (0.097 mi.)***	***B11***	***26***
Cleanup Status: COMPLETED - CASE CLOSED				
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***
Cleanup Status: COMPLETED - CASE CLOSED				

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 7 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SPRING VALLEY MIDDLE	3900 CONRAD	ENE 1/8 - 1/4 (0.144 mi.)	C33	245
Reg Id: 9UT3725				
TLC CHEVRON	***9749 CAMPO RD***	***ESE 1/8 - 1/4 (0.238 mi.)***	***D43***	***279***
Reg Id: 9UT1229				
CREST KENNALS INC NT	***9832 CAMPO RD***	***E 1/4 - 1/2 (0.333 mi.)***	***E46***	***338***
Reg Id: 9UT59				
VALERO CORNER STORE	***9932 CAMPO RD***	***E 1/4 - 1/2 (0.444 mi.)***	***F50***	***388***
Reg Id: 9UT235				
THE DAIRY STORE	***9951 CAMPO RD***	***E 1/4 - 1/2 (0.482 mi.)***	***G51***	***400***
Reg Id: 9UT2704				

Lower Elevation	Address	Direction / Distance	Map ID	Page
GAS DEPOT/QWIK KORNE	***9663 CAMPO RD***	***ESE 0 - 1/8 (0.097 mi.)***	***B11***	***26***
Reg Id: 9UT472				
L M S V OPERATIONS C	***3838 CONRAD DR***	***E 1/8 - 1/4 (0.136 mi.)***	***C27***	***180***
Reg Id: 9UT741				
Reg Id: 9UT3835				

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected

listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 3 EDR Hist Auto sites within approximately 0.125 miles of the target property.

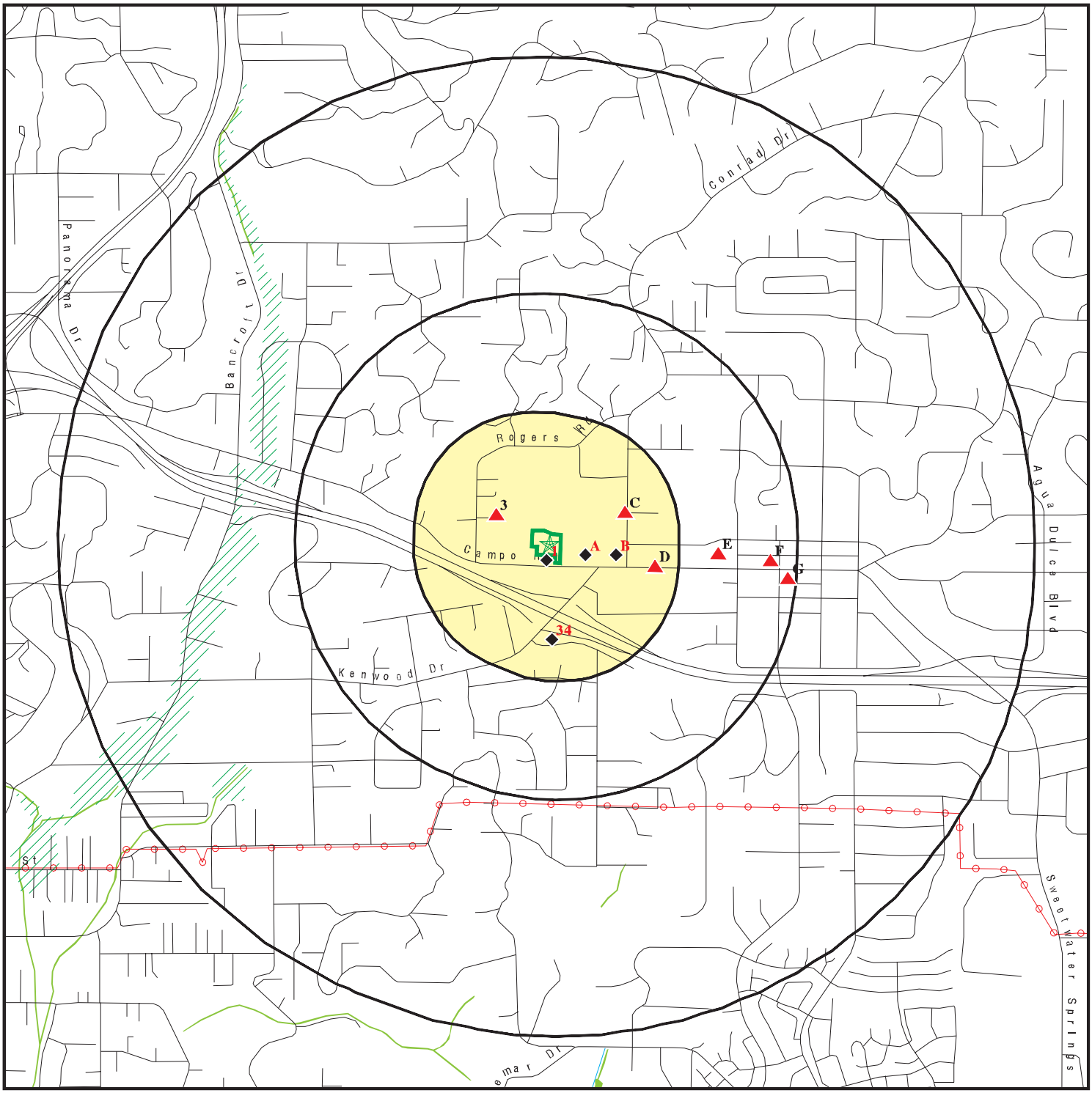
Lower Elevation	Address	Direction / Distance	Map ID	Page
HILDERBRAND GRANT	9660 CAMPO RD	ESE 0 - 1/8 (0.093 mi.)	A4	12
LOU S SHELL SERVICE	9663 COMPO RD	ESE 0 - 1/8 (0.097 mi.)	B12	106
ROGER MANNING TEXACO	9676 CAMPO RD	E 0 - 1/8 (0.118 mi.)	B23	163

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
CASA DE ORO REGAL CLEANER	HWTS

OVERVIEW MAP - 6160544.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Casa Del Oro Library ADDRESS: 9610 Campo Rd Spring Valley CA 91977 LAT/LONG: 32.74865 / 116.990147	CLIENT: Michael Baker International CONTACT: Danielle Regimbal INQUIRY #: 6160544.2s DATE: August 18, 2020 5:28 pm

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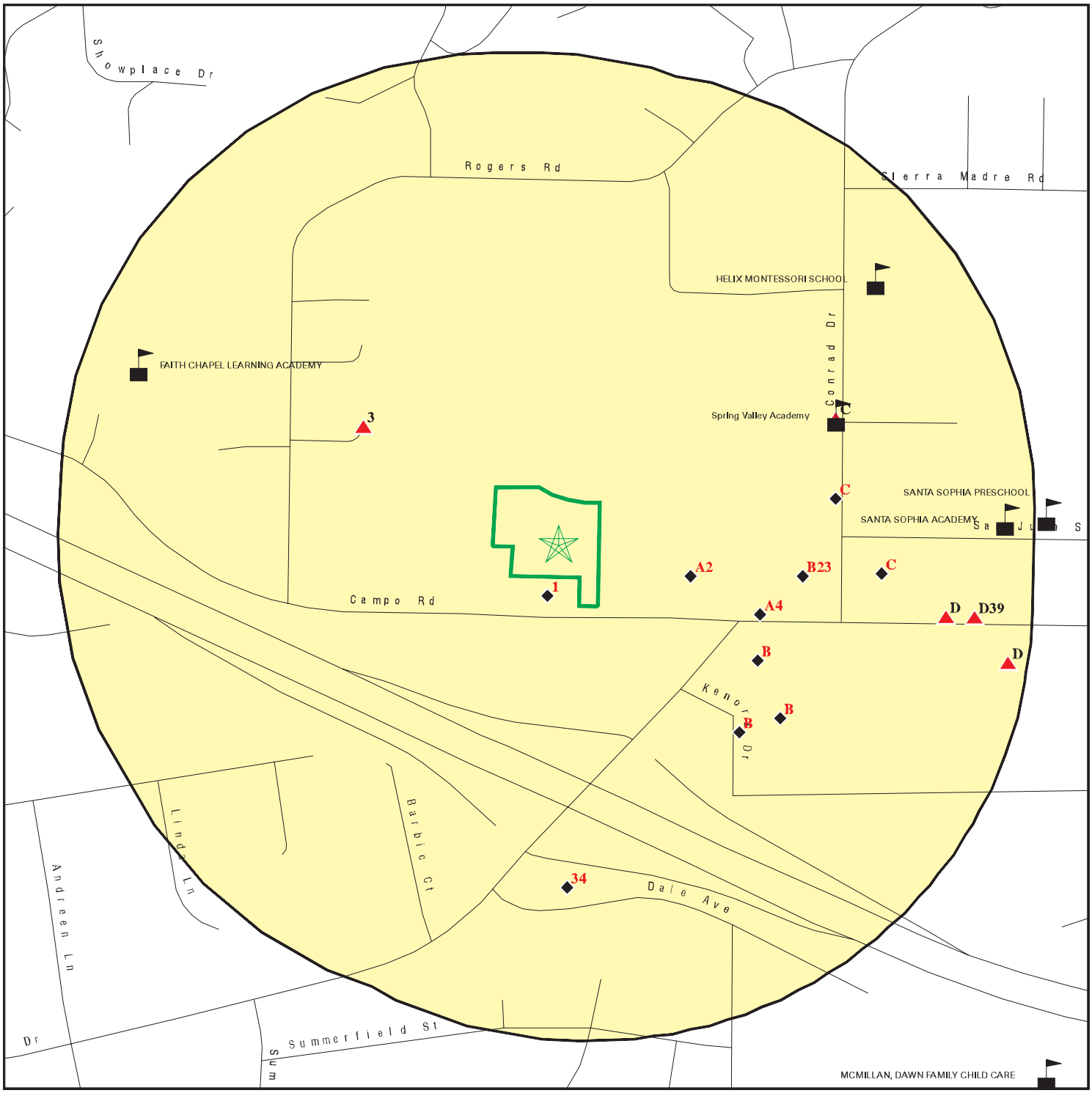
DETAIL MAP - 6160544.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Casa Del Oro Library	CLIENT: Michael Baker International
ADDRESS: 9610 Campo Rd Spring Valley CA 91977	CONTACT: Danielle Regimbal
LAT/LONG: 32.74865 / 116.990147	INQUIRY #: 6160544.2s DATE: August 18, 2020 5:29 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		1	0	0	NR	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		2	0	NR	NR	NR	2
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		1	0	0	0	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		2	6	5	NR	NR	13

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SAN DIEGO CO. SAM	0.500		1	2	4	NR	NR	7
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		1	2	0	NR	NR	3
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	1	NR	NR	NR	2
AST	0.250		0	1	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
San Diego Co. HMMD	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		5	4	NR	NR	NR	9
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		1	2	NR	NR	NR	3
HIST UST	0.250		2	3	NR	NR	NR	5
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		1	2	NR	NR	NR	3
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		10	6	NR	NR	NR	16
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		1	2	3	NR	NR	6
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	3	3	NR	NR	7
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
SAN DIEGO CO LOP	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		3	NR	NR	NR	NR	3
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	34	34	15	0	0	83

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SSW
< 1/8
0.011 mi.
57 ft.

GRASS DOCTOR LANDSCAPE INC
9600 CAMPO RD STE C
SPRING VALLEY, CA 91977

RCRA NonGen / NLR

1024811951
CAL000297416

Relative:
Lower

Actual:
435 ft.

RCRA NonGen / NLR:

Date form received by agency:	2005-08-15 00:00:00.0
Facility name:	GRASS DOCTOR LANDSCAPE INC
Facility address:	9600 CAMPO RD STE C SPRING VALLEY, CA 91977
EPA ID:	CAL000297416
Mailing address:	9600 CAMPO RD STE C SPRING VALLEY, CA 91977-1223
Contact:	PERRY ORSINELLI
Contact address:	9600 CAMPO RD STE C SPRING VALLEY, CA 91977
Contact country:	Not reported
Contact telephone:	619-462-7252
Contact email:	GDOCBIZ@YAHOO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	GRASS DOCTOR LANDSCAPE INC
Owner/operator address:	9600 CAMPO RD STE C SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-462-7252
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	PERRY ORSINELLI
Owner/operator address:	9600 CAMPO RD STE C SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-462-7252
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No

GRASS DOCTOR LANDSCAPE INC (Continued) **1024811951**

Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

A2 **ONI LIVELY TRUST** **RCRA NonGen / NLR** **1025856115**
ESE **9628 CAMPO RD.** **CAC003036419**
< 1/8 **SPRING VALLEY, CA 91977**
0.053 mi.
280 ft. **Site 1 of 2 in cluster A**

Relative:
Lower

Actual:
436 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-10-01 00:00:00.0
Facility name:	ONI LIVELY TRUST
Facility address:	9628 CAMPO RD. SUITE M SPRING VALLEY, CA 91977
EPA ID:	CAC003036419
Mailing address:	9628 CAMPO RD SUITE G SPRING VALLEY, CA 91977-1245
Contact:	ONI LIVELY TRUST
Contact address:	9628 CAMPO RD SUITE G SPRING VALLEY, CA 91977-1245
Contact country:	Not reported
Contact telephone:	619-772-2296
Contact email:	SDABATEMENT@GMAIL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ONI LIVELY TRUST
Owner/operator address:	9628 CAMPO RD SUITE G SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-772-2296
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	ONI LIVELY TRUST
Owner/operator address:	9628 CAMPO RD SUITE G SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-772-2296

ONI LIVELY TRUST (Continued) **1025856115**

Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

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3 **GREELEY PAYNE** **RCRA NonGen / NLR** **1024756207**
WNW **3847 ROGERS PL.** **CAC002976032**
< 1/8 **SPRING VALLEY, CA 91977**
0.084 mi.
442 ft.

Relative:
Higher

Actual:
471 ft.

RCRA NonGen / NLR:
Date form received by agency: 2018-08-16 00:00:00.0
Facility name: GREELEY PAYNE
Facility address: 3847 ROGERS PL.
SPRING VALLEY, CA 91977
EPA ID: CAC002976032
Contact: GREELEY PAYNE
Contact address: 3847 ROGERS PL.
SPRING VALLEY, CA 91977
Contact country: Not reported
Contact telephone: 619-463-9537
Contact email: CINDYEDWARDS@ALLIANCE-ENVIRO.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: GREELEY PAYNE
Owner/operator address: 3847 ROGERS PL.
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-463-9537
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported

GREELEY PAYNE (Continued) **1024756207**

Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: GREELEY PAYNE
Owner/operator address: 3847 ROGERS PL.
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-463-9537
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A4 **HILDERBRAND GRANT** **EDR Hist Auto** **1022104291**
ESE **9660 CAMPO RD** **N/A**
< 1/8 **SPRING VALLEY, CA 92077**
0.093 mi.
493 ft. **Site 2 of 2 in cluster A**

Relative: EDR Hist Auto
Lower

Actual: Year: Name: Type:
428 ft. 1969 HILDERBRAND GRANT Gasoline Service Stations

B5 **SHELL SERVICE STATION** **LUST** **S102437358**
ESE **9663 CAMPO RD** **SWEEPS UST** **N/A**
< 1/8 **SPRING VALLEY, CA 91977** **HIST UST**
0.097 mi. **EMI**
514 ft. **Site 1 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

LUST REG 9:

Region:	9
Status:	Preliminary site assessment workplan submitted
Case Number:	9UT4006
Local Case:	H03233-002
Substance:	0
Qty Leaked:	Not reported
Abate Method:	Not reported
Local Agency:	San Diego
How Found:	Other Means
How Stopped:	Not reported
Source:	Tank
Cause:	Unknown
Lead Agency:	Local Agency
Case Type:	Aquifer affected
Date Found:	11/23/1999
Date Stopped:	/ /
Confirm Date:	/ /
Submit Workplan:	12/13/99
Prelim Assess:	/ /
Desc Pollution:	Not reported
Remed Plan:	/ /
Remed Action:	Not reported
Began Monitor:	Not reported
Release Date:	11/23/1999
Enforce Date:	Not reported
Closed Date:	Not reported
Enforce Type:	Not reported
Pilot Program:	LOP
Basin Number:	909.21
GW Depth:	Not reported
Beneficial Use:	MUNBU
NPDES Number:	Not reported
Priority:	High priority
File Dispn:	Administratively opened on database, however no file physically exists
Interim Remedial Actions:	Not reported
Cleanup and Abatement order Number:	Not reported
Waste Discharge Requirement Number:	Not reported

Region:	9
Status:	Case Closed
Case Number:	9UT472
Local Case:	H03233-001
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Local Agency:	San Diego
How Found:	Tank Closure
How Stopped:	Not reported
Source:	Tank
Cause:	Corrosion
Lead Agency:	Local Agency
Case Type:	Soil only

SHELL SERVICE STATION (Continued) **S102437358**

Date Found: 12/06/1985
Date Stopped: / /
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 04/23/1987
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 12/16/1985
Enforce Date: Not reported
Closed Date: 6/23/87
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 909.21
GW Depth: 6'
Beneficial Use: Not reported
NPDES Number: Not reported
Priority: Low priority. Priority ranking can change over time.
File Dispn: File discarded, case closed
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

SWEEPS UST:
Name: CASA DE ORO SHELL
Address: 9663 CAMPO RD
City: SPRING VALLEY
Status: Active
Comp Number: 3233
Number: 9
Board Of Equalization: 44-000074
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-003233-000008
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: 4

Name: CASA DE ORO SHELL
Address: 9663 CAMPO RD
City: SPRING VALLEY
Status: Active
Comp Number: 3233
Number: 9
Board Of Equalization: 44-000074
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-003233-000009

SHELL SERVICE STATION (Continued) **S102437358**

Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: CASA DE ORO SHELL
Address: 9663 CAMPO RD
City: SPRING VALLEY
Status: Active
Comp Number: 3233
Number: 9
Board Of Equalization: 44-000074
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-003233-000010
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

Name: CASA DE ORO SHELL
Address: 9663 CAMPO RD
City: SPRING VALLEY
Status: Active
Comp Number: 3233
Number: 9
Board Of Equalization: 44-000074
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-003233-000011
Tank Status: A
Capacity: 550
Active Date: Not reported
Tank Use: PETROLEUM
STG: W
Content: Not reported
Number Of Tanks: Not reported

Name: CASA DE ORO SHELL
Address: 9663 CAMPO RD
City: SPRING VALLEY
Status: Not reported
Comp Number: 3233
Number: Not reported
Board Of Equalization: 44-000074
Referral Date: Not reported
Action Date: Not reported

SHELL SERVICE STATION (Continued) **S102437358**

Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003233-000001
Tank Status:	Not reported
Capacity:	6000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	LEADED
Number Of Tanks:	7

Name:	CASA DE ORO SHELL
Address:	9663 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	3233
Number:	Not reported
Board Of Equalization:	44-000074
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003233-000002
Tank Status:	Not reported
Capacity:	8000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	LEADED
Number Of Tanks:	Not reported

Name:	CASA DE ORO SHELL
Address:	9663 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	3233
Number:	Not reported
Board Of Equalization:	44-000074
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003233-000003
Tank Status:	Not reported
Capacity:	6000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Name:	CASA DE ORO SHELL
Address:	9663 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	3233
Number:	Not reported

SHELL SERVICE STATION (Continued) **S102437358**

Board Of Equalization:	44-000074
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003233-000004
Tank Status:	Not reported
Capacity:	550
Active Date:	Not reported
Tank Use:	PETROLEUM
STG:	WASTE
Content:	Not reported
Number Of Tanks:	Not reported

Name:	CASA DE ORO SHELL
Address:	9663 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	3233
Number:	Not reported
Board Of Equalization:	44-000074
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003233-000005
Tank Status:	Not reported
Capacity:	1000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	LEADED
Number Of Tanks:	Not reported

Name:	CASA DE ORO SHELL
Address:	9663 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	3233
Number:	Not reported
Board Of Equalization:	44-000074
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003233-000006
Tank Status:	Not reported
Capacity:	2000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Name:	CASA DE ORO SHELL
Address:	9663 CAMPO RD
City:	SPRING VALLEY

SHELL SERVICE STATION (Continued) **S102437358**

Status: Not reported
Comp Number: 3233
Number: Not reported
Board Of Equalization: 44-000074
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-003233-000007
Tank Status: Not reported
Capacity: 1000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: OTHER
Number Of Tanks: Not reported

HIST UST:
Name: LOUS SHELL SERVICE
Address: 9663 CAMPO ROAD
City,State,Zip: SPRING VALLEY, CA 92077
File Number: 0002F2F1
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002F2F1.pdf
Region: Not reported
Facility ID: Not reported
Facility Type: Not reported
Other Type: Not reported
Contact Name: Not reported
Telephone: Not reported
Owner Name: Not reported
Owner Address: Not reported
Owner City,St,Zip: Not reported
Total Tanks: Not reported

Tank Num: Not reported
Container Num: Not reported
Year Installed: Not reported
Tank Capacity: Not reported
Tank Used for: Not reported
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

EMI:
Name: QWIK KORNER
Address: 9663 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977-1228
Year: 2000
County Code: 37
Air Basin: SD
Facility ID: 1310
Air District Name: SD
SIC Code: 5541
Air District Name: SAN DIEGO COUNTY APCD

SHELL SERVICE STATION (Continued) **S102437358**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977-1228
Year:	2001
County Code:	37
Air Basin:	SD
Facility ID:	1310
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977-1228
Year:	2002
County Code:	37
Air Basin:	SD
Facility ID:	1310
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977-1228
Year:	2003
County Code:	37
Air Basin:	SD
Facility ID:	1310

SHELL SERVICE STATION (Continued) **S102437358**

Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977-1228
Year:	2004
County Code:	37
Air Basin:	SD
Facility ID:	1310
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.9188018
Reactive Organic Gases Tons/Yr:	0.9188018
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977-1228
Year:	2005
County Code:	37
Air Basin:	SD
Facility ID:	1310
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.9188018
Reactive Organic Gases Tons/Yr:	.9188018
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977-1228
Year:	2006

SHELL SERVICE STATION (Continued) **S102437358**

County Code:	37
Air Basin:	SD
Facility ID:	1310
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.9188018
Reactive Organic Gases Tons/Yr:	.9188018
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

B6 **GAS DEPOT/QWIK KORNER** **SAN DIEGO CO. SAM** **S105691781**
ESE **9663 CAMPO RD** **N/A**
< 1/8 **SPRING VALLEY, CA 91977**
0.097 mi.
514 ft. **Site 2 of 22 in cluster B**

Relative: SAN DIEGO CO. SAM:
Lower

Name:	GAS DEPOT/QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771228
Case Number:	H03233-002
Agency:	DEH Site Assessment & Mitigation
Funding:	**LOP - State Fund**
Facility Type:	Drinking Water Aquifer Impacted
Facility Status:	Remedial Investigation
Date:	3/2/2000
Date Began:	7/22/1999

Actual:
425 ft.

Name:	GAS DEPOT/QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771228
Case Number:	H03233-001
Agency:	DEH Site Assessment & Mitigation
Funding:	**Private - VAP**
Facility Type:	Soils Only
Facility Status:	Closed Case
Date:	6/23/1987
Date Began:	12/6/1985

B7 **QWIK KORNER** **RCRA NonGen / NLR** **1024815944**
ESE **9663 CAMPO RD** **CAL000315739**
< 1/8 **SPRING VALLEY, CA 91977**
0.097 mi.
514 ft. **Site 3 of 22 in cluster B**

Relative: RCRA NonGen / NLR:
Lower

Date form received by agency:	2007-01-25 00:00:00.0
Facility name:	QWIK KORNER
Facility address:	9663 CAMPO RD SPRING VALLEY, CA 91977

Actual:
425 ft.

QWIK KORNER (Continued) **1024815944**

EPA ID: CAL000315739
Contact: NICK NISSOU
Contact address: 9663 CAMPO RD
SPRING VALLEY, CA 91977
Contact country: Not reported
Contact telephone: 619-469-0333
Contact email: PAUL@PCETINC.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NICK NISSOU
Owner/operator address: 9663 CAMPO RD
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-469-0333
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NICK NISSON
Owner/operator address: 9663 CAMPO RD
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-469-0333
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B8 **QWIK KORNER PETROLEUM INC** **UST** **U004261897**
ESE **9663 CAMPO RD** **N/A**
< 1/8 **SPRING VALLEY, CA 91977**
0.097 mi.
514 ft. **Site 4 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

UST:

Name:	QWIK KORNER PETROLEUM INC
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Facility ID:	37-000-103233
Permitting Agency:	San Diego County Department of Environmental Health
Latitude:	32.74767
Longitude:	-116.9882

Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Facility ID:	37-000-103233
Permitting Agency:	San Diego County Department of Environme
Latitude:	32.74767
Longitude:	-116.9882

B9 **QWIK KORNER** **RCRA NonGen / NLR** **1024848339**
ESE **9663 CAMPO RD** **CAL000403856**
< 1/8 **SPRING VALLEY, CA 91977**
0.097 mi.
514 ft. **Site 5 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

RCRA NonGen / NLR:

Date form received by agency:	2015-01-20 00:00:00.0
Facility name:	QWIK KORNER
Facility address:	9663 CAMPO RD SPRING VALLEY, CA 91977
EPA ID:	CAL000403856
Contact:	NICK NISSOU
Contact address:	9663 CAMPO RD SPRING VALLEY, CA 91977
Contact country:	Not reported
Contact telephone:	619-469-0089
Contact email:	PAUL@PCETINC.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NICK NISSOU
Owner/operator address:	9663 CAMPO RD SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-469-0089
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

QWIK KORNER (Continued) **1024848339**

Owner/operator name:	NICK NISSOU
Owner/operator address:	9663 CAMPO RD SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-469-0089
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

B10 **LOU'S SHELL SERVICE** **HIST UST** **1000375863**
ESE **9663 CAMPO RD** **N/A**
< 1/8 **SPRING VALLEY, CA 92077**
0.097 mi.
514 ft. **Site 6 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

HIST UST:

Name:	LOU'S SHELL SERVICE
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 92077
File Number:	Not reported
URL:	Not reported
Region:	STATE
Facility ID:	00000009583
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	LOU PELLETIER
Telephone:	6196972111
Owner Name:	SHELL OIL COMPANY
Owner Address:	P.O. BOX 4848
Owner City,St,Zip:	ANAHEIM, CA 92803
Total Tanks:	0007
Tank Num:	001
Container Num:	1
Year Installed:	64

LOU'S SHELL SERVICE (Continued) **1000375863**

Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor, 10

Tank Num: 002
Container Num: 2
Year Installed: 70
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor, 10

Tank Num: 003
Container Num: 3
Year Installed: 64
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor, 10

Tank Num: 004
Container Num: 4
Year Installed: 64
Tank Capacity: 00000550
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: 12
Leak Detection: Stock Inventor, 10

Tank Num: 005
Container Num: 2
Year Installed: 1968
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Container Construction Thickness: 3/16
Leak Detection: Stock Inventor, None

Tank Num: 006
Container Num: 3
Year Installed: 1970
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: 3/16
Leak Detection: Stock Inventor, None

Tank Num: 007
Container Num: 4
Year Installed: 1973
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL

LOU'S SHELL SERVICE (Continued) **1000375863**

Container Construction Thickness: 3/16
Leak Detection: Stock Inventor, None

B11 **GAS DEPOT/QWIK KORNER** **LUST** **S104577748**
ESE **9663 CAMPO RD** **CPS-SLIC** **N/A**
< 1/8 **SPRING VALLEY, CA 91977** **San Diego Co. HMMD**
0.097 mi. **CERS HAZ WASTE**
514 ft. **Site 7 of 22 in cluster B** **CERS TANKS**
Cortese
Relative: Lower **HIST CORTESE**
SAN DIEGO CO LOP
Actual: 425 ft. **CERS**
HWTS

LUST:

Name:	GAS DEPOT/QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771228
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607399215
Global Id:	T0607399215
Latitude:	32.747768413
Longitude:	-116.988021209
Status:	Completed - Case Closed
Status Date:	08/09/2016
Case Worker:	EM
RB Case Number:	9UT4006
Local Agency:	SAN DIEGO COUNTY LOP
File Location:	Local Agency
Local Case Number:	H03233-002
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	This site is currently an active gas station. The former release (H03323-001) was opened to investigate a release around the used oil Underground Storage Tanks (UST) pit in December 1985. A groundwater monitoring well (B1) indicated no impacts and the case was closed in June 1987. This case (H03323-002) was opened in June 1998 due to hydrocarbon contaminated soils noted in a March 1999 Phase II Site Assessment Report. In December 1999, all four USTs, piping and dispensers were removed and replaced with three gasoline tanks (no new used oil tank was installed). Approximately 880 cubic yards of soil was disposed of offsite. Other than excavation of soil during the December 1999 tank removal, no other form of remediation has been performed on site. Between 2000 and 2013 a total of 10 soil borings, 7 hydropunch borings and 9 groundwater monitoring wells were drilled / installed to investigate both groundwater and soil impacts. Soil impacts were limited to the immediate area around the former underground storage tank location and the fuel dispenser island. There is an estimated 234 cubic yards of impacted soils (above 100 mg/kg) remaining on site. The location of the residual soil impacts is depicted on Figure 8 which is from the August 2013 Corrective Action Plan (CAP). Groundwater flow beneath the site is towards the southwest, paralleling Kenwood Drive. Groundwater beneath the site is approximately 5.6 to 6.0 feet below grade whereas off site south of Kenora Drive groundwater is approximately 7.5 to 8.5 feet below grade. Figure 5 provides a groundwater contour map and the results from the most recent sampling event. Residual groundwater impacts are

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

limited to MTBE. Trend analysis of the groundwater monitoring data indicates that the dissolved plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation processes. It is estimated that the MTBE will drop below MTBEs primary and secondary maximum contaminant level (MCL) by 2034 and 2047, respectively. On August 2013, a CAP, and on October 2013, a CAP Addendum were submitted for natural attenuation and were approved by DEH. The consultant proposed natural attenuation because: The plume is stable and shrinking. No Liquid Phase Hydrocarbons (LPH) have ever observed on the groundwater. There are no supply wells within 1/2 mile of the site. Utilities include a westward trending concrete lined channel (Spring Valley Creek) that is located about 40 feet west of the southwest corner of the site. The consultant claims that even though MtBE has been detected around the area of this channel, it is concrete-lined and the levels of MtBE are low and decreasing. Based on this, the creek will not be impacted by the MtBE. Sweetwater reservoir is about 2.75 miles south of the site and would not be impacted by the low residuals of MtBE in the groundwater, per the consultant. A site visit indicated that the bottom of this channel was 7 feet bgs with weep holes located one foot above the base (about 6 bgs). Since groundwater is at an average of 7.5 -8.5 feet bgs, and MW-6, on the opposite side of the channel, has trace levels of MtBE, the channel does not appear to be a pathway of MtBE migration, nor does it seem that MtBE-impacted water would seep into the channel. There are no health risks based on the absence of benzene or ethylbenzene in the groundwater. Benzene is currently below the MCL of 1 ug/l. Based on a degradation analysis, it is estimated that MtBE in groundwater will degrade to the primary MCL of 13 ug/l by 2034 and the secondary MtBE MCL of 5 ug/l would be reached by 2047. DEH concurs with the consultants conclusions and approves case closure. Permit # DEH2015-LMWP-002277 was issued by DEH for destruction of the 9 wells associated with the site.

LUST:

Global Id:	T0607399215
Contact Type:	Local Agency Caseworker
Contact Name:	EWAN MOFFAT
Organization Name:	SAN DIEGO COUNTY LOP
Address:	P.O. Box 129261
City:	San Diego
Email:	ewan.moffat@sdcounty.ca.gov
Phone Number:	Not reported

LUST:

Global Id:	T0607399215
Action Type:	RESPONSE
Date:	09/21/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0607399215
Action Type:	RESPONSE
Date:	10/16/2015
Action:	Correspondence
Global Id:	T0607399215
Action Type:	ENFORCEMENT
Date:	06/08/2011

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 08/02/2016
Action: Site Visit / Inspection / Sampling

Global Id: T0607399215
Action Type: Other
Date: 07/22/1999
Action: Leak Discovery

Global Id: T0607399215
Action Type: RESPONSE
Date: 01/26/2011
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 04/25/2011
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 07/25/2011
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 05/04/2009
Action: Well Installation Workplan - Regulator Responded

Global Id: T0607399215
Action Type: RESPONSE
Date: 05/23/2013
Action: Site Assessment Report - Regulator Responded

Global Id: T0607399215
Action Type: RESPONSE
Date: 08/29/2013
Action: Request for Closure - Regulator Responded

Global Id: T0607399215
Action Type: RESPONSE
Date: 12/03/2013
Action: CAP/RAP - Other Report - Regulator Responded

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 03/06/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 08/09/2016
Action: Closure/No Further Action Letter

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Global Id: T0607399215
Action Type: RESPONSE
Date: 10/05/2011
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 12/08/2011
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 01/20/2012
Action: Correspondence

Global Id: T0607399215
Action Type: REMEDIATION
Date: 12/15/1999
Action: Excavation

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 12/02/1999
Action: Notice of Responsibility

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 04/05/2013
Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: Other
Date: 12/21/1999
Action: Leak Stopped

Global Id: T0607399215
Action Type: RESPONSE
Date: 04/20/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0607399215
Action Type: RESPONSE
Date: 07/10/2012
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 09/17/2012
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 12/27/2012
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: ENFORCEMENT

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Date: 07/18/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 09/25/2013
Action: Staff Letter

Global Id: T0607399215
Action Type: Other
Date: 11/23/1999
Action: Leak Reported

Global Id: T0607399215
Action Type: RESPONSE
Date: 02/20/2013
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 05/24/2013
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 05/26/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 07/14/2009
Action: Letter - Notice

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 12/26/2013
Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: RESPONSE
Date: 07/07/2009
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 08/29/2013
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 01/22/2014
Action: Correspondence

Global Id: T0607399215
Action Type: RESPONSE
Date: 01/27/2014
Action: Correspondence

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Global Id: T0607399215
Action Type: RESPONSE
Date: 01/20/2014
Action: Correspondence

Global Id: T0607399215
Action Type: RESPONSE
Date: 03/03/2014
Action: Correspondence

Global Id: T0607399215
Action Type: RESPONSE
Date: 02/24/2014
Action: Correspondence

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 11/09/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 01/15/2015
Action: Letter - Notice

Global Id: T0607399215
Action Type: RESPONSE
Date: 04/14/2009
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 02/11/2009
Action: Site Assessment Report

Global Id: T0607399215
Action Type: RESPONSE
Date: 08/10/2009
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 01/22/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0607399215
Action Type: RESPONSE
Date: 04/25/2014
Action: Correspondence

Global Id: T0607399215
Action Type: ENFORCEMENT
Date: 02/04/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0607399215
Action Type: ENFORCEMENT

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Date: 01/15/2015
Action: Letter - Notice

Global Id: T0607399215
Action Type: RESPONSE
Date: 10/19/2009
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: RESPONSE
Date: 04/28/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0607399215
Action Type: RESPONSE
Date: 07/06/2010
Action: Monitoring Report - Quarterly

Global Id: T0607399215
Action Type: Other
Date: 07/22/1999
Action: Leak Began

Global Id: T0607399215
Action Type: RESPONSE
Date: 03/26/2014
Action: Correspondence

LUST:
Global Id: T0607399215
Status: Open - Case Begin Date
Status Date: 07/22/1999

Global Id: T0607399215
Status: Open - Remediation
Status Date: 03/02/2000

Global Id: T0607399215
Status: Open - Site Assessment
Status Date: 07/07/2009

Global Id: T0607399215
Status: Open - Eligible for Closure
Status Date: 05/12/2014

Global Id: T0607399215
Status: Open - Site Assessment
Status Date: 05/15/2014

Global Id: T0607399215
Status: Open - Eligible for Closure
Status Date: 05/26/2015

Global Id: T0607399215
Status: Open - Site Assessment
Status Date: 05/26/2015

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Global Id: T0607399215
Status: Open - Verification Monitoring
Status Date: 05/05/2016

Global Id: T0607399215
Status: Completed - Case Closed
Status Date: 08/09/2016

CPS-SLIC:
Name: GAS DEPOT/QWIK KORNER
Address: 9663 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771228
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 06/23/1987
Global Id: T0607302773
Lead Agency: SAN DIEGO COUNTY LOP
Lead Agency Case Number: H03233-001
Latitude: 32.747678
Longitude: -116.988195
Case Type: Cleanup Program Site
Case Worker: KH
Local Agency: SAN DIEGO COUNTY LOP
RB Case Number: 9UT472
File Location: Local Agency
Potential Media Affected: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

HMMD SAN DIEGO:
Name: QWIK KORNER
Address: 9663 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: 103233
Business Type: 6HK28
EPA Id Number: CAL000315739
APN: 500-261-40-00
Last HMMD Inspection: 10/26/2011
Facility Telephone: 619-469-0333
Permit Status: OPEN
Permit Expiration: 10/31/2013
Date Last Updated: 11/02/2012
Facility Owner: NICK NISSOU/ADEL YELDA
Facility Mailing Address: 9663 CAMPO RD
Facility Mailing City: SPRING VALLEY
Facility Mailing State: CA
Facility Mailing Zip: 91977-1228
UST Owner: ADEL YELDA & NICK NISSOU
Handle Regulated Hazmat: Y
Own Or Operate UST: Y
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):

Permit Number: 103233
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: MIDGRADE UNLEADED
Other Information: UNDERGROUND TANK 103233 T013
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 103233
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: PREMIUM UNLEADED
Other Information: UNDERGROUND TANK 103233 T014
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 103233
Update Date: 11/02/2012
Case Number: 74-98-6
Name: PROPANE, LIQUIFIED PETROLEUM COMPRESSED GAS
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: ACUTE
Hazardous Categories 2: Not reported

Permit Number: 103233
Update Date: 11/02/2012
Case Number: Not reported
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 103233 T012
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 103233
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: GASOLINE FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/26/2004
Violation Code: 6HV3102
Violation: OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation: Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity: ACTIVE

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3255
Violation:	SPILL CONTAIN. NOT DRY/IN GOOD CONDITION
Violation Citation:	Spill container is not in good condition and/or liquid free. 2635(b)(1), 2636(a)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3255
Violation:	SPILL CONTAIN. NOT DRY/IN GOOD CONDITION
Violation Citation:	Spill container is not in good condition and/or liquid free. 2635(b)(1), 2636(a)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Violation Code:	6HV3255
Violation:	SPILL CONTAIN. NOT DRY/IN GOOD CONDITION
Violation Citation:	Spill container is not in good condition and/or liquid free. 2635(b)(1), 2636(a)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3406
Violation:	AUTOMATIC LLD NOT CERTIFIED ANNUALLY
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 3-Automatic line leak detector not certified annually 25284.1(a)(4)(C); 2630(d), 2641(j)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3406
Violation:	AUTOMATIC LLD NOT CERTIFIED ANNUALLY
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 3-Automatic line leak detector not certified annually 25284.1(a)(4)(C); 2630(d), 2641(j)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3406
Violation:	AUTOMATIC LLD NOT CERTIFIED ANNUALLY
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 3-Automatic line leak detector not certified annually 25284.1(a)(4)(C); 2630(d), 2641(j)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV0132
Violation:	EPA ID NUMBER NOT OBTAINED/MAINTAINED
Violation Citation:	Generator of hazardous waste has not obtained/maintained an EPA

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

identification number. CCR 66262.12(a)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV0225
Violation: ACCUMULATED HW>180 OR >270 DAYS
Violation Citation: Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV0135
Violation: MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation: Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

(UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3158
Violation: ALL OPERATING CONDITIONS NOT MET
Violation Citation: All permit operating conditions not met. 25284; 2712
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3164
Violation: MONITOR EQUIP NOT PER MANUF. SPECS
Violation Citation: All monitoring equipment not installed, calibrated, operated, and/or maintained per manufacturer instructions. 2638(a), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3192
Violation: NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation: Designated Operator monthly inspection not conducted or incomplete; or

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

DO inspection reports not onsite 2715 (c)(d)(e)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3252
Violation: AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation: All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3252
Violation: AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation: All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3252
Violation: AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation: All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/10/2005
Violation Code: 6HV0135
Violation: MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation: Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity: ACTIVE

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV1011
Violation:	TRAINING RECORDS NOT AVAILABLE
Violation Citation:	Personnel training records not available. 19 CCR 2732
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3158
Violation:	ALL OPERATING CONDITIONS NOT MET
Violation Citation:	All permit operating conditions not met. 25284; 2712
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3411
Violation:	LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV3252

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV0228
Violation:	CONTAINER NOT KEPT CLOSED
Violation Citation:	Failed to keep container closed. CFR 265.173
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3152
Violation:	ALL MAINT/MONITOR RECORDS NOT AVAILABLE
Violation Citation:	All maintenance/monitoring/calibration/ repair records not available. 25293; 2712 (b)
Activity:	ACTIVE

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3261
Violation:	DISPENSER CONTAINMENT NOT DRY
Violation Citation:	Dispenser containment not free of liquid. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3261
Violation:	DISPENSER CONTAINMENT NOT DRY
Violation Citation:	Dispenser containment not free of liquid. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3261
Violation:	DISPENSER CONTAINMENT NOT DRY
Violation Citation:	Dispenser containment not free of liquid. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3407
Violation:	PIPE INT. TEST DOESN'T DETECT.1 GPH @150
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 2-Piping integrity test does

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	not detect 0.1-gph leak with ELLD or at 150% pressure 2636(f)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3407
Violation:	PIPE INT. TEST DOESN'T DETECT.1 GPH @150
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 2-Piping integrity test does not detect 0.1-gph leak with ELLD or at 150% pressure 2636(f)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3407
Violation:	PIPE INT. TEST DOESN'T DETECT.1 GPH @150
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 2-Piping integrity test does not detect 0.1-gph leak with ELLD or at 150% pressure 2636(f)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3193
Violation:	NO TRAINING/RECORD INCOMPLETE-NOT ONSITE
Violation Citation:	Facility employee(s) are not trained, training records are incomplete, and/or not onsite. 2715(f)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

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Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	06/05/2003
Violation Code:	6HV3103
Violation:	NO UST PLAN CHECK PERMIT OBTAINED
Violation Citation:	UST repair/modify/closure permit not obtained .68.1004, 68.1005, 68.1009.5
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004
Violation Code:	6HV3101
Violation:	UPF PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004
Violation Code:	6HV3152
Violation:	ALL MAINT/MONITOR RECORDS NOT AVAILABLE
Violation Citation:	All maintenance/monitoring/calibration/ repair records not available. 25293; 2712 (b)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004

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Violation Code: 6HV3264
Violation: SPILL CONT. NOT TESTED ANNUALLY
Violation Citation: Spill containment at fill point not tested annually. 25284.2
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 02/13/2004
Violation Code: 6HV3264
Violation: SPILL CONT. NOT TESTED ANNUALLY
Violation Citation: Spill containment at fill point not tested annually. 25284.2
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 02/13/2004
Violation Code: 6HV3264
Violation: SPILL CONT. NOT TESTED ANNUALLY
Violation Citation: Spill containment at fill point not tested annually. 25284.2
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/26/2011
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 103233 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 103233
Tank Type: SINGLE WALL
Additional Id: 1
Capacity Gallons: 6000
UST Contents: LEADED
Other Content Info: LEADED
Reg Status: REMOVED
Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1964-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 103233 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 103233
Tank Type: SINGLE WALL
Additional Id: 2
Capacity Gallons: 8000
UST Contents: PREMIUM UNLEADED
Other Content Info: PREMIUM UNLEADED
Reg Status: REMOVED

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Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 103233 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	6000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1964-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 103233 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	4
Capacity Gallons:	550
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1964-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 103233 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	2
Capacity Gallons:	1000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1968-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING

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ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 103233 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	2000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 103233 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	4
Capacity Gallons:	1000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 103233 T008
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	RT0821
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	PRESSURE
Monitor Code:	18
UST Monitor Method:	DW TNK SW PRESSURE PIPE W/ SHUTOFF LLD: INTERSTITIAL, PIPE TEST ANNUALLY 0.1 GAL/HR OR MONTHLY 0.2 GAL/HR.

UST Name:	UNDERGROUND TANK 103233 T009
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL

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Additional Id:	RT0821
Capacity Gallons:	10000
UST Contents:	MIDGRADE UNLEADED
Other Content Info:	MIDGRADE UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	PRESSURE
Monitor Code:	18
UST Monitor Method:	DW TNK SW PRESSURE PIPE W/ SHUTOFF LLD: INTERSTITIAL, PIPE TEST ANNUALLY 0.1 GAL/HR OR MONTHLY 0.2 GAL/HR.

UST Name:	UNDERGROUND TANK 103233 T010
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	RT0821
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	PRESSURE
Monitor Code:	18
UST Monitor Method:	DW TNK SW PRESSURE PIPE W/ SHUTOFF LLD: INTERSTITIAL, PIPE TEST ANNUALLY 0.1 GAL/HR OR MONTHLY 0.2 GAL/HR.

UST Name:	UNDERGROUND TANK 103233 T011
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	RT0821
Capacity Gallons:	550
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	GRAVITY
Monitor Code:	16
UST Monitor Method:	DW TANK SW SUCTION PIPE: CONTINUOUS INTERSTITIAL MONITOR, PIPE TEST TRIENNIALLY

UST Name:	UNDERGROUND TANK 103233 T012
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	NT2224 /RT2359/RT2811
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Year Installed:	2000-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31D
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/ POSITIVE SHUT-OFF
UST Name:	UNDERGROUND TANK 103233 T013
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	NT2224/ RT2811
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	2000-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31D
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/ POSITIVE SHUT-OFF
UST Name:	UNDERGROUND TANK 103233 T014
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	NT2224/RT2811
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	2000-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31D
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/ POSITIVE SHUT-OFF
Name:	QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	103233
Business Type:	6HK28
EPA Id Number:	CAL000315739
APN:	500-261-40-00
Last HMMD Inspection:	10/26/2011
Facility Telephone:	619-469-0333
Permit Status:	OPEN
Permit Expiration:	10/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	NICK NISSOU/ADEL YELDA
Facility Mailing Address:	9663 CAMPO RD
Facility Mailing City:	SPRING VALLEY

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Facility Mailing State:	CA
Facility Mailing Zip:	91977-1228
UST Owner:	ADEL YELDA & NICK NISSOU
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	103233
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	MIDGRADE UNLEADED
Other Information:	UNDERGROUND TANK 103233 T013
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	103233
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 103233 T014
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	103233
Update Date:	11/02/2012
Case Number:	74-98-6
Name:	PROPANE, LIQUIFIED PETROLEUM COMPRESSED GAS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	Not reported

Permit Number:	103233
Update Date:	11/02/2012
Case Number:	Not reported
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 103233 T012
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	103233
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	GASOLINE FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

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Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3102
Violation:	OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3255
Violation:	SPILL CONTAIN. NOT DRY/IN GOOD CONDITION
Violation Citation:	Spill container is not in good condition and/or liquid free. 2635(b)(1), 2636(a)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004

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Violation Code:	6HV3255
Violation:	SPILL CONTAIN. NOT DRY/IN GOOD CONDITION
Violation Citation:	Spill container is not in good condition and/or liquid free. 2635(b)(1), 2636(a)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3255
Violation:	SPILL CONTAIN. NOT DRY/IN GOOD CONDITION
Violation Citation:	Spill container is not in good condition and/or liquid free. 2635(b)(1), 2636(a)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE

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Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3406
Violation:	AUTOMATIC LLD NOT CERTIFIED ANNUALLY
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 3-Automatic line leak detector not certified annually 25284.1(a)(4)(C); 2630(d), 2641(j)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3406
Violation:	AUTOMATIC LLD NOT CERTIFIED ANNUALLY
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 3-Automatic line leak detector not certified annually 25284.1(a)(4)(C); 2630(d), 2641(j)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2004
Violation Code:	6HV3406
Violation:	AUTOMATIC LLD NOT CERTIFIED ANNUALLY
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 3-Automatic line leak

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

detector not certified annually 25284.1(a)(4)(C); 2630(d), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/26/2004
Violation Code: 6HV0132
Violation: EPA ID NUMBER NOT OBTAINED/MAINTAINED
Violation Citation: Generator of hazardous waste has not obtained/maintained an EPA identification number. CCR 66262.12(a)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV0225
Violation: ACCUMULATED HW>180 OR >270 DAYS
Violation Citation: Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/29/2009
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV0135
Violation: MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation: Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a)

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

& 25160.2(b)(3)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3158
Violation: ALL OPERATING CONDITIONS NOT MET
Violation Citation: All permit operating conditions not met. 25284; 2712
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 103233
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3164
Violation: MONITOR EQUIP NOT PER MANUF. SPECS
Violation Citation: All monitoring equipment not installed, calibrated, operated, and/or

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	maintained per manufacturer instructions. 2638(a), 2641(j)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV1011
Violation:	TRAINING RECORDS NOT AVAILABLE
Violation Citation:	Personnel training records not available. 19 CCR 2732
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3158
Violation:	ALL OPERATING CONDITIONS NOT MET
Violation Citation:	All permit operating conditions not met. 25284; 2712
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/10/2005
Violation Code:	6HV3411
Violation:	LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV0228
Violation:	CONTAINER NOT KEPT CLOSED
Violation Citation:	Failed to keep container closed. CFR 265.173
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly.

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/31/2006
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3152
Violation:	ALL MAINT/MONITOR RECORDS NOT AVAILABLE
Violation Citation:	All maintenance/monitoring/calibration/ repair records not available. 25293; 2712 (b)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3261
Violation:	DISPENSER CONTAINMENT NOT DRY
Violation Citation:	Dispenser containment not free of liquid. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3261
Violation:	DISPENSER CONTAINMENT NOT DRY
Violation Citation:	Dispenser containment not free of liquid. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3261
Violation:	DISPENSER CONTAINMENT NOT DRY
Violation Citation:	Dispenser containment not free of liquid. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional.

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	2630, 2641(j), 2632
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3407
Violation:	PIPE INT. TEST DOESN'T DETECT.1 GPH @150
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 2-Piping integrity test does not detect 0.1-gph leak with ELLD or at 150% pressure 2636(f)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3407
Violation:	PIPE INT. TEST DOESN'T DETECT.1 GPH @150
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 2-Piping integrity test does not detect 0.1-gph leak with ELLD or at 150% pressure 2636(f)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV3407
Violation:	PIPE INT. TEST DOESN'T DETECT.1 GPH @150
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING: OPTION 2-Piping integrity test does not detect 0.1-gph leak with ELLD or at 150% pressure 2636(f)(4)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	01/30/2003
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3193
Violation:	NO TRAINING/RECORD INCOMPLETE-NOT ONSITE
Violation Citation:	Facility employee(s) are not trained, training records are incomplete, and/or not onsite. 2715(f)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3252
Violation:	AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation:	All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	11/04/2008
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	06/05/2003
Violation Code:	6HV3103
Violation:	NO UST PLAN CHECK PERMIT OBTAINED
Violation Citation:	UST repair/modify/closure permit not obtained .68.1004, 68.1005, 68.1009.5
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004
Violation Code:	6HV3101
Violation:	UPF PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity:	ACTIVE

Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Violation Code:	6HV3152
Violation:	ALL MAINT/MONITOR RECORDS NOT AVAILABLE
Violation Citation:	All maintenance/monitoring/calibration/ repair records not available. 25293; 2712 (b)
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	02/13/2004
Violation Code:	6HV3264
Violation:	SPILL CONT. NOT TESTED ANNUALLY
Violation Citation:	Spill containment at fill point not tested annually. 25284.2
Activity:	ACTIVE
Permit Number:	103233
Update Date:	11/02/2012
Inspection Date:	10/26/2011
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

UST:

UST Name:	UNDERGROUND TANK 103233 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	1
Capacity Gallons:	6000
UST Contents:	LEADED
Other Content Info:	LEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1964-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

UST Name:	UNDERGROUND TANK 103233 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	2
Capacity Gallons:	8000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 103233 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	6000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1964-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 103233 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	4
Capacity Gallons:	550
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1964-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 103233 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	2
Capacity Gallons:	1000

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1968-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 103233 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	2000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 103233 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	SINGLE WALL
Additional Id:	4
Capacity Gallons:	1000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 103233 T008
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	RT0821
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Delivery System:	PRESSURE
Monitor Code:	18
UST Monitor Method:	DW TNK SW PRESSURE PIPE W/ SHUTOFF LLD: INTERSTITIAL, PIPE TEST ANNUALLY 0.1 GAL/HR OR MONTHLY 0.2 GAL/HR.
UST Name:	UNDERGROUND TANK 103233 T009
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	RT0821
Capacity Gallons:	10000
UST Contents:	MIDGRADE UNLEADED
Other Content Info:	MIDGRADE UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	PRESSURE
Monitor Code:	18
UST Monitor Method:	DW TNK SW PRESSURE PIPE W/ SHUTOFF LLD: INTERSTITIAL, PIPE TEST ANNUALLY 0.1 GAL/HR OR MONTHLY 0.2 GAL/HR.
UST Name:	UNDERGROUND TANK 103233 T010
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	RT0821
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	PRESSURE
Monitor Code:	18
UST Monitor Method:	DW TNK SW PRESSURE PIPE W/ SHUTOFF LLD: INTERSTITIAL, PIPE TEST ANNUALLY 0.1 GAL/HR OR MONTHLY 0.2 GAL/HR.
UST Name:	UNDERGROUND TANK 103233 T011
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	RT0821
Capacity Gallons:	550
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1999-12-21 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	GRAVITY
Monitor Code:	16
UST Monitor Method:	DW TANK SW SUCTION PIPE: CONTINUOUS INTERSTITIAL MONITOR, PIPE TEST TRIENNIALLY
UST Name:	UNDERGROUND TANK 103233 T012

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	NT2224 /RT2359/RT2811
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	2000-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31D
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 103233 T013
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	NT2224/ RT2811
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	2000-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31D
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 103233 T014
Last Update:	2012-11-02 14:17:38
Permit Number:	103233
Tank Type:	DOUBLE WALL
Additional Id:	NT2224/RT2811
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	2000-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31D
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/ POSITIVE SHUT-OFF

Name:	QWIK KORNER PETROLEUM INC
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAL000403856

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	619-469-0333
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	09/21/2019
Facility Owner:	Not reported
Facility Mailing Address:	9663 CAMPO RD, SPRING VALLEY, CA 91977-1228
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	Y
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5505640
Return To Compliance Date:	2017-10-06T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	17139
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2016-10-06T15:44:00.000
Violation Code:	2030008 Failure to maintain under dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid. HSC 25290.1, 25290.2, 25291

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5992775
Return To Compliance Date:	Not reported
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	17139
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2018-09-25T16:51:22.000
Violation Code:	2030048 Failure to conduct secondary containment testing, or one or more of the following requirements: Perform the test within six months of installation and every 36 months thereafter. Use a procedure that demonstrates the system works as well as at installation. Use applicable manufacturer guidelines, industry codes, engineering standard, or professional engineer approval. Performed by a certified

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

service technician or a licensed tank tester. 23 CCR 2637(a)(c)(d)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5992775
Return To Compliance Date:	Not reported
Nov:	Yes
Violation Classification:	Class I
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2018-09-25T16:51:22.000
Violation Code:	1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508(a)(1)(A), 25508.2, 19 CCR 2654(b)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5734511
Return To Compliance Date:	Not reported
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2017-10-06T17:46:00.000
Violation Code:	1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508(a)(1)(A), 25508.2, 19 CCR 2654(b)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5734511
Return To Compliance Date:	2017-10-06T00:00:00.000
Nov:	Yes
Violation Classification:	Class I
Underground Storage Tank Id:	17139
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2017-10-06T17:46:00.000
Violation Code:	2060015 (RD) Failure of leak detection equipment to be located such that equipment is capable of detecting a leak at the earliest possible opportunity. 23 CCR 2630(d), 2641(a)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5161775
Return To Compliance Date:	2015-10-27T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	17141
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2015-10-07T05:55:00.000
Violation Code:	2030026 Failure of line leak detector to detect a leak and/or failure of audible and visual alarm. 23 CCR 2636(f)(2)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5161775
Return To Compliance Date:	2016-02-03T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	17140
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2015-10-07T05:55:00.000
Violation Code:	2010008 (RD) Failure to maintain records of repairs, lining, and upgrades on site, or off site if approved by the CUPA, for the life of the underground storage tank and/or failure to maintain written monitoring and maintenance records on site, or off site if approved by the CUPA, for a period of 3 years, 6 +e-+ years for cathodic protection, and 5 years for written performance claims pertaining to release detection systems and calibration and maintenance records for such systems. 23 CCR 2712(b)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5505640
Return To Compliance Date:	Not reported
Nov:	Not reported
Violation Classification:	Not reported
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2016-10-06T15:44:00.000
Violation Code:	2010003 The owner/operator has failed to designate an UST operator or to inform the CUPA or any change in the designated UST operator(s) within 30 days after a change. 23 CCR 2715(a)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5734511
Return To Compliance Date:	2017-10-06T00:00:00.000
Nov:	Yes
Violation Classification:	Class I
Underground Storage Tank Id:	17141
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2017-10-06T17:46:00.000
Violation Code:	2030016 (RD) Failure to continuously monitor the interstitial space of the tank such that the leak detection activates an audible/visual alarm when a leak is detected. 23 CCR 2631(g), 2632(c)(2)(A)&(B)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5734511
Return To Compliance Date:	2017-10-06T00:00:00.000
Nov:	Yes
Violation Classification:	Class I
Underground Storage Tank Id:	17139
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2017-10-06T17:46:00.000
Violation Code:	2030013 Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained. 23 CCR 2715(c)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5992775
Return To Compliance Date:	Not reported
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	17139
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2018-09-25T16:51:22.000
Violation Code:	2030013 Failure to comply with one or more of the following designated

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operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been trained in accordance with 23 CCR 2715(f)(2), 2715(c)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	6246309
Return To Compliance Date:	Not reported
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	17139
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2019-09-18T17:20:56.000
Violation Code:	2030025 (TCR 9d) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	6246309
Return To Compliance Date:	2019-09-18T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	17139
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2019-09-18T17:20:56.000
Violation Code:	2030036 (TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the

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fittings located on the top of the tank are exposed to product due to overfilling. 5. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018. 6. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. 7. For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter. 8. Inspected within 30 days after a repair to the overfill prevention equipment. 9. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. 10. Inspected by a certified UST service technician. 11. Maintain records of overfill prevention equipment inspection for 36 months. 23 CCR 2635(c)(1), 2635(d), 2637.2(a-c), 2665, 2712(b)(1)(G)

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5505640
Return To Compliance Date:	2017-07-18T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2016-10-06T15:44:00.000
Violation Code:	3010002 Failed to obtain and/or maintain an active EPA ID. 22 CCR 66262.12

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	4964656
Return To Compliance Date:	2015-03-10T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2014-10-16T14:30:00.000
Violation Code:	1010002 Owner/Operator failed to complete and/or submit a Hazardous Materials Business Plan when storing hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet; HSC 6.95 25508(a)1A

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Program Element:	Hazardous Materials Release Response Plans

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Inspection Type:	Routine
Inspection Number:	5505640
Return To Compliance Date:	2017-10-06T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-21T00:00:00.000
Inspection Date:	2016-10-06T15:44:00.000
Violation Code:	1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508.2

UST DTL:

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	Owik Korner Petroleum Inc
Tankid:	17139
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-09-21T02:32:32.000
Tank Capacityin Gallons:	10000
Tank Contents:	Regular Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	Owik Korner Petroleum Inc
Tankid:	17140
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-09-21T02:32:32.000
Tank Capacityin Gallons:	10000
Tank Contents:	Regular Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-103233
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	Owik Korner Petroleum Inc
Tankid:	17141
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-09-21T02:32:32.000

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Tank Capacityin Gallons: 10000
Tank Contents: Premium Unleaded
Type Of Tank: Double Wall

Waste and Materials:
Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2015-HCHEM-0075512
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-04-21T18:50:30.000
Chemical Name: MIDGRADE UNLEADED
Common Name: UNDERGROUND TANK 103233 T013
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2015-HCHEM-0075513
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-04-21T18:50:30.000
Chemical Name: PROPANE, LIQUIFIED PETROLEUM COMPRESSED GAS
Common Name: PROPANE, LIQUIFIED PETROLEUM COMPRESSED GAS
Case Number: 74-98-6

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2015-HWAST-0059339
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-04-21T18:50:30.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: GASOLINE FILTERS
Case Number: Not reported

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0223455
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-09-21T02:32:32.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 103233 T012
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0223456
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-09-21T02:32:32.000
Chemical Name: PREMIUM UNLEADED

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Common Name: UNDERGROUND TANK 103233 T014
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0223457
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-09-21T02:32:32.000
Chemical Name: MIDGRADE UNLEADED
Common Name: UNDERGROUND TANK 103233 T013
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0223458
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-09-21T02:32:32.000
Chemical Name: PROPANE, LIQUIFIED PETROLEUM COMPRESSED GAS
Common Name: PROPANE, LIQUIFIED PETROLEUM COMPRESSED GAS
Case Number: 74-98-6

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0193135
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-09-21T02:32:32.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: GASOLINE FILTERS
Case Number: Not reported

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0193136
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-09-21T02:32:32.000
Chemical Name: Aqueous Solution - 134
Common Name: GASOLINE & WATER MIX
Case Number: Not reported

Record ID: DEH2002-HUPFP-103233
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2015-HCHEM-0075510
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-04-21T18:50:30.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 103233 T012
Case Number: 8006-61-9

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Record ID:	DEH2002-HUPFP-103233
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2015-HCHEM-0075511
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2019-04-21T18:50:30.000
Chemical Name:	PREMIUM UNLEADED
Common Name:	UNDERGROUND TANK 103233 T014
Case Number:	8006-61-9

CERS HAZ WASTE:

Name:	QWIK KORNER PETROLEUM INC
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Site ID:	400175
CERS ID:	10362793
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	QWIK KORNER PETROLEUM INC
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Site ID:	400175
CERS ID:	10362793
CERS Description:	Underground Storage Tank

CORTESE:

Name:	GAS DEPOT/QWIK KORNER
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771228
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0607399215
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

edr_fname: SHELL SERVICE STATION #
edr_fadd1: 9663 CAMPO
City,State,Zip: SPRING VALLEY, CA 92077
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT472

SAN DIEGO CO LOP:
Name: GAS DEPOT/QWIK KORNER
Address: 9663 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Record ID: DEH1999-LSAM-H03233-002
Record Status: Completed
Opened Date: 11/23/1999
Parcel Number: 500-261-40-00
Case Type: LOP - Local Oversight Program
Historical Name: SHELL SERVICE STATION
SWRCB Global ID: T0607399215
Funding: S - LOP State Fund
Lead Agency: DEH/SAM
Lead Agency Date: 11/30/1999
Census Tract: 135.03
Community: Spring Valley
Jurisdiction: UNINCORPORATED
Watershed Basin Number: 909.12
Water Purveyor: HELIX WATER DISTRICT LAND
Fire Agency: SAN MIGUEL FIRE PROT DIST
Latitude: 32.7476688
Longitude: -116.9881792
X MapCoord: 6334691.172
Y MapCoord: 1852631.395

CERS:
Name: GAS DEPOT/QWIK KORNER
Address: 9663 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771228
Site ID: 240465
CERS ID: T0607302773
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: KEVIN HEATON - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Local Agency Caseworker
Entity Name: EWAN MOFFAT - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: GAS DEPOT/QWIK KORNER
Address: 9663 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771228
Site ID: 240465
CERS ID: T0607399215
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: KEVIN HEATON - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Local Agency Caseworker
Entity Name: EWAN MOFFAT - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: QWIK KORNER PETROLEUM INC
Address: 9663 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 400175
CERS ID: 10362793
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 400175
Site Name: QWIK KORNER PETROLEUM INC
Violation Date: 09-25-2018
Citation: 23 CCR 16 2715(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)
Violation Description: Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

have been trained in accordance with 23 CCR 2715(f)(2).

Violation Notes: Inspection Sequence ID:5992775;Tank ID:17139,17140,17141;Violation Description:Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been trained in accordance with 23 CCR 2715(f)(2), 2715(c)

Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 400175
Site Name: QWIK KORNER PETROLEUM INC
Violation Date: 09-18-2019
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)

Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Returned to compliance on 09/18/2019. Inspection Sequence ID:6246309;Tank ID:17139,17140,17141;Violation Description:(TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 5. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prev
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	09-25-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Inspection Sequence ID:5992775
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	09-18-2019
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes:	Inspection Sequence ID:6246309;Tank ID:17139;Violation Description:(TCR 9d) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	23 CCR 16 2631(g), 2632(c)(2)(A) & (B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2631(g), 2632(c)(2)(A) & (B)
Violation Description:	Failure of the double-walled interstitial space of the tank to be continuously monitored with an audible and visual alarm.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5734511;Tank ID:17141;Violation Description:(RD) Failure to continuously monitor the interstitial space of the tank such that the leak detection activates an audible/visual alarm when a leak is

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	detected. 23 CCR 2631(g), 2632(c)(2)(A)&(B)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	HSC 6.7 25290.1(c)(3), 25290.2(c)(3) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c)(3), 25290.2(c)(3)
Violation Description:	Failure to keep water out of the secondary containment of UST systems installed on or after July 1, 2003 and before July 1, 2004, or on or after July 1, 2004.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5505640;Tank ID:17139,17140,17141;Violation Description:Failure to maintain under dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid. HSC 25290.1, 25290.2, 25291
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	09-25-2018
Citation:	23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description:	Failure to conduct secondary containment testing, or one or more of the following requirements: Perform the test within six months of installation and every 36 months thereafter.Use a procedure that demonstrates the system works as well as at installation.Use applicable manufacturer guidelines, industry codes, engineering standard, or professional engineer approval.Performed by a certified service technician or a licensed tank tester.
Violation Notes:	Inspection Sequence ID:5992775;Tank ID:17139,17140,17141;Violation Description:Failure to conduct secondary containment testing, or one or more of the following requirements: Perform the test within six months of installation and every 36 months thereafter. Use a procedure that demonstrates the system works as well as at installation. Use applicable manufacturer guidelines, industry codes, engineering standard, or professional engineer approval. Performed by a certified service technician or a licensed tank tester. 23 CCR 2637(a)(c)(d)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	23 CCR 16 2641(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(a)
Violation Description:	Failure of leak detection equipment to be located such that equipment is capable of detecting a leak at the earliest possible opportunity.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5734511;Tank ID:17139,17140,17141;Violation Description:(RD) Failure of leak detection equipment to be located such that equipment is capable of detecting a leak at the earliest possible opportunity.

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	23 CCR 2630(d), 2641(a)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Inspection Sequence ID:5734511
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-07-2015
Citation:	23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description:	Failure to maintain records of repairs, lining, and upgrades on site, or off site if approved by the CUPA, for the life of the underground storage tank and/or failure to maintain written monitoring and maintenance records on site, or off site if approved by the CUPA, for a period of 3 years, 6 1/2 years for cathodic protection, and 5 years for written performance claims pertaining to release detection systems and calibration and maintenance records for such systems.
Violation Notes:	Returned to compliance on 02/03/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-07-2015
Citation:	23 CCR 16 2666(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2666(c)
Violation Description:	Failure of line leak detector to detect a leak and/or failure of audible and visual alarm.
Violation Notes:	Returned to compliance on 10/27/2015.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description:	Failure to notify the CUPA of the designated operator (DO) identification and/or change of the DO within 30 days.
Violation Notes:	Returned to compliance on 10/31/2016. Inspection Sequence ID:5505640;Tank ID:17139,17140,17141;Violation Description:The owner/operator has failed to designate an UST operator or to inform

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	the CUPA or any change in the designated UST operator(s) within 30 days after a change. 23 CCR 2715(a)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5505640
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-16-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 03/10/2015.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 07/18/2017. Inspection Sequence ID:5505640
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	23 CCR 16 2715(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)
Violation Description:	Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly.

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5734511;Tank ID:17139,17140,17141;Violation Description:Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained. 23 CCR 2715(c)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:6246309
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:6246309
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-25-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5992775
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5734511
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-07-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5161775
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Tank HT205 Inspection ID:4964656
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-25-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5992775
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Garchitorena Bobby Inspection ID:5505640
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5734511
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Tank HT205 Inspection ID:4964656
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2013
Violations Found:	No

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4519501
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Garchitorena Bobby Inspection ID:5505640
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5734511
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-07-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5161775
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4519501
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:6246309
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-25-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5992775
Eval Division:	San Diego County Department of Env Health

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-06-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Garchitorena Bobby Inspection ID:5505640
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Tank HT205 Inspection ID:4964656
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Fuentecilla Carmel Inspection ID:4519501
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 400175
Facility Name: QWIK KORNER PETROLEUM INC
Env Int Type Code: HMBP
Program ID: 10362793
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 32.747670
Longitude: -116.988200

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Identification Signer
Entity Name: Paul Vidakovich
Entity Title: Consultant
Affiliation Address: Not reported
Affiliation City: Not reported

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Qwik Korner
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Qwik Korner Petroleum Inc
Entity Title:	Not reported
Affiliation Address:	9663 Campo Road
Affiliation City:	Spring Valley
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 985-0944
Affiliation Type Desc:	Document Preparer
Entity Name:	P. Vidakovich
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	CLOW FAMILY SURVIVORS TRUST
Entity Title:	Not reported
Affiliation Address:	P O BOX 188
Affiliation City:	RANCHO SANTA FE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92067
Affiliation Phone:	(619) 334-0707
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	CLOW FAMILY SURVIVORS TRUST
Entity Title:	Not reported
Affiliation Address:	P O BOX 188
Affiliation City:	RANCHO SANTA FE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92067
Affiliation Phone:	(619) 985-0944
Affiliation Type Desc:	Environmental Contact
Entity Name:	PAUL VIDAKOVICH PCET

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Entity Title:	Not reported
Affiliation Address:	3720 OCEANIC WAY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	PAUL VIDAKOVICH-PCET INC
Entity Title:	Not reported
Affiliation Address:	3720 Oceanic Way
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	9663 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91977-1228
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Qwik Korner Petroleum Inc
Entity Title:	Not reported
Affiliation Address:	9663 Campo Road
Affiliation City:	Spring VAlley
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 469-0333
Affiliation Type Desc:	Operator
Entity Name:	Owik Korner Petroleum Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 469-0089
Affiliation Type Desc:	Property Owner
Entity Name:	CLOW FMLY SURVIVORS TRST 03
Entity Title:	Not reported
Affiliation Address:	POBOX 188
Affiliation City:	RANCHOSANTAFE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Paul Vidakovich
Entity Title:	Consultant
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 421-0400

Affiliation Type Desc:	UST PO Name
Entity Name:	CLOW FMLY SURVIVORS TRST 03
Entity Title:	Not reported
Affiliation Address:	POBOX 188
Affiliation City:	RANCHOSANTAFE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Tank Operator
Entity Name:	Qwik Korner Petroleum Inc
Entity Title:	Not reported
Affiliation Address:	9663 Campo Rd
Affiliation City:	Spring Valley
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 469-0089

Name:	QWIK KORNER PETROLEUM INC
Address:	9663 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Site ID:	400175
CERS ID:	110021363326
CERS Description:	US EPA Air Emission Inventory System (EIS)

Violations:

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	09-25-2018
Citation:	23 CCR 16 2715(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)
Violation Description:	Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been trained in accordance with 23 CCR 2715(f)(2).
Violation Notes:	Inspection Sequence ID:5992775;Tank ID:17139,17140,17141;Violation Description:Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been trained in accordance with 23 CCR 2715(f)(2), 2715(c)

Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 400175
Site Name: QWIK KORNER PETROLEUM INC
Violation Date: 09-18-2019
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)

Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Returned to compliance on 09/18/2019. Inspection Sequence ID:6246309;Tank ID:17139,17140,17141;Violation Description:(TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 5. Install/retrofit overfill prevention equipment that

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

	does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prev
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	09-25-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Inspection Sequence ID:5992775
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	09-18-2019
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes:	Inspection Sequence ID:6246309;Tank ID:17139;Violation Description:(TCR 9d) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	23 CCR 16 2631(g), 2632(c)(2)(A) & (B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2631(g), 2632(c)(2)(A) & (B)
Violation Description:	Failure of the double-walled interstitial space of the tank to be continuously monitored with an audible and visual alarm.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5734511;Tank ID:17141;Violation Description:(RD) Failure to continuously monitor the interstitial space of the tank such that the leak detection activates an audible/visual alarm when a leak is detected. 23 CCR 2631(g), 2632(c)(2)(A)&(B)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	HSC 6.7 25290.1(c)(3), 25290.2(c)(3) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c)(3), 25290.2(c)(3)
Violation Description:	Failure to keep water out of the secondary containment of UST systems installed on or after July 1, 2003 and before July 1, 2004, or on or after July 1, 2004.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5505640;Tank ID:17139,17140,17141;Violation Description:Failure to maintain under dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid. HSC 25290.1, 25290.2, 25291
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	09-25-2018
Citation:	23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description:	Failure to conduct secondary containment testing, or one or more of the following requirements: Perform the test within six months of installation and every 36 months thereafter.Use a procedure that demonstrates the system works as well as at installation.Use applicable manufacturer guidelines, industry codes, engineering standard, or professional engineer approval.Performed by a certified service technician or a licensed tank tester.
Violation Notes:	Inspection Sequence ID:5992775;Tank ID:17139,17140,17141;Violation Description:Failure to conduct secondary containment testing, or one or more of the following requirements: Perform the test within six months of installation and every 36 months thereafter. Use a procedure that demonstrates the system works as well as at installation. Use applicable manufacturer guidelines, industry codes, engineering standard, or professional engineer approval. Performed by a certified service technician or a licensed tank tester. 23 CCR 2637(a)(c)(d)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	23 CCR 16 2641(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(a)
Violation Description:	Failure of leak detection equipment to be located such that equipment is capable of detecting a leak at the earliest possible opportunity.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5734511;Tank ID:17139,17140,17141;Violation Description:(RD) Failure of leak detection equipment to be located such that equipment is capable of detecting a leak at the earliest possible opportunity. 23 CCR 2630(d), 2641(a)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Inspection Sequence ID:5734511
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-07-2015
Citation:	23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description:	Failure to maintain records of repairs, lining, and upgrades on site, or off site if approved by the CUPA, for the life of the underground storage tank and/or failure to maintain written monitoring and maintenance records on site, or off site if approved by the CUPA, for a period of 3 years, 6 1/2 years for cathodic protection, and 5 years for written performance claims pertaining to release detection systems and calibration and maintenance records for such systems.
Violation Notes:	Returned to compliance on 02/03/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-07-2015
Citation:	23 CCR 16 2666(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2666(c)
Violation Description:	Failure of line leak detector to detect a leak and/or failure of audible and visual alarm.
Violation Notes:	Returned to compliance on 10/27/2015.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description:	Failure to notify the CUPA of the designated operator (DO) identification and/or change of the DO within 30 days.
Violation Notes:	Returned to compliance on 10/31/2016. Inspection Sequence ID:5505640;Tank ID:17139,17140,17141;Violation Description:The owner/operator has failed to designate an UST operator or to inform the CUPA or any change in the designated UST operator(s) within 30 days after a change. 23 CCR 2715(a)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5505640
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-16-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 03/10/2015.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2016
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 07/18/2017. Inspection Sequence ID:5505640
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	400175
Site Name:	QWIK KORNER PETROLEUM INC
Violation Date:	10-06-2017
Citation:	23 CCR 16 2715(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)
Violation Description:	Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained.
Violation Notes:	Returned to compliance on 10/06/2017. Inspection Sequence ID:5734511;Tank ID:17139,17140,17141;Violation Description:Failure to

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained. 23 CCR 2715(c)

Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6246309
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6246309
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-25-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5992775
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-06-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5734511
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5161775

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Tank HT205 Inspection ID:4964656
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-25-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5992775
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Garchitorena Bobby Inspection ID:5505640
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5734511
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Tank HT205 Inspection ID:4964656
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4519501
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Garchitorena Bobby Inspection ID:5505640
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5734511
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-07-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5161775
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4519501
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:6246309
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-25-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5992775
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-06-2016
Violations Found:	Yes

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Garchitorena Bobby Inspection ID:5505640
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Tank HT205 Inspection ID:4964656
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4519501
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	400175
Facility Name:	QWIK KORNER PETROLEUM INC
Env Int Type Code:	HMBP
Program ID:	10362793
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	32.747670
Longitude:	-116.988200

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Identification Signer
Entity Name:	Paul Vidakovich
Entity Title:	Consultant
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Entity Name:	Qwik Korner
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Qwik Korner Petroleum Inc
Entity Title:	Not reported
Affiliation Address:	9663 Campo Road
Affiliation City:	Spring Valley
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 985-0944
Affiliation Type Desc:	Document Preparer
Entity Name:	P. Vidakovich
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	CLOW FAMILY SURVIVORS TRUST
Entity Title:	Not reported
Affiliation Address:	P O BOX 188
Affiliation City:	RANCHO SANTA FE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92067
Affiliation Phone:	(619) 334-0707
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	CLOW FAMILY SURVIVORS TRUST
Entity Title:	Not reported
Affiliation Address:	P O BOX 188
Affiliation City:	RANCHO SANTA FE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92067
Affiliation Phone:	(619) 985-0944
Affiliation Type Desc:	Environmental Contact
Entity Name:	PAUL VIDAKOVICH PCET
Entity Title:	Not reported
Affiliation Address:	3720 OCEANIC WAY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: PAUL VIDAKOVICH-PCET INC
Entity Title: Not reported
Affiliation Address: 3720 Oceanic Way
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 9663 CAMPO RD
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977-1228
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Qwik Korner Petroleum Inc
Entity Title: Not reported
Affiliation Address: 9663 Campo Road
Affiliation City: Spring VAlley
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91977
Affiliation Phone: (619) 469-0333

Affiliation Type Desc: Operator
Entity Name: Owik Korner Petroleum Inc
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (619) 469-0089

Affiliation Type Desc: Property Owner
Entity Name: CLOW FMLY SURVIVORS TRST 03
Entity Title: Not reported
Affiliation Address: POBOX 188
Affiliation City: RANCHOSANTAFE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Permit Applicant
Entity Name: Paul Vidakovich
Entity Title: Consultant
Affiliation Address: Not reported
Affiliation City: Not reported

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 421-0400

Affiliation Type Desc: UST PO Name
Entity Name: CLOW FMLY SURVIVORS TRST 03
Entity Title: Not reported
Affiliation Address: POBOX 188
Affiliation City: RANCHOSANTAFE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Tank Operator
Entity Name: Qwik Korner Petroleum Inc
Entity Title: Not reported
Affiliation Address: 9663 Campo Rd
Affiliation City: Spring Valley
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91977
Affiliation Phone: (619) 469-0089

HWTS:
Name: QWIK KORNER
Address: 9663 CAMPO RD
Address 2: Not reported
City,State,Zip: SPRING VALLEY, CA 91977
EPA ID: CAL000403856
Inactive Date: Not reported
Create Date: 01/20/2015
Last Act Date: 08/19/2019
Mailing Name: Not reported
Mailing Address: 9663 CAMPO RD
Mailing Address 2: Not reported
Mailing City,State,Zip: SPRING VALLEY, CA 91977
Owner Name: NICK NISSOU
Owner Address: 9663 CAMPO RD
Owner Address 2: Not reported
Owner City,State,Zip: SPRING VALLEY, CA 91977
Contact Name: NICK NISSOU
Contact Address: 9663 CAMPO RD
Contact Address 2: Not reported
City,State,Zip: SPRING VALLEY, CA 91977

NAICS:
EPA ID: CAL000403856
Create Date: 2015-01-20 13:06:30
NAICS Code: 44719
NAICS Description: Other Gasoline Stations
Issued EPA ID Date: 2015-01-20 13:06:30
Inactive Date: Not reported
Facility Name: QWIK KORNER
Facility Address: 9663 CAMPO RD

GAS DEPOT/QWIK KORNER (Continued) **S104577748**

Facility Address 2:	Not reported
Facility City:	SPRING VALLEY
Facility County:	37
Facility State:	CA
Facility Zip:	91977

B12 **LOU S SHELL SERVICE** **EDR Hist Auto** **1020535583**
ESE **9663 COMPO RD** **N/A**
< 1/8 **SPRING VALLEY, CA 92077**
0.097 mi.
514 ft. **Site 8 of 22 in cluster B**

Relative: EDR Hist Auto
Lower

Actual:
425 ft.

Year:	Name:	Type:
1969	PELLETIER LOUIS	Gasoline Service Stations
1971	PELLETIER LOUIS	Gasoline Service Stations
1972	PELLETIER LOUIS	Gasoline Service Stations
1973	PELLETIER LOUIS	Gasoline Service Stations
1974	PELLETIER LOUIS	Gasoline Service Stations
1975	PELLETIER LOUIS	Gasoline Service Stations
1976	PELLETIER LOUIS	Gasoline Service Stations
1977	PELLETIER LOUIS	Gasoline Service Stations
1978	PELLETIER LOUIS	Gasoline Service Stations
1979	PELLETIER LOUIS	Gasoline Service Stations
1980	PELLETIER LOUIS	Gasoline Service Stations
1982	PELLETIER LOUIS	Gasoline Service Stations
1983	PELLETIER LOUIS	Gasoline Service Stations
1985	PELLETIER LOUIS	Gasoline Service Stations
1986	LOU S SHELL SERVICE	Gasoline Service Stations
1986	PELLETIER LOUIS	Gasoline Service Stations
1987	LOUS SHELL	Gasoline Service Stations
1987	LOU S SHELL SERVICE	Gasoline Service Stations
1987	PELLETIER LOUIS	Gasoline Service Stations
1988	PELLETIER LOUIS	Gasoline Service Stations
1988	LOUS SHELL	Gasoline Service Stations
1989	LOUS SHELL	Gasoline Service Stations
1989	PELLETIER LOUIS	Gasoline Service Stations
1990	PELLETIER LOUIS	Gasoline Service Stations
1990	LOUS SHELL	Gasoline Service Stations
1991	LOUS SHELL	Gasoline Service Stations
1991	PELLETIER LOUIS	Gasoline Service Stations
1992	LOUS SHELL	Gasoline Service Stations
1992	PELLETIER LOUIS	Gasoline Service Stations
1993	GUS PERFORMANCE AUTOMOTIVE	General Automotive Repair Shops
1993	PELLETIER LOUIS	Gasoline Service Stations
1993	LOUS SHELL	Gasoline Service Stations
1994	GUS PERFORMANCE AUTOMOTIVE	General Automotive Repair Shops
1994	LOUS SHELL	Gasoline Service Stations
1995	LOUS SHELL	Gasoline Service Stations
1995	GUS PERFORMANCE AUTOMOTIVE	General Automotive Repair Shops
1996	GUS PERFORMANCE AUTOMOTIVE	General Automotive Repair Shops
1997	GUS PERFORMANCE AUTOMOTIVE	General Automotive Repair Shops
1998	GUS PERFORMANCE AUTOMOTIVE	General Automotive Repair Shops
1999	GUS PERFORMANCE AUTOMOTIVE	General Automotive Repair Shops
2000	LOUS SHELL	Gasoline Service Stations
2001	LOUS SHELL	Gasoline Service Stations

LOU S SHELL SERVICE (Continued) **1020535583**

2002 LOUS SHELL Gasoline Service Stations

B13 **LILLY'S PRECISION PRODUCTS** **RCRA-SQG** **1025502027**
SE **3737 KENORA DRIVE SUITE A** **CAR000294090**
< 1/8 **SPRING VALLEY, CA 91977**
0.109 mi.
577 ft. **Site 9 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

RCRA-SQG:

Date form received by agency:	2019-04-06 00:00:00.0
Facility name:	LILLY'S PRECISION PRODUCTS
Facility address:	3737 KENORA DRIVE SUITE A SPRING VALLEY, CA 91977
EPA ID:	CAR000294090
Mailing address:	KENORA DRIVE SUITE A SPRING VALLEY, CA 91977
Contact:	JASON LILLY
Contact address:	KENORA DRIVE SUITE A SPRING VALLEY, CA 91977
Contact country:	US
Contact telephone:	619-667-4039
Contact email:	JALILLY2@COX.NET
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	JASON LILLY
Owner/operator address:	KENORA DRIVE SUITE A SPRING VALLEY, CA 91977
Owner/operator country:	US
Owner/operator telephone:	619-667-4039
Owner/operator email:	JALILLY2@COX.NET
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JASON LILLY
Owner/operator address:	KENORA DRIVE SUITE A SPRING VALLEY, CA 91977
Owner/operator country:	US
Owner/operator telephone:	619-667-4039
Owner/operator email:	JALILLY2@COX.NET
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

LILLY'S PRECISION PRODUCTS (Continued) **1025502027**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

. Waste code: 132
. Waste name: Aqueous solution w/metals (< restricted levels and see waste code 121 for a list of metals)

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D007
. Waste name: CHROMIUM

Violation Status: No violations found

B14 **LILLY'S PRECISION PRODUCTS** **RCRA NonGen / NLR** **1024809905**
SE **3737 KENORA DR STE A** **CAL000287130**
< 1/8 **SPRING VALLEY, CA 91977**
0.109 mi.
577 ft. **Site 10 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

RCRA NonGen / NLR:
Date form received by agency: 2004-10-13 00:00:00.0
Facility name: LILLY'S PRECISION PRODUCTS
Facility address: 3737 KENORA DR STE A
SPRING VALLEY, CA 91977-1254
EPA ID: CAL000287130
Contact: JASON LILLY
Contact address: 3737 KENORA DR STE A
SPRING VALLEY, CA 91977
Contact country: Not reported
Contact telephone: 619-667-4039
Contact email: JALILLY2@COX.NET
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: JASON LILLY
Owner/operator address: 3737 KENORA DR STE A
SPRING VALLEY, CA 91977

LILLY'S PRECISION PRODUCTS (Continued) **1024809905**

Owner/operator country: Not reported
Owner/operator telephone: 619-667-4039
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JASON LILLY
Owner/operator address: 3737 KENORA DR STE A
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-667-4039
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B15 **LILLY'S PRECISION PRODUCTS** **San Diego Co. HMMD** **S106879595**
SE **3737 KENORA DR** **CERS HAZ WASTE** **N/A**
< 1/8 **SPRING VALLEY, CA 91977** **HAZNET**
0.109 mi. **CERS**
577 ft. **Site 11 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

HMMD SAN DIEGO:
Name: LILLY'S PRECISION PRODUCTS
Address: 3737 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: CAR000294090
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 619-667-4039

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	03/27/2020
Facility Owner:	Not reported
Facility Mailing Address:	3737 KENORA DR #A, SPRING VALLEY, CA 91977
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Y
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2004-HUPFP-204128
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-204128
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	6120115
Return To Compliance Date:	2019-04-11T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-03-27T01:01:06.000
Inspection Date:	2019-03-19T00:00:00.000
Violation Code:	3030010 Accumulated waste too long (>180 or 270 days) or (>90 days). HSC 25201(a), 25123.3(h)(1); 22 CCR 66262.34(d); 40 CFR 262.34(e) and/or (f)

Record ID:	DEH2004-HUPFP-204128
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-204128
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	6120115
Return To Compliance Date:	2019-04-11T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-03-27T01:01:06.000
Inspection Date:	2019-03-19T00:00:00.000
Violation Code:	3010002 Failed to obtain &/or maintain an active EPA ID Number. 22 CCR 66262.12(a)

Waste and Materials:

Record ID:	DEH2004-HUPFP-204128
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114292

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-12-20T02:32:20.000
Chemical Name: WASTE 132 AQUEOUS SOL'N WITH METALS
Common Name: SODIUM BISULFATE/PHOSPHORIC ACID
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114293
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-12-20T02:32:20.000
Chemical Name: WASTE 491 UNSPECIFIED SLUDGE WASTE
Common Name: OIL DIRT SPENT ALKALINE CLEANER
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2014-HWAST-0013269
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-12-31T02:34:29.000
Chemical Name: WASTE 132 AQUEOUS SOL'N WITH METALS
Common Name: SODIUM BISULFATE/PHOSPHORIC ACID
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2014-HWAST-0013270
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-12-31T02:34:29.000
Chemical Name: WASTE 491 UNSPECIFIED SLUDGE WASTE
Common Name: OIL DIRT SPENT ALKALINE CLEANER
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HCHEM-0257854
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-03-27T01:01:11.000
Chemical Name: ERM Recycled Water
Common Name: ERM Recycled Water
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0228716
Trade Secret: N
Hazardous Material Type: Not reported

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Last Updated: 2020-03-27T01:01:11.000
Chemical Name: WASTE 132 AQUEOUS SOL'N WITH METALS
Common Name: SODIUM BISULFATE /PHOSPHORIC ACID/SPENT METAL CLEANER
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0228717
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-27T01:01:11.000
Chemical Name: Black Oxide Tank Sludge (Basic)
Common Name: Black Oxide Tank Sludge (Basic)
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0221470
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-12-18T02:34:12.000
Chemical Name: ERM Recycled Water
Common Name: ERM Recycled Water
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0191233
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-12-18T02:34:12.000
Chemical Name: WASTE 132 AQUEOUS SOL'N WITH METALS
Common Name: SODIUM BISULFATE /PHOSPHORIC ACID/SPENT METAL CLEANER
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0191234
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-12-18T02:34:12.000
Chemical Name: Black Oxide Tank Sludge (Basic)
Common Name: Black Oxide Tank Sludge (Basic)
Case Number: Not reported

Record ID: DEH2004-HUPFP-204128
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0166836
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-08T02:33:44.000
Chemical Name: WASTE 132 AQUEOUS SOL'N WITH METALS

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Common Name:	SODIUM BISULFATE /PHOSPHORIC ACID/SPENT METAL CLEANER
Case Number:	Not reported
Name:	LILLY'S PRECISION PRODUCTS
Address:	3737 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	204128
Business Type:	6HK34
EPA Id Number:	CAL000287130
APN:	500-261-44-00
Last HMMD Inspection:	10/19/2011
Facility Telephone:	619-667-4039
Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	LILLY'S PRECISION PRODUCTS
Facility Mailing Address:	3737 KENORA DR #A
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Y
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	204128
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 132 AQUEOUS SOL'N WITH METALS
Other Information:	SODIUM BISULFATE/PHOSPHORIC ACID
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	204128
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 491 UNSPECIFIED SLUDGE WASTE
Other Information:	OIL DIRT SPENT ALKALINE CLEANER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/24/2004
Violation Code:	6HV0131
Violation:	UPF Permit NOT OBTAINED for HAZWASTE
Violation Citation:	A Unified Program Facility permit has not been obtained for the generation of hazardous waste. 68.905
Activity:	ACTIVE

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/24/2004
Violation Code:	6HV0132
Violation:	EPA ID NUMBER NOT OBTAINED/MAINTAINED
Violation Citation:	Generator of hazardous waste has not obtained/maintained an EPA identification number. CCR 66262.12(a)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/24/2004
Violation Code:	6HV1002
Violation:	HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation:	Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1745
Violation:	ANNUAL WASTE MINIM. CERT. INADEQ/MISSING
Violation Citation:	Annual waste minimization certification not properly completed/submitted to CUPA (must outline waste minimization program -as economically feasible- and state that treatment is in accordance with waste minimization program). {CA units: 25202.9 & 25200.3(c)(2); PBR 66262.45(c)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1746
Violation:	NO FIN. ASSUR OR NOT UPDATED/ADEQUATE
Violation Citation:	Financial assurance not obtained, not updated annually or inadequate for sum of closure cost estimates using appropriate mechanism (i.e. trust fund, surety bond, insurance, self-certification) showing each unit's estimated closure costs. {67450.13; 66265.143} Requires submittal of UPC form, "Certification of Financial Assurance per 67450.13(b)"
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1751
Violation:	PBR NOTIFICATION NOT FILED/RENEWED
Violation Citation:	PBR notification not renewed/filed annually (due by January 1) or sooner {if significant change(s) occurred}. {67450.3(c)(1) & (c)(2)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1752
Violation:	TREATMENT UNIT NOT PROPERLY MARKED

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Violation Citation:	Exterior of treatment unit was not permanently marked with facility ID number, an individual serial number, and name of the owner/operator. {67450.3(c)(7)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1756
Violation:	WRITTEN ANALYSIS PLAN INADEQUATE/ABSENT
Violation Citation:	Written waste analysis plan does not exist or is inadequate in specifying parameters of analysis, testing methods, frequency of analysis and sampling methods used to obtain representative samples. {66265.13(b) & 67450.3(c)(9)(A)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1757
Violation:	NO UNIT WRITTEN CLOSURE PLAN
Violation Citation:	Facility does not have an adequate written closure plan (plan must specify how & when each unit will be closed, equipment decontamination steps & procedures, expected year of closure, and estimated time required to close each unit). {67450.3(c)(11)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1711
Violation:	INADEQ./NO ONSITE UNIT INSPECTION SCHED.
Violation Citation:	Inadequate or no onsite written inspection schedule for containers, tanks, & equipment (must include inspections for safety equipment, emergency & security devices, specify problems checked for, and frequency of inspections). {For containers-CE: 25201.5(d)(4)&(5); CEL: 25201.14(c)(1); CA: 25200.3(c)(5); PBR: 67450.3(c)(8)(B) & 67450.3(c)(9)(A) & (D); 66265.15} (For tanks, also 66265.195)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1712
Violation:	INADEQ./NO RECORDS OF UNIT INSPECTIONS
Violation Citation:	Inadequate or no onsite records/logs of inspections conducted (must include dates, times, name of inspector, observations, and specifics of any needed repairs or corrective actions). (3 years for CE and PBR units, 5 years for CA). {CE: 25201.5(d)(4)&(5), 25201.14(c)(1); CA: 25200.3(c)(5)&(7); PBR: 67450.3(c)(8) & (9)(A) & (D), 66265.73(a)&(b)(1); 66265.15(b) & (d)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1713

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Violation:	POTW DISCHARGE REQS. NOT MET/NO RECORDS
Violation Citation:	Facility does not meet all POTW industrial waste discharge requirements, as applicable, or is missing records of such (keep 5 years for CA tier). {CE: 25201.5(d)(6); CEL: 25201.14(c)(1); CA: 25200.3(c)(7); PBR: 67450.3(c)(5)(A)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1716
Violation:	INADEQ/NO WRITTEN UNIT OPERATING INSTR.
Violation Citation:	Inadequate or no written operating instructions for treatment unit (must include for every unit: how to operate unit, how to perform waste treatment, and how to manage residuals AND records of the dates, volumes, and types of wastes treated). Records must be kept 3 years for CE; 5 years for CA; or until closure for PBR unit. {CE: 25201.5(d)(3)&(5); CEL: 25201.14(c)(1); CA: 25200.3(c)(6) & (7); PBR: 67450.3(c)(9)(D) and 66265.73(a) & (b)(1)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1742
Violation:	NO PE WRITTEN ASSESSMENT OBTAINED
Violation Citation:	Facility has not obtained a written statement/assessment signed by an independent, California registered professional engineer (PE) certifying that tank system and secondary containment for tanks or containers meet all the design requirements of Title 22 CCR. For the CA tier, treatment in "containers" does not require a written statement signed by a PE for the containment area. {66264.175(c); & 66265.190 through 66265.202; PBR: 67450.3(c)(9) & (12); For CA 25200.3(c)(4)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1744
Violation:	PHASE I ASSESSMENT NOT DONE/INADEQ.
Violation Citation:	Phase I site assessment checklist not completed & filed (with DTSC) within one year of being authorized to operate unit. {CA: 25200.3(c)(3); PBR: 67450.7(a)(3); 25200.14(b)(1)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	02/23/2007
Violation Code:	6HV0145
Violation:	ERM REPORT NOT SUBMITTED TO HMD
Violation Citation:	Excluded recyclable materials report not submitted biennially to HMD &/or available. 25143.10
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Inspection Date:	09/30/2004
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1601
Violation:	HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation:	Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1701
Violation:	UNAUTH. TREATMENT OF HAZARDOUS WASTE
Violation Citation:	Unauthorized treatment of hazardous waste.{All tiers 25201(a) Additionally, CESW/SQT: 25201.5; CEL: 25201.14; CA: 25200.3; PBR: 67450.1}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1702
Violation:	TREATMENT NOTIFICATION NO DONE/INADEQ.
Violation Citation:	Onsite Hazardous Waste Treatment Notification pages (facility, unit & treatment process pages) not complete, accurate and/or on file with CUPA. {CE: 25201.5(d)(7) & 25201.14(c)(2); CA: 25200.3(e)(1); PBR: 67450.2(b) & 67450.3(c)}
Activity:	ACTIVE
Name:	LILLY'S PRECISION PRODUCTS
Address:	3737 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	204128
Business Type:	6HK34
EPA Id Number:	CAL000287130
APN:	500-261-44-00
Last HMMD Inspection:	10/19/2011
Facility Telephone:	619-667-4039

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	LILLY'S PRECISION PRODUCTS
Facility Mailing Address:	3737 KENORA DR #A
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	204128
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 132 AQUEOUS SOL'N WITH METALS
Other Information:	SODIUM BISULFATE/PHOSPHORIC ACID
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	204128
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 491 UNSPECIFIED SLUDGE WASTE
Other Information:	OIL DIRT SPENT ALKALINE CLEANER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/24/2004
Violation Code:	6HV0131
Violation:	UPF Permit NOT OBTAINED for HAZWASTE
Violation Citation:	A Unified Program Facility permit has not been obtained for the generation of hazardous waste. 68.905
Activity:	ACTIVE

Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/24/2004
Violation Code:	6HV0132
Violation:	EPA ID NUMBER NOT OBTAINED/MAINTAINED
Violation Citation:	Generator of hazardous waste has not obtained/maintained an EPA identification number. CCR 66262.12(a)
Activity:	ACTIVE

Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/24/2004

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Violation Code:	6HV1002
Violation:	HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation:	Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1745
Violation:	ANNUAL WASTE MINIM. CERT. INADEQ/MISSING
Violation Citation:	Annual waste minimization certification not properly completed/submitted to CUPA (must outline waste minimization program -as economically feasible- and state that treatment is in accordance with waste minimization program). {CA units: 25202.9 & 25200.3(c)(2); PBR 66262.45(c)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1746
Violation:	NO FIN. ASSUR OR NOT UPDATED/ADEQUATE
Violation Citation:	Financial assurance not obtained, not updated annually or inadequate for sum of closure cost estimates using appropriate mechanism (i.e. trust fund, surety bond, insurance, self-certification) showing each unit's estimated closure costs. {67450.13; 66265.143} Requires submittal of UPC form, "Certification of Financial Assurance per 67450.13(b)"
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1751
Violation:	PBR NOTIFICATION NOT FILED/RENEWED
Violation Citation:	PBR notification not renewed/filed annually (due by January 1) or sooner {if significant change(s) occurred}. {67450.3(c)(1) & (c)(2)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1752
Violation:	TREATMENT UNIT NOT PROPERLY MARKED
Violation Citation:	Exterior of treatment unit was not permanently marked with facility ID number, an individual serial number, and name of the owner/operator. {67450.3(c)(7)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1756
Violation:	WRITTEN ANALYSIS PLAN INADEQUATE/ABSENT
Violation Citation:	Written waste analysis plan does not exist or is inadequate in specifying parameters of analysis, testing methods, frequency of

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

	analysis and sampling methods used to obtain representative samples. {66265.13(b) & 67450.3(c)(9)(A)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1757
Violation:	NO UNIT WRITTEN CLOSURE PLAN
Violation Citation:	Facility does not have an adequate written closure plan (plan must specify how & when each unit will be closed, equipment decontamination steps & procedures, expected year of closure, and estimated time required to close each unit). {67450.3(c)(11)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1711
Violation:	INADEQ./NO ONSITE UNIT INSPECTION SCHED.
Violation Citation:	Inadequate or no onsite written inspection schedule for containers, tanks, & equipment (must include inspections for safety equipment, emergency & security devices, specify problems checked for, and frequency of inspections). {For containers-CE: 25201.5(d)(4)&(5); CEL: 25201.14(c)(1); CA: 25200.3(c)(5); PBR: 67450.3(c)(8)(B) & 67450.3(c)(9)(A) & (D); 66265.15} (For tanks, also 66265.195)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1712
Violation:	INADEQ./NO RECORDS OF UNIT INSPECTIONS
Violation Citation:	Inadequate or no onsite records/logs of inspections conducted (must include dates, times, name of inspector, observations, and specifics of any needed repairs or corrective actions). (3 years for CE and PBR units, 5 years for CA). {CE: 25201.5(d)(4)&(5), 25201.14(c)(1); CA: 25200.3(c)(5)&(7); PBR: 67450.3(c)(8) & (9)(A) & (D), 66265.73(a)&(b)(1); 66265.15(b) & (d)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1713
Violation:	POTW DISCHARGE REQS. NOT MET/NO RECORDS
Violation Citation:	Facility does not meet all POTW industrial waste discharge requirements, as applicable, or is missing records of such (keep 5 years for CA tier). {CE: 25201.5(d)(6); CEL: 25201.14(c)(1); CA: 25200.3(c)(7); PBR: 67450.3(c)(5)(A)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1716
Violation:	INADEQ/NO WRITTEN UNIT OPERATING INSTR.

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Violation Citation:	Inadequate or no written operating instructions for treatment unit (must include for every unit: how to operate unit, how to perform waste treatment, and how to manage residuals AND records of the dates, volumes, and types of wastes treated). Records must be kept 3 years for CE; 5 years for CA; or until closure for PBR unit. {CE: 25201.5(d)(3)&(5); CEL: 25201.14(c)(1); CA: 25200.3(c)(6) & (7); PBR: 67450.3(c)(9)(D) and 66265.73(a) & (b)(1)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1742
Violation:	NO PE WRITTEN ASSESSMENT OBTAINED
Violation Citation:	Facility has not obtained a written statement/assessment signed by an independent, California registered professional engineer (PE) certifying that tank system and secondary containment for tanks or containers meet all the design requirements of Title 22 CCR. For the CA tier, treatment in "containers" does not require a written statement signed by a PE for the containment area. {66264.175(c); & 66265.190 through 66265.202; PBR: 67450.3(c)(9) & (12); For CA 25200.3(c)(4)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1744
Violation:	PHASE I ASSESSMENT NOT DONE/INADEQ.
Violation Citation:	Phase I site assessment checklist not completed & filed (with DTSC) within one year of being authorized to operate unit. {CA: 25200.3(c)(3); PBR: 67450.7(a)(3); 25200.14(b)(1)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	02/23/2007
Violation Code:	6HV0145
Violation:	ERM REPORT NOT SUBMITTED TO HMD
Violation Citation:	Excluded recyclable materials report not submitted biennially to HMD &/or available. 25143.10
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1601

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Violation:	HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation:	Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1701
Violation:	UNAUTH. TREATMENT OF HAZARDOUS WASTE
Violation Citation:	Unauthorized treatment of hazardous waste.{All tiers 25201(a) Additionally, CESW/SQT: 25201.5; CEL: 25201.14; CA: 25200.3; PBR: 67450.1}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1702
Violation:	TREATMENT NOTIFICATION NO DONE/INADEQ.
Violation Citation:	Onsite Hazardous Waste Treatment Notification pages (facility, unit & treatment process pages) not complete, accurate and/or on file with CUPA. {CE: 25201.5(d)(7) & 25201.14(c)(2); CA: 25200.3(e)(1); PBR: 67450.2(b) & 67450.3(c)}
Activity:	ACTIVE

Name:	LILLY'S PRECISION PRODUCTS
Address:	3737 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	204128
Business Type:	6HK34
EPA Id Number:	CAL000287130
APN:	500-261-44-00
Last HMMD Inspection:	10/19/2011
Facility Telephone:	619-667-4039
Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	LILLY'S PRECISION PRODUCTS
Facility Mailing Address:	3737 KENORA DR #A
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Generate Haz Waste: Y
Treat Haz Waste: Y
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 204128
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 132 AQUEOUS SOL'N WITH METALS
Other Information: SODIUM BISULFATE/PHOSPHORIC ACID
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 204128
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 491 UNSPECIFIED SLUDGE WASTE
Other Information: OIL DIRT SPENT ALKALINE CLEANER
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/24/2004
Violation Code: 6HV0131
Violation: UPF Permit NOT OBTAINED for HAZWASTE
Violation Citation: A Unified Program Facility permit has not been obtained for the generation of hazardous waste. 68.905
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/24/2004
Violation Code: 6HV0132
Violation: EPA ID NUMBER NOT OBTAINED/MAINTAINED
Violation Citation: Generator of hazardous waste has not obtained/maintained an EPA identification number. CCR 66262.12(a)
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/24/2004
Violation Code: 6HV1002
Violation: HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation: Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1745
Violation: ANNUAL WASTE MINIM. CERT. INADEQ/MISSING
Violation Citation: Annual waste minimization certification not properly

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

completed/submitted to CUPA (must outline waste minimization program -as economically feasible- and state that treatment is in accordance with waste minimization program). {CA units: 25202.9 & 25200.3(c)(2); PBR 66262.45(c)}

Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1746
Violation: NO FIN. ASSUR OR NOT UPDATED/ADEQUATE
Violation Citation: Financial assurance not obtained, not updated annually or inadequate for sum of closure cost estimates using appropriate mechanism (i.e. trust fund, surety bond, insurance, self-certification) showing each unit's estimated closure costs. {67450.13; 66265.143} Requires submittal of UPC form, "Certification of Financial Assurance per 67450.13(b)"
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1751
Violation: PBR NOTIFICATION NOT FILED/RENEWED
Violation Citation: PBR notification not renewed/filed annually (due by January 1) or sooner {if significant change(s) occurred}. {67450.3(c)(1) & (c)(2)}
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1752
Violation: TREATMENT UNIT NOT PROPERLY MARKED
Violation Citation: Exterior of treatment unit was not permanently marked with facility ID number, an individual serial number, and name of the owner/operator. {67450.3(c)(7)}
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1756
Violation: WRITTEN ANALYSIS PLAN INADEQUATE/ABSENT
Violation Citation: Written waste analysis plan does not exist or is inadequate in specifying parameters of analysis, testing methods, frequency of analysis and sampling methods used to obtain representative samples. {66265.13(b) & 67450.3(c)(9)(A)}
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1757
Violation: NO UNIT WRITTEN CLOSURE PLAN
Violation Citation: Facility does not have an adequate written closure plan (plan must specify how & when each unit will be closed, equipment decontamination steps & procedures, expected year of closure, and estimated time

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

	required to close each unit). {67450.3(c)(11)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1711
Violation:	INADEQ./NO ONSITE UNIT INSPECTION SCHED.
Violation Citation:	Inadequate or no onsite written inspection schedule for containers, tanks, & equipment (must include inspections for safety equipment, emergency & security devices, specify problems checked for, and frequency of inspections). {For containers-CE: 25201.5(d)(4)&(5); CEL: 25201.14(c)(1); CA: 25200.3(c)(5); PBR: 67450.3(c)(8)(B) & 67450.3(c)(9)(A) & (D); 66265.15} (For tanks, also 66265.195)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1712
Violation:	INADEQ./NO RECORDS OF UNIT INSPECTIONS
Violation Citation:	Inadequate or no onsite records/logs of inspections conducted (must include dates, times, name of inspector, observations, and specifics of any needed repairs or corrective actions). (3 years for CE and PBR units, 5 years for CA). {CE: 25201.5(d)(4)&(5), 25201.14(c)(1); CA: 25200.3(c)(5)&(7); PBR: 67450.3(c)(8) & (9)(A) & (D), 66265.73(a)&(b)(1); 66265.15(b) & (d)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1713
Violation:	POTW DISCHARGE REQS. NOT MET/NO RECORDS
Violation Citation:	Facility does not meet all POTW industrial waste discharge requirements, as applicable, or is missing records of such (keep 5 years for CA tier). {CE: 25201.5(d)(6); CEL: 25201.14(c)(1); CA: 25200.3(c)(7); PBR: 67450.3(c)(5)(A)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1716
Violation:	INADEQ/NO WRITTEN UNIT OPERATING INSTR.
Violation Citation:	Inadequate or no written operating instructions for treatment unit (must include for every unit: how to operate unit, how to perform waste treatment, and how to manage residuals AND records of the dates, volumes, and types of wastes treated). Records must be kept 3 years for CE; 5 years for CA; or until closure for PBR unit. {CE: 25201.5(d)(3)&(5); CEL: 25201.14(c)(1); CA: 25200.3(c)(6) & (7); PBR: 67450.3(c)(9)(D) and 66265.73(a) & (b)(1)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Violation Code:	6HV1742
Violation:	NO PE WRITTEN ASSESSMENT OBTAINED
Violation Citation:	Facility has not obtained a written statement/assessment signed by an independent, California registered professional engineer (PE) certifying that tank system and secondary containment for tanks or containers meet all the design requirements of Title 22 CCR. For the CA tier, treatment in "containers" does not require a written statement signed by a PE for the containment area. {66264.175(c); & 66265.190 through 66265.202; PBR: 67450.3(c)(9) & (12); For CA 25200.3(c)(4)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1744
Violation:	PHASE I ASSESSMENT NOT DONE/INADEQ.
Violation Citation:	Phase I site assessment checklist not completed & filed (with DTSC) within one year of being authorized to operate unit. {CA: 25200.3(c)(3); PBR: 67450.7(a)(3); 25200.14(b)(1)}
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	02/23/2007
Violation Code:	6HV0145
Violation:	ERM REPORT NOT SUBMITTED TO HMD
Violation Citation:	Excluded recyclable materials report not submitted biennially to HMD &/or available. 25143.10
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1601
Violation:	HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation:	Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity:	ACTIVE
Permit Number:	204128
Update Date:	11/02/2012
Inspection Date:	09/30/2004
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1701
Violation: UNAUTH. TREATMENT OF HAZARDOUS WASTE
Violation Citation: Unauthorized treatment of hazardous waste.{All tiers 25201(a) Additionally, CESW/SQT: 25201.5; CEL: 25201.14; CA: 25200.3; PBR: 67450.1}
Activity: ACTIVE

Permit Number: 204128
Update Date: 11/02/2012
Inspection Date: 09/30/2004
Violation Code: 6HV1702
Violation: TREATMENT NOTIFICATION NO DONE/INADEQ.
Violation Citation: Onsite Hazardous Waste Treatment Notification pages (facility, unit & treatment process pages) not complete, accurate and/or on file with CUPA. {CE: 25201.5(d)(7) & 25201.14(c)(2); CA: 25200.3(e)(1); PBR: 67450.2(b) & 67450.3(c)}
Activity: ACTIVE

CERS HAZ WASTE:
Name: LILLY'S PRECISION PRODUCTS
Address: 3737 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 130756
CERS ID: 10363039
CERS Description: Hazardous Waste Onsite Treatment

Name: LILLY'S PRECISION PRODUCTS
Address: 3737 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 130756
CERS ID: 10363039
CERS Description: Hazardous Waste Generator

Name: EXOTIC MATERIALS GRINDING
Address: 3737 KENORA DR., SUITE B
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 115338
CERS ID: 10363042
CERS Description: Hazardous Waste Generator

HAZNET:
Name: LILLY'S PRECISION PRODUCTS
Address: 3737 KENORA DR STE A
Address 2: Not reported
City,State,Zip: SPRING VALLEY, CA 91977
Contact: JASON LILLY
Telephone: 6196674039
Mailing Name: Not reported
Mailing Address: 3737 KENORA DRIVE SUITE A

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Year: 2019
Gepaid: CAR000294090
TSD EPA ID: NVT330010000
CA Waste Code: 141 - Off-specification, aged or surplus inorganics
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.25000

Year: 2019
Gepaid: CAR000294090
TSD EPA ID: NVT330010000
CA Waste Code: 132 - Aqueous solution with metals (< restricted levels and (Alkaline solution (pH >= 12.5) with metals))
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.75000

CERS:
Name: EXOTIC MATERIALS GRINDING
Address: 3737 KENORA DR., SUITE B
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 115338
CERS ID: 10363042
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-02-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Soquiat Joseph Inspection ID:6111673
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-14-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5646338
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-05-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4486013
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Environmental Contact
Entity Name:	DANNY F WADE SR
Entity Title:	Not reported
Affiliation Address:	P.O. BOX 455
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91976
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Danny Wade SR
Entity Title:	Not reported
Affiliation Address:	3737 KENORA DR., SUITE B
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 464-6816
Affiliation Type Desc:	Operator
Entity Name:	DANNY F WADE SR
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 464-6816
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O. BOX 455
Affiliation City:	SPING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91976
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	DAN WADE
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Affiliation Type Desc: Parent Corporation
Entity Name: EXOTIC MATERIALS GRINDING
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: LILLY'S PRECISION PRODUCTS
Address: 3737 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 130756
CERS ID: 10363039
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 130756
Site Name: LILLY'S PRECISION PRODUCTS
Violation Date: 03-19-2019
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 04/11/2019. Inspection Sequence ID:6120115
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 130756
Site Name: LILLY'S PRECISION PRODUCTS
Violation Date: 03-19-2019
Citation: HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description: Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes: Returned to compliance on 04/11/2019. Inspection Sequence ID:6120115
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Soquiat Joseph Inspection ID:6120115

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-01-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Daniel Lapel. Manually entered on 7/28/15 by GG.
Eval Division: San Diego County Department of Env Health
Eval Program: CE
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5646337
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5646337
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Soquiat Joseph Inspection ID:6120115
Eval Division: San Diego County Department of Env Health
Eval Program: CE
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Soquiat Joseph Inspection ID:6120115
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-01-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4097428
Eval Division: San Diego County Department of Env Health
Eval Program: CE
Eval Source: CERS

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-01-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4097428
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5646337
Eval Division: San Diego County Department of Env Health
Eval Program: CE
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3737 KENORA DR Suite A
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: LIVELY ONIE O TR&LIVELY JOHN S
Entity Title: Not reported
Affiliation Address: 2120 PARK PL 2ND FLR
Affiliation City: EL SEGUNDO
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90245
Affiliation Phone: (619) 469-0197

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Operator
Entity Name: LILLY'S PRECISION PRODUCTS
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported

LILLY'S PRECISION PRODUCTS (Continued) **S106879595**

Affiliation Phone:	(619) 667-4039
Affiliation Type Desc:	Parent Corporation
Entity Name:	LILLY'S PRECISION PRODUCTS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	JASON A LILLY
Entity Title:	Not reported
Affiliation Address:	3737 KENORA DR #A
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91977
Affiliation Phone:	Not reported
Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	JASON LILLY
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B16 **EXOTIC MATERIALS GRINDING** **RCRA NonGen / NLR** **1024805726**
SE **3737 KENORA DR** **CAL000265269**
< 1/8 **SPRING VALLEY, CA 91977**
0.109 mi.
577 ft. **Site 12 of 22 in cluster B**

Relative: **Lower**

Actual: **425 ft.**

RCRA NonGen / NLR:

Date form received by agency:	2003-01-23 00:00:00.0
Facility name:	EXOTIC MATERIALS GRINDING
Facility address:	3737 KENORA DR SPRING VALLEY, CA 91977-1254
EPA ID:	CAL000265269
Mailing address:	PO BOX 455 SPRING VALLEY, CA 91976-0000
Contact:	THOMAS WADE
Contact address:	PO BOX 455 SPRING VALLEY, CA 91976
Contact country:	Not reported
Contact telephone:	619-464-6816
Contact email:	EXOTICMATERIALSGRINDING@YAHOO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

EXOTIC MATERIALS GRINDING (Continued) **1024805726**

Owner/Operator Summary:
Owner/operator name: THOMAS WADE
Owner/operator address: PO BOX 455
SPRING VALLEY, CA 91976
Owner/operator country: Not reported
Owner/operator telephone: 619-464-6816
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: THOMAS WADE
Owner/operator address: PO BOX 455
SPRING VALLEY, CA 91976
Owner/operator country: Not reported
Owner/operator telephone: 619-464-6816
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B17 **JOE BELL BICYCLE RESTORATION** **RCRA NonGen / NLR** **1024796274**
SE **3735 KENORA DR** **CAL000174234**
< 1/8 **SPRING VALLEY, CA 91977**
0.110 mi.
580 ft. **Site 13 of 22 in cluster B**

Relative: RCRA NonGen / NLR:
Lower
Date form received by agency: 1995-11-30 00:00:00.0
Actual: Facility name: JOE BELL BICYCLE RESTORATION
425 ft. Facility address: 3735 KENORA DR
SPRING VALLEY, CA 91977-0000
EPA ID: CAL000174234

JOE BELL BICYCLE RESTORATION (Continued) **1024796274**

Mailing address: PO BOX 34
SPRING VALLEY, CA 91976-0000
Contact: JOSEPH BELL
Contact address: 3735 KENORA DR
SPRING VALLEY, CA 91977-0000
Contact country: Not reported
Contact telephone: 619-469-4312
Contact email: JOEBELL1977@GMAIL.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: JOSEPH BELL
Owner/operator address: 3735 KENORA DR
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-469-4312
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JOSEPH BELL
Owner/operator address: 3735 KENORA DR
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-469-4312
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

JOE BELL BICYCLE RESTORATION (Continued) **1024796274**

Violation Status: No violations found

B18 **JB BICYCLE REFINISHING** **San Diego Co. HMMD** **S104746763**
SE **3735 KENORA DR** **CERS HAZ WASTE** **N/A**
< 1/8 **SPRING VALLEY, CA 91977** **CERS**
0.110 mi.
580 ft. **Site 14 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

HMMD SAN DIEGO:

Name:	JB BICYCLE REFINISHING
Address:	3735 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	109409
Business Type:	6HK27
EPA Id Number:	CAL000174234
APN:	500-261-37-00
Last HMMD Inspection:	02/21/2012
Facility Telephone:	619-469-4312
Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	JOE BELL
Facility Mailing Address:	PO BOX 34
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91976-
UST Owner:	Not reported
Handle Regulated Hazmat:	N
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	109409
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 181 INORGANIC SOLID WASTE (OTHER)
Other Information:	PAINT BOOTH FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	109409
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 461 PAINT SLUDGE
Other Information:	Not reported
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	109409
Update Date:	11/02/2012
Inspection Date:	05/03/2007
Violation Code:	6HV0407
Violation:	EMPLOYEE TRAINING NOT ADEQUATE

JB BICYCLE REFINISHING (Continued) **S104746763**

Violation Citation: Employee training program for small quantity generator of hazardous waste is inadequate. CFR 262.34(d)(5)(iii)
Activity: ACTIVE

Name: JB BICYCLE REFINISHING
Address: 3735 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: 109409
Business Type: 6HK27
EPA Id Number: CAL000174234
APN: 500-261-37-00
Last HMMD Inspection: 02/21/2012
Facility Telephone: 619-469-4312
Permit Status: OPEN
Permit Expiration: 01/31/2013
Date Last Updated: 11/02/2012
Facility Owner: JOE BELL
Facility Mailing Address: PO BOX 34
Facility Mailing City: SPRING VALLEY
Facility Mailing State: CA
Facility Mailing Zip: 91976-
UST Owner: Not reported
Handle Regulated Hazmat: Y
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 109409
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 181 INORGANIC SOLID WASTE (OTHER)
Other Information: PAINT BOOTH FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 109409
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 461 PAINT SLUDGE
Other Information: Not reported
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 109409
Update Date: 11/02/2012
Inspection Date: 05/03/2007
Violation Code: 6HV0407
Violation: EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation: Employee training program for small quantity generator of hazardous waste is inadequate. CFR 262.34(d)(5)(iii)

JB BICYCLE REFINISHING (Continued) **S104746763**

Activity: ACTIVE

Name: JB BICYCLE REFINISHING
Address: 3735 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: CAL000174234
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 619-469-4312
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 01/25/2020
Facility Owner: Not reported
Facility Mailing Address: PO BOX 34, SPRING VALLEY, CA 91976
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Inspection Violation:
Record ID: DEH2002-HUPFP-109409
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-109409
Program Element: Hazardous Waste Generator
Inspection Type: Routine
Inspection Number: 4451854
Return To Compliance Date: 2016-06-16T00:00:00.000
Nov: No
Violation Classification: CLASS II
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2020-05-29T02:13:37.000
Inspection Date: 2015-08-25T16:53:00.000
Violation Code: 3010029 The facility has not submitted complete and accurate facility information in CERS. HSC 25404(e)(4); 27 CCR 15188(b)

Record ID: DEH2002-HUPFP-109409
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-109409
Program Element: Hazardous Waste Generator
Inspection Type: Routine
Inspection Number: 4451854
Return To Compliance Date: 2015-10-22T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported

JB BICYCLE REFINISHING (Continued) **S104746763**

Last Update:	2020-05-29T02:13:37.000
Inspection Date:	2015-08-25T16:53:00.000
Violation Code:	3010002 Failed to obtain and/or maintain an active EPA ID. 22 CCR 66262.12
Record ID:	DEH2002-HUPFP-109409
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-109409
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	6228328
Return To Compliance Date:	2019-08-12T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T02:13:37.000
Inspection Date:	2019-08-12T00:00:00.000
Violation Code:	3030017 Failed to properly close hazardous waste container(s). 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(2), 265.173
Record ID:	DEH2002-HUPFP-109409
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-109409
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	6228328
Return To Compliance Date:	2019-08-12T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T02:13:37.000
Inspection Date:	2019-08-12T00:00:00.000
Violation Code:	3030005 Failed to make a proper waste determination. 22 CCR 66262.11, 66262.40(c)

Waste and Materials:

Record ID:	DEH2002-HUPFP-109409
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0088110
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-02-03T02:30:58.000
Chemical Name:	WASTE 181 INORGANIC SOLID WASTE (OTHER)
Common Name:	PAINT BOOTH FILTERS
Case Number:	Not reported
Record ID:	DEH2002-HUPFP-109409
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0088111
Trade Secret:	N
Hazardous Material Type:	Not reported

JB BICYCLE REFINISHING (Continued) **S104746763**

Last Updated: 2017-02-03T02:30:58.000
Chemical Name: WASTE 461 PAINT SLUDGE
Common Name: WASTE 461 PAINT SLUDGE
Case Number: Not reported

Record ID: DEH2002-HUPFP-109409
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0141798
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-01-25T02:35:36.000
Chemical Name: WASTE 181 INORGANIC SOLID WASTE (OTHER)
Common Name: PAINT BOOTH FILTERS
Case Number: Not reported

Record ID: DEH2002-HUPFP-109409
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0149111
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-10-23T18:41:00.000
Chemical Name: Compliant Solvent
Common Name: Compliant Solvent
Case Number: Not reported

Record ID: DEH2002-HUPFP-109409
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0127485
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-23T18:41:00.000
Chemical Name: WASTE 181 INORGANIC SOLID WASTE (OTHER)
Common Name: PAINT BOOTH FILTERS
Case Number: Not reported

Record ID: DEH2002-HUPFP-109409
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0127486
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-23T18:41:00.000
Chemical Name: WASTE 461 PAINT SLUDGE
Common Name: WASTE 461 PAINT SLUDGE
Case Number: Not reported

Record ID: DEH2002-HUPFP-109409
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0141799
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-01-25T02:35:36.000
Chemical Name: WASTE 461 PAINT SLUDGE

JB BICYCLE REFINISHING (Continued) **S104746763**

Common Name: WASTE 461 PAINT SLUDGE
Case Number: Not reported

CERS HAZ WASTE:
Name: JB BICYCLE REFINISHING
Address: 3735 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 125669
CERS ID: 10362913
CERS Description: Hazardous Waste Generator

CERS:
Name: JB BICYCLE REFINISHING
Address: 3735 KENORA DR
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 125669
CERS ID: 10362913
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 125669
Site Name: JB BICYCLE REFINISHING
Violation Date: 08-25-2015
Citation: HSC 6.11 25404(e)(4) - California Health and Safety Code, Chapter 6.11, Section(s) 25404(e)(4)
Violation Description: Failure to report program data electronically.
Violation Notes: Returned to compliance on 06/16/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 125669
Site Name: JB BICYCLE REFINISHING
Violation Date: 08-12-2019
Citation: 22 CCR 12 66262.11 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.11
Violation Description: Failure to determine if wastes generated are hazardous waste by using generator knowledge or applying testing method.
Violation Notes: Inspection Sequence ID:6228328
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 125669
Site Name: JB BICYCLE REFINISHING
Violation Date: 08-25-2015
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain and/or maintain an Active EPA ID.
Violation Notes: Returned to compliance on 10/22/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 125669
Site Name: JB BICYCLE REFINISHING

JB BICYCLE REFINISHING (Continued) **S104746763**

Violation Date:	08-12-2019
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 08/12/2019. Inspection Sequence ID:6228328
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-12-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Soquiat Joseph Inspection ID:6228328
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-25-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: LaPel Daniel Inspection ID:4451854
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-12-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Soquiat Joseph Inspection ID:6228328
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	125669
Facility Name:	JB BICYCLE REFINISHING
Env Int Type Code:	HWG
Program ID:	10362913
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	32.746660
Longitude:	-116.986070

Affiliation:

Affiliation Type Desc:	Legal Owner
Entity Name:	JOE BELL
Entity Title:	Not reported

JB BICYCLE REFINISHING (Continued) **S104746763**

Affiliation Address:	PO Box 34
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91976
Affiliation Phone:	(619) 469-4312
Affiliation Type Desc:	Operator
Entity Name:	JOE BELL
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 469-4312
Affiliation Type Desc:	Environmental Contact
Entity Name:	JOE BELL
Entity Title:	Not reported
Affiliation Address:	PO Box 34
Affiliation City:	Spring Valley
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91976
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Document Preparer
Entity Name:	Joe Bell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Joe Bell
Entity Title:	owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

JB BICYCLE REFINISHING (Continued) **S104746763**

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 34
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91976
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	JB BICYCLE REFINISHING
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B19 **HELIOTROPE GENERAL** **ENVIROSTOR** **1000726755**
SE **3733 KENORA DR.** **N/A**
< 1/8 **SPRING VALLEY, CA 92077**
0.110 mi.
583 ft. **Site 15 of 22 in cluster B**

Relative: **Lower**

Actual: **425 ft.**

ENVIROSTOR:

Name:	HELIOTROPE GENERAL
Address:	3733 KENORA DR.
City,State,Zip:	SPRING VALLEY, CA 92077
Facility ID:	37360060
Status:	Refer: Other Agency
Status Date:	08/21/1995
Site Code:	Not reported
Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	* Mmonroy
Division Branch:	Cleanup Cypress
Assembly:	71
Senate:	38
Special Program:	* CERC2
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	32.74666
Longitude:	-116.9883
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	* HALOGENATED ORGANIC COMPOUNDS * HALOGENATED SOLVENTS * ALKALINE SOLUTION WITHOUT METALS * AQUEOUS SOLUTION 2<PH<12.5, WITH REACTIVE ANIONS * OTHER PESTICIDE CONTAINERS, 30 GALLONS OR MORE
Confirmed COC:	NONE SPECIFIED

HELIOTROPE GENERAL (Continued) **1000726755**

Potential Description: NONE SPECIFIED
Alias Name: HYDE INDUSTRIES
Alias Type: Alternate Name
Alias Name: 37360060
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 10/25/1994
Comments: CALSITES VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 06/27/1988
Comments: PRELIM ASSESS DONE LOW PRIORITY SI RECOMMENDED. LITTLE DATA EXITS REGARDING PRACTICES OF PREVIOUS OPERATOR. CURRENT OPERATOR MUST SECURE STORAGE AREA. LOCAL HLTH DEPT. SHOULD CONTINUE TO REGULATE FACILITY.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 06/15/1987
Comments: SITE SCREENING DONE RATIONALE FOR PA: SITE MAY HAVE HAD AN ONSITE DISPOSAL OF RINSE WATER.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 12/17/1982
Comments: FACILITY IDENTIFIED ID VIA 72 SAN DIEGO YELLOW PAGES

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

B20 **DEERING BANJO CO INC** **RCRA NonGen / NLR** **1024805376**
SE **3733 KENORA DR** **CAL000263364**
< 1/8 **SPRING VALLEY, CA 91977**
0.110 mi.
583 ft. **Site 16 of 22 in cluster B**

Relative: **Lower**
Actual: **425 ft.**

RCRA NonGen / NLR:
Date form received by agency: 2002-12-09 00:00:00.0
Facility name: DEERING BANJO CO INC
Facility address: 3733 KENORA DR
SPRING VALLEY, CA 91977
EPA ID: CAL000263364
Contact: JANET DEERING

DEERING BANJO CO INC (Continued) **1024805376**

Contact address:	3733 KENORA DR SPRING VALLEY, CA 91977
Contact country:	Not reported
Contact telephone:	619-464-8252
Contact email:	CHADKOPOTIC@DEERINGBANJOS.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JANET DEERING
Owner/operator address:	3733 KENORA DR SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-464-8252
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	DEERING BANJO CO INC
Owner/operator address:	3733 KENORA DR SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-464-8252
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

B21 **DEERING BANJO CO** **San Diego Co. HMMD** **S106071442**
SE **3733 KENORA DR** **CERS HAZ WASTE** **N/A**
< 1/8 **SPRING VALLEY, CA 91977** **CERS**
0.110 mi.
583 ft. **Site 17 of 22 in cluster B**

Relative:
Lower

Actual:
425 ft.

HMMD SAN DIEGO:

Name:	DEERING BANJO CO
Address:	3733 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	201406
Business Type:	6HK50
EPA Id Number:	CAL000263364
APN:	500-261-44-00
Last HMMD Inspection:	10/06/2010
Facility Telephone:	619-464-8252
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	DEERING BANJO COMPANY
Facility Mailing Address:	3733 KENORA DR
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	201406
Update Date:	11/02/2012
Case Number:	7440-37-1
Name:	ARGON GAS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	PRESSURE RELEASE
Hazardous Categories 2:	Not reported

Permit Number:	201406
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 331 OFF-SPEC,AGED,SURPLUS ORGANICS
Other Information:	WASTE LACQUER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	201406
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	EMPTY CONTAINERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

DEERING BANJO CO (Continued) **S106071442**

Violations Active Permits:

Permit Number:	201406
Update Date:	11/02/2012
Inspection Date:	04/03/2003
Violation Code:	6HV0304
Violation:	WASTE DETERMINATION NOT MADE
Violation Citation:	Generator of a waste has not determined if that waste is a hazardous waste as defined by law. CCR 66262.11 & 66260.200(c)
Activity:	ACTIVE

Permit Number:	201406
Update Date:	11/02/2012
Inspection Date:	04/03/2003
Violation Code:	6HV1009
Violation:	HMBP: INADEQUATE SITE MAP
Violation Citation:	Business Plan does not have a site map which provides sufficient or complete information for emergency response agencies. HSC 25509(a)(5) & 25505(a)(2)
Activity:	ACTIVE

Name:	DEERING BANJO CO
Address:	3733 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	201406
Business Type:	6HK50
EPA Id Number:	CAL000263364
APN:	500-261-44-00
Last HMMD Inspection:	10/06/2010
Facility Telephone:	619-464-8252
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	DEERING BANJO COMPANY
Facility Mailing Address:	3733 KENORA DR
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	201406
Update Date:	11/02/2012
Case Number:	7440-37-1
Name:	ARGON GAS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	PRESSURE RELEASE
Hazardous Categories 2:	Not reported

Permit Number:	201406

DEERING BANJO CO (Continued) **S106071442**

Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 331 OFF-SPEC,AGED,SURPLUS ORGANICS
Other Information:	WASTE LACQUER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	201406
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	EMPTY CONTAINERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	201406
Update Date:	11/02/2012
Inspection Date:	04/03/2003
Violation Code:	6HV0304
Violation:	WASTE DETERMINATION NOT MADE
Violation Citation:	Generator of a waste has not determined if that waste is a hazardous waste as defined by law. CCR 66262.11 & 66260.200(c)
Activity:	ACTIVE
Permit Number:	201406
Update Date:	11/02/2012
Inspection Date:	04/03/2003
Violation Code:	6HV1009
Violation:	HMBP: INADEQUATE SITE MAP
Violation Citation:	Business Plan does not have a site map which provides sufficient or complete information for emergency response agencies. HSC 25509(a)(5) & 25505(a)(2)
Activity:	ACTIVE

Name:	DEERING BANJO CO
Address:	3733 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	201406
Business Type:	6HK50
EPA Id Number:	CAL000263364
APN:	500-261-44-00
Last HMMD Inspection:	10/06/2010
Facility Telephone:	619-464-8252
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	DEERING BANJO COMPANY
Facility Mailing Address:	3733 KENORA DR
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported

DEERING BANJO CO (Continued) **S106071442**

Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 201406
Update Date: 11/02/2012
Case Number: 7440-37-1
Name: ARGON GAS
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: PRESSURE RELEASE
Hazardous Categories 2: Not reported

Permit Number: 201406
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 331 OFF-SPEC,AGED,SURPLUS ORGANICS
Other Information: WASTE LACQUER
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 201406
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: EMPTY CONTAINERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 201406
Update Date: 11/02/2012
Inspection Date: 04/03/2003
Violation Code: 6HV0304
Violation: WASTE DETERMINATION NOT MADE
Violation Citation: Generator of a waste has not determined if that waste is a hazardous waste as defined by law. CCR 66262.11 & 66260.200(c)
Activity: ACTIVE

Permit Number: 201406
Update Date: 11/02/2012
Inspection Date: 04/03/2003
Violation Code: 6HV1009
Violation: HMBP: INADEQUATE SITE MAP
Violation Citation: Business Plan does not have a site map which provides sufficient or complete information for emergency response agencies. HSC 25509(a)(5) & 25505(a)(2)
Activity: ACTIVE

Name: DEERING BANJO CO
Address: 3733 KENORA DR

DEERING BANJO CO (Continued) **S106071442**

City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	201406
Business Type:	6HK50
EPA Id Number:	CAL000263364
APN:	500-261-44-00
Last HMMD Inspection:	10/06/2010
Facility Telephone:	619-464-8252
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	DEERING BANJO COMPANY
Facility Mailing Address:	3733 KENORA DR
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	201406
Update Date:	11/02/2012
Case Number:	7440-37-1
Name:	ARGON GAS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	PRESSURE RELEASE
Hazardous Categories 2:	Not reported

Permit Number:	201406
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 331 OFF-SPEC,AGED,SURPLUS ORGANICS
Other Information:	WASTE LACQUER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	201406
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	EMPTY CONTAINERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	201406
Update Date:	11/02/2012
Inspection Date:	04/03/2003
Violation Code:	6HV0304
Violation:	WASTE DETERMINATION NOT MADE

DEERING BANJO CO (Continued) **S106071442**

Violation Citation:	Generator of a waste has not determined if that waste is a hazardous waste as defined by law. CCR 66262.11 & 66260.200(c)
Activity:	ACTIVE
Permit Number:	201406
Update Date:	11/02/2012
Inspection Date:	04/03/2003
Violation Code:	6HV1009
Violation:	HMBP: INADEQUATE SITE MAP
Violation Citation:	Business Plan does not have a site map which provides sufficient or complete information for emergency response agencies. HSC 25509(a)(5) & 25505(a)(2)
Activity:	ACTIVE
Name:	DEERING BANJO CO
Address:	3733 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	cal000263364
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	619-464-8252
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	08/17/2019
Facility Owner:	Not reported
Facility Mailing Address:	3733 KENORA DR, SPRING VALLEY, CA 91977
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2003-HUPFP-201406
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201406
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5976966
Return To Compliance Date:	2018-10-24T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-08-17T00:00:00.000
Inspection Date:	2018-09-11T15:05:00.000
Violation Code:	3030005 Failed to make a proper waste determination. 22 CCR 66262.11, 66262.40(c)

DEERING BANJO CO (Continued) **S106071442**

Record ID:	DEH2003-HUPFP-201406
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201406
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5976966
Return To Compliance Date:	2018-09-30T00:00:00.000
Nov:	Yes
Violation Classification:	Class I
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-08-17T00:00:00.000
Inspection Date:	2018-09-11T15:05:00.000
Violation Code:	HMD0131 Unified Program Facility Permit not obtained &/or maintained for the generation of hazardous waste. SDCC 68.905

Waste and Materials:

Record ID:	DEH2003-HUPFP-201406
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2015-HWAST-0062559
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-09-01T02:31:59.000
Chemical Name:	WASTE 331 OFF-SPEC,AGED,SURPLUS ORGANICS
Common Name:	WASTE LACQUER
Case Number:	Not reported

Record ID:	DEH2003-HUPFP-201406
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0170056
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2019-08-17T02:36:37.000
Chemical Name:	WASTE 331 OFF-SPEC,AGED,SURPLUS ORGANICS
Common Name:	WASTE LACQUER
Case Number:	Not reported

CERS HAZ WASTE:

Name:	DEERING BANJO CO
Address:	3733 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Site ID:	24366
CERS ID:	10362982
CERS Description:	Hazardous Waste Generator

CERS:

Name:	DEERING BANJO CO
Address:	3733 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977
Site ID:	24366
CERS ID:	10362982
CERS Description:	Chemical Storage Facilities

DEERING BANJO CO (Continued) **S106071442**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-23-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Zahra Alaaeddine Inspection ID:5520167
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-23-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Zahra Alaaeddine Inspection ID:5520167
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-01-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: LaPel Daniel Inspection ID:4931536
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	24366
Facility Name:	DEERING BANJO CO
Env Int Type Code:	HWG
Program ID:	10362982
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	32.746660
Longitude:	-116.985970

Affiliation:

Affiliation Type Desc:	Property Owner
Entity Name:	LIVELY ONIE O TR&LIVELY JOHN S
Entity Title:	Not reported
Affiliation Address:	2120 PARK PL 2ND FLR
Affiliation City:	EL SEGUNDO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90245
Affiliation Phone:	(619) 469-0197

Affiliation Type Desc:	Parent Corporation
Entity Name:	DEERING BANJO CO
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

DEERING BANJO CO (Continued) **S106071442**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Chad Kopotic
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: CHAD KOPOTIC
Entity Title: QC MANAGER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: JANET DEERING
Entity Title: Not reported
Affiliation Address: 3733 KENORA DR
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3733 KENORA DR
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: LIVELY ONIE O TR&LIVELY JOHN S
Entity Title: Not reported
Affiliation Address: 2120 PARK PL 2ND FLR

DEERING BANJO CO (Continued) **S106071442**

Affiliation City:	EL SEGUNDO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90245
Affiliation Phone:	(619) 469-0197
Affiliation Type Desc:	Operator
Entity Name:	GREG DEERING
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 464-8252

B22 **DEERING BANJO CO INC** **SEMS-ARCHIVE** **1000260722**
SE **3733 KENORA DR** **RCRA-SQG** **CAD020227526**
< 1/8 **SPRING VALLEY, CA 91977** **San Diego Co. HMMD**
0.110 mi. **FINDS**
583 ft. **Site 18 of 22 in cluster B** **ECHO**
HAZNET
Relative: **HWTS**
Lower

Actual: **425 ft.**

SEMS Archive:

Site ID:	0900054
EPA ID:	CAD020227526
Name:	HELIOTROPE GENERAL
Address:	3733 KENORA DR
Address 2:	Not reported
City,State,Zip:	SPRING VALLEY, CA 92077
Cong District:	41
FIPS Code:	06073
FF:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:

Region:	09
Site ID:	0900054
EPA ID:	CAD020227526
Site Name:	HELIOTROPE GENERAL
NPL:	N
FF:	N
OU:	00
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1
Start Date:	Not reported
Finish Date:	1988-11-14 05:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse
Region:	09
Site ID:	0900054
EPA ID:	CAD020227526
Site Name:	HELIOTROPE GENERAL

DEERING BANJO CO INC (Continued) **1000260722**

NPL: N
FF: N
OU: 00
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1987-12-01 05:00:00
Finish Date: 1987-12-01 05:00:00
Qual: Not reported
Current Action Lead: St Perf

Region: 09
Site ID: 0900054
EPA ID: CAD020227526
Site Name: HELIOTROPE GENERAL
NPL: N
FF: N
OU: 00
Action Code: PA
Action Name: PA
SEQ: 1
Start Date: Not reported
Finish Date: 1988-11-14 05:00:00
Qual: N
Current Action Lead: St Perf

RCRA-SQG:
Date form received by agency: 2002-12-30 00:00:00.0
Facility name: DEERING BANJO COMPANY INC
Facility address: 3733 KENORA DR
SPRING VALLEY, CA 91977
EPA ID: CAD020227526
Mailing address: KENORA DR
SPRING VALLEY, CA 91977
Contact: CHARLES G DEERING
Contact address: KENORA DR
SPRING VALLEY, CA 91977
Contact country: US
Contact telephone: 619-464-8252
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: DEERING BANJO COMPANY INC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported

DEERING BANJO CO INC (Continued) **1000260722**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 2002-09-01 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: CHARLES DEERING
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2002-09-01 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 1996-09-01 00:00:00.0
Site name: HELIOTROPE GENERAL
Classification: Small Quantity Generator

Date form received by agency: 1986-03-18 00:00:00.0
Site name: HELIOTROPE GENERAL
Classification: Large Quantity Generator

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

HMMD SAN DIEGO:
Name: HELIOTROPE GENERAL INC.
Address: 3733 KENORA DR

DEERING BANJO CO INC (Continued) **1000260722**

City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	109897
Business Type:	6HK18
EPA Id Number:	CAD020227526
APN:	500-261-44-00
Last HMMD Inspection:	05/05/2000
Facility Telephone:	619-619-4603
Permit Status:	INAC
Permit Expiration:	05/05/2000
Date Last Updated:	11/02/2012
Facility Owner:	SAM DAWSON
Facility Mailing Address:	3733 KENORA DR
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977-1206
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

FINDS:
Registry ID: 110006466840

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000260722
Registry ID:	110006466840
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110006466840
Name:	DEERING BANJO CO INC
Address:	3733 KENORA DR
City,State,Zip:	SPRING VALLEY, CA 91977

HAZNET:

Name:	HELIOTROPE GENERAL
Address:	3733 KENORA DR
Address 2:	Not reported
City,State,Zip:	SPRING VALLEY, CA 920770000
Contact:	BOB CLERICO
Telephone:	--
Mailing Name:	Not reported
Mailing Address:	3733 KENORA DR

DEERING BANJO CO INC (Continued) **1000260722**

Year: 2003
Gepaid: CAD020227526
TSD EPA ID: AZD980892731
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: R01 - Recycler
Tons: 2.1956

Year: 2003
Gepaid: CAD020227526
TSD EPA ID: AZD980892731
CA Waste Code: 352 - Other organic solids
Disposal Method: D80 - Disposal, Land Fill
Tons: 0.3

Year: 1994
Gepaid: CAD020227526
TSD EPA ID: CAD009452657
CA Waste Code: 211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: R01 - Recycler
Tons: 0.2085

Year: 1992
Gepaid: CAD020227526
TSD EPA ID: CAD074644659
CA Waste Code: 211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: R01 - Recycler
Tons: 0.2293

Year: 1991
Gepaid: CAD020227526
TSD EPA ID: CAT000618652
CA Waste Code: 211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: R01 - Recycler
Tons: 0.2293

Year: 1989
Gepaid: CAD020227526
TSD EPA ID: CAT000618652
CA Waste Code: 211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: R01 - Recycler
Tons: 0.6463

Year: 1988
Gepaid: CAD020227526
TSD EPA ID: CAT000618652
CA Waste Code: 211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: R01 - Recycler
Tons: 0.2293

Year: 1987
Gepaid: CAD020227526
TSD EPA ID: CAD042245001

DEERING BANJO CO INC (Continued) **1000260722**

CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	-
Tons:	0.4587
Year:	1987
Gepaid:	CAD020227526
TSD EPA ID:	Not reported
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	01 -
Tons:	0.4378
Year:	1986
Gepaid:	CAD020227526
TSD EPA ID:	Not reported
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	01 -
Tons:	0.271

Click this hyperlink while viewing on your computer to access additional CA HAZNET: detail in the EDR Site Report.

Additional Info:

Year:	1994
Gen EPA ID:	CAD020227526
Shipment Date:	19941108
Creation Date:	3/28/1996 0:00:00
Receipt Date:	19941214
Manifest ID:	92467884
Trans EPA ID:	CAD029363876
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009452657
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	F001
Meth Code:	R01 - Recycler
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2003

DEERING BANJO CO INC (Continued) **1000260722**

Gen EPA ID:	CAD020227526
Shipment Date:	20030213
Creation Date:	7/22/2004 8:36:14
Receipt Date:	20030219
Manifest ID:	21993786
Trans EPA ID:	CAD980585293
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	AZD980892731
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.51
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030213
Creation Date:	7/22/2004 8:36:14
Receipt Date:	20030219
Manifest ID:	21993786
Trans EPA ID:	CAD980585293
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	AZD980892731
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.3
Waste Quantity:	600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030213
Creation Date:	7/22/2004 8:36:14
Receipt Date:	20030219
Manifest ID:	21993786
Trans EPA ID:	CAD980585293
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported

DEERING BANJO CO INC (Continued) **1000260722**

Trans 2 Name:	Not reported
TSDF EPA ID:	AZD980892731
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	1.6856
Waste Quantity:	2
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	HELIOTROPE GENERAL
Address:	3733 KENORA DR
Address 2:	Not reported
City,State,Zip:	SPRING VALLEY, CA 920770000
EPA ID:	CAD020227526
Inactive Date:	06/30/2000
Create Date:	04/10/1987
Last Act Date:	11/09/2004
Mailing Name:	Not reported
Mailing Address:	3733 KENORA DR
Mailing Address 2:	Not reported
Mailing City,State,Zip:	SPRING VALLEY, CA 919770000
Owner Name:	SAM DAWSON
Owner Address:	3733 KENORA DR
Owner Address 2:	Not reported
Owner City,State,Zip:	SPRING VALLEY, CA --
Contact Name:	BOB CLERICO
Contact Address:	INACT PER VQ / NO LONGER GEN
Contact Address 2:	WASTE / JB
City,State,Zip:	SPRING VALLEY, CA --

B23 **ROGER MANNING TEXACO** **EDR Hist Auto** **1021100273**
East **9676 CAMPO RD** **N/A**
< 1/8 **SPRING VALLEY, CA 92077**
0.118 mi.
621 ft. **Site 19 of 22 in cluster B**

Relative: EDR Hist Auto
Lower

Actual: **427 ft.**

Year:	Name:	Type:
1971	ROGER MANNING TEXACO	Gasoline Service Stations
1972	ROGER MANNING TEXACO	Gasoline Service Stations
1973	ROGER MANNING TEXACO	Gasoline Service Stations
1974	ROGER MANNING TEXACO	Gasoline Service Stations
1976	ROGER MANNING TEXACO	Gasoline Service Stations
1977	ROGER MANNING TEXACO	Gasoline Service Stations
1978	ROGER MANNING TEXACO	Gasoline Service Stations
1979	ROGER MANNING TEXACO	Gasoline Service Stations
1980	ROGER MANNING TEXACO	Gasoline Service Stations

ROGER MANNING TEXACO (Continued) **1021100273**

1982 ROGER MANNING TEXACO Gasoline Service Stations
1983 ROGER MANNING TEXACO Gasoline Service Stations

B24 **CVS PHARMACY #10919** **CERS HAZ WASTE** **S121127172**
SE **9665 CAMPO RD** **HAZNET** **N/A**
< 1/8 **SPRING VALLEY, CA 91977** **CERS**
0.123 mi. **HWTS**
652 ft. **Site 20 of 22 in cluster B**

Relative: **Lower**

Actual: **426 ft.**

CERS HAZ WASTE:
Name: CVS PHARMACY #10919
Address: 9665 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 380849
CERS ID: 10363222
CERS Description: Hazardous Waste Generator

Name: CVS PHARMACY #10919
Address: 9665 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 380849
CERS ID: 10363222
CERS Description: RCRA LQ HW Generator

HAZNET:
Name: CVS PHARMACY #10919
Address: 9665 CAMPO RD
Address 2: Not reported
City,State,Zip: SPRING VALLEY, CA 02895
Contact: NICOLE WILKINSON
Telephone: 4017707132
Mailing Name: Not reported
Mailing Address: 1 CVS DR - MC 1160

Year: 2019
Gepaid: CAR000269357
TSD EPA ID: CAD008364432
CA Waste Code: 141 - Off-specification, aged or surplus inorganics
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.00550

Year: 2019
Gepaid: CAR000269357
TSD EPA ID: CAD008364432
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.03900

Year: 2019
Gepaid: CAR000269357
TSD EPA ID: CAD008364432
CA Waste Code: 331 - Off-specification, aged or surplus organics
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.60050

CVS PHARMACY #10919 (Continued) **S121127172**

Year:	2019
Gepaid:	CAR000269357
TSD EPA ID:	INR000110197
CA Waste Code:	311 - Pharmaceutical waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.00300

Year:	2019
Gepaid:	CAR000269357
TSD EPA ID:	NVD980895338
CA Waste Code:	311 - Pharmaceutical waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.04400

Year:	2019
Gepaid:	CAR000269357
TSD EPA ID:	NVD980895338
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.02950

Year:	2019
Gepaid:	CAR000269357
TSD EPA ID:	NVD980895338
CA Waste Code:	141 - Off-specification, aged or surplus inorganics
Disposal Method:	H070 -
Tons:	0.00350

Year:	2019
Gepaid:	CAR000269357
TSD EPA ID:	CAD008364432
CA Waste Code:	311 - Pharmaceutical waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.21650

Year:	2018
Gepaid:	CAR000269357
TSD EPA ID:	CAD008364432
CA Waste Code:	331 - Off-specification, aged or surplus organics
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.08550

Year:	2018
Gepaid:	CAR000269357
TSD EPA ID:	CAD008364432
CA Waste Code:	311 - Pharmaceutical waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.04300

CVS PHARMACY #10919 (Continued) **S121127172**

Click this hyperlink while viewing on your computer to access
9 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2017
Gen EPA ID:	CAR000269357
Shipment Date:	20171230
Creation Date:	10/23/2018 18:30:08
Receipt Date:	20180117
Manifest ID:	011325084FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	NED986382133
Trans 2 Name:	SMITH SYSTEMS TRANSPORTATION INC
TSDF EPA ID:	INR000110197
Trans Name:	STERICYCLE INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0005
Waste Quantity:	1
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171230
Creation Date:	10/23/2018 18:30:08
Receipt Date:	20180117
Manifest ID:	011325084FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	NED986382133
Trans 2 Name:	SMITH SYSTEMS TRANSPORTATION INC
TSDF EPA ID:	INR000110197
Trans Name:	STERICYCLE INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0005
Waste Quantity:	1
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CVS PHARMACY #10919 (Continued) **S121127172**

Shipment Date:	20171230
Creation Date:	8/7/2018 18:30:18
Receipt Date:	20170104
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000
Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	P001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0005
Waste Quantity:	1
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20171230
Creation Date:	8/7/2018 18:30:18
Receipt Date:	20170104
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000
Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	D010
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.001
Waste Quantity:	2
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20171230
Creation Date:	8/7/2018 18:30:18
Receipt Date:	20170104
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000

CVS PHARMACY #10919 (Continued) **S121127172**

Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	P075
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0005
Waste Quantity:	1
Quantity Unit:	P
Additional Code 1:	P001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171230
Creation Date:	8/7/2018 18:30:18
Receipt Date:	20170104
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000
Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	141 - Off-specification, aged, or surplus inorganics
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0005
Waste Quantity:	1
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171230
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000
Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported

CVS PHARMACY #10919 (Continued) **S121127172**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.061
Waste Quantity:	122
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171230
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000
Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0045
Waste Quantity:	9
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171230
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000
Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	U002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.003
Waste Quantity:	6
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported

CVS PHARMACY #10919 (Continued) **S121127172**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171230
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	011325085FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217000
Trans 2 Name:	LA CHIQUITA TRUCKING
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	CVS PHARMACY #10919
Address:	9665 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Site ID:	380849
CERS ID:	10363222
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	380849
Site Name:	CVS Pharmacy #10919
Violation Date:	03-07-2017
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 09/08/2017. Inspection Sequence ID:5642563;Violation:HMD0131 Unified Program Facility Permit not obtained &/or maintained for the generation of hazardous waste. HSC 25404.1; SDCC 68.905; 68.906, 68.907
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	380849
Site Name:	CVS Pharmacy #10919
Violation Date:	03-07-2017
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5,

CVS PHARMACY #10919 (Continued) **S121127172**

	Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 03/08/2017. Inspection Sequence ID:5642563;Violation:HMD0150 Failed to submit complete and accurate Facility Information in CERS. HSC 25404(e)(4); 27 CCR 15188(b-c); SDCC 68.904(b)
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-16-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Soquiat Joseph Inspection ID:6124185
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-07-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: LaPel Daniel Inspection ID:5642563
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-19-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: LaPel Daniel Inspection ID:4096297
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	380849
Facility Name:	CVS Pharmacy #10919
Env Int Type Code:	HWG
Program ID:	10363222
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	32.747180
Longitude:	-116.987960

Affiliation:

Affiliation Type Desc:	Parent Corporation
Entity Name:	CVS Health
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

CVS PHARMACY #10919 (Continued) **S121127172**

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: Erin Baltazar, Agent for Garfield Beach CVS, L.L.C.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: CVS Health, Attn: Dianne E. Durand, Licensing One CVS Drive G MC 1160
Affiliation City: Woonsocket
Affiliation State: RI
Affiliation Country: Not reported
Affiliation Zip: 02895
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Garfield Beach CVS, L.L.C.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (401) 765-1500

Affiliation Type Desc: Environmental Contact
Entity Name: Verisk 3E, Regulatory Services/CVS
Entity Title: Not reported
Affiliation Address: 3207 Grey Hawk Court, Suite 200
Affiliation City: Carlsbad
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92010
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Erin Baltazar, Agent for Garfield Beach CVS, L.L.C.
Entity Title: Regulatory Compliance Specialist, Verisk 3E

CVS PHARMACY #10919 (Continued) **S121127172**

Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Garfield Beach CVS, L.L.C.
Entity Title: Not reported
Affiliation Address: One CVS Drive
Affiliation City: Woonsocket
Affiliation State: RI
Affiliation Country: United States
Affiliation Zip: 02895
Affiliation Phone: (401) 765-1500

HWTS:
Name: CVS PHARMACY #10919
Address: 9665 CAMPO RD
Address 2: Not reported
City,State,Zip: SPRING VALLEY, CA 91977
EPA ID: CAR000269357
Inactive Date: Not reported
Create Date: 12/23/2016
Last Act Date: 09/04/2019
Mailing Name: Not reported
Mailing Address: 1 CVS DR - MC 1160
Mailing Address 2: Not reported
Mailing City,State,Zip: WOONSOCKET, RI 02895
Owner Name: LONGS DRUG STORES CALIFORNIA LLC
Owner Address: 1 CVS DR
Owner Address 2: Not reported
Owner City,State,Zip: WOONSOCKET, RI 02895
Contact Name: NICOLE WILKINSON
Contact Address: 1 CVS DRIVE
Contact Address 2: MAIL CODE 2340
City,State,Zip: WOONSOCKET, RI 028956146

NAICS:
EPA ID: CAR000269357
Create Date: 2016-12-23 12:28:09
NAICS Code: 99999
NAICS Description: Not Otherwise Specified
Issued EPA ID Date: 2016-12-23 12:28:09
Inactive Date: Not reported
Facility Name: CVS PHARMACY #10919
Facility Address: 9665 CAMPO RD
Facility Address 2: Not reported
Facility City: SPRING VALLEY
Facility County: 37
Facility State: CA
Facility Zip: 91977

B25
SE
< 1/8
0.123 mi.
652 ft.

CVS PHARMACY #10919
9665 CAMPO RD
SPRING VALLEY, CA 91977

Site 21 of 22 in cluster B

RCRA-LQG **1023675020**
CAR000269357

Relative:
Lower

Actual:
426 ft.

RCRA-LQG:

Date form received by agency:	2016-12-13 03:00:00.0
Facility name:	CVS PHARMACY #10919
Facility address:	9665 CAMPO RD SPRING VALLEY, CA 91977
EPA ID:	CAR000269357
Mailing address:	ONE CVS DRIVE WOONSOCKET, RI 02895
Contact:	NICOLE WILKINSON
Contact address:	ONE CVS DRIVE MAIL CODE 2340 WOONSOCKET, RI 02895
Contact country:	US
Contact telephone:	401-770-7132
Contact email:	NICOLE.WILKINSON@CVSHEALTH.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	GARFIELD BEACH CVS LLC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	2016-11-13 03:00:00.
Owner/Op end date:	Not reported
Owner/operator name:	THE LIVELY TRUST
Owner/operator address:	CAMPO RD STE G SPRING VALLEY, CA 91977
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner

CVS PHARMACY #10919 (Continued) **1023675020**

Owner/Op start date: 2006-11-06 03:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 123
. Waste name: Unspecified alkaline solution

. Waste code: 134
. Waste name: Aqueous solution with <10% total organic residues

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 541
. Waste name: Photochemicals / photo processing waste

. Waste code: 561
. Waste name: Detergent and soap

. Waste code: 791

CVS PHARMACY #10919 (Continued) **1023675020**

. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D027
. Waste name: 1,4-DICHLOROBENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P012
. Waste name: ARSENIC OXIDE AS2O3 (OR) ARSENIC TRIOXIDE

CVS PHARMACY #10919 (Continued) **1023675020**

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: P188
. Waste name: BENZOIC ACID, 2-HYDROXY-, COMPD. WITH (3AS-CIS)-1,2,3,3A,8,8A-HEXAHYDRO-1,3A,8-TRIMETHYLPYRROLO[2,3-B]INDOL-5-YL METHYLCARBAMATE ESTER (1:1) (OR) PHYSOSTIGMINE SALICYLATE

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-METHOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U031
. Waste name: 1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

. Waste code: U070
. Waste name: BENZENE, 1,2-DICHLORO- (OR) O-DICHLOROBENZENE

. Waste code: U072
. Waste name: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS, (E)-

. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

CVS PHARMACY #10919 (Continued) **1023675020**

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U151
. Waste name: MERCURY

. Waste code: U154
. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U165
. Waste name: NAPHTHALENE

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

. Waste code: U206
. Waste name: D-GLUCOSE, 2-DEOXY-2-[[(METHYLNITROSOAMINO)-CARBONYL]AMINO]- (OR) GLUCOPYRANOSE, 2-DEOXY-2-(3-METHYL-3-NITROSOUREIDO)-,D- (OR) STREPTOZOTOCIN

. Waste code: U210
. Waste name: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

. Waste code: U279
. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U411
. Waste name: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Violation Status: No violations found

B26 **FRESH AND EASY *D** **RCRA NonGen / NLR** **1025880535**
SE **9665 CAMPO RD** **CAP000187401**
< 1/8 **SPRING VALLEY, CA 91977**
0.123 mi.
652 ft. **Site 22 of 22 in cluster B**

Relative: RCRA NonGen / NLR:
Lower
Date form received by agency: 2008-01-01 00:00:00.0
Actual: Facility name: FRESH AND EASY *D
426 ft. Facility address: 9665 CAMPO RD
SPRING VALLEY, CA 91977

FRESH AND EASY *D (Continued) **1025880535**

EPA ID: CAP000187401
Contact: ROB FELSTAD
Contact address: 9665 CAMPO RD
SPRING VALLEY, CA 91977
Contact country: US
Contact telephone: 949-369-7820
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: TESSCO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2007-01-01 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: HERB BLUMMER
Owner/operator address: 9628 CAMPO RD
SPRING VALLEY, CA 91977
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 1959-01-01 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

FRESH AND EASY *D (Continued) **1025880535**

Historical Generators:
Date form received by agency: 2007-09-18 00:00:00.0
Site name: FRESH AND EASY
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: D009
. Waste name: MERCURY

Violation Status: No violations found

C27 **L M S V OPERATIONS CENTER** **LUST** **S103656500**
East **3838 CONRAD DR** **SAN DIEGO CO. SAM** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977** **CPS-SLIC**
0.136 mi. **AST**
716 ft. **Site 1 of 9 in cluster C** **San Diego Co. HMMD**
CERS HAZ WASTE
Relative: **SWEEPS UST**
Lower **HIST UST**
CERS TANKS
Actual: **Cortese**
433 ft. **HIST CORTESE**
NPDES
SAN DIEGO CO LOP
CIWQS
CERS

LUST:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607302492
Global Id: T0607302492
Latitude: 32.7486185
Longitude: -116.987366
Status: Completed - Case Closed
Status Date: 12/24/2001
Case Worker: Not reported
RB Case Number: 9UT3725
Local Agency: Not reported
File Location: Local Agency
Local Case Number: H04394-002
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0607302492
Action Type: Other
Date: 08/18/1998
Action: Leak Discovery

Global Id: T0607302492
Action Type: Other
Date: 08/18/1998

L M S V OPERATIONS CENTER (Continued) **S103656500**

Action: Leak Stopped

Global Id: T0607302492
Action Type: ENFORCEMENT
Date: 12/24/2001
Action: Closure/No Further Action Letter

Global Id: T0607302492
Action Type: Other
Date: 09/23/1998
Action: Leak Reported

Global Id: T0607302492
Action Type: Other
Date: 08/18/1998
Action: Leak Began

LUST:
Global Id: T0607302492
Status: Open - Case Begin Date
Status Date: 08/18/1998

Global Id: T0607302492
Status: Completed - Case Closed
Status Date: 12/24/2001

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607302592
Global Id: T0607302592
Latitude: 32.7486185
Longitude: -116.987366
Status: Completed - Case Closed
Status Date: 12/24/2001
Case Worker: Not reported
RB Case Number: 9UT3835
Local Agency: Not reported
File Location: Local Agency
Local Case Number: H04394-003
Potential Media Affect: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

LUST:
Global Id: T0607302592
Action Type: ENFORCEMENT
Date: 12/24/2001
Action: Closure/No Further Action Letter

LUST:
Global Id: T0607302592
Status: Open - Case Begin Date
Status Date: 01/13/1999

L M S V OPERATIONS CENTER (Continued) **S103656500**

Global Id: T0607302592
Status: Completed - Case Closed
Status Date: 12/24/2001

SAN DIEGO CO. SAM:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Case Number: H04394-003
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - Federal Fund**
Facility Type: Soils Only
Facility Status: Closed Case
Date: 12/24/2001
Date Began: 12/31/1998

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Case Number: H04394-001
Agency: DEH Site Assessment & Mitigation
Funding: **Private - VAP**
Facility Type: Soils Only
Facility Status: Closed Case
Date: 3/21/1988
Date Began: 5/7/1987

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Case Number: H04394-002
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - Federal Fund**
Facility Type: Soils Only
Facility Status: Closed Case
Date: 12/24/2001
Date Began: 8/18/1998

CPS-SLIC:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 03/21/1988
Global Id: T0607303003
Lead Agency: SAN DIEGO COUNTY LOP
Lead Agency Case Number: H04394-001
Latitude: 32.7486185
Longitude: -116.987366
Case Type: Cleanup Program Site
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: 9UT741
File Location: Local Agency

L M S V OPERATIONS CENTER (Continued) **S103656500**

Potential Media Affected: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

AST:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City/Zip: SPRING VALLEY,91977
Certified Unified Program Agencies: Not reported
Owner: LA MESA-SPRING VALLEY SCHOOL DI
Total Gallons: Not reported
CERSID: 10362832
Facility ID: 37-000-104394
Business Name: L M S V OPERATIONS CENTER
Phone: 619-668-5767
Fax: Not reported
Mailing Address: 3838 CONRAD DR
Mailing Address City: SPRING VALLEY
Mailing Address State: CA
Mailing Address Zip Code: 91977
Operator Name: LA MESA-SPRING VALLEY SCHL DST
Operator Phone: 619-668-5700
Owner Phone: 619-668-5700
Owner Mail Address: 4750 DATE AVENUE
Owner State: CA
Owner Zip Code: Not reported
Owner Country: United States
Property Owner Name: LA MESA-SPRING VALLEY SCHOOL DI
Property Owner Phone: Not reported
Property Owner Mailing Address: Not reported
Property Owner City: Not reported
Property Owner Stat : Not reported
Property Owner Zip Code: 0
Property Owner Country: United States
EPAID: CAL000033250

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City/Zip: SPRING VALLEY,
Certified Unified Program Agencies: San Diego
Owner: LA MESA-SPRING VALLEY SCHL DST
Total Gallons: 17000
CERSID: Not reported
Facility ID: Not reported
Business Name: Not reported
Phone: Not reported
Fax: Not reported
Mailing Address: Not reported
Mailing Address City: Not reported
Mailing Address State: Not reported
Mailing Address Zip Code: Not reported
Operator Name: Not reported
Operator Phone: Not reported
Owner Phone: Not reported
Owner Mail Address: Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

HMMD SAN DIEGO:

Name:	L M S V OPERATIONS CENTER
Address:	3838 CONRAD DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAL000033250
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	619-668-5767
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	05/21/2020
Facility Owner:	Not reported
Facility Mailing Address:	3838 CONRAD DR, SPRING VALLEY, CA 91977
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	4786723
Return To Compliance Date:	2016-03-24T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2016-02-04T14:15:00.000
Violation Code:	1010006 HMBP not updated to reflect inventory changes or facility information. HSC 25508.1(a-e)

Record ID:	DEH2002-HUPFP-104394

L M S V OPERATIONS CENTER (Continued) **S103656500**

Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5842574
Return To Compliance Date:	2018-02-13T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2018-01-19T15:53:00.000
Violation Code:	3010010 Failed to maintain copies of Uniform Hazardous Waste Manifest, consolidated manifest, or Bills of Lading for 3 years. HSC 25160.2(b)(3), 25185(a)(4); 22 CCR 66262.40(a), 66262.23(a)(3)

Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	4786723
Return To Compliance Date:	2016-03-24T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2016-02-04T14:15:00.000
Violation Code:	1020002 Initial and/or annual employee training not conducted for hazardous materials management and/or employee training records not available or not maintained for 3 years. HSC 25505(a)(4)

Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5842574
Return To Compliance Date:	2018-01-19T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2018-01-19T15:53:00.000
Violation Code:	1010005 Site map not submitted in CERS or not sufficient. HSC 25505(a)(2); 25508.1(f); 19 CCR 2652(a)(3)

Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Materials Release Response Plans

L M S V OPERATIONS CENTER (Continued) **S103656500**

Inspection Type:	Routine
Inspection Number:	5842574
Return To Compliance Date:	2018-01-19T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2018-01-19T15:53:00.000
Violation Code:	1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508(a)(1)(A), 25508.2, 19 CCR 2654(b)

Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Aboveground Petroleum Storage Act
Inspection Type:	Routine
Inspection Number:	4786723
Return To Compliance Date:	2016-03-24T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2016-02-04T14:15:00.000
Violation Code:	4010008 Failed to maintain a copy of the Plan on site (applies if facility is manned at least 4 hours/day). (40 CFR 112.3(e)(1).) HSC 25270.4.5(a)

Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	4097774
Return To Compliance Date:	2013-02-28T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2013-02-07T08:41:00.000
Violation Code:	3130005 RCRA: Failure to accumulate hazardous waste in a container that is in good condition. 22 CCR 15 66265.171

Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	4097774
Return To Compliance Date:	2016-03-24T00:00:00.000
Nov:	No
Violation Classification:	Minor

L M S V OPERATIONS CENTER (Continued) **S103656500**

Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2020-05-29T01:14:05.000
Inspection Date: 2013-02-07T08:41:00.000
Violation Code: 3030012 Failure to accumulate hazardous waste in a container that is in good condition.; 22 CCR 12 66262.34(d)(2); 40 CFR 1 265.171.

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104394
Program Element: Hazardous Materials Release Response Plans
Inspection Type: Routine
Inspection Number: 4786723
Return To Compliance Date: 2016-03-24T00:00:00.000
Nov: No
Violation Classification: Class II
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2020-05-29T01:14:05.000
Inspection Date: 2016-02-04T14:15:00.000
Violation Code: 1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508.2

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104394
Program Element: Hazardous Waste Generator
Inspection Type: Routine
Inspection Number: 4097774
Return To Compliance Date: 2013-02-28T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2020-05-29T01:14:05.000
Inspection Date: 2013-02-07T08:41:00.000
Violation Code: 3030030 Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human health or the environment..; 22 CCR 12 66262.34(d)(2); 40 CFR 1 265.31.

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104394
Program Element: Aboveground Petroleum Storage Act
Inspection Type: Routine
Inspection Number: 5842574
Return To Compliance Date: 2018-02-13T00:00:00.000
Nov: No
Violation Classification: Class II
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2020-05-29T01:14:05.000

L M S V OPERATIONS CENTER (Continued) **S103656500**

Inspection Date:	2018-01-19T15:53:00.000
Violation Code:	4010021 Failed to have record of inspections and integrity tests signed by the appropriate supervisor or inspector, keep written procedures and records of inspections and integrity tests for at least three years, and/or keep comparison records. (40 CFR 112.7(e), 112.8(c)(6).) HSC 25270.4.5(a)
Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	4097774
Return To Compliance Date:	2013-03-26T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2013-02-07T08:41:00.000
Violation Code:	1010008 Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1; 19 CCR 4 2729.4(b), 2729.5.
Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	4097774
Return To Compliance Date:	2013-02-28T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2020-05-29T01:14:05.000
Inspection Date:	2013-02-07T08:41:00.000
Violation Code:	1010006 Failure to update hazardous material inventory within 30 days when one of the following occurs: A 100 percent or more increase in the quantity of a previously disclosed material; Any handling of a previously undisclosed hazardous materials; A change of business address, business ownership, or business name; 19 CCR 4 2729.4(d); HSC 6.95 25505(b), 25510.
Record ID:	DEH2002-HUPFP-104394
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104394
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5842574
Return To Compliance Date:	2018-02-09T00:00:00.000
Nov:	No

L M S V OPERATIONS CENTER (Continued) **S103656500**

Violation Classification: Class II
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2020-05-29T01:14:05.000
Inspection Date: 2018-01-19T15:53:00.000
Violation Code: 1020002 Initial &/or annual employee training not conducted in safety procedures for a hazardous material release or threatened release &/or employee training records not available or not maintained for 3 years. HSC 25505(a)(4); 19 CCR 2659(b)

UST DTL:
Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104394
Facility Type (Ust Facility): Not reported
Tank Owner Name: LA MESA-SPRING VALLEY SCHL DST
Tankid: 18147
Tank Status: Removed
Date Ust Permanently Closed: 12/31/1998
Tank Use: 01
Piping System Type: 02
Last Updated: 2020-05-21T07:53:59.000
Tank Capacityin Gallons: 12000
Tank Contents: 1A
Type Of Tank: 01

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104394
Facility Type (Ust Facility): Not reported
Tank Owner Name: LA MESA-SPRING VALLEY SCHL DST
Tankid: 18148
Tank Status: Removed
Date Ust Permanently Closed: 08/18/1998
Tank Use: 01
Piping System Type: 02
Last Updated: 2020-05-21T07:53:59.000
Tank Capacityin Gallons: 6000
Tank Contents: Diesel
Type Of Tank: 01

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104394
Facility Type (Ust Facility): Not reported
Tank Owner Name: LA MESA-SPRING VALLEY SCHL DST
Tankid: 18150
Tank Status: Removed
Date Ust Permanently Closed: 08/18/1998
Tank Use: 01
Piping System Type: Not reported
Last Updated: 2020-05-21T07:53:59.000
Tank Capacityin Gallons: 2500
Tank Contents: Diesel

L M S V OPERATIONS CENTER (Continued) **S103656500**

Type Of Tank: 01

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104394
Facility Type (Ust Facility): Not reported
Tank Owner Name: LA MESA-SPRING VALLEY SCHL DST
Tankid: 18149
Tank Status: Removed
Date Ust Permanently Closed: 01/28/1988
Tank Use: 04
Piping System Type: Not reported
Last Updated: 2020-05-21T07:53:59.000
Tank Capacityin Gallons: 2000
Tank Contents: Not reported
Type Of Tank: 95

Waste and Materials:
Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581131
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: ACETYLENE GAS
Common Name: Not reported
Case Number: 74-86-2

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581136
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: ANTIFREEZE
Common Name: ZEREX EXTREME LIFE AFC
Case Number: MIX

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581143
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: HILTI MC300 BIODEGREASER
Common Name: DEGREASING SOLVENT (NONE EXISTS-PERHILTI REPRESENTATIVE)
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581142
Trade Secret: N

L M S V OPERATIONS CENTER (Continued) **S103656500**

Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name: OILY ABSORBENT
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581129
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: OILS, LUBRICATING, MOTOR OILS
Common Name: HYCRAULIC OILS, AND TRANSMISSION FL
Case Number: 8002-05-9

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581130
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: OXYGEN,GAS
Common Name: Not reported
Case Number: 7782-44-7

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581132
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: UNLEADED GASOLINE
Common Name: Not reported
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581133
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: DIESEL FUEL
Common Name: Not reported
Case Number: 68476-34-6

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581134
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-05-21T07:53:58.000

L M S V OPERATIONS CENTER (Continued) **S103656500**

Chemical Name: LACQUER THINNER
Common Name: Not reported
Case Number: 7727-37-9

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581135
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: CHEMSEARCH 777 CORROSION INHIBITOR
Common Name: Not reported
Case Number: MIXTURE

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581137
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASH-N-WAX SOAP
Common Name: Not reported
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581138
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: GLASS BRIGHT GLASS CLEANER
Common Name: Not reported
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581125
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 491 UNSPECIFIED SLUDGE WASTE
Common Name: STEAM CLEAN SUMP SLUDGE
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581126
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 888 USED OIL FILTERS
Common Name: USED OIL FILTERS

L M S V OPERATIONS CENTER (Continued) **S103656500**

Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581127
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 342 ORGANIC LIQUIDS W/METALS
Common Name: USED ANTIFREEZE
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581128
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 461 PAINT SLUDGE
Common Name: LATEX/ENAMEL PAINT WASTE
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581141
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Common Name: PARTS WASHER
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581123
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 444 USED BATTERIES
Common Name: Not reported
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HWAST-581124
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL
Common Name: WASTE OIL
Case Number: Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581139
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: SENSATIONAL-SOAP
Common Name: Not reported
Case Number: Not reported

Record ID: DEH2002-HUPFP-104394
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2002-HCHEM-581140
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-05-21T07:53:58.000
Chemical Name: ARGON GAS/CARBON DIOXIDE
Common Name: Not reported
Case Number: MIXTURE

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: 104394
Business Type: 6HK56
EPA Id Number: CAL000033250
APN: 500-191-19-00
Last HMMD Inspection: 07/29/2010
Facility Telephone: 619-668-5767
Permit Status: OPEN
Permit Expiration: 06/30/2013
Date Last Updated: 11/02/2012
Facility Owner: LA MESA-SPRING VALLEY SCHL DST
Facility Mailing Address: 3838 CONRAD DR
Facility Mailing City: Spring Valley
Facility Mailing State: CA
Facility Mailing Zip: 91977
UST Owner: LA MESA-SPRING VALLEY SCHL DST
Handle Regulated Hazmat: Y
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 104394
Update Date: 11/02/2012
Case Number: 74-86-2
Name: ACETYLENE GAS
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: PRESSURE RELEASE

L M S V OPERATIONS CENTER (Continued) **S103656500**

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	MIX
Name:	ANTIFREEZE
Other Information:	ZEREX EXTREME LIFE AFC
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	CHRONIC

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	MIXTURE
Name:	ARGON GAS/CARBON DIOXIDE
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	PRESSURE RELEASE
Hazardous Categories 2:	Not reported

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	MIXTURE
Name:	CHEMSEARCH 777 CORROSION INHIBITOR
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	68476-34-6
Name:	DIESEL FUEL
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	GLASS BRIGHT GLASS CLEANER
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	Not reported

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	HILTI MC300 BIODEGREASER
Other Information:	DEGREASING SOLVENT (NONE EXISTS-PERHILTI REPRESENTATIVE)
Material Waste:	Material
Hazardous Categories 1:	CHRONIC
Hazardous Categories 2:	Not reported

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	7727-37-9

L M S V OPERATIONS CENTER (Continued) **S103656500**

Name: LACQUER THINNER
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: ACUTE

Permit Number: 104394
Update Date: 11/02/2012
Case Number: 8002-05-9
Name: OILS, LUBRICATING, MOTOR OILS
Other Information: HYCRAULIC OILS, AND TRANSMISSION FL
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: CHRONIC

Permit Number: 104394
Update Date: 11/02/2012
Case Number: 7782-44-7
Name: OXYGEN,GAS
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: PRESSURE RELEASE

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: SENSATIONAL-SOAP
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: ACUTE
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: UNLEADED GASOLINE
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: ACUTE

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASH-N-WAX SOAP
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: ACUTE
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information: PARTS WASHER
Material Waste: Waste

L M S V OPERATIONS CENTER (Continued) **S103656500**

Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 221 WASTE OIL & MIXED OIL
Other Information: WASTE OIL
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information: OILY ABSORBENT
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 342 ORGANIC LIQUIDS W/METALS
Other Information: USED ANTIFREEZE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 444 USED BATTERIES
Other Information: Not reported
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 461 PAINT SLUDGE
Other Information: LATEX/ENAMEL PAINT WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 491 UNSPECIFIED SLUDGE WASTE
Other Information: STEAM CLEAN SUMP SLUDGE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Permit Number: 104394
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 888 USED OIL FILTERS
Other Information: USED OIL FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 07/29/2010
Violation Code: 6HV0224
Violation: MISMANAGED EMPTY CONTAINERS >5GALS.
Violation Citation: Failed to mark date on empty container larger than 5 gallons and/or manage it within one year. 66261.7(e) & (f).
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 07/29/2010
Violation Code: 6HV0227
Violation: HAZWASTE TANK/CONTAINER W/O LABEL/DATE
Violation Citation: Failed to properly label/date hazardous waste container &/or tank. 66262.34(f)
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 07/29/2010
Violation Code: 6HV5103
Violation: SPCC PLAN NOT PREPARED
Violation Citation: Failed to prepare a Spill Prevention Control and Countermeasures Plan. 25270.4.5(a), 25270.5 & 25270.12(a) [ref. CFR 112.3]
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 05/31/2006
Violation Code: 6HV0133
Violation: MANIFEST COPY NOT SENT TO DTSC
Violation Citation: Generator of hazardous waste has not sent the appropriate copy of the manifest to DTSC/Cal-EPA. CCR 66262.23(a)(4)
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 05/31/2006
Violation Code: 6HV0217
Violation: HAZMAT CON. NOT REPACKAGED WI 96 HRS.
Violation Citation: Failed to repackage damaged/deteriorated hazardous material container within 96 hours. 25124(b)(3)(B) & 66262.34(f)
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012

L M S V OPERATIONS CENTER (Continued) **S103656500**

Inspection Date:	05/31/2006
Violation Code:	6HV0218
Violation:	FILTERS:FUEL/OIL NOT LABELED OR CLOSED
Violation Citation:	Failed to label &/or close drained used oil filters &/or used fuel filters. 25250.22 and 66266.130(c)(3)
Activity:	ACTIVE
Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	05/31/2006
Violation Code:	6HV0224
Violation:	MISMANAGED EMPTY CONTAINERS >5GALS.
Violation Citation:	Failed to mark date on empty container larger than 5 gallons and/or manage it within one year. 66261.7(e) & (f).
Activity:	ACTIVE
Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	05/31/2006
Violation Code:	6HV0227
Violation:	HAZWASTE TANK/CONTAINER W/O LABEL/DATE
Violation Citation:	Failed to properly label/date hazardous waste container &/or tank. 66262.34(f)
Activity:	ACTIVE
Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	05/31/2006
Violation Code:	6HV0228
Violation:	CONTAINER NOT KEPT CLOSED
Violation Citation:	Failed to keep container closed. CFR 265.173
Activity:	ACTIVE
Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	09/30/2008
Violation Code:	6HV1015
Violation:	EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation:	Did not have adequate employee training program 2732 &/or 25504(c)
Activity:	ACTIVE
Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	09/30/2008
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	09/30/2008
Violation Code:	6HV0223
Violation:	MISMANAGED NON-EMPTY CONTAINER/LINER
Violation Citation:	Failed to properly manage non-empty container or inner liner removed

L M S V OPERATIONS CENTER (Continued) **S103656500**

from a container. 66261.7 (b), (d) &/or (r)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 104394 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 104394
Tank Type: SINGLE WALL
Additional Id: 001
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: REMOVED
Remove Close Date: 1998-12-31 00:00:00
Year Installed: 1976-01-01 00:00:00
Pipe Type: SINGLE WALL
Delivery System: SUCTION
Monitor Code: 01
UST Monitor Method: SW TANK SW SUCTION PIPE W/ SIRS: SIR DATA ANALYSIS MONTHLY, TANK TEST BIENNIALLY, PIPE TEST TRIENNIALLY

UST Name: UNDERGROUND TANK 104394 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 104394
Tank Type: SINGLE WALL
Additional Id: 002
Capacity Gallons: 6000
UST Contents: DIESEL
Other Content Info: DIESEL
Reg Status: REMOVED
Remove Close Date: 1998-08-18 00:00:00
Year Installed: 1976-01-01 00:00:00
Pipe Type: SINGLE WALL
Delivery System: SUCTION
Monitor Code: 01
UST Monitor Method: SW TANK SW SUCTION PIPE W/ SIRS: SIR DATA ANALYSIS MONTHLY, TANK TEST BIENNIALLY, PIPE TEST TRIENNIALLY

UST Name: UNDERGROUND TANK 104394 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 104394
Tank Type: UNKNOWN
Additional Id: 003
Capacity Gallons: 2000
UST Contents: Not reported
Other Content Info: WASTE OIL
Reg Status: REMOVED
Remove Close Date: 1988-01-28 00:00:00
Year Installed: 1976-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 07
UST Monitor Method: SW TANK SW PRESSURE PIPE W/RESTRICTIVE LLD W/DAILY RECONCILIATION OR WEEKLY GAUGING: TANK AND PIPE TEST ANNUALLY

UST Name: UNDERGROUND TANK 104394 T004
Last Update: 2012-11-02 14:17:38

L M S V OPERATIONS CENTER (Continued) **S103656500**

Permit Number:	104394
Tank Type:	SINGLE WALL
Additional Id:	at4139
Capacity Gallons:	2500
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	REMOVED
Remove Close Date:	1998-08-18 00:00:00
Year Installed:	Not reported
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

Name:	L M S V OPERATIONS CENTER
Address:	3838 CONRAD DR
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	104394
Business Type:	6HK56
EPA Id Number:	CAL000033250
APN:	500-191-19-00
Last HMMD Inspection:	07/29/2010
Facility Telephone:	619-668-5767
Permit Status:	OPEN
Permit Expiration:	06/30/2013
Date Last Updated:	11/02/2012
Facility Owner:	LA MESA-SPRING VALLEY SCHL DST
Facility Mailing Address:	3838 CONRAD DR
Facility Mailing City:	Spring Valley
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	LA MESA-SPRING VALLEY SCHL DST
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Y
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	74-86-2
Name:	ACETYLENE GAS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	PRESSURE RELEASE

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	MIX
Name:	ANTIFREEZE
Other Information:	ZEREX EXTREME LIFE AFC
Material Waste:	Material
Hazardous Categories 1:	ACUTE

L M S V OPERATIONS CENTER (Continued) **S103656500**

Hazardous Categories 2:	CHRONIC
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	MIXTURE
Name:	ARGON GAS/CARBON DIOXIDE
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	PRESSURE RELEASE
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	MIXTURE
Name:	CHEMSEARCH 777 CORROSION INHIBITOR
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	68476-34-6
Name:	DIESEL FUEL
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	GLASS BRIGHT GLASS CLEANER
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	HILTI MC300 BIODEGREASER
Other Information:	DEGREASING SOLVENT (NONE EXISTS-PERHILTI REPRESENTATIVE)
Material Waste:	Material
Hazardous Categories 1:	CHRONIC
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	7727-37-9
Name:	LACQUER THINNER
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE
Permit Number:	104394

L M S V OPERATIONS CENTER (Continued) **S103656500**

Update Date:	11/02/2012
Case Number:	8002-05-9
Name:	OILS, LUBRICATING, MOTOR OILS
Other Information:	HYCRAULIC OILS, AND TRANSMISSION FL
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	CHRONIC

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	7782-44-7
Name:	OXYGEN,GAS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	PRESSURE RELEASE

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	SENSATIONAL-SOAP
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	Not reported

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	UNLEADED GASOLINE
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASH-N-WAX SOAP
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	Not reported

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information:	PARTS WASHER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 221 WASTE OIL & MIXED OIL

L M S V OPERATIONS CENTER (Continued) **S103656500**

Other Information:	WASTE OIL
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information:	OILY ABSORBENT
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 342 ORGANIC LIQUIDS W/METALS
Other Information:	USED ANTIFREEZE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 444 USED BATTERIES
Other Information:	Not reported
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 461 PAINT SLUDGE
Other Information:	LATEX/ENAMEL PAINT WASTE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 491 UNSPECIFIED SLUDGE WASTE
Other Information:	STEAM CLEAN SUMP SLUDGE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	104394
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 888 USED OIL FILTERS
Other Information:	USED OIL FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 07/29/2010
Violation Code: 6HV0224
Violation: MISMANAGED EMPTY CONTAINERS >5GALS.
Violation Citation: Failed to mark date on empty container larger than 5 gallons and/or manage it within one year. 66261.7(e) & (f).
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 07/29/2010
Violation Code: 6HV0227
Violation: HAZWASTE TANK/CONTAINER W/O LABEL/DATE
Violation Citation: Failed to properly label/date hazardous waste container &/or tank. 66262.34(f)
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 07/29/2010
Violation Code: 6HV5103
Violation: SPCC PLAN NOT PREPARED
Violation Citation: Failed to prepare a Spill Prevention Control and Countermeasures Plan. 25270.4.5(a), 25270.5 & 25270.12(a) [ref. CFR 112.3]
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 05/31/2006
Violation Code: 6HV0133
Violation: MANIFEST COPY NOT SENT TO DTSC
Violation Citation: Generator of hazardous waste has not sent the appropriate copy of the manifest to DTSC/Cal-EPA. CCR 66262.23(a)(4)
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 05/31/2006
Violation Code: 6HV0217
Violation: HAZMAT CON. NOT REPACKAGED WI 96 HRS.
Violation Citation: Failed to repackage damaged/deteriorated hazardous material container within 96 hours. 25124(b)(3)(B) & 66262.34(f)
Activity: ACTIVE

Permit Number: 104394
Update Date: 11/02/2012
Inspection Date: 05/31/2006
Violation Code: 6HV0218
Violation: FILTERS:FUEL/OIL NOT LABELED OR CLOSED
Violation Citation: Failed to label &/or close drained used oil filters &/or used fuel filters. 25250.22 and 66266.130(c)(3)
Activity: ACTIVE

L M S V OPERATIONS CENTER (Continued) **S103656500**

Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	05/31/2006
Violation Code:	6HV0224
Violation:	MISMANAGED EMPTY CONTAINERS >5GALS.
Violation Citation:	Failed to mark date on empty container larger than 5 gallons and/or manage it within one year. 66261.7(e) & (f).
Activity:	ACTIVE

Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	05/31/2006
Violation Code:	6HV0227
Violation:	HAZWASTE TANK/CONTAINER W/O LABEL/DATE
Violation Citation:	Failed to properly label/date hazardous waste container &/or tank. 66262.34(f)
Activity:	ACTIVE

Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	05/31/2006
Violation Code:	6HV0228
Violation:	CONTAINER NOT KEPT CLOSED
Violation Citation:	Failed to keep container closed. CFR 265.173
Activity:	ACTIVE

Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	09/30/2008
Violation Code:	6HV1015
Violation:	EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation:	Did not have adequate employee training program 2732 &/or 25504(c)
Activity:	ACTIVE

Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	09/30/2008
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

Permit Number:	104394
Update Date:	11/02/2012
Inspection Date:	09/30/2008
Violation Code:	6HV0223
Violation:	MISMANAGED NON-EMPTY CONTAINER/LINER
Violation Citation:	Failed to properly manage non-empty container or inner liner removed from a container. 66261.7 (b), (d) &/or (r)
Activity:	ACTIVE

UST:

UST Name:	UNDERGROUND TANK 104394 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	104394

L M S V OPERATIONS CENTER (Continued) **S103656500**

Tank Type:	SINGLE WALL
Additional Id:	001
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1998-12-31 00:00:00
Year Installed:	1976-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	SUCTION
Monitor Code:	01
UST Monitor Method:	SW TANK SW SUCTION PIPE W/ SIRS: SIR DATA ANALYSIS MONTHLY, TANK TEST BIENNIALLY, PIPE TEST TRIENNIALLY
UST Name:	UNDERGROUND TANK 104394 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	104394
Tank Type:	SINGLE WALL
Additional Id:	002
Capacity Gallons:	6000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	REMOVED
Remove Close Date:	1998-08-18 00:00:00
Year Installed:	1976-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	SUCTION
Monitor Code:	01
UST Monitor Method:	SW TANK SW SUCTION PIPE W/ SIRS: SIR DATA ANALYSIS MONTHLY, TANK TEST BIENNIALLY, PIPE TEST TRIENNIALLY
UST Name:	UNDERGROUND TANK 104394 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	104394
Tank Type:	UNKNOWN
Additional Id:	003
Capacity Gallons:	2000
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1988-01-28 00:00:00
Year Installed:	1976-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	07
UST Monitor Method:	SW TANK SW PRESSURE PIPE W/RESTRICTIVE LLD W/DAILY RECONCILIATION OR WEEKLY GAUGING: TANK AND PIPE TEST ANNUALLY
UST Name:	UNDERGROUND TANK 104394 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	104394
Tank Type:	SINGLE WALL
Additional Id:	at4139
Capacity Gallons:	2500
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	REMOVED

L M S V OPERATIONS CENTER (Continued) **S103656500**

Remove Close Date: 1998-08-18 00:00:00
Year Installed: Not reported
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

CERS HAZ WASTE:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Site ID: 42321
CERS ID: 10362832
CERS Description: Hazardous Waste Generator

SWEEPS UST:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City: SPRING VALLEY
Status: Active
Comp Number: 4394
Number: 9
Board Of Equalization: 44-022031
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-004394-000001
Tank Status: A
Capacity: 12000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: 2

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City: SPRING VALLEY
Status: Active
Comp Number: 4394
Number: 9
Board Of Equalization: 44-022031
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-004394-000002
Tank Status: A
Capacity: 6000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: OTHER

L M S V OPERATIONS CENTER (Continued) **S103656500**

Number Of Tanks: Not reported

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City: SPRING VALLEY
Status: Not reported
Comp Number: 4394
Number: Not reported
Board Of Equalization: 44-022031
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-004394-000003
Tank Status: Not reported
Capacity: 2000
Active Date: Not reported
Tank Use: PETROLEUM
STG: WASTE
Content: Not reported
Number Of Tanks: 1

HIST UST:
Name: LMSV OPERATIONS CENTER
Address: 3838 CONRAD DRIVE
City,State,Zip: SPRING VALLEY, CA 92077
File Number: 0002B63D
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002B63D.pdf
Region: Not reported
Facility ID: Not reported
Facility Type: Not reported
Other Type: Not reported
Contact Name: Not reported
Telephone: Not reported
Owner Name: Not reported
Owner Address: Not reported
Owner City,St,Zip: Not reported
Total Tanks: Not reported

Tank Num: Not reported
Container Num: Not reported
Year Installed: Not reported
Tank Capacity: Not reported
Tank Used for: Not reported
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

CERS TANKS:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Site ID: 42321
CERS ID: 10362832

L M S V OPERATIONS CENTER (Continued) **S103656500**

CERS Description: Aboveground Petroleum Storage

CORTESE:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0607302492
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0607302592
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HIST CORTESE:
edr_fname: LA MESA-SPRING VALLEY SCH
edr_fadd1: 3838 CONRAD

L M S V OPERATIONS CENTER (Continued) **S103656500**

City,State,Zip: SPRING VALLEY, CA 92077
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT741

edr_fname: SPRING VALLEY MIDDLE SCHO
edr_fadd1: 3838 CONRAD
City,State,Zip: SPRING VALLEY, CA 92077
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT3835

NPDES:
Name: LA MESA SPRING VALLEY SCH D
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 91977
Facility Status: Active
NPDES Number: CAS000001
Region: 9
Agency Number: 0
Regulatory Measure ID: 218185
Place ID: Not reported
Order Number: 97-03-DWQ
WDID: 9 37I001427
Regulatory Measure Type: Enrollee
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 03/27/1992
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: 4750 Date Ave
Discharge Name: La Mesa Spring Valley School Dist
Discharge City: La Mesa
Discharge State: California
Discharge Zip: 91942
Status: Not reported
Status Date: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported

NPDES as of 03/2018:
NPDES Number: Not reported
Status: Not reported
Agency Number: Not reported
Region: 9
Regulatory Measure ID: 218185
Order Number: Not reported
Regulatory Measure Type: Industrial
Place ID: Not reported
WDID: 9 37I001427
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	03/27/1992
Status:	Active
Status Date:	03/27/1992
Place Size:	Not reported
Place Size Unit:	Acres
Contact:	Nick Richard
Contact Title:	Not reported
Contact Phone:	619-668-5767
Contact Phone Ext:	4728
Contact Email:	nick.richard@lmsvsd.net
Operator Name:	La Mesa Spring Valley School Dist
Operator Address:	4750 Date Ave
Operator City:	La Mesa
Operator State:	California
Operator Zip:	91942
Operator Contact:	Nick Richard
Operator Contact Title:	Not reported
Operator Contact Phone:	619-668-5767
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	nick.richard@lmsvsd.net
Operator Type:	Special District
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	619-668-5767
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N

L M S V OPERATIONS CENTER (Continued) **S103656500**

Receiving Water Name:	Sweetwater River
Certifier:	David Feliciano
Certifier Title:	Chief Business Officer
Certification Date:	15-JUN-15
Primary Sic:	4151-School Buses
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	9
Regulatory Measure ID:	218185
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	9 37I001427
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	03/27/1992
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	La Mesa Spring Valley School Dist
Discharge Address:	4750 Date Ave
Discharge City:	La Mesa
Discharge State:	California
Discharge Zip:	91942
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

Name:	LA MESA SPRING VALLEY SCH D
Address:	3838 CONRAD DR
City,State,Zip:	SPRING VALLEY, CA 91977
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	9 37I001427
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	03/27/1992
Operator Name:	La Mesa Spring Valley School Dist
Operator Address:	4750 Date Ave
Operator City:	La Mesa
Operator State:	California
Operator Zip:	91942

L M S V OPERATIONS CENTER (Continued) **S103656500**

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	9
Regulatory Measure ID:	218185
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	9 37I001427
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	03/27/1992
Status:	Active
Status Date:	03/27/1992
Place Size:	Not reported
Place Size Unit:	Acres
Contact:	Nick Richard
Contact Title:	Not reported
Contact Phone:	619-668-5767
Contact Phone Ext:	4728
Contact Email:	nick.richard@lmsvsd.net
Operator Name:	La Mesa Spring Valley School Dist
Operator Address:	4750 Date Ave
Operator City:	La Mesa
Operator State:	California
Operator Zip:	91942
Operator Contact:	Nick Richard
Operator Contact Title:	Not reported
Operator Contact Phone:	619-668-5767
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	nick.richard@lmsvsd.net
Operator Type:	Special District
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	619-668-5767
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Sweetwater River
Certifier:	David Feliciano
Certifier Title:	Chief Business Officer
Certification Date:	15-JUN-15
Primary Sic:	4151-School Buses
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	9
Regulatory Measure ID:	218185
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	9 37I001427
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	03/27/1992
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	La Mesa Spring Valley School Dist
Discharge Address:	4750 Date Ave
Discharge City:	La Mesa
Discharge State:	California
Discharge Zip:	91942
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

SAN DIEGO CO LOP:

Name:	L M S V OPERATIONS CENTER
Address:	3838 CONRAD DR
City,State,Zip:	SPRING VALLEY, CA 91977
Record ID:	DEH1998-LSAM-H04394-002
Record Status:	Completed
Opened Date:	09/23/1998
Parcel Number:	500-191-19-00
Case Type:	LOP - Local Oversight Program
Historical Name:	SPRING VALLEY MIDDLE SCHOOL
SWRCB Global ID:	T0607302492
Funding:	F - LOP Federal Fund
Lead Agency:	DEH/SAM
Lead Agency Date:	09/24/1998
Census Tract:	137.01
Community:	Spring Valley
Jurisdiction:	UNINCORPORATED

L M S V OPERATIONS CENTER (Continued) **S103656500**

Watershed Basin Number:	909.12
Water Purveyor:	HELIX WATER DISTRICT LAND
Fire Agency:	SAN MIGUEL FIRE PROT DIST
Latitude:	32.7491717
Longitude:	-116.9879515
X MapCoord:	6334770.668
Y MapCoord:	1853193.800

Name:	L M S V OPERATIONS CENTER
Address:	3838 CONRAD DR
City,State,Zip:	SPRING VALLEY, CA 91977
Record ID:	DEH1998-LSAM-H04394-003
Record Status:	Completed
Opened Date:	12/31/1998
Parcel Number:	500-191-19-00
Case Type:	LOP - Local Oversight Program
Historical Name:	SPRING VALLEY MIDDLE SCHOOL
SWRCB Global ID:	T0607302592
Funding:	F - LOP Federal Fund
Lead Agency:	DEH/SAM
Lead Agency Date:	01/13/1999
Census Tract:	137.01
Community:	Spring Valley
Jurisdiction:	UNINCORPORATED
Watershed Basin Number:	909.12
Water Purveyor:	HELIX WATER DISTRICT LAND
Fire Agency:	SAN MIGUEL FIRE PROT DIST
Latitude:	32.7491717
Longitude:	-116.9879515
X MapCoord:	6334770.668
Y MapCoord:	1853193.800

CIWQS:

Name:	LA MESA SPRING VALLEY SCH D
Address:	3838 CONRAD DR
City,State,Zip:	SPRING VALLEY, CA 91977
Agency:	La Mesa Spring Valley School Dist
Agency Address:	4750 Date Ave, La Mesa, CA 91942
Place/Project Type:	Industrial - School Buses
SIC/NAICS:	4151
Region:	9
Program:	INDSTW
Regulatory Measure Status:	Active
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	9 37I001427
NPDES Number:	CAS000001
Adoption Date:	Not reported
Effective Date:	03/27/1992
Termination Date:	Not reported
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0

L M S V OPERATIONS CENTER (Continued) **S103656500**

Latitude: 32.74887
Longitude: -116.98735

CERS:
Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Site ID: 42321
CERS ID: T0607302592
CERS Description: Leaking Underground Storage Tank Cleanup Site

Violations:
Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 02/09/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 01/19/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description: Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes: Returned to compliance on 02/13/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016

L M S V OPERATIONS CENTER (Continued) **S103656500**

Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to maintain SPCC plan onsite (applies if facility is manned at least four (4) hours per day).
Violation Notes:	Returned to compliance on 03/24/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	02-07-2013
Citation:	HSC 6.95 25510 - California Health and Safety Code, Chapter 6.95, Section(s) 25510
Violation Description:	Failure to update hazardous material inventory within 30 days when one of the following occurs: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials A change of business address, business ownership, or business name.
Violation Notes:	Returned to compliance on 02/28/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	01-19-2018
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to comply with one or more of the following requirements: 1. Have record of inspections and integrity tests signed by the appropriate supervisor or inspector. 2. Keep written procedures and records of inspections and integrity tests for at least three years. 3. Keep comparison records.
Violation Notes:	Returned to compliance on 02/13/2018.
Violation Division:	San Diego County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	02-04-2016
Citation:	HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description:	Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes:	Returned to compliance on 03/24/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER

L M S V OPERATIONS CENTER (Continued) **S103656500**

Violation Date:	02-04-2016
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes:	Returned to compliance on 03/24/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	02-04-2016
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 03/24/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	02-07-2013
Citation:	19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description:	Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes:	Returned to compliance on 03/26/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	01-19-2018
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 01/19/2018.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffin Donelle Inspection ID:5842574

L M S V OPERATIONS CENTER (Continued) **S103656500**

Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

L M S V OPERATIONS CENTER (Continued) **S103656500**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 42321
Facility Name: L M S V OPERATIONS CENTER
Env Int Type Code: HWG
Program ID: 10362832
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 32.748990
Longitude: -116.987390

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: LA MESA-SPRING VALLEY SCHOOL DI
Entity Title: Not reported
Affiliation Address: 4750 DATE AVENUE
Affiliation City: LA MESA
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91942-9293
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Operator
Entity Name: LA MESA-SPRING VALLEY SCHL DST
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3838 CONRAD DR
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA

L M S V OPERATIONS CENTER (Continued) **S103656500**

Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Environmental Contact
Entity Name:	NICK RICHARD
Entity Title:	Not reported
Affiliation Address:	3838 CONRAD DRIVE
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91977
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	L M S V OPERATIONS CENTER
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Name:	L M S V OPERATIONS CENTER
Address:	3838 CONRAD DR
City,State,Zip:	SPRING VALLEY, CA 919771422
Site ID:	42321
CERS ID:	T0607302492
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Violations:

Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	01-19-2018
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 02/09/2018.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	01-19-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 01/19/2018.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP

L M S V OPERATIONS CENTER (Continued) **S103656500**

Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description: Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes: Returned to compliance on 02/13/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to maintain SPCC plan onsite (applies if facility is manned at least four (4) hours per day).
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-07-2013
Citation: HSC 6.95 25510 - California Health and Safety Code, Chapter 6.95, Section(s) 25510
Violation Description: Failure to update hazardous material inventory within 30 days when one of the following occurs: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 02/28/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to comply with one or more of the following requirements: 1. Have record of inspections and integrity tests signed by the appropriate supervisor or inspector. 2. Keep written procedures and records of inspections and integrity tests for at least three years. 3. Keep comparison records.
Violation Notes: Returned to compliance on 02/13/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: APSA

L M S V OPERATIONS CENTER (Continued) **S103656500**

Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-07-2013
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes: Returned to compliance on 03/26/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP

L M S V OPERATIONS CENTER (Continued) **S103656500**

Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 01/19/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health

L M S V OPERATIONS CENTER (Continued) **S103656500**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 42321
Facility Name: L M S V OPERATIONS CENTER
Env Int Type Code: HWG
Program ID: 10362832
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 32.748990
Longitude: -116.987390

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: LA MESA-SPRING VALLEY SCHOOL DI
Entity Title: Not reported
Affiliation Address: 4750 DATE AVENUE
Affiliation City: LA MESA
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91942-9293
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Operator
Entity Name: LA MESA-SPRING VALLEY SCHL DST
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3838 CONRAD DR
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: NICK RICHARD
Entity Title: Not reported
Affiliation Address: 3838 CONRAD DRIVE
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: L M S V OPERATIONS CENTER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Site ID: 42321
CERS ID: T0607303003
CERS Description: Cleanup Program Site

Violations:
Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter

L M S V OPERATIONS CENTER (Continued) **S103656500**

6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 02/09/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 01/19/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description: Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes: Returned to compliance on 02/13/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to maintain SPCC plan onsite (applies if facility is manned at least four (4) hours per day).
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-07-2013
Citation: HSC 6.95 25510 - California Health and Safety Code, Chapter 6.95, Section(s) 25510
Violation Description: Failure to update hazardous material inventory within 30 days when one of the following occurs: A 100 percent or more increase in the

L M S V OPERATIONS CENTER (Continued) **S103656500**

quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 02/28/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to comply with one or more of the following requirements: 1. Have record of inspections and integrity tests signed by the appropriate supervisor or inspector. 2. Keep written procedures and records of inspections and integrity tests for at least three years. 3. Keep comparison records.
Violation Notes: Returned to compliance on 02/13/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in

L M S V OPERATIONS CENTER (Continued) **S103656500**

safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-07-2013
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes: Returned to compliance on 03/26/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 01/19/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes

L M S V OPERATIONS CENTER (Continued) **S103656500**

Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 42321
Facility Name: L M S V OPERATIONS CENTER
Env Int Type Code: HWG
Program ID: 10362832
Coord Name: Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Ref Point Type Desc: Center of a facility or station.
Latitude: 32.748990
Longitude: -116.987390

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: LA MESA-SPRING VALLEY SCHOOL DI
Entity Title: Not reported
Affiliation Address: 4750 DATE AVENUE
Affiliation City: LA MESA
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91942-9293
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Operator
Entity Name: LA MESA-SPRING VALLEY SCHL DST
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3838 CONRAD DR
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: NICK RICHARD
Entity Title: Not reported
Affiliation Address: 3838 CONRAD DRIVE
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: L M S V OPERATIONS CENTER

L M S V OPERATIONS CENTER (Continued) **S103656500**

Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: L M S V OPERATIONS CENTER
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 919771422
Site ID: 42321
CERS ID: 10362832
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 02/09/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 01/19/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description: Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes: Returned to compliance on 02/13/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

L M S V OPERATIONS CENTER (Continued) **S103656500**

Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	02-04-2016
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to maintain SPCC plan onsite (applies if facility is manned at least four (4) hours per day).
Violation Notes:	Returned to compliance on 03/24/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS

Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	02-07-2013
Citation:	HSC 6.95 25510 - California Health and Safety Code, Chapter 6.95, Section(s) 25510
Violation Description:	Failure to update hazardous material inventory within 30 days when one of the following occurs: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials A change of business address, business ownership, or business name.
Violation Notes:	Returned to compliance on 02/28/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	01-19-2018
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to comply with one or more of the following requirements: 1. Have record of inspections and integrity tests signed by the appropriate supervisor or inspector. 2. Keep written procedures and records of inspections and integrity tests for at least three years. 3. Keep comparison records.
Violation Notes:	Returned to compliance on 02/13/2018.
Violation Division:	San Diego County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS

Site ID:	42321
Site Name:	L M S V OPERATIONS CENTER
Violation Date:	02-04-2016
Citation:	HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description:	Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes:	Returned to compliance on 03/24/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

L M S V OPERATIONS CENTER (Continued) **S103656500**

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-04-2016
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 03/24/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 02-07-2013
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes: Returned to compliance on 03/26/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42321
Site Name: L M S V OPERATIONS CENTER
Violation Date: 01-19-2018
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 01/19/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes

L M S V OPERATIONS CENTER (Continued) **S103656500**

Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5842574
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:4786723
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health

L M S V OPERATIONS CENTER (Continued) **S103656500**

Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4097774
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 42321
Facility Name: L M S V OPERATIONS CENTER
Env Int Type Code: HWG
Program ID: 10362832
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 32.748990
Longitude: -116.987390

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: LA MESA-SPRING VALLEY SCHOOL DI
Entity Title: Not reported
Affiliation Address: 4750 DATE AVENUE
Affiliation City: LA MESA
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91942-9293
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Operator
Entity Name: LA MESA-SPRING VALLEY SCHL DST
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (619) 668-5700

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3838 CONRAD DR
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported

L M S V OPERATIONS CENTER (Continued) **S103656500**

Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: NICK RICHARD
Entity Title: Not reported
Affiliation Address: 3838 CONRAD DRIVE
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91977
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: L M S V OPERATIONS CENTER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: LA MESA SPRING VALLEY SCH D
Address: 3838 CONRAD DR
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 535248
CERS ID: 235928
CERS Description: Industrial Facility Storm Water

Affiliation:
Affiliation Type Desc: Owner/Operator
Entity Name: La Mesa Spring Valley School Dist
Entity Title: Operator
Affiliation Address: 4750 Date Ave
Affiliation City: La Mesa
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91942
Affiliation Phone: Not reported

C28 **L.M.S.V. OPERATIONS CENTER** **HIST UST** **U001572339**
East **3838 CONRAD DR** **N/A**
1/8-1/4 **SPRING VALLEY, CA 92077**
0.136 mi.
716 ft. **Site 2 of 9 in cluster C**

Relative: HIST UST:
Lower Name: L.M.S.V. OPERATIONS CENTER
Address: 3838 CONRAD DR
Actual: City,State,Zip: SPRING VALLEY, CA 92077
433 ft. File Number: Not reported

L.M.S.V. OPERATIONS CENTER (Continued) **U001572339**

URL:	Not reported
Region:	STATE
Facility ID:	00000030279
Facility Type:	Other
Other Type:	SCHOOL DISTRICT
Contact Name:	STANLEY OLSON
Telephone:	6194696171
Owner Name:	LA MESA-SPRING VALLEY SCHOOL D
Owner Address:	4750 DATE AVENUE
Owner City,St,Zip:	LA MESA, CA 92041
Total Tanks:	0003
Tank Num:	001
Container Num:	001
Year Installed:	1976
Tank Capacity:	00012000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	10
Tank Num:	002
Container Num:	002
Year Installed:	1976
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	10
Tank Num:	003
Container Num:	003
Year Installed:	1976
Tank Capacity:	00002000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	None

C29 **LA MESA-SPRING VALLEY SCH.DIST** **LUST** **S102432421**
East **3838 CONRAD DR** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.136 mi.
716 ft. **Site 3 of 9 in cluster C**

Relative:
Lower

Actual:
433 ft.

LUST REG 9:

Region:	9
Status:	Case Closed
Case Number:	9UT741
Local Case:	H04394-001
Substance:	0
Qty Leaked:	0
Abate Method:	Not reported
Local Agency:	San Diego
How Found:	Not reported
How Stopped:	Close Tank
Source:	Not reported
Cause:	Not reported

LA MESA-SPRING VALLEY SCH.DIST (Continued) **S102432421**

Lead Agency:	Local Agency
Case Type:	Aquifer affected
Date Found:	05/29/1987
Date Stopped:	/ /
Confirm Date:	/ /
Submit Workplan:	Not reported
Prelim Assess:	/ /
Desc Pollution:	Not reported
Remed Plan:	/ /
Remed Action:	3/2/88
Began Monitor:	Not reported
Release Date:	05/29/1987
Enforce Date:	Not reported
Closed Date:	3/10/88
Enforce Type:	Not reported
Pilot Program:	LOP
Basin Number:	909.12
GW Depth:	Not reported
Beneficial Use:	Municipal groundwater use
NPDES Number:	Not reported
Priority:	Low priority. Priority ranking can change over time.
File Dispn:	File archived, case closed and file moved to storage
Interim Remedial Actions:	Yes
Cleanup and Abatement order Number:	Not reported
Waste Discharge Requirement Number:	Not reported

C30 **LA MESA SPRING VALLEY SCHOOL DIST (OPS)** **RCRA NonGen / NLR** **1024787463**
East **3838 CONRAD DR** **CAL000033250**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.136 mi.
716 ft. **Site 4 of 9 in cluster C**

Relative: **Lower**

Actual: **433 ft.**

RCRA NonGen / NLR:

Date form received by agency:	1990-05-16 00:00:00.0
Facility name:	LA MESA SPRING VALLEY SCHOOL DIST (OPS)
Facility address:	3838 CONRAD DR SPRING VALLEY, CA 91977-1422
EPA ID:	CAL000033250
Mailing address:	4750 DATE AVENUE LA MESA, CA 91942-0000
Contact:	COLLEEN HACKNER
Contact address:	3838 CONRAD DR SPRING VALLEY, CA 91977
Contact country:	Not reported
Contact telephone:	619-668-5760
Contact email:	COLLEEN.HACKNER@LMSVSCHOOLS.ORG
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	LM-SV SCHOOL DISTRICT
Owner/operator address:	4750 DATE AVENUE LA MESA, CA 91942
Owner/operator country:	Not reported
Owner/operator telephone:	619-668-5700
Owner/operator email:	Not reported

LA MESA SPRING VALLEY SCHOOL DIST (OPS) (Continued) **1024787463**

Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	COLLEEN HACKNER
Owner/operator address:	3838 CONRAD DR SPRING VALLEY, CA 91977
Owner/operator country:	Not reported
Owner/operator telephone:	619-668-5760
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

C31 **SPRING VALLEY MIDDLE SCHOOL** **LUST** **S103723469**
East **3838 CONRAD DR** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.136 mi.
716 ft. **Site 5 of 9 in cluster C**

Relative:
Lower

Actual:
433 ft.

LUST REG 9:

Region:	9
Status:	Preliminary site assessment underway
Case Number:	9UT3835
Local Case:	H04394-003
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Local Agency:	San Diego
How Found:	Tank Closure
How Stopped:	Close Tank
Source:	Unknown
Cause:	Unknown

SPRING VALLEY MIDDLE SCHOOL (Continued) **S103723469**

Lead Agency: Local Agency
Case Type: Soil only
Date Found: 12/31/1998
Date Stopped: 12/31/1998
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 01/13/1999
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 12/31/1998
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 909.12
GW Depth: 5'
Beneficial Use: MUNBU
NPDES Number: Not reported
Priority: Medium priority
File Dispn: Administratively opened on database, however no file physically exists
Interim Remedial Actions: Not reported
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

C32 **SPRING VALLEY MIDDLE SCHOOL** **LUST** **S103472142**
ENE **3900 CONRAD DR** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.144 mi.
762 ft. **Site 6 of 9 in cluster C**

Relative: LUST REG 9:
Higher
Region: 9
Actual: Status: Preliminary site assessment workplan submitted
442 ft. Case Number: 9UT3725
Local Case: H04394-002
Substance: Diesel
Qty Leaked: 0
Abate Method: Not reported
Local Agency: San Diego
How Found: Tank Closure
How Stopped: Close Tank
Source: Tank
Cause: Corrosion
Lead Agency: Local Agency
Case Type: Soil only
Date Found: 08/18/1998
Date Stopped: 08/18/1998
Confirm Date: 09/24/1998
Submit Workplan: 10/1/98
Prelim Assess: / /
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 09/23/1998
Enforce Date: Not reported

SPRING VALLEY MIDDLE SCHOOL (Continued) **S103472142**

Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 909.12
GW Depth: Not reported
Beneficial Use: MUNBU
NPDES Number: Not reported
Priority: 2A
File Dispn: Administratively opened on database, however no file physically exists
Interim Remedial Actions: Not reported
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

C33 **SPRING VALLEY MIDDLE SCHO** **HIST CORTESE** **S103974014**
ENE **3900 CONRAD** **N/A**
1/8-1/4 **SPRING VALLEY, CA**
0.144 mi.
762 ft. **Site 7 of 9 in cluster C**

Relative: **Higher**
Actual: **442 ft.**

HIST CORTESE:
edr_fname: SPRING VALLEY MIDDLE SCHO
edr_fadd1: 3900 CONRAD
City,State,Zip: SPRING VALLEY, CA
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT3725

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34 **GAL CAB AUTO REPAIR** **RCRA NonGen / NLR** **1025874911**
South **9612 DALE AVE #2** **CAL000448044**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.162 mi.
855 ft.

Relative: **Lower**
Actual: **422 ft.**

RCRA NonGen / NLR:
Date form received by agency: 2019-08-06 00:00:00.0
Facility name: GAL CAB AUTO REPAIR
Facility address: 9612 DALE AVE #2
SPRING VALLEY, CA 91977
EPA ID: CAL000448044
Mailing address: 5842 ESTELLE ST
SAN DIEGO, CA 92115
Contact: FRANCISCO CABALLERO
Contact address: 9612 DALE AVE #2
SPRING VALLEY, CA 91977
Contact country: Not reported
Contact telephone: 619-518-9645
Contact email: GALCAB.AUTOREPAIR@GMAIL.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: FRANCISCO GABALLERO
Owner/operator address: 5842 ESTELLE ST
SAN DIEGO, CA 92115

GAL CAB AUTO REPAIR (Continued) **1025874911**

Owner/operator country: Not reported
Owner/operator telephone: 619-518-9645
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: FRANCISCO CABALLERO
Owner/operator address: 9612 DALE AVE #2
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-518-9645
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

C35 **AUTO ZONE #4155** **San Diego Co. HMMD** **S112877251**
East **9710 CAMPO RD** **CERS HAZ WASTE** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977** **CERS**
0.163 mi.
860 ft. **Site 8 of 9 in cluster C**

Relative:
Lower

Actual:
421 ft.

HMMD SAN DIEGO:
Name: AUTO ZONE #4155
Address: 9710 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: CAL000379043
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 619-469-1605

AUTO ZONE #4155 (Continued) **S112877251**

Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 04/15/2020
Facility Owner: Not reported
Facility Mailing Address: Dept 8190, 123 South Front Street, Memphis, TN 38103
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Waste and Materials:

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0226635
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-24T01:52:27.000
Chemical Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0226636
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-24T01:52:27.000
Chemical Name: WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name: WASTE CORROSIVE - ACIDIC
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0226637
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-24T01:52:27.000
Chemical Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name: WASTE ABSORBENT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0226638
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-24T01:52:27.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL

AUTO ZONE #4155 (Continued) **S112877251**

Common Name:	WASTE PETROLEUM OIL
Case Number:	Not reported
Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2020-HWAST-0226639
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2020-03-24T01:52:27.000
Chemical Name:	WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name:	FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number:	Not reported
Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2020-HWAST-0226640
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2020-03-24T01:52:27.000
Chemical Name:	WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION
Common Name:	WASTE OXIDIZERS
Case Number:	Not reported
Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0136246
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-11-02T02:07:11.000
Chemical Name:	WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name:	WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number:	Not reported
Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0136247
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-11-02T02:07:11.000
Chemical Name:	WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name:	WASTE CORROSIVE - ACIDIC
Case Number:	Not reported
Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0136248
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-11-02T02:07:11.000
Chemical Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name:	WASTE ABSORBENT
Case Number:	Not reported

AUTO ZONE #4155 (Continued) **S112877251**

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0136249
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-02T02:07:11.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL
Common Name: WASTE PETROLEUM OIL
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0136250
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-02T02:07:11.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0136251
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-02T02:07:11.000
Chemical Name: WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION
Common Name: WASTE OXIDIZERS
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0146722
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-07T00:46:55.000
Chemical Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0146723
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-07T00:46:55.000
Chemical Name: WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name: WASTE CORROSIVE - ACIDIC
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed

AUTO ZONE #4155 (Continued) **S112877251**

Active Permit: Y
Child Record Id: DEH2018-HWAST-0146724
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-07T00:46:55.000
Chemical Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name: WASTE ABSORBENT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0146725
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-07T00:46:55.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL
Common Name: WASTE PETROLEUM OIL
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0146726
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-07T00:46:55.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0146727
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-07T00:46:55.000
Chemical Name: WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION
Common Name: WASTE OXIDIZERS
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0173352
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-27T20:54:03.000
Chemical Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0173353

AUTO ZONE #4155 (Continued) **S112877251**

Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-27T20:54:03.000
Chemical Name: WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name: WASTE CORROSIVE - ACIDIC
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0173354
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-27T20:54:03.000
Chemical Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name: WASTE ABSORBENT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0173355
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-27T20:54:03.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL
Common Name: WASTE PETROLEUM OIL
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0173356
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-27T20:54:03.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0173357
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-27T20:54:03.000
Chemical Name: WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION
Common Name: WASTE OXIDIZERS
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0185433
Trade Secret: N
Hazardous Material Type: Not reported

AUTO ZONE #4155 (Continued) **S112877251**

Last Updated: 2019-08-06T02:32:46.000
Chemical Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0185434
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-08-06T02:32:46.000
Chemical Name: WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name: WASTE CORROSIVE - ACIDIC
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0185435
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-08-06T02:32:46.000
Chemical Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name: WASTE ABSORBENT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0185436
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-08-06T02:32:46.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL
Common Name: WASTE PETROLEUM OIL
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0185437
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-08-06T02:32:46.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0185438
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-08-06T02:32:46.000
Chemical Name: WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION

AUTO ZONE #4155 (Continued) **S112877251**

Common Name: WASTE OXIDIZERS
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0089806
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-08-09T02:31:34.000
Chemical Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0089807
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-08-09T02:31:34.000
Chemical Name: WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name: WASTE CORROSIVE - ACIDIC
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0089808
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-08-09T02:31:34.000
Chemical Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name: WASTE ABSORBENT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0089809
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-08-09T02:31:34.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL
Common Name: WASTE PETROLEUM OIL
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0089810
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-08-09T02:31:34.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number: Not reported

AUTO ZONE #4155 (Continued) **S112877251**

Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0089811
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-08-09T02:31:34.000
Chemical Name:	WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION
Common Name:	WASTE OXIDIZERS
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0170057
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-10-11T00:54:30.000
Chemical Name:	WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name:	WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0170058
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-10-11T00:54:30.000
Chemical Name:	WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name:	WASTE CORROSIVE - ACIDIC
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0170059
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-10-11T00:54:30.000
Chemical Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name:	WASTE ABSORBENT
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0170060
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-10-11T00:54:30.000
Chemical Name:	WASTE 221 WASTE OIL & MIXED OIL
Common Name:	WASTE PETROLEUM OIL
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-217107
Permit Status:	Permit Renewed

AUTO ZONE #4155 (Continued) **S112877251**

Active Permit: Y
Child Record Id: DEH2018-HWAST-0170061
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-10-11T00:54:30.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0170062
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-10-11T00:54:30.000
Chemical Name: WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION
Common Name: WASTE OXIDIZERS
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0231654
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-04-15T07:42:42.000
Chemical Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Common Name: WASTE 123 UNSPECIFIED ALKALINE SOL'N
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0231655
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-04-15T07:42:42.000
Chemical Name: WASTE 791 LIQUIDS WITH PH <OR= 2
Common Name: WASTE CORROSIVE - ACIDIC
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0231656
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-04-15T07:42:42.000
Chemical Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Common Name: WASTE ABSORBENT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0231657

AUTO ZONE #4155 (Continued) **S112877251**

Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-04-15T07:42:42.000
Chemical Name: WASTE 221 WASTE OIL & MIXED OIL
Common Name: WASTE PETROLEUM OIL
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0231658
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-04-15T07:42:42.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: FLAMMABLE & AEROSOL WASTE PRODUCT
Case Number: Not reported

Record ID: DEH2012-HUPFP-217107
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2020-HWAST-0231659
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-04-15T07:42:42.000
Chemical Name: WASTE 131 AQUEOUS SOL'N W/REACTIVE ANION
Common Name: WASTE OXIDIZERS
Case Number: Not reported

CERS HAZ WASTE:
Name: AUTO ZONE #4155
Address: 9710 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 9714
CERS ID: 10396264
CERS Description: Hazardous Waste Generator

CERS:
Name: AUTO ZONE #4155
Address: 9710 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 9714
CERS ID: 10396264
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 9714
Site Name: AUTO ZONE #4155
Violation Date: 06-10-2019
Citation: 22 CCR 15 66265.192(a) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(a)
Violation Description: Failure to obtain and maintain a written assessment reviewed and certified by an independent, qualified, professional engineer prior to placing the tank system in service. The written assessment shall state that, the new hazardous waste tank system has sufficient structural integrity, is acceptable for the transferring, storing and treating of

AUTO ZONE #4155 (Continued) **S112877251**

hazardous waste, and that the tanks and containment system including the foundation, structural support, seams, connections, and pressure controls (if applicable) are suitably designed to meet the regulation.

Violation Notes: Inspection Sequence ID:6191479
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-02-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5283342
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-10-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Soquiat Joseph Inspection ID:6191479
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-13-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5672569
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-10-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Soquiat Joseph Inspection ID:6191479
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-13-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5672569
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:

Affiliation Type Desc: CUPA District

AUTO ZONE #4155 (Continued) **S112877251**

Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Identification Signer
Entity Name:	Deborah Williams
Entity Title:	Environmental Coordinator
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Andrew Beaven
Entity Title:	Not reported
Affiliation Address:	Dept 8190, 123 South Front Street
Affiliation City:	Memphis
Affiliation State:	TN
Affiliation Country:	Not reported
Affiliation Zip:	38103
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	AutoZone Stores Inc
Entity Title:	Not reported
Affiliation Address:	123 South Front Street
Affiliation City:	Memphis
Affiliation State:	TN
Affiliation Country:	United States
Affiliation Zip:	38103
Affiliation Phone:	(901) 495-6500
Affiliation Type Desc:	Parent Corporation
Entity Name:	Auto Zone
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Autozone
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

AUTO ZONE #4155 (Continued) **S112877251**

Affiliation Phone:	(760) 471-0463
Affiliation Type Desc:	Property Owner
Entity Name:	CHARRY & CHARRY LLC
Entity Title:	Not reported
Affiliation Address:	2913 STONEFIELD DRIVE
Affiliation City:	JAMEL
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91935
Affiliation Phone:	(619) 729-3729
Affiliation Type Desc:	Document Preparer
Entity Name:	Deborah Williams
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	Dept 8190, 123 South Front Street
Affiliation City:	Memphis
Affiliation State:	TN
Affiliation Country:	Not reported
Affiliation Zip:	38103
Affiliation Phone:	Not reported

C36 **AUTOZONE #4155** **RCRA NonGen / NLR** **1024836129**
East **9710 CAMPO RD** **CAL000379043**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.163 mi.
860 ft. **Site 9 of 9 in cluster C**

Relative:
Lower

Actual:
421 ft.

RCRA NonGen / NLR:

Date form received by agency:	2012-10-17 00:00:00.0
Facility name:	AUTOZONE #4155
Facility address:	9710 CAMPO RD SPRING VALLEY, CA 91977-1415
EPA ID:	CAL000379043
Mailing address:	DEPT 8190, 123 S FRONT ST MEMPHIS, TN 38103-3607
Contact:	BRYAN BLAIR
Contact address:	DEPT 8190, 123 SOUTH FRONT STREET MEMPHIS, TN 38103
Contact country:	Not reported
Contact telephone:	901-495-7217
Contact email:	BRYAN.BLAIR@AUTOZONE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

AUTOZONE #4155 (Continued) **1024836129**

Owner/Operator Summary:
Owner/operator name: BRYAN BLAIR
Owner/operator address: DEPT 8190, 123 SOUTH FRONT STREET
MEMPHIS, TN 38103
Owner/operator country: Not reported
Owner/operator telephone: 901-495-7217
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: AUTO ZONE CORPORTATION
Owner/operator address: 123 S FRONT ST
MEMPHIS, TN 38103
Owner/operator country: Not reported
Owner/operator telephone: 901-495-6500
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

D37 **CARQUEST AUTO PARTS #4576** **San Diego Co. HMMD** **S114001845**
East **9748 CAMPO RD 9742** **CERS HAZ WASTE** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977** **CHMIRS**
0.200 mi. **CERS**
1058 ft. **Site 1 of 9 in cluster D**

Relative:
Higher

Actual:
438 ft.

HMMD SAN DIEGO:
Name: CARQUEST AUTO PARTS #4576
Address: 9748 CAMPO RD 9742
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: Not reported
Business Type: Not reported

CARQUEST AUTO PARTS #4576 (Continued) **S114001845**

EPA Id Number: CAL000403064
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 9195733000
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 03/21/2020
Facility Owner: Not reported
Facility Mailing Address: PO BOX 2710, ROANOKE, VA 24001-2710
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Waste and Materials:
Record ID: DEH2017-HUPFP-003773
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0177501
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-21T02:33:12.000
Chemical Name: Waste, Consumer Commodities
Common Name: Waste, Consumer Commodities
Case Number: Not reported

CERS HAZ WASTE:
Name: CARQUEST AUTO PARTS #7756
Address: 9748 CAMPO RD STE 9742
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 425389
CERS ID: 10742161
CERS Description: Hazardous Waste Generator

CHMIRS:
Name: Not reported
Address: 9748 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91978
OES Incident Number: 13-5895
OES notification: 09/19/2013
OES Date: Not reported
OES Time: Not reported
Date Completed: **Not reported**
Property Use: Not reported
Agency Id Number: Not reported
Agency Incident Number: Not reported
Time Notified: Not reported
Time Completed: Not reported
Surrounding Area: Not reported
Estimated Temperature: Not reported

CARQUEST AUTO PARTS #4576 (Continued) **S114001845**

Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	Storm Drain
Spill Site:	Road
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	910
Year:	2013
Agency:	County of San Diego Waste Water Management
Incident Date:	9/19/2013
Admin Agency:	San Diego County Health Services Department
Amount:	Not reported
Contained:	Yes
Site Type:	Storm Drain
E Date:	Not reported
Substance:	Sewage
Quantity Released:	750
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Caller states substance released from a manhole due to blockage. Caller states substance went into storm drain. Caller states area has been sanitized and clean-up has been completed. Caller

CARQUEST AUTO PARTS #4576 (Continued) **S114001845**

states approximately 95% of the release was recovered. Caller states CCTV Main line inspection will be performed

CERS:
Name: CARQUEST AUTO PARTS #7756
Address: 9748 CAMPO RD STE 9742
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 425389
CERS ID: 10742161
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-15-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Zmily Zanalee Inspection ID:5781389
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Micah Thompson
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Micah Thompson
Entity Title: Not reported
Affiliation Address: 5008 Airport Road
Affiliation City: Roanoke
Affiliation State: VA
Affiliation Country: Not reported
Affiliation Zip: 24012
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Micah Thompson
Entity Title: Manager, Environmental Affairs
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: General Parts, Inc.
Entity Title: Not reported
Affiliation Address: 2635 East Millbrook Road

CARQUEST AUTO PARTS #4576 (Continued) **S114001845**

Affiliation City:	Raleigh
Affiliation State:	NC
Affiliation Country:	United States
Affiliation Zip:	27604
Affiliation Phone:	(919) 573-3000
Affiliation Type Desc:	Operator
Entity Name:	GOLDEN STATE SUPPLY, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(919) 573-3000
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2635 East Millbrook Road
Affiliation City:	Raleigh
Affiliation State:	NC
Affiliation Country:	Not reported
Affiliation Zip:	27604
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Golden State Supply LLC, d/b/a CARQUEST
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	CIF Holdings LP
Entity Title:	Not reported
Affiliation Address:	8100 La Mesa Blvd, Ste 101
Affiliation City:	La Mesa
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91942
Affiliation Phone:	(619) 463-4040

D38 **CARQUEST AUTO PARTS #7756** **RCRA NonGen / NLR** **1024847859**
East **9748 CAMPO RD** **CAL000403064**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.200 mi.
1058 ft. **Site 2 of 9 in cluster D**

Relative:
Higher

Actual:
438 ft.

RCRA NonGen / NLR:

Date form received by agency:	2014-12-16 00:00:00.0
Facility name:	CARQUEST AUTO PARTS #7756
Facility address:	9748 CAMPO RD SPRING VALLEY, CA 91977
EPA ID:	CAL000403064
Mailing address:	5008 AIRPORT ROAD ROANOKE, VA 24012-0000
Contact:	MICAH THOMPSON
Contact address:	5008 AIRPORT ROAD ROANOKE, VA 24012
Contact country:	Not reported
Contact telephone:	540-561-8492
Contact email:	MICAH.THOMPSON@ADVANCE-AUTO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MICAH THOMPSON
Owner/operator address:	5008 AIRPORT ROAD ROANOKE, VA 24012
Owner/operator country:	Not reported
Owner/operator telephone:	540-561-8492
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	GOLDEN STATE SUPPLY LLC
Owner/operator address:	PO BOX 26006 RALEIGH, NC 27611
Owner/operator country:	Not reported
Owner/operator telephone:	919-573-3900
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

CARQUEST AUTO PARTS #7756 (Continued) **1024847859**

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

D39 **CIF HOLDINGS, L.P.** **RCRA NonGen / NLR** **1025846149**
East **9762 CAMPO RD** **CAC003025886**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.217 mi.
1145 ft. **Site 3 of 9 in cluster D**

Relative:
Higher

Actual:
441 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-07-25 00:00:00.0
Facility name:	CIF HOLDINGS, L.P.
Facility address:	9762 CAMPO RD SPRING VALLEY, CA 91977-1415
EPA ID:	CAC003025886
Mailing address:	8100 LA MESA BLVD, SUITE 101 LA MESA, CA 91942
Contact:	DAVID MELVILLE
Contact address:	9911 MAINE AVE LAKESIDE, CA 92040
Contact country:	Not reported
Contact telephone:	619-694-7903
Contact email:	DMELVILLE@CLAUSSCONSTRUCTION.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DAVID MELVILLE
Owner/operator address:	9911 MAINE AVE LAKESIDE, CA 92040
Owner/operator country:	Not reported
Owner/operator telephone:	619-694-7903
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	ROBERT HOUCK
Owner/operator address:	8100 LA MESA BLVD, SUITE 101 LA MESA, CA 91942
Owner/operator country:	Not reported
Owner/operator telephone:	619-843-9937
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported

CIF HOLDINGS, L.P. (Continued) **1025846149**

Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

D40 **SMR CHEVRON** **RCRA NonGen / NLR** **1024809187**
ESE **9749 CAMPO RD** **CAL000283357**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.238 mi.
1258 ft. **Site 4 of 9 in cluster D**

Relative:
Higher

Actual:
438 ft.

RCRA NonGen / NLR:
Date form received by agency: 2004-06-24 00:00:00.0
Facility name: SMR CHEVRON
Facility address: 9749 CAMPO RD
SPRING VALLEY, CA 91977
EPA ID: CAL000283357
Contact: SALAM RAZURI - OWNER
Contact address: 9749 CAMPO ROAD
SPRING VALLEY, CA 91977-0000
Contact country: Not reported
Contact telephone: 619-454-6622
Contact email: HAITH@RAZUKILLC.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: SALAM RAZURI - OWNER
Owner/operator address: 9749 CAMPO ROAD
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-454-6622
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported

SMR CHEVRON (Continued) **1024809187**

Owner/Op end date: Not reported

Owner/operator name: SMR CHEVRON GAS STATION
Owner/operator address: 9749 CAMPO ROAD
SPRING VALLEY, CA 91977
Owner/operator country: Not reported
Owner/operator telephone: 619-469-6060
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

D41 **TLC CHEVRON** **SAN DIEGO CO. SAM** **U003789257**
ESE **9749 CAMPO RD** **UST** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977** **San Diego Co. HMMD**
0.238 mi. **SWEEPS UST**
1258 ft. **Site 5 of 9 in cluster D** **Cortese**
CERS

Relative:
Higher

Actual:
438 ft.

SAN DIEGO CO. SAM:
Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Case Number: H05718-001
Agency: DEH Site Assessment & Mitigation
Funding: **POP**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Closed Case
Date: 12/13/2004
Date Began: 11/4/1988

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Case Number: H05718-002
Agency: DEH Site Assessment & Mitigation

TLC CHEVRON (Continued) **U003789257**

Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 5/4/1993
Date Began: 3/10/1993

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Case Number: H05718-003
Agency: DEH Site Assessment & Mitigation
Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 5/10/1994
Date Began: 4/6/1994

UST:
Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Facility ID: H05718
Permitting Agency: SAN DIEGO COUNTY
Latitude: 32.7489869
Longitude: -116.984381

Name: SMR CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Facility ID: 37-000-201285
Permitting Agency: San Diego County Department of Environmental Health
Latitude: 32.74765
Longitude: -116.98571

HMMD SAN DIEGO:
Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: 105718
Business Type: 6HK28
EPA Id Number: CAL000088450
APN: 500-261-32-00
Last HMMD Inspection: 02/19/2003
Facility Telephone: 619-469-6881
Permit Status: CHNG
Permit Expiration: 10/31/2002
Date Last Updated: 11/02/2012
Facility Owner: TERRY SITTLOH ENTERPRISES INC.
Facility Mailing Address: 9749 CAMPO RD
Facility Mailing City: SPRING VALLEY
Facility Mailing State: CA
Facility Mailing Zip: 91977-1416
UST Owner: AZNA ENTERPRISES LLC
Handle Regulated Hazmat: Y
Own Or Operate UST: Y
Subject To APSA: Not reported

TLC CHEVRON (Continued) **U003789257**

Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

UST:

UST Name: UNDERGROUND TANK 105718 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 105718
Tank Type: SINGLE WALL
Additional Id: 1
Capacity Gallons: 7000
UST Contents: Not reported
Other Content Info: SEE FILE FOR CONTENTS
Reg Status: REMOVED
Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1964-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 105718 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 105718
Tank Type: SINGLE WALL
Additional Id: 2
Capacity Gallons: 6000
UST Contents: Not reported
Other Content Info: SEE FILE FOR CONTENTS
Reg Status: REMOVED
Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1964-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 105718 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 105718
Tank Type: SINGLE WALL
Additional Id: 3
Capacity Gallons: 3000
UST Contents: Not reported
Other Content Info: SEE FILE FOR CONTENTS
Reg Status: REMOVED
Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1964-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 105718 T004
Last Update: 2012-11-02 14:17:38

TLC CHEVRON (Continued) **U003789257**

Permit Number:	105718
Tank Type:	SINGLE WALL
Additional Id:	4
Capacity Gallons:	550
UST Contents:	Not reported
Other Content Info:	SEE FILE FOR CONTENTS
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1964-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 105718 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	105718
Tank Type:	DOUBLE WALL
Additional Id:	1
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1988-03-11 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	LINED TRENCH
Delivery System:	PRESSURE
Monitor Code:	25
UST Monitor Method:	EXTERNAL MONITOR : CONTINUOUS VADOSE ZONE VAPOR MONITORS AND / OR WEEKLY (MINIMUM) VADOSE ZONE LIQUID MONITORING
UST Name:	UNDERGROUND TANK 105718 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	105718
Tank Type:	DOUBLE WALL
Additional Id:	2
Capacity Gallons:	10000
UST Contents:	LEADED
Other Content Info:	LEADED
Reg Status:	REMOVED
Remove Close Date:	1988-03-11 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	LINED TRENCH
Delivery System:	PRESSURE
Monitor Code:	25
UST Monitor Method:	EXTERNAL MONITOR : CONTINUOUS VADOSE ZONE VAPOR MONITORS AND / OR WEEKLY (MINIMUM) VADOSE ZONE LIQUID MONITORING
UST Name:	UNDERGROUND TANK 105718 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	105718
Tank Type:	DOUBLE WALL
Additional Id:	3
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED

TLC CHEVRON (Continued) **U003789257**

Reg Status:	REMOVED
Remove Close Date:	1988-03-11 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	LINED TRENCH
Delivery System:	PRESSURE
Monitor Code:	25
UST Monitor Method:	EXTERNAL MONITOR : CONTINUOUS VADOSE ZONE VAPOR MONITORS AND / OR WEEKLY (MINIMUM) VADOSE ZONE LIQUID MONITORING
UST Name:	UNDERGROUND TANK 105718 T008
Last Update:	2012-11-02 14:17:38
Permit Number:	105718
Tank Type:	DOUBLE WALL
Additional Id:	4
Capacity Gallons:	1000
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1988-03-11 00:00:00
Year Installed:	1985-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	Not reported
UST Monitor Method:	Not reported
UST Name:	UNDERGROUND TANK 105718 T009
Last Update:	2012-11-02 14:17:38
Permit Number:	105718
Tank Type:	DOUBLE WALL
Additional Id:	9
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	20
UST Monitor Method:	DW TANK DW PRESSURE PIPE W/ SHUT OFF AND ALARM ON LINE LEAK DETECTOR: INTERSTITIAL.
UST Name:	UNDERGROUND TANK 105718 T010
Last Update:	2012-11-02 14:17:38
Permit Number:	105718
Tank Type:	DOUBLE WALL
Additional Id:	10
Capacity Gallons:	10000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	20
UST Monitor Method:	DW TANK DW PRESSURE PIPE W/ SHUT OFF AND ALARM ON LINE LEAK

TLC CHEVRON (Continued) **U003789257**

DETECTOR: INTERSTITIAL.

UST Name:	UNDERGROUND TANK 105718 T011
Last Update:	2012-11-02 14:17:38
Permit Number:	105718
Tank Type:	DOUBLE WALL
Additional Id:	11
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	20
UST Monitor Method:	DW TANK DW PRESSURE PIPE W/ SHUT OFF AND ALARM ON LINE LEAK DETECTOR: INTERSTITIAL.

SWEEPS UST:

Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Active
Comp Number:	5718
Number:	9
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-005718-000009
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	3

Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Active
Comp Number:	5718
Number:	9
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-005718-000010
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL

TLC CHEVRON (Continued) **U003789257**

STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported
Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Active
Comp Number:	5718
Number:	9
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-005718-000011
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	LEADED
Number Of Tanks:	Not reported
Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	5718
Number:	Not reported
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-005718-000001
Tank Status:	Not reported
Capacity:	7000
Active Date:	Not reported
Tank Use:	UNKNOWN
STG:	PRODUCT
Content:	Not reported
Number Of Tanks:	8
Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	5718
Number:	Not reported
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-005718-000002
Tank Status:	Not reported

TLC CHEVRON (Continued) **U003789257**

Capacity:	6000
Active Date:	Not reported
Tank Use:	UNKNOWN
STG:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	5718
Number:	Not reported
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-005718-000003
Tank Status:	Not reported
Capacity:	3000
Active Date:	Not reported
Tank Use:	UNKNOWN
STG:	PRODUCT
Content:	Not reported
Number Of Tanks:	Not reported

Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	5718
Number:	Not reported
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-005718-000004
Tank Status:	Not reported
Capacity:	550
Active Date:	Not reported
Tank Use:	UNKNOWN
STG:	WASTE
Content:	Not reported
Number Of Tanks:	Not reported

Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	5718
Number:	Not reported
Board Of Equalization:	44-022282
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported

TLC CHEVRON (Continued) **U003789257**

Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-005718-000005
Tank Status: Not reported
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City: SPRING VALLEY
Status: Not reported
Comp Number: 5718
Number: Not reported
Board Of Equalization: 44-022282
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-005718-000006
Tank Status: Not reported
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: Not reported

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City: SPRING VALLEY
Status: Not reported
Comp Number: 5718
Number: Not reported
Board Of Equalization: 44-022282
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-005718-000007
Tank Status: Not reported
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: Not reported

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City: SPRING VALLEY
Status: Not reported
Comp Number: 5718
Number: Not reported
Board Of Equalization: 44-022282

TLC CHEVRON (Continued) **U003789257**

Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-005718-000008
Tank Status: Not reported
Capacity: 1000
Active Date: Not reported
Tank Use: PETROLEUM
STG: WASTE
Content: Not reported
Number Of Tanks: Not reported

CORTESE:
Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0607300176
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

CERS:
Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Site ID: 203978
CERS ID: T0608122135
CERS Description: Cleanup Program Site

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Site ID: 203978
CERS ID: T0608153644
CERS Description: Cleanup Program Site

Name: TLC CHEVRON
Address: 9749 CAMPO RD

TLC CHEVRON (Continued) **U003789257**

City,State,Zip: SPRING VALLEY, CA 919771416
Site ID: 203978
CERS ID: T0607300176
CERS Description: Leaking Underground Storage Tank Cleanup Site

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D42 **93694** **HIST UST** **U001572320**
ESE **9749 CAMPO RD** **N/A**
1/8-1/4 **SPRING VALLEY, CA 92077**
0.238 mi.
1258 ft. **Site 6 of 9 in cluster D**

Relative: **Higher**
Actual: **438 ft.**

HIST UST:
Name: 93694
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 92077
File Number: 0002AE52
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002AE52.pdf
Region: STATE
Facility ID: 00000062489
Facility Type: Gas Station
Other Type: Not reported
Contact Name: TOM RUSSELL ENT. INC.
Telephone: 6194696881
Owner Name: CHEVRON U.S.A. INC.
Owner Address: 575 MARKET
Owner City,St,Zip: SAN FRANCISCO, CA 94105
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: 1964
Tank Capacity: 00007000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 0000250
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1964
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 0000250
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: 1964
Tank Capacity: 00003000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 0000170
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: 1964

93694 (Continued) **U001572320**

Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	0000100
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

D43 **TLC CHEVRON** **LUST** **S103991606**
ESE **9749 CAMPO RD** **CPS-SLIC** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977** **HIST CORTESE**
0.238 mi. **SAN DIEGO CO LOP**
1258 ft. **Site 7 of 9 in cluster D**

Relative:
Higher

Actual:
438 ft.

LUST:

Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771416
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607300176
Global Id:	T0607300176
Latitude:	32.7479439
Longitude:	-116.9857851
Status:	Completed - Case Closed
Status Date:	12/13/2004
Case Worker:	Not reported
RB Case Number:	9UT1229
Local Agency:	Not reported
File Location:	Local Agency
Local Case Number:	H05718-001
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0607300176
Action Type:	Other
Date:	11/04/1988
Action:	Leak Discovery
Global Id:	T0607300176
Action Type:	Other
Date:	11/04/1988
Action:	Leak Stopped
Global Id:	T0607300176
Action Type:	ENFORCEMENT
Date:	11/04/1988
Action:	Notice of Responsibility
Global Id:	T0607300176
Action Type:	ENFORCEMENT
Date:	12/13/2004
Action:	Closure/No Further Action Letter
Global Id:	T0607300176
Action Type:	Other

TLC CHEVRON (Continued) **S103991606**

Date: 11/04/1988
Action: Leak Reported

Global Id: T0607300176
Action Type: Other
Date: 11/04/1988
Action: Leak Began

LUST:
Global Id: T0607300176
Status: Open - Case Begin Date
Status Date: 11/04/1988

Global Id: T0607300176
Status: Completed - Case Closed
Status Date: 12/13/2004

CPS-SLIC:
Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 05/10/1994
Global Id: T0608122135
Lead Agency: SAN DIEGO COUNTY LOP
Lead Agency Case Number: H05718-003
Latitude: 32.747673
Longitude: -116.985707
Case Type: Cleanup Program Site
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: Not reported
File Location: Local Agency
Potential Media Affected: Under Investigation
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771416
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 05/04/1993
Global Id: T0608153644
Lead Agency: SAN DIEGO COUNTY LOP
Lead Agency Case Number: H05718-002
Latitude: 32.747673
Longitude: -116.985707
Case Type: Cleanup Program Site
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: Not reported

TLC CHEVRON (Continued) **S103991606**

File Location: Local Agency
Potential Media Affected: Under Investigation
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

HIST CORTESE:
edr_fname: CHEVRON SERVICE STATION
edr_fadd1: 9749 CAMPO
City,State,Zip: SPRING VALLEY, CA 92077
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT1229

SAN DIEGO CO LOP:
Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Record ID: DEH1988-LSAM-H05718-001
Record Status: Completed
Opened Date: 11/04/1988
Parcel Number: 500-261-32-00
Case Type: LOP - Local Oversight Program
Historical Name: CHEVRON #9-3694
SWRCB Global ID: T0607300176
Funding: S - LOP State Fund
Lead Agency: DEH/SAM
Lead Agency Date: 11/04/1988
Census Tract: 135.03
Community: Spring Valley
Jurisdiction: UNINCORPORATED
Watershed Basin Number: 909.12
Water Purveyor: HELIX WATER DISTRICT LAND
Fire Agency: SAN MIGUEL FIRE PROT DIST
Latitude: 32.7476486
Longitude: -116.9857089
X MapCoord: 6335455.781
Y MapCoord: 1852616.598

Name: TLC CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Record ID: DEH1993-LSAM-H05718-002
Record Status: Completed
Opened Date: 03/18/1993
Parcel Number: 500-261-32-00
Case Type: Not reported
Historical Name: CHEVRON USA
SWRCB Global ID: T0608153644
Funding: N - Non-Billable
Lead Agency: DEH/SAM
Lead Agency Date: 03/18/1993
Census Tract: 135.03
Community: Spring Valley

TLC CHEVRON (Continued) **S103991606**

Jurisdiction:	UNINCORPORATED
Watershed Basin Number:	909.12
Water Purveyor:	HELIX WATER DISTRICT LAND
Fire Agency:	SAN MIGUEL FIRE PROT DIST
Latitude:	32.7476486
Longitude:	-116.9857089
X MapCoord:	6335455.781
Y MapCoord:	1852616.598

Name:	TLC CHEVRON
Address:	9749 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Record ID:	DEH1994-LSAM-H05718-003
Record Status:	Completed
Opened Date:	04/11/1994
Parcel Number:	500-261-32-00
Case Type:	Not reported
Historical Name:	CHEVRON USA
SWRCB Global ID:	T0608122135
Funding:	N - Non-Billable
Lead Agency:	DEH/SAM
Lead Agency Date:	04/12/1994
Census Tract:	135.03
Community:	Spring Valley
Jurisdiction:	UNINCORPORATED
Watershed Basin Number:	909.12
Water Purveyor:	HELIX WATER DISTRICT LAND
Fire Agency:	SAN MIGUEL FIRE PROT DIST
Latitude:	32.7476486
Longitude:	-116.9857089
X MapCoord:	6335455.781
Y MapCoord:	1852616.598

D44 **SMR CHEVRON** **San Diego Co. HMMD** **S106071331**
ESE **9749 CAMPO RD** **CERS HAZ WASTE** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977** **CERS TANKS**
0.238 mi. **CERS**
1258 ft. **Site 8 of 9 in cluster D**

Relative: **Higher**
Actual: **438 ft.**

HMMD SAN DIEGO:

Name:	SMR CHEVRON
Address:	9749 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	201285
Business Type:	6HK28
EPA Id Number:	CAL000283357
APN:	500-261-32-00
Last HMMD Inspection:	10/27/2011
Facility Telephone:	619-469-6060
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	SALAM M. RAZUKI
Facility Mailing Address:	9749 CAMPO RD
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	SALAM M. RAZUKI

SMR CHEVRON (Continued) **S106071331**

Handle Regulated Hazmat: Y
Own Or Operate UST: Y
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 201285
Update Date: 11/02/2012
Case Number: 68476-34-6
Name: DIESEL
Other Information: UNDERGROUND TANK 105718 T010
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 201285
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: PREMIUM UNLEADED
Other Information: UNDERGROUND TANK 105718 T011
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 201285
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 105718 T009
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 201285
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Other Information: WATER & FUEL
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 201285
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: USED GAS FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005

SMR CHEVRON (Continued) **S106071331**

Violation Code: 6HV3158
Violation: ALL OPERATING CONDITIONS NOT MET
Violation Citation: All permit operating conditions not met. 25284; 2712
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV0228
Violation: CONTAINER NOT KEPT CLOSED
Violation Citation: Failed to keep container closed. CFR 265.173
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV3256
Violation: NO FUNCTIONAL DRAIN BOX/BACKUP
Violation Citation: Fill box drain not functional and backup system is not available. 2635(b)(1)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/13/2006
Violation Code: 6HV0138
Violation: NO TSDF SIGNED MANIFEST ONSITE
Violation Citation: Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/13/2006
Violation Code: 6HV3105
Violation: NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation: Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity: ACTIVE

SMR CHEVRON (Continued) **S106071331**

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/13/2006
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/05/2010
Violation Code: 6HV3152

SMR CHEVRON (Continued) **S106071331**

Violation:	ALL MAINT/MONITOR RECORDS NOT AVAILABLE
Violation Citation:	All maintenance/monitoring/calibration/ repair records not available. 25293; 2712 (b)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV0131
Violation:	UPF Permit NOT OBTAINED for HAZWASTE
Violation Citation:	A Unified Program Facility permit has not been obtained for the generation of hazardous waste. 68.905
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV1001
Violation:	NO UPF PERMIT FOR HAZMATS
Violation Citation:	A Unified Program Facility permit has not been obtained for hazardous materials. 68.905
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV3101
Violation:	UPF PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV3102
Violation:	OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV3112
Violation:	2NDRY CONT TEST NOT DONE (6/36 MOS.)
Violation Citation:	Secondary containment testing not conducted at 6months/36 months. 25284.1; 2637(a)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV3262
Violation:	SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation:	Secondary containment piping obstructed preventing drainage to sump. 2632

SMR CHEVRON (Continued) **S106071331**

Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3262
Violation: SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation: Secondary containment piping obstructed preventing drainage to sump. 2632
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV0135
Violation: MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation: Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV0227
Violation: HAZWASTE TANK/CONTAINER W/O LABEL/DATE
Violation Citation: Failed to properly label/date hazardous waste container &/or tank. 66262.34(f)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV0228
Violation: CONTAINER NOT KEPT CLOSED
Violation Citation: Failed to keep container closed. CFR 265.173
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004

SMR CHEVRON (Continued) **S106071331**

Violation Code: 6HV3102
Violation: OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation: Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3105
Violation: NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation: Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012

SMR CHEVRON (Continued) **S106071331**

Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3261
Violation: DISPENSER CONTAINMENT NOT DRY
Violation Citation: Dispenser containment not free of liquid. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3264
Violation: SPILL CONT. NOT TESTED ANNUALLY
Violation Citation: Spill containment at fill point not tested annually. 25284.2
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 105718 T009
Last Update: 2012-11-02 14:17:38
Permit Number: 201285
Tank Type: DOUBLE WALL
Additional Id: RT3561
Capacity Gallons: 10000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1988-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31F
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

UST Name: UNDERGROUND TANK 105718 T010
Last Update: 2012-11-02 14:17:38
Permit Number: 201285
Tank Type: DOUBLE WALL
Additional Id: RT3561
Capacity Gallons: 10000
UST Contents: DIESEL
Other Content Info: DIESEL
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1988-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31F
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

SMR CHEVRON (Continued) **S106071331**

UST Name:	UNDERGROUND TANK 105718 T011
Last Update:	2012-11-02 14:17:38
Permit Number:	201285
Tank Type:	DOUBLE WALL
Additional Id:	RT3561
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31F
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

Name:	SMR CHEVRON
Address:	9749 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	201285
Business Type:	6HK28
EPA Id Number:	CAL000283357
APN:	500-261-32-00
Last HMMD Inspection:	10/27/2011
Facility Telephone:	619-469-6060
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	SALAM M. RAZUKI
Facility Mailing Address:	9749 CAMPO RD
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	SALAM M. RAZUKI
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	201285
Update Date:	11/02/2012
Case Number:	68476-34-6
Name:	DIESEL
Other Information:	UNDERGROUND TANK 105718 T010
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	201285
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 105718 T011

SMR CHEVRON (Continued) **S106071331**

Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 201285
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 105718 T009
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 201285
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Other Information: WATER & FUEL
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 201285
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: USED GAS FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3158
Violation: ALL OPERATING CONDITIONS NOT MET
Violation Citation: All permit operating conditions not met. 25284; 2712
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV0228
Violation: CONTAINER NOT KEPT CLOSED
Violation Citation: Failed to keep container closed. CFR 265.173
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV3256
Violation: NO FUNCTIONAL DRAIN BOX/BACKUP
Violation Citation: Fill box drain not functional and backup system is not available. 2635(b)(1)(C)
Activity: ACTIVE

SMR CHEVRON (Continued) **S106071331**

Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/19/2007
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/19/2007
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/13/2006
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/13/2006
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE

Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/13/2006
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE

Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/30/2005
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE

Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/30/2005
Violation Code:	6HV3257

SMR CHEVRON (Continued) **S106071331**

Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/05/2010
Violation Code: 6HV3152
Violation: ALL MAINT/MONITOR RECORDS NOT AVAILABLE
Violation Citation: All maintenance/monitoring/calibration/ repair records not available. 25293; 2712 (b)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV0131
Violation: UPF Permit NOT OBTAINED for HAZWASTE
Violation Citation: A Unified Program Facility permit has not been obtained for the generation of hazardous waste. 68.905
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV1001
Violation: NO UPF PERMIT FOR HAZMATS
Violation Citation: A Unified Program Facility permit has not been obtained for hazardous materials. 68.905
Activity: ACTIVE

SMR CHEVRON (Continued) **S106071331**

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3101
Violation: UPF PERMIT NOT CURRENT/ONSITE
Violation Citation: Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3102
Violation: OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation: Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3112
Violation: 2NDRY CONT TEST NOT DONE (6/36 MOS.)
Violation Citation: Secondary containment testing not conducted at 6months/36 months. 25284.1; 2637(a)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3262
Violation: SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation: Secondary containment piping obstructed preventing drainage to sump. 2632
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3262
Violation: SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation: Secondary containment piping obstructed preventing drainage to sump. 2632
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV3257

SMR CHEVRON (Continued) **S106071331**

Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	10/02/2008
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	10/02/2008
Violation Code:	6HV0227
Violation:	HAZWASTE TANK/CONTAINER W/O LABEL/DATE
Violation Citation:	Failed to properly label/date hazardous waste container &/or tank. 66262.34(f)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	10/02/2008
Violation Code:	6HV0228
Violation:	CONTAINER NOT KEPT CLOSED
Violation Citation:	Failed to keep container closed. CFR 265.173
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/02/2004
Violation Code:	6HV3102
Violation:	OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/02/2004
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/02/2004
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE

SMR CHEVRON (Continued) **S106071331**

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3261
Violation: DISPENSER CONTAINMENT NOT DRY
Violation Citation: Dispenser containment not free of liquid. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3264
Violation: SPILL CONT. NOT TESTED ANNUALLY
Violation Citation: Spill containment at fill point not tested annually. 25284.2
Activity: ACTIVE

SMR CHEVRON (Continued) **S106071331**

UST:

UST Name:	UNDERGROUND TANK 105718 T009
Last Update:	2012-11-02 14:17:38
Permit Number:	201285
Tank Type:	DOUBLE WALL
Additional Id:	RT3561
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31F
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

UST Name:	UNDERGROUND TANK 105718 T010
Last Update:	2012-11-02 14:17:38
Permit Number:	201285
Tank Type:	DOUBLE WALL
Additional Id:	RT3561
Capacity Gallons:	10000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31F
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

UST Name:	UNDERGROUND TANK 105718 T011
Last Update:	2012-11-02 14:17:38
Permit Number:	201285
Tank Type:	DOUBLE WALL
Additional Id:	RT3561
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31F
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

Name:	SMR CHEVRON
Address:	9749 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	201285

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Business Type:	6HK28
EPA Id Number:	CAL000283357
APN:	500-261-32-00
Last HMMD Inspection:	10/27/2011
Facility Telephone:	619-469-6060
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	SALAM M. RAZUKI
Facility Mailing Address:	9749 CAMPO RD
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977
UST Owner:	SALAM M. RAZUKI
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	201285
Update Date:	11/02/2012
Case Number:	68476-34-6
Name:	DIESEL
Other Information:	UNDERGROUND TANK 105718 T010
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	201285
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 105718 T011
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	201285
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 105718 T009
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	201285
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Other Information:	WATER & FUEL
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

SMR CHEVRON (Continued) **S106071331**

Permit Number: 201285
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: USED GAS FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/30/2005
Violation Code: 6HV3158
Violation: ALL OPERATING CONDITIONS NOT MET
Violation Citation: All permit operating conditions not met. 25284; 2712
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV0228
Violation: CONTAINER NOT KEPT CLOSED
Violation Citation: Failed to keep container closed. CFR 265.173
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV3256
Violation: NO FUNCTIONAL DRAIN BOX/BACKUP
Violation Citation: Fill box drain not functional and backup system is not available. 2635(b)(1)(C)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/19/2007
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/13/2006
Violation Code: 6HV0138
Violation: NO TSDF SIGNED MANIFEST ONSITE
Violation Citation: Generator has not maintained the required signed copy of the hazardous

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	waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/13/2006
Violation Code:	6HV3105
Violation:	NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation:	Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/13/2006
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/30/2005
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/30/2005
Violation Code:	6HV3257
Violation:	2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation:	Secondary containment system components not liquid free. 2631(d)(4)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/30/2005
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/30/2005
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE

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Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	09/30/2005
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	10/05/2010
Violation Code:	6HV3152
Violation:	ALL MAINT/MONITOR RECORDS NOT AVAILABLE
Violation Citation:	All maintenance/monitoring/calibration/ repair records not available. 25293; 2712 (b)
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV0131
Violation:	UPF Permit NOT OBTAINED for HAZWASTE
Violation Citation:	A Unified Program Facility permit has not been obtained for the generation of hazardous waste. 68.905
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV1001
Violation:	NO UPF PERMIT FOR HAZMATS
Violation Citation:	A Unified Program Facility permit has not been obtained for hazardous materials. 68.905
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV3101
Violation:	UPF PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003
Violation Code:	6HV3102
Violation:	OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation:	Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity:	ACTIVE
Permit Number:	201285
Update Date:	11/02/2012
Inspection Date:	02/19/2003

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Violation Code: 6HV3112
Violation: 2NDRY CONT TEST NOT DONE (6/36 MOS.)
Violation Citation: Secondary containment testing not conducted at 6months/36 months. 25284.1; 2637(a)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3262
Violation: SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation: Secondary containment piping obstructed preventing drainage to sump. 2632
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 02/19/2003
Violation Code: 6HV3262
Violation: SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation: Secondary containment piping obstructed preventing drainage to sump. 2632
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV0135
Violation: MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation: Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV0227
Violation: HAZWASTE TANK/CONTAINER W/O LABEL/DATE
Violation Citation: Failed to properly label/date hazardous waste container &/or tank. 66262.34(f)

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Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 10/02/2008
Violation Code: 6HV0228
Violation: CONTAINER NOT KEPT CLOSED
Violation Citation: Failed to keep container closed. CFR 265.173
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3102
Violation: OPER. PERMIT NOT CURRENT/ONSITE
Violation Citation: Current Operating Permit not available at facility. 25284(a), 25286(a); 2712(i); 68.1003
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3105
Violation: NO CURRENT FINANCIAL RESPONSIBILITY
Violation Citation: Current evidence of financial responsibility not available. 25292.2(a), 25299.33; 2809
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3257
Violation: 2NDRY CONTAINMENT NOT LIQUID FREE
Violation Citation: Secondary containment system components not liquid free. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED

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Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3260
Violation: DISPENSER CONT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) & (g)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3261
Violation: DISPENSER CONTAINMENT NOT DRY
Violation Citation: Dispenser containment not free of liquid. 2631(d)(4)
Activity: ACTIVE

Permit Number: 201285
Update Date: 11/02/2012
Inspection Date: 09/02/2004
Violation Code: 6HV3264
Violation: SPILL CONT. NOT TESTED ANNUALLY
Violation Citation: Spill containment at fill point not tested annually. 25284.2
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 105718 T009
Last Update: 2012-11-02 14:17:38
Permit Number: 201285
Tank Type: DOUBLE WALL
Additional Id: RT3561
Capacity Gallons: 10000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1988-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31F
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

UST Name: UNDERGROUND TANK 105718 T010
Last Update: 2012-11-02 14:17:38
Permit Number: 201285
Tank Type: DOUBLE WALL

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Additional Id: RT3561
Capacity Gallons: 10000
UST Contents: DIESEL
Other Content Info: DIESEL
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1988-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31F
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

UST Name: UNDERGROUND TANK 105718 T011
Last Update: 2012-11-02 14:17:38
Permit Number: 201285
Tank Type: DOUBLE WALL
Additional Id: RT3561
Capacity Gallons: 10000
UST Contents: PREMIUM UNLEADED
Other Content Info: PREMIUM UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1988-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31F
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 0.1 LLD; UDC W/STAND ALONE SENSOR

Name: SMR CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: CAL000283357
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 619-469-6060
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 09/10/2019
Facility Owner: Not reported
Facility Mailing Address: 9749 CAMPO RD, SPRING VALLEY, CA 91977
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: Y
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Inspection Violation:
Record ID: DEH2003-HUPFP-201285

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Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5685482
Return To Compliance Date:	2017-09-01T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	19835
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2017-07-20T18:13:00.000
Violation Code:	2030025 (RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly, be capable of detecting a release of 3.0 gallons per hour, restrict or shut off the flow of product through the piping or trigger an alarm when a leak is detected. 23 CCR 2636(f)(2)

Record ID:	DEH2003-HUPFP-201285
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5685482
Return To Compliance Date:	2017-07-20T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	19835
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2017-07-20T18:13:00.000
Violation Code:	2030017 Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested annually: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC). 23 CCR 2636(f)(5)

Record ID:	DEH2003-HUPFP-201285
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5685482
Return To Compliance Date:	2017-07-20T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	19835
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2017-07-20T18:13:00.000
Violation Code:	2030036 (RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the

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tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Program Element: Underground Storage Tank
Inspection Type: Routine
Inspection Number: 5931067
Return To Compliance Date: 2018-07-16T00:00:00.000
Nov: No
Violation Classification: Not reported
Underground Storage Tank Id: 19835
Container/Tank Id: Not reported
Last Update: 2019-09-10T00:00:00.000
Inspection Date: 2018-07-13T00:00:00.000
Violation Code: 2030047 Failure to maintain secondary containment (e.g. failure of secondary containment testing). HSC 25290.1(c)(2), 25290.2(c)(2), 25291(a), 25291(e)

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Program Element: Underground Storage Tank
Inspection Type: Routine
Inspection Number: 5931067
Return To Compliance Date: 2018-07-16T00:00:00.000
Nov: No
Violation Classification: Not reported
Underground Storage Tank Id: 19835
Container/Tank Id: Not reported
Last Update: 2019-09-10T00:00:00.000
Inspection Date: 2018-07-13T00:00:00.000
Violation Code: 2030025 (RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 p.s.i.g. and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Program Element: Underground Storage Tank
Inspection Type: Routine
Inspection Number: 6191485

SMR CHEVRON (Continued) **S106071331**

Return To Compliance Date:	Not reported
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	19835
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2019-07-25T17:15:31.000
Violation Code:	2010008 Failure to maintain records of repairs and upgrades on site, or off site if approved by the CUPA, for the life of the UST. 23 CCR 2712(b)

Record ID:	DEH2003-HUPFP-201285
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	6191485
Return To Compliance Date:	Not reported
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	19837
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2019-07-25T17:15:31.000
Violation Code:	2030025 (TCR 9d) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)

Record ID:	DEH2003-HUPFP-201285
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	6191485
Return To Compliance Date:	Not reported
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	19835
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2019-07-25T17:15:31.000
Violation Code:	2030036 (TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to

SMR CHEVRON (Continued) **S106071331**

overfilling. 5. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018. 6. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. 7. For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter. 8. Inspected within 30 days after a repair to the overfill prevention equipment. 9. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. 10. Inspected by a certified UST service technician. 11. Maintain records of overfill prevention equipment inspection for 36 months. 23 CCR 2635(c)(1), 2635(d), 2637.2(a-c), 2665, 2712(b)(1)(G)

Record ID:	DEH2003-HUPFP-201285
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5685482
Return To Compliance Date:	2018-07-13T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2017-07-20T18:13:00.000
Violation Code:	3010002 Failed to obtain &/or maintain an active EPA ID Number. 22 CCR 66262.12(a)

Record ID:	DEH2003-HUPFP-201285
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5533005
Return To Compliance Date:	2016-07-22T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-09-10T00:00:00.000
Inspection Date:	2016-07-22T13:42:00.000
Violation Code:	1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508.2

Record ID:	DEH2003-HUPFP-201285
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-201285
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5161706
Return To Compliance Date:	2015-10-08T00:00:00.000

SMR CHEVRON (Continued) **S106071331**

Nov: No
Violation Classification: Not reported
Underground Storage Tank Id: 19835
Container/Tank Id: Not reported
Last Update: 2019-09-10T00:00:00.000
Inspection Date: 2015-10-01T12:08:00.000
Violation Code: 2030008 Failure to maintain under dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid. HSC 25290.1, 25290.2, 25291

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Program Element: Underground Storage Tank
Inspection Type: Routine
Inspection Number: 5161706
Return To Compliance Date: 2015-10-01T00:00:00.000
Nov: No
Violation Classification: Class I
Underground Storage Tank Id: 19836
Container/Tank Id: Not reported
Last Update: 2019-09-10T00:00:00.000
Inspection Date: 2015-10-01T12:08:00.000
Violation Code: 2030018 (RD) Failure of the double wall pressurized piping in the turbine sump to be continuously monitored with a system that activates an audible and visual alarm or restricts or stops flow at dispenser when a leak is detected. 23 CCR 2636(f)(1)

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Program Element: Underground Storage Tank
Inspection Type: Routine
Inspection Number: 5533005
Return To Compliance Date: 2016-07-22T00:00:00.000
Nov: No
Violation Classification: Class II
Underground Storage Tank Id: 19835
Container/Tank Id: Not reported
Last Update: 2019-09-10T00:00:00.000
Inspection Date: 2016-07-22T13:42:00.000
Violation Code: 2030002 (RD) Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test. 23 CCR 2638

UST DTL:
Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Facility Type (Ust Facility): Other
Tank Owner Name: SALAM M. RAZUKI
Tankid: 19835
Tank Status: Active

SMR CHEVRON (Continued) **S106071331**

Date Ust Permanently Closed: Not reported
Tank Use: Motor Vehicle Fueling
Piping System Type: Pressure
Last Updated: 2019-09-10T02:30:59.000
Tank Capacityin Gallons: 10000
Tank Contents: Premium Unleaded
Type Of Tank: Double Wall

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Facility Type (Ust Facility): Other
Tank Owner Name: SALAM M. RAZUKI
Tankid: 19836
Tank Status: Active
Date Ust Permanently Closed: Not reported
Tank Use: Motor Vehicle Fueling
Piping System Type: Pressure
Last Updated: 2019-09-10T02:30:59.000
Tank Capacityin Gallons: 10000
Tank Contents: Diesel
Type Of Tank: Double Wall

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-201285
Facility Type (Ust Facility): Other
Tank Owner Name: SALAM M. RAZUKI
Tankid: 19837
Tank Status: Active
Date Ust Permanently Closed: Not reported
Tank Use: Motor Vehicle Fueling
Piping System Type: Pressure
Last Updated: 2019-09-10T02:30:59.000
Tank Capacityin Gallons: 10000
Tank Contents: Premium Unleaded
Type Of Tank: Double Wall

Waste and Materials:
Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0152014
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2018-10-26T16:49:49.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 105718 T011
Case Number: 8006-61-9

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0152015
Trade Secret: N

SMR CHEVRON (Continued) **S106071331**

Hazardous Material Type: Pure
Last Updated: 2018-10-26T16:49:49.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 105718 T009
Case Number: 8006-61-9

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0152016
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2018-10-26T16:49:49.000
Chemical Name: DIESEL FUEL #2
Common Name: UNDERGROUND TANK 105718 T010
Case Number: 68476-34-6

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0130517
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-10-26T16:49:49.000
Chemical Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Common Name: WATER & FUEL mix
Case Number: Not reported

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0130518
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-10-26T16:49:49.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: USED GAS FILTERS
Case Number: Not reported

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0201871
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-09-10T02:30:59.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 105718 T011
Case Number: 8006-61-9

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0201872
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-09-10T02:30:59.000

SMR CHEVRON (Continued) **S106071331**

Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 105718 T009
Case Number: 8006-61-9

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0201873
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-09-10T02:30:59.000
Chemical Name: DIESEL FUEL #2
Common Name: UNDERGROUND TANK 105718 T010
Case Number: 68476-34-6

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0174058
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-09-10T02:30:59.000
Chemical Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Common Name: WATER & FUEL mix
Case Number: Not reported

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0174059
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-09-10T02:30:59.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: USED GAS FILTERS
Case Number: Not reported

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0108741
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2016-09-22T02:30:42.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 105718 T011
Case Number: 8006-61-9

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0108742
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2016-09-22T02:30:42.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 105718 T009

SMR CHEVRON (Continued) **S106071331**

Case Number: 8006-61-9

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0108743
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2016-09-22T02:30:42.000
Chemical Name: DIESEL FUEL #2
Common Name: UNDERGROUND TANK 105718 T010
Case Number: 68476-34-6

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090093
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-09-22T02:30:42.000
Chemical Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Common Name: WATER & FUEL
Case Number: Not reported

Record ID: DEH2003-HUPFP-201285
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090094
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-09-22T02:30:42.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: USED GAS FILTERS
Case Number: Not reported

CERS HAZ WASTE:
Name: SMR CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 154358
CERS ID: 10362979
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: SMR CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 154358
CERS ID: 10362979
CERS Description: Underground Storage Tank

CERS:
Name: SMR CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977

SMR CHEVRON (Continued) **S106071331**

Site ID: 154358
CERS ID: 110013824825
CERS Description: US EPA Air Emission Inventory System (EIS)

Violations:
Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-25-2019
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Inspection Sequence ID:6191485;Tank ID:19837;Violation Description:(TCR 9d) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-13-2018
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 p.s.i.g. and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Returned to compliance on 07/16/2018. Inspection Sequence ID:5931067;Tank ID:19835,19837;Violation Description:(RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 p.s.i.g. and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.

SMR CHEVRON (Continued) **S106071331**

Violation Notes:	Returned to compliance on 09/01/2017. Inspection Sequence ID:5685482;Tank ID:19835,19837;Violation Description:(RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly, be capable of detecting a release of 3.0 gallons per hour, restrict or shut off the flow of product through the piping or trigger an alarm when a leak is detected. 23 CCR 2636(f)(2)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	154358
Site Name:	SMR CHEVRON
Violation Date:	07-13-2018
Citation:	HSC 6.7 25290.1(c),25290.2(c),25291(a)(2),2529.1(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c),25290.2(c),25291(a)(2),2529.1(e)
Violation Description:	Failure to maintain secondary containment (e.g., failure of secondary containment testing).
Violation Notes:	Returned to compliance on 07/16/2018. Inspection Sequence ID:5931067;Tank ID:19835,19836,19837;Violation Description:Failure to maintain secondary containment (e.g. failure of secondary containment testing). HSC 25290.1(c)(2), 25290.2(c)(2), 25291(a), 25291(e)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	154358
Site Name:	SMR CHEVRON
Violation Date:	07-22-2016
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 07/22/2016. Inspection Sequence ID:5533005
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	154358
Site Name:	SMR CHEVRON
Violation Date:	07-25-2019
Citation:	23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description:	Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention

SMR CHEVRON (Continued) **S106071331**

equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Inspection Sequence ID:6191485;Tank ID:19835,19836,19837;Violation Description:(TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 5. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prev
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 07/13/2018. Inspection Sequence ID:5685482
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the

SMR CHEVRON (Continued) **S106071331**

tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.

Violation Notes: Returned to compliance on 07/20/2017. Inspection Sequence ID:5685482;Tank ID:19835,19837;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 10-01-2015
Citation: HSC 6.7 25291 - California Health and Safety Code, Chapter 6.7, Section(s) 25291
Violation Description: Failure to maintain under-dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid.
Violation Notes: Returned to compliance on 10/08/2015. Inspection Sequence ID:5161706;Tank ID:19835,19836;Violation Description:Failure to maintain under dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid. HSC 25290.1, 25290.2, 25291
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 23 CCR 16 2636(f)(5) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(5)
Violation Description: "Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested annually: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC)."
Violation Notes: Returned to compliance on 07/20/2017. Inspection Sequence ID:5685482;Tank ID:19835,19836,19837;Violation Description:Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested annually: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC). 23 CCR 2636(f)(5)
Violation Division: San Diego County Department of Env Health

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Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-22-2016
Citation: 23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description: Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes: Returned to compliance on 07/22/2016. Inspection Sequence ID:5533005;Tank ID:19835,19836,19837;Violation Description:(RD) Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test. 23 CCR 2638
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-25-2019
Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description: Failure to maintain records of repairs and upgrades on site, or off site if approved by the UPA, for the life of the UST.
Violation Notes: Inspection Sequence ID:6191485;Tank ID:19835,19836,19837;Violation Description:Failure to maintain records of repairs and upgrades on site, or off site if approved by the CUPA, for the life of the UST. 23 CCR 2712(b)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 10-01-2015
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double wall pressurized piping in the turbine sump to be continuously monitored with a system that activates an audible and visual alarm or restricts or stops flow at dispenser when a leak is detected.
Violation Notes: Returned to compliance on 10/01/2015. Inspection Sequence ID:5161706;Tank ID:19836,19837;Violation Description:(RD) Failure of the double wall pressurized piping in the turbine sump to be continuously monitored with a system that activates an audible and visual alarm or restricts or stops flow at dispenser when a leak is detected. 23 CCR 2636(f)(1)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

SMR CHEVRON (Continued) **S106071331**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-13-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5931067
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-20-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5685482
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-22-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Lewallen Cecilia Inspection ID:5533005
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-22-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Lewallen Cecilia Inspection ID:5533005
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4418798
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4418798
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-20-2014

SMR CHEVRON (Continued) **S106071331**

Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Khan Steven Inspection ID:4964655
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-20-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Khan Steven Inspection ID:4964655
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-20-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5685482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-01-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5161706
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-01-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5161706
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-13-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5931067
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-13-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5931067

SMR CHEVRON (Continued) **S106071331**

Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-22-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Lewallen Cecilia Inspection ID:5533005
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-25-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6191485
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-25-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6191485
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Fuentecilla Carmel Inspection ID:4418798
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-20-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Khan Steven Inspection ID:4964655
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-20-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5685482
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

SMR CHEVRON (Continued) **S106071331**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-25-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6191485
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 154358
Facility Name: SMR CHEVRON
Env Int Type Code: HWG
Program ID: 10362979
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 32.747650
Longitude: -116.985710

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: SALAM M RAZUKI
Entity Title: Not reported
Affiliation Address: 9749 CAMPO RD
Affiliation City: SPRINGVALLEY
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: SALAM M. RAZUKI
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (619) 464-2501

Affiliation Type Desc: UST Tank Operator
Entity Name: SALAM M. RAZUKI
Entity Title: Not reported
Affiliation Address: 9749 CAMPO RD
Affiliation City: SPRING VALLEY
Affiliation State: CA

SMR CHEVRON (Continued) **S106071331**

Affiliation Country: United States
Affiliation Zip: 91977
Affiliation Phone: (619) 469-6881

Affiliation Type Desc: Legal Owner
Entity Name: RAZUKI INVESTMENTS L L C
Entity Title: Not reported
Affiliation Address: 9749 CAMPO RD
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91977
Affiliation Phone: (619) 464-2501

Affiliation Type Desc: Property Owner
Entity Name: RAZUKI INVESTMENTS L L C
Entity Title: Not reported
Affiliation Address: 9749 CAMPO RD
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91977
Affiliation Phone: (619) 464-2501

Affiliation Type Desc: UST PO Name
Entity Name: RAZUKI INVESTMENTS
Entity Title: Not reported
Affiliation Address: 9749 CAMPO RD
Affiliation City: SPRINGVALLEY
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Tank Owner
Entity Name: SALAM M. RAZUKI
Entity Title: Not reported
Affiliation Address: 9749 CAMPO RD
Affiliation City: SPRING VALLEY
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91977
Affiliation Phone: (619) 469-6881

Affiliation Type Desc: Parent Corporation
Entity Name: smr chevron
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Permit Applicant
Entity Name: SALAM M. RAZUKI
Entity Title: Owner

SMR CHEVRON (Continued) **S106071331**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 469-6881
Affiliation Type Desc:	Environmental Contact
Entity Name:	SALAM M. RAZUKI
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91977
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91977
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	SALAM M. RAZUKI
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	RAZUKI INVESTMENTS
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRINGVALLEY
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	RAZUKI INVESTMENTS L L C
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 469-6881

SMR CHEVRON (Continued) **S106071331**

Name: SMR CHEVRON
Address: 9749 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 154358
CERS ID: 10362979
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-25-2019
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Inspection Sequence ID:6191485;Tank ID:19837;Violation Description:(TCR 9d) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-13-2018
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 p.s.i.g. and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Returned to compliance on 07/16/2018. Inspection Sequence ID:5931067;Tank ID:19835,19837;Violation Description:(RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly. with the capability of detecting a release of 3.0 gallons per hour leak at 10 p.s.i.g. and restrict or shut off the flow of product through the piping when a leak is detected. 23 CCR 2636(f)(2)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least

SMR CHEVRON (Continued) **S106071331**

hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.

Violation Notes: Returned to compliance on 09/01/2017. Inspection Sequence ID:5685482;Tank ID:19835,19837;Violation Description:(RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly, be capable of detecting a release of 3.0 gallons per hour, restrict or shut off the flow of product through the piping or trigger an alarm when a leak is detected. 23 CCR 2636(f)(2)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-13-2018
Citation: HSC 6.7 25290.1(c),25290.2(c),25291(a)(2),2529.1(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c),25290.2(c),25291(a)(2),2529.1(e)
Violation Description: Failure to maintain secondary containment (e.g., failure of secondary containment testing).
Violation Notes: Returned to compliance on 07/16/2018. Inspection Sequence ID:5931067;Tank ID:19835,19836,19837;Violation Description:Failure to maintain secondary containment (e.g. failure of secondary containment testing). HSC 25290.1(c)(2), 25290.2(c)(2), 25291(a), 25291(e)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-22-2016
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 07/22/2016. Inspection Sequence ID:5533005
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-25-2019
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of

SMR CHEVRON (Continued) **S106071331**

capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Inspection Sequence ID:6191485;Tank ID:19835,19836,19837;Violation Description:(TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 5. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prev
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 07/13/2018. Inspection Sequence ID:5685482
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs

SMR CHEVRON (Continued) **S106071331**

when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.

Violation Notes: Returned to compliance on 07/20/2017. Inspection Sequence ID:5685482;Tank ID:19835,19837;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 10-01-2015
Citation: HSC 6.7 25291 - California Health and Safety Code, Chapter 6.7, Section(s) 25291
Violation Description: Failure to maintain under-dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid.
Violation Notes: Returned to compliance on 10/08/2015. Inspection Sequence ID:5161706;Tank ID:19835,19836;Violation Description:Failure to maintain under dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid. HSC 25290.1, 25290.2, 25291
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-20-2017
Citation: 23 CCR 16 2636(f)(5) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(5)
Violation Description: "Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested annually: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC)."
Violation Notes: Returned to compliance on 07/20/2017. Inspection Sequence ID:5685482;Tank ID:19835,19836,19837;Violation Description:Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested annually: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system

SMR CHEVRON (Continued) **S106071331**

shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC). 23 CCR 2636(f)(5)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-22-2016
Citation: 23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description: Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes: Returned to compliance on 07/22/2016. Inspection Sequence ID:5533005;Tank ID:19835,19836,19837;Violation Description:(RD) Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test. 23 CCR 2638
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 07-25-2019
Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description: Failure to maintain records of repairs and upgrades on site, or off site if approved by the UPA, for the life of the UST.
Violation Notes: Inspection Sequence ID:6191485;Tank ID:19835,19836,19837;Violation Description:Failure to maintain records of repairs and upgrades on site, or off site if approved by the CUPA, for the life of the UST. 23 CCR 2712(b)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 154358
Site Name: SMR CHEVRON
Violation Date: 10-01-2015
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double wall pressurized piping in the turbine sump to be continuously monitored with a system that activates an audible and visual alarm or restricts or stops flow at dispenser when a leak is detected.
Violation Notes: Returned to compliance on 10/01/2015. Inspection Sequence ID:5161706;Tank ID:19836,19837;Violation Description:(RD) Failure of the double wall pressurized piping in the turbine sump to be continuously monitored with a system that activates an audible and visual alarm or restricts or stops flow at dispenser when a leak is detected. 23 CCR 2636(f)(1)
Violation Division: San Diego County Department of Env Health
Violation Program: UST

SMR CHEVRON (Continued) **S106071331**

Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-13-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5931067
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-20-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5685482
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-22-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Lewallen Cecilia Inspection ID:5533005
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-22-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Lewallen Cecilia Inspection ID:5533005
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Fuentecilla Carmel Inspection ID:4418798
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Fuentecilla Carmel Inspection ID:4418798
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

SMR CHEVRON (Continued) **S106071331**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-20-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Khan Steven Inspection ID:4964655
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-20-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Khan Steven Inspection ID:4964655
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-20-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5685482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-01-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5161706
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-01-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5161706
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-13-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5931067
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-13-2018
Violations Found:	Yes

SMR CHEVRON (Continued) **S106071331**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5931067
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-22-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Lewallen Cecilia Inspection ID:5533005
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:6191485
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-25-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:6191485
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4418798
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-20-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Khan Steven Inspection ID:4964655
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5685482
Eval Division:	San Diego County Department of Env Health

SMR CHEVRON (Continued) **S106071331**

Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-25-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6191485
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 154358
Facility Name: SMR CHEVRON
Env Int Type Code: HWG
Program ID: 10362979
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 32.747650
Longitude: -116.985710

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: SALAM M RAZUKI
Entity Title: Not reported
Affiliation Address: 9749 CAMPO RD
Affiliation City: SPRINGVALLEY
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: SALAM M. RAZUKI
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (619) 464-2501

Affiliation Type Desc: UST Tank Operator
Entity Name: SALAM M. RAZUKI
Entity Title: Not reported

SMR CHEVRON (Continued) **S106071331**

Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 469-6881
Affiliation Type Desc:	Legal Owner
Entity Name:	RAZUKI INVESTMENTS L L C
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 464-2501
Affiliation Type Desc:	Property Owner
Entity Name:	RAZUKI INVESTMENTS L L C
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 464-2501
Affiliation Type Desc:	UST PO Name
Entity Name:	RAZUKI INVESTMENTS
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRINGVALLEY
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	SALAM M. RAZUKI
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91977
Affiliation Phone:	(619) 469-6881
Affiliation Type Desc:	Parent Corporation
Entity Name:	smr chevron
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

SMR CHEVRON (Continued) **S106071331**

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	SALAM M. RAZUKI
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 469-6881

Affiliation Type Desc:	Environmental Contact
Entity Name:	SALAM M. RAZUKI
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91977
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91977
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	SALAM M. RAZUKI
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	RAZUKI INVESTMENTS
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRINGVALLEY
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	RAZUKI INVESTMENTS L L C
Entity Title:	Not reported
Affiliation Address:	9749 CAMPO RD
Affiliation City:	SPRING VALLEY
Affiliation State:	CA
Affiliation Country:	United States

SMR CHEVRON (Continued) **S106071331**

Affiliation Zip: 91977
Affiliation Phone: (619) 469-6881

D45 **CHEVRON SERVICE STATION** **LUST** **S102427557**
ESE **9749 CAMPO RD** **N/A**
1/8-1/4 **SPRING VALLEY, CA 91977**
0.238 mi.
1258 ft. **Site 9 of 9 in cluster D**

Relative:
Higher

Actual:
438 ft.

LUST REG 9:

Region:	9
Status:	Case Closed
Case Number:	9UT1229
Local Case:	H05718-001
Substance:	Unleaded Gasoline
Qty Leaked:	0
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Local Agency:	San Diego
How Found:	Tank Closure
How Stopped:	Close Tank
Source:	Unknown
Cause:	Unknown
Lead Agency:	Local Agency
Case Type:	Aquifer affected
Date Found:	11/03/1988
Date Stopped:	11/03/1988
Confirm Date:	11/04/1988
Submit Workplan:	Not reported
Prelim Assess:	11/04/1988
Desc Pollution:	Not reported
Remed Plan:	/ /
Remed Action:	Not reported
Began Monitor:	Not reported
Release Date:	11/04/1988
Enforce Date:	Not reported
Closed Date:	5/4/93
Enforce Type:	Not reported
Pilot Program:	LOP
Basin Number:	909.12
GW Depth:	7’
Beneficial Use:	Municipal groundwater use
NPDES Number:	Not reported
Priority:	2A
File Dispn:	Not reported
Interim Remedial Actions:	Yes
Cleanup and Abatement order Number:	Not reported
Waste Discharge Requirement Number:	Not reported

E46 **CREST KENNALS INC NT0067** **LUST** **S102428483**
East **9832 CAMPO RD** **SAN DIEGO CO. SAM** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977** **San Diego Co. HMMD**
0.333 mi. **SWEEPS UST**
1757 ft. **Site 1 of 2 in cluster E** **Cortese**
HIST CORTESE
Relative: **SAN DIEGO CO LOP**
Higher **CERS**

Actual: **443 ft.**

LUST:

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771417
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607302878
Global Id:	T0607302878
Latitude:	32.748425
Longitude:	-116.984039
Status:	Completed - Case Closed
Status Date:	02/11/2000
Case Worker:	Not reported
RB Case Number:	9UT59
Local Agency:	Not reported
File Location:	Local Agency
Local Case Number:	H20867-001
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

LUST:

Global Id:	T0607302878
Action Type:	Other
Date:	09/28/1984
Action:	Leak Discovery

Global Id:	T0607302878
Action Type:	ENFORCEMENT
Date:	02/11/2000
Action:	Closure/No Further Action Letter

Global Id:	T0607302878
Action Type:	Other
Date:	09/28/1984
Action:	Leak Reported

Global Id:	T0607302878
Action Type:	Other
Date:	09/28/1984
Action:	Leak Began

LUST:

Global Id:	T0607302878
Status:	Open - Case Begin Date
Status Date:	09/28/1984

Global Id:	T0607302878
Status:	Completed - Case Closed
Status Date:	02/11/2000

CREST KENNALS INC NT0067 (Continued) **S102428483**

SAN DIEGO CO. SAM:

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771417
Case Number:	H20867-001
Agency:	DEH Site Assessment & Mitigation
Funding:	**LOP - State Fund**
Facility Type:	Soils Only
Facility Status:	Closed Case
Date:	2/11/2000
Date Began:	9/28/1984

HMMD SAN DIEGO:

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	120867
Business Type:	Not reported
EPA Id Number:	Not reported
APN:	501-176-09-00
Last HMMD Inspection:	Not reported
Facility Telephone:	Not reported
Permit Status:	INAC
Permit Expiration:	Not reported
Date Last Updated:	11/02/2012
Facility Owner:	CREST KENNALS INC
Facility Mailing Address:	9832 CAMPO RD
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977-1417
UST Owner:	CREST KENNALS INC
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120867 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	120867
Tank Type:	SINGLE WALL
Additional Id:	NT0067-1
Capacity Gallons:	1000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	REMOVED
Remove Close Date:	1987-01-12 00:00:00
Year Installed:	Not reported
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 120867 T002

CREST KENNALS INC NT0067 (Continued) **S102428483**

Last Update:	2012-11-02 14:17:38
Permit Number:	120867
Tank Type:	SINGLE WALL
Additional Id:	NT0067-2
Capacity Gallons:	1000
UST Contents:	LEADED
Other Content Info:	LEADED
Reg Status:	REMOVED
Remove Close Date:	1987-01-12 00:00:00
Year Installed:	Not reported
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

SWEEPS UST:

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City:	SPRING VALLEY
Status:	Active
Comp Number:	20867
Number:	9
Board Of Equalization:	44-023354
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	20867
Number:	Not reported
Board Of Equalization:	44-023354
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-020867-000001
Tank Status:	Not reported
Capacity:	1000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	OTHER
Number Of Tanks:	2

CREST KENNALS INC NT0067 (Continued) **S102428483**

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	20867
Number:	Not reported
Board Of Equalization:	44-023354
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-020867-000002
Tank Status:	Not reported
Capacity:	1000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	LEADED
Number Of Tanks:	Not reported

CORTESE:

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771417
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0607302878
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	CREST RENTALS INCORPORATE
edr_fadd1:	9832 CAMPO
City,State,Zip:	SPRING VALLEY, CA 92077
Region:	CORTESE
Facility County Code:	37
Reg By:	LTNKA
Reg Id:	9UT59

CREST KENNALS INC NT0067 (Continued) **S102428483**

SAN DIEGO CO LOP:

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Record ID:	DEH1984-LSAM-H20867-001
Record Status:	Completed
Opened Date:	09/28/1984
Parcel Number:	501-176-09-00
Case Type:	LOP - Local Oversight Program
Historical Name:	CREST RENTAL
SWRCB Global ID:	T0607302878
Funding:	S - LOP State Fund
Lead Agency:	DEH/SAM
Lead Agency Date:	09/28/1984
Census Tract:	136.01
Community:	Spring Valley
Jurisdiction:	UNINCORPORATED
Watershed Basin Number:	909.12
Water Purveyor:	HELIX WATER DISTRICT LAND
Fire Agency:	SAN MIGUEL FIRE PROT DIST
Latitude:	32.7484197
Longitude:	-116.9840358
X MapCoord:	6335972.002
Y MapCoord:	1852884.622

CERS:

Name:	CREST KENNALS INC NT0067
Address:	9832 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771417
Site ID:	214606
CERS ID:	T0607302878
CERS Description:	Leaking Underground Storage Tank Cleanup Site

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E47 **FORMER CREST RENTALS** **LUST** **S104539640**
East **9832 CAMPO RD** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977**
0.333 mi.
1757 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
443 ft.

LUST REG 9:

Region:	9
Status:	Case Closed
Case Number:	9UT59
Local Case:	H20867-001
Substance:	Diesel
Qty Leaked:	100
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Local Agency:	San Diego
How Found:	Tank Closure
How Stopped:	Close Tank
Source:	Unknown
Cause:	Unknown
Lead Agency:	Local Agency
Case Type:	Soil only
Date Found:	09/28/1984
Date Stopped:	/ /

FORMER CREST RENTALS (Continued) **S104539640**

Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 09/28/1984
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 09/28/1984
Enforce Date: Not reported
Closed Date: 2/11/00
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 909.12
GW Depth: 12
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: 3B
File Dispn: File discarded, case closed
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

F48 **JAMACHA PUMP STATION** **SAN DIEGO CO. SAM** **S106916572**
East **9903 HY 94 CAMPO RD** **SAN DIEGO CO LOP** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977** **CERS**
0.413 mi.
2181 ft. **Site 1 of 3 in cluster F**

Relative:
Higher

Actual:
450 ft.

SAN DIEGO CO. SAM:
Name: JAMACHA PUMP STATION
Address: 9903 HY 94 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Case Number: H20879-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - Federal Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Closed Case
Date: 12/19/2003
Date Began: 9/23/1987

SAN DIEGO CO LOP:
Name: JAMACHA PUMP STATION
Address: 9903 HY 94 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Record ID: DEH1987-LSAM-H20879-001
Record Status: Completed
Opened Date: 09/23/1987
Parcel Number: 580-010-06-00
Case Type: LOP - Local Oversight Program
Historical Name: COUNTY OF SD-JAMACHA PUMP STA
SWRCB Global ID: T0607303058
Funding: F - LOP Federal Fund
Lead Agency: DEH/SAM
Lead Agency Date: 09/23/1987
Census Tract: 139.03
Community: Spring Valley
Jurisdiction: UNINCORPORATED

JAMACHA PUMP STATION (Continued) **S106916572**

Watershed Basin Number: 909.21
Water Purveyor: OTAY WATER DISTRICT
Fire Agency: SAN MIGUEL FIRE PROT DIST
Latitude: 32.7094312
Longitude: -116.9830454
X MapCoord: 6336175.507
Y MapCoord: 1838678.035

CERS:
Name: JAMACHA PUMP STATION
Address: 9903 HY 94 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 248802
CERS ID: T0607303058
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: JON SENAHA - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

F49 **ULTRAMAR STATION #1-744** **SAN DIEGO CO. SAM** **S106060449**
East **9932 CAMPO RD** **San Diego Co. HMMD** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977** **CERS HAZ WASTE**
0.444 mi. **CERS TANKS**
2343 ft. **Site 2 of 3 in cluster F** **Cortese**
CERS

Relative:
Higher

Actual:
456 ft.

SAN DIEGO CO. SAM:
Name: ULTRAMAR STATION #1-744
Address: 9932 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771608
Case Number: H04860-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - State Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Remedial Investigation
Date: 3/11/1988
Date Began: 12/11/1978

HMMD SAN DIEGO:
Name: VALERO STATION #3744
Address: 9932 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Permit Number: 104860
Business Type: 6HK28
EPA Id Number: CAL000323846
APN: 501-177-13-00
Last HMMD Inspection: 10/13/2011
Facility Telephone: 619-461-0388

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	VALERO CALIFORNIA RETAIL COMPANY
Facility Mailing Address:	685 W 03RD ST
Facility Mailing City:	HANFORD
Facility Mailing State:	CA
Facility Mailing Zip:	93230
UST Owner:	VALERO CA RETAIL CO
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 104860 T007
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 104860 T005
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 104860 T006
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Other Information:	WATER & FUEL
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	USED FUEL FILTERS

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/13/2011
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/07/2009
Violation Code: 6HV3101
Violation: UPF PERMIT NOT CURRENT/ONSITE
Violation Citation: Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/07/2009
Violation Code: 6HV3193
Violation: NO TRAINING/RECORD INCOMPLETE-NOT ONSITE
Violation Citation: Facility employee(s) are not trained, training records are incomplete, and/or not onsite. 2715(f)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3411
Violation:	LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3411
Violation:	LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/17/2005
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/17/2005
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/17/2005
Violation Code:	6HV3262
Violation:	SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation:	Secondary containment piping obstructed preventing drainage to sump. 2632
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/17/2005
Violation Code:	6HV3411
Violation:	LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not

ULTRAMAR STATION #1-744 (Continued) **S106060449**

tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/06/2010
Violation Code: 6HV1017
Violation: HMBP NOT CERTIFIED ANNUALLY
Violation Citation: Business Plan not certified annually. 25505(d) & (e)(2)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV1009
Violation: HMBP: INADEQUATE SITE MAP
Violation Citation: Business Plan does not have a site map which provides sufficient or complete information for emergency response agencies. HSC 25509(a)(5) & 25505(a)(2)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/10/2004
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/10/2004
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/10/2004
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/13/2003
Violation Code: 6HV0135
Violation: MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation: Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 104860 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 104860
Tank Type: OTHER
Additional Id: 1 REGULAR LEADED,
Capacity Gallons: 10000
UST Contents: LEADED
Other Content Info: LEADED

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 104860 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	OTHER
Additional Id:	2 UNLEADED
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 104860 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	OTHER
Additional Id:	3 PREMIUM
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 104860 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	0
UST Contents:	Not reported
Other Content Info:	SEE FILE FOR CONTENTS
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1971-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90

ULTRAMAR STATION #1-744 (Continued) **S106060449**

UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 104860 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440 / RT4152
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT
UST Name:	UNDERGROUND TANK 104860 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440 / RT4152
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT
UST Name:	UNDERGROUND TANK 104860 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440, RT3500, RT4200 / RT4152; RT 5356
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT
Name:	VALERO STATION #3744
Address:	9932 CAMPO RD

ULTRAMAR STATION #1-744 (Continued) **S106060449**

City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	208381
Business Type:	6HK28
EPA Id Number:	CAL000116439
APN:	501-177-13-00
Last HMMD Inspection:	Not reported
Facility Telephone:	619-461-0388
Permit Status:	INAC
Permit Expiration:	07/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	ULTRAMAR INC
Facility Mailing Address:	Not reported
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 104860 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	OTHER
Additional Id:	1 REGULAR LEADED
Capacity Gallons:	10000
UST Contents:	LEADED
Other Content Info:	LEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	OTHER
Additional Id:	2 UNLEADED
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

ULTRAMAR STATION #1-744 (Continued) **S106060449**

UST Name:	UNDERGROUND TANK 104860 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	OTHER
Additional Id:	3 PREMIUM
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	0
UST Contents:	Not reported
Other Content Info:	SEE FILE FOR CONTENTS
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1971-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

UST Name:	UNDERGROUND TANK 104860 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440
Capacity Gallons:	10000

ULTRAMAR STATION #1-744 (Continued) **S106060449**

UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

UST Name:	UNDERGROUND TANK 104860 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440, RT3500
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

Name:	VALERO STATION #3744
Address:	9932 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	208381
Business Type:	6HK28
EPA Id Number:	CAL000116439
APN:	501-177-13-00
Last HMMD Inspection:	Not reported
Facility Telephone:	619-461-0388
Permit Status:	INAC
Permit Expiration:	07/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	ULTRAMAR INC
Facility Mailing Address:	Not reported
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 104860 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	208381

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Tank Type:	OTHER
Additional Id:	1 REGULAR LEADED
Capacity Gallons:	10000
UST Contents:	LEADED
Other Content Info:	LEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	OTHER
Additional Id:	2 UNLEADED
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	OTHER
Additional Id:	3 PREMIUM
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	208381
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	0
UST Contents:	Not reported
Other Content Info:	SEE FILE FOR CONTENTS
Reg Status:	REMOVED

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1971-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 104860 T005
Last Update: 2012-11-02 14:17:38
Permit Number: 208381
Tank Type: DOUBLE WALL
Additional Id: RT0814/ RT2440
Capacity Gallons: 10000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31B
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

UST Name: UNDERGROUND TANK 104860 T006
Last Update: 2012-11-02 14:17:38
Permit Number: 208381
Tank Type: DOUBLE WALL
Additional Id: RT0814/ RT2440
Capacity Gallons: 10000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31B
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

UST Name: UNDERGROUND TANK 104860 T007
Last Update: 2012-11-02 14:17:38
Permit Number: 208381
Tank Type: DOUBLE WALL
Additional Id: RT0814/ RT2440, RT3500
Capacity Gallons: 10000
UST Contents: PREMIUM UNLEADED
Other Content Info: PREMIUM UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31B
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF &

ULTRAMAR STATION #1-744 (Continued) **S106060449**

FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

Name:	VALERO STATION #3744
Address:	9932 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	104860
Business Type:	6HK28
EPA Id Number:	CAL000323846
APN:	501-177-13-00
Last HMMD Inspection:	10/13/2011
Facility Telephone:	619-461-0388
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	VALERO CALIFORNIA RETAIL COMPANY
Facility Mailing Address:	685 W 03RD ST
Facility Mailing City:	HANFORD
Facility Mailing State:	CA
Facility Mailing Zip:	93230
UST Owner:	VALERO CA RETAIL CO
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 104860 T007
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 104860 T005
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 104860 T006
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Case Number: Not reported
Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Other Information: WATER & FUEL
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104860
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: USED FUEL FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/13/2011
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/07/2009
Violation Code: 6HV3101
Violation: UPF PERMIT NOT CURRENT/ONSITE
Violation Citation: Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/07/2009
Violation Code: 6HV3193
Violation: NO TRAINING/RECORD INCOMPLETE-NOT ONSITE
Violation Citation: Facility employee(s) are not trained, training records are incomplete, and/or not onsite. 2715(f)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3267

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3192
Violation: NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation: Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3262

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Violation: SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation: Secondary containment piping obstructed preventing drainage to sump. 2632
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/06/2010
Violation Code: 6HV1017
Violation: HMBP NOT CERTIFIED ANNUALLY
Violation Citation: Business Plan not certified annually. 25505(d) & (e)(2)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV1009
Violation: HMBP: INADEQUATE SITE MAP
Violation Citation: Business Plan does not have a site map which provides sufficient or complete information for emergency response agencies. HSC 25509(a)(5) & 25505(a)(2)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3267

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/10/2004
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/10/2004
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/10/2004
Violation Code: 6HV3258
Violation: SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation: Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/13/2003
Violation Code: 6HV0135
Violation: MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation: Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a)

ULTRAMAR STATION #1-744 (Continued) **S106060449**

& 25160.2(b)(3)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 104860 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 104860
Tank Type: OTHER
Additional Id: 1 REGULAR LEADED,
Capacity Gallons: 10000
UST Contents: LEADED
Other Content Info: LEADED
Reg Status: REMOVED
Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1973-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 104860 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 104860
Tank Type: OTHER
Additional Id: 2 UNLEADED
Capacity Gallons: 10000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: REMOVED
Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1973-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 104860 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 104860
Tank Type: OTHER
Additional Id: 3 PREMIUM
Capacity Gallons: 10000
UST Contents: PREMIUM UNLEADED
Other Content Info: PREMIUM UNLEADED
Reg Status: REMOVED
Remove Close Date: 1986-11-08 00:00:00
Year Installed: 1973-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 90
UST Monitor Method: NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name: UNDERGROUND TANK 104860 T004
Last Update: 2012-11-02 14:17:38

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Permit Number:	104860
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	0
UST Contents:	Not reported
Other Content Info:	SEE FILE FOR CONTENTS
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1971-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440 / RT4152
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

UST Name:	UNDERGROUND TANK 104860 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440 / RT4152
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

UST Name:	UNDERGROUND TANK 104860 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440, RT3500, RT4200 / RT4152; RT 5356
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

Name:	VALERO STATION #3744
Address:	9932 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	104860
Business Type:	6HK28
EPA Id Number:	CAL000323846
APN:	501-177-13-00
Last HMMD Inspection:	10/13/2011
Facility Telephone:	619-461-0388
Permit Status:	OPEN
Permit Expiration:	08/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	VALERO CALIFORNIA RETAIL COMPANY
Facility Mailing Address:	685 W 03RD ST
Facility Mailing City:	HANFORD
Facility Mailing State:	CA
Facility Mailing Zip:	93230
UST Owner:	VALERO CA RETAIL CO
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 104860 T007
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 104860 T005
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	104860
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Other Information: UNDERGROUND TANK 104860 T006
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 104860
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Other Information: WATER & FUEL
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 104860
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: USED FUEL FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/13/2011
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/07/2009
Violation Code: 6HV3101
Violation: UPF PERMIT NOT CURRENT/ONSITE
Violation Citation: Current UPF permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/07/2009
Violation Code: 6HV3193
Violation: NO TRAINING/RECORD INCOMPLETE-NOT ONSITE
Violation Citation: Facility employee(s) are not trained, training records are incomplete, and/or not onsite. 2715(f)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/31/2007
Violation Code: 6HV3267
Violation: DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation: Dispenser containment not adequately monitored. 2636(f)(1) or

ULTRAMAR STATION #1-744 (Continued) **S106060449**

	(f)(5)(A)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3411
Violation:	LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	10/31/2007
Violation Code:	6HV3411
Violation:	LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation:	DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/17/2005
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/17/2005
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or

ULTRAMAR STATION #1-744 (Continued) **S106060449**

DO inspection reports not onsite 2715 (c)(d)(e)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3262
Violation: SEC CONT PIPING DRAINAGE OBSTRUCTED
Violation Citation: Secondary containment piping obstructed preventing drainage to sump. 2632
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/17/2005
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 10/06/2010
Violation Code: 6HV1017
Violation: HMBP NOT CERTIFIED ANNUALLY
Violation Citation: Business Plan not certified annually. 25505(d) & (e)(2)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV1009
Violation: HMBP: INADEQUATE SITE MAP
Violation Citation: Business Plan does not have a site map which provides sufficient or complete information for emergency response agencies. HSC 25509(a)(5) & 25505(a)(2)
Activity: ACTIVE

Permit Number: 104860
Update Date: 11/02/2012
Inspection Date: 11/22/2006
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not

ULTRAMAR STATION #1-744 (Continued) **S106060449**

	completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/22/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/22/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/22/2006
Violation Code:	6HV3267
Violation:	DISP. CONTAINMENT NOT ADEQ. MONITORED
Violation Citation:	Dispenser containment not adequately monitored. 2636(f)(1) or (f)(5)(A)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/10/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/10/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE
Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/10/2004
Violation Code:	6HV3258
Violation:	SENSORS NOT AT LOW POINT OR ADEQUATELY
Violation Citation:	Sensors not placed adequately and/or at low point in sumps. 2641(a), 25291(a)(7)(C)
Activity:	ACTIVE

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Permit Number:	104860
Update Date:	11/02/2012
Inspection Date:	11/13/2003
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE

UST:

UST Name:	UNDERGROUND TANK 104860 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	OTHER
Additional Id:	1 REGULAR LEADED,
Capacity Gallons:	10000
UST Contents:	LEADED
Other Content Info:	LEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	OTHER
Additional Id:	2 UNLEADED
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 104860 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	OTHER
Additional Id:	3 PREMIUM
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1973-01-01 00:00:00
Pipe Type:	Not reported

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 104860 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	0
UST Contents:	Not reported
Other Content Info:	SEE FILE FOR CONTENTS
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1971-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.
UST Name:	UNDERGROUND TANK 104860 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440 / RT4152
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT
UST Name:	UNDERGROUND TANK 104860 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440 / RT4152
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT
UST Name:	UNDERGROUND TANK 104860 T007

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Last Update:	2012-11-02 14:17:38
Permit Number:	104860
Tank Type:	DOUBLE WALL
Additional Id:	RT0814/ RT2440, RT3500, RT4200 / RT4152; RT 5356
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31B
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ MECHANICAL FLOAT

Name:	7-ELEVEN INC. STORE# 37991
Address:	9932 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAL000419003
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	619-461-0388
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	03/28/2020
Facility Owner:	Not reported
Facility Mailing Address:	P.O.BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT, DALLAS, TX 75221
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	Y
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104860
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5994692
Return To Compliance Date:	2018-10-31T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	18653
Container/Tank Id:	Not reported
Last Update:	2020-03-28T03:43:28.000
Inspection Date:	2018-10-04T00:00:00.000
Violation Code:	2060020 (TCR 9a) Failure to meet one or more of the following

ULTRAMAR STATION #1-744 (Continued) **S106060449**

requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of 5 gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container, tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. 23 CCR 2635(b), 2637.1(a-c), 2665(a-b), 2712(b)(1)(F); HSC 25284.2

Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104860
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5738421
Return To Compliance Date:	2017-10-10T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	18651
Container/Tank Id:	Not reported
Last Update:	2020-03-28T03:43:28.000
Inspection Date:	2017-10-10T16:32:21.000
Violation Code:	2030025 (RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly, be capable of detecting a release of 3.0 gallons per hour, restrict or shut off the flow of product through the piping or trigger an alarm when a leak is detected. 23 CCR 2636(f)(2)

Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104860
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5994692
Return To Compliance Date:	2018-10-04T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	18653
Container/Tank Id:	Not reported
Last Update:	2020-03-28T03:43:28.000
Inspection Date:	2018-10-04T00:00:00.000
Violation Code:	2030017 (TCR 9d) Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC). 23 CCR 2636(f)

Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Facility Id Number:	37-000-104860
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	6253971
Return To Compliance Date:	2019-10-10T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	18653
Container/Tank Id:	Not reported
Last Update:	2020-03-28T03:43:28.000
Inspection Date:	2019-10-10T00:00:00.000
Violation Code:	2030017 (TCR 9d) Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC). 23 CCR 2636(f)
Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104860
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	6253971
Return To Compliance Date:	2019-10-21T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	18651
Container/Tank Id:	Not reported
Last Update:	2020-03-28T03:43:28.000
Inspection Date:	2019-10-10T00:00:00.000
Violation Code:	2060020 (TCR 9a) Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of 5 gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container, tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. 23 CCR 2635(b), 2637.1(a-c), 2665(a-b), 2712(b)(1)(F); HSC 25284.2
Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104860
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	6253971
Return To Compliance Date:	2019-10-10T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	18653

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Container/Tank Id:	Not reported
Last Update:	2020-03-28T03:43:28.000
Inspection Date:	2019-10-10T00:00:00.000
Violation Code:	2030036 (TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 5. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018. 6. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. 7. For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter. 8. Inspected within 30 days after a repair to the overfill prevention equipment. 9. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. 10. Inspected by a certified UST service technician. 11. Maintain records of overfill prevention equipment inspection for 36 months. 23 CCR 2635(c)(1), 2635(d), 2637.2(a-c), 2665, 2712(b)(1)(G)

UST DTL:

Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104860
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	7-ELEVEN INC.
Tankid:	18651
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2020-03-28T03:43:28.000
Tank Capacityin Gallons:	10000
Tank Contents:	Regular Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2002-HUPFP-104860
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-104860
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	7-ELEVEN INC.
Tankid:	18652
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Last Updated: 2020-03-28T03:43:28.000
Tank Capacityin Gallons: 10000
Tank Contents: Regular Unleaded
Type Of Tank: Double Wall

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-104860
Facility Type (Ust Facility): Motor Vehicle Fueling
Tank Owner Name: 7-ELEVEN INC.
Tankid: 18653
Tank Status: Active
Date Ust Permanently Closed: Not reported
Tank Use: Motor Vehicle Fueling
Piping System Type: Pressure
Last Updated: 2020-03-28T03:43:28.000
Tank Capacityin Gallons: 10000
Tank Contents: Premium Unleaded
Type Of Tank: Double Wall

Waste and Materials:
Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0178078
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-01-28T12:09:10.000
Chemical Name: GASOLINE
Common Name: GASOLINE (GRADES: REGULAR & PREMIUM)
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0152592
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-28T12:09:10.000
Chemical Name: SUMP WASTE CLEAN-UP, TEST WATER
Common Name: SUMP WASTE CLEAN-UP, TEST WATER
Case Number: Not reported

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0120539
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-01-20T00:00:00.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 104860 T006
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Active Permit: Y
Child Record Id: DEH2016-HCHEM-0120540
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-01-20T00:00:00.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 104860 T007
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0120541
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-01-20T00:00:00.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 104860 T005
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0101469
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-01-20T00:00:00.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: USED FUEL FILTERS
Case Number: Not reported

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0101470
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-01-20T00:00:00.000
Chemical Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Common Name: WATER & FUEL
Case Number: Not reported

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0116017
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-01-16T15:56:43.000
Chemical Name: WASTE 134 AQUEOUS SOL'N W/LESS 10% ORG
Common Name: WATER & FUEL
Case Number: Not reported

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0191541

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-28T03:43:28.000
Chemical Name: SUMP WASTE CLEAN-UP, TEST WATER
Common Name: SUMP WASTE CLEAN-UP, TEST WATER
Case Number: Not reported

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0137630
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-01-16T15:56:43.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 104860 T006
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0137631
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-01-16T15:56:43.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 104860 T007
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0137632
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-01-16T15:56:43.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 104860 T005
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0116016
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-01-16T15:56:43.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: USED FUEL FILTERS
Case Number: Not reported

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0152591
Trade Secret: N
Hazardous Material Type: Not reported

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Last Updated: 2019-01-28T12:09:10.000
Chemical Name: WASTE ABSORBENT & SPENT DISPENSER FUEL FILTERS
Common Name: WASTE ABSORBENT & SPENT DISPENSER FUEL FILTERS
Case Number: Not reported

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0221718
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2020-03-28T03:43:28.000
Chemical Name: GASOLINE
Common Name: GASOLINE (GRADES: REGULAR & PREMIUM)
Case Number: 8006-61-9

Record ID: DEH2002-HUPFP-104860
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0191540
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2020-03-28T03:43:28.000
Chemical Name: WASTE ABSORBENT & SPENT DISPENSER FUEL FILTERS
Common Name: WASTE ABSORBENT & SPENT DISPENSER FUEL FILTERS
Case Number: Not reported

CERS HAZ WASTE:
Name: 7-ELEVEN INC. STORE# 37991
Address: 9932 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 165492
CERS ID: 10362910
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: 7-ELEVEN INC. STORE# 37991
Address: 9932 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Site ID: 165492
CERS ID: 10362910
CERS Description: Underground Storage Tank

CORTESE:
Name: ULTRAMAR STATION #1-744
Address: 9932 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771608
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0607301121
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

CERS:

Name:	7-ELEVEN INC. STORE# 37991
Address:	9932 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Site ID:	165492
CERS ID:	10362910
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	165492
Site Name:	7-ELEVEN INC. STORE# 37991
Violation Date:	10-10-2019
Citation:	23 CCR 16 2636(f)(4) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(4)
Violation Description:	Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC).
Violation Notes:	Returned to compliance on 10/10/2019. Inspection Sequence ID:6253971;Tank ID:18653;Violation Description:(TCR 9d) Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC). 23 CCR 2636(f)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	165492
Site Name:	7-ELEVEN INC. STORE# 37991
Violation Date:	10-10-2017
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes:	Returned to compliance on 10/10/2017. Inspection Sequence

ULTRAMAR STATION #1-744 (Continued) **S106060449**

ID:5738421;Tank ID:18651,18652;Violation Description:(RD) Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly, be capable of detecting a release of 3.0 gallons per hour, restrict or shut off the flow of product through the piping or trigger an alarm when a leak is detected. 23 CCR 2636(f)(2)

Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 165492
Site Name: 7-ELEVEN INC. STORE# 37991
Violation Date: 10-10-2019
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.
Violation Notes: Returned to compliance on 10/10/2019. Inspection Sequence ID:6253971;Tank ID:18653,18651,18652;Violation Description:(TCR 9b) Failure to comply with one or more of the following overfill prevention equipment requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 5. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prev
Violation Division: San Diego County Department of Env Health
Violation Program: UST

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Violation Source:	CERS
Site ID:	165492
Site Name:	7-ELEVEN INC. STORE# 37991
Violation Date:	10-10-2019
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	"Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container. Tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. "
Violation Notes:	Returned to compliance on 10/21/2019. Inspection Sequence ID:6253971;Tank ID:18651;Violation Description:(TCR 9a) Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of 5 gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container, tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. 23 CCR 2635(b), 2637.1(a-c), 2665(a-b), 2712(b)(1)(F); HSC 25284.2
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	165492
Site Name:	7-ELEVEN INC. STORE# 37991
Violation Date:	10-04-2018
Citation:	23 CCR 16 2636(f)(4) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(4)
Violation Description:	Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC).
Violation Notes:	Returned to compliance on 10/04/2018. Inspection Sequence ID:5994692;Tank ID:18653;Violation Description:(TCR 9d) Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC). 23 CCR 2636(f)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Site ID: 165492
Site Name: 7-ELEVEN INC. STORE# 37991
Violation Date: 10-04-2018
Citation: HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description: "Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container. Tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. "
Violation Notes: Returned to compliance on 10/31/2018. Inspection Sequence ID:5994692;Tank ID:18653,18651,18652;Violation Description:(TCR 9a) Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of 5 gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container, tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. 23 CCR 2635(b), 2637.1(a-c), 2665(a-b), 2712(b)(1)(F); HSC 25284.2
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5738421
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-13-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5161703
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-04-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5994692
Eval Division: San Diego County Department of Env Health

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Fuentecilla Carmel Inspection ID:4213258
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5738421
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6253971
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Khan Steven Inspection ID:4964622
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5738421
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6253971
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-12-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5560238
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-12-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5560238
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Khan Steven Inspection ID:4964622
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-04-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5994692
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-04-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Kiener Michael Inspection ID:5994692
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-10-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Fuentecilla Carmel Inspection ID:4213258
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-10-2013
Violations Found:	No

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Eval Type: Routine done by local agency
Eval Notes: Inspector: Fuentecilla Carmel Inspection ID:4213258
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:6253971
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-12-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5560238
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-13-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kiener Michael Inspection ID:5161703
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Khan Steven Inspection ID:4964622
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 165492
Facility Name: 7-ELEVEN INC. STORE# 37991
Env Int Type Code: HWG
Program ID: 10362910
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 32.748210
Longitude: -116.982130

Affiliation:
Affiliation Type Desc: UST Tank Owner
Entity Name: 7-ELEVEN INC.
Entity Title: Not reported

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Affiliation Address:	P.O. BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT
Affiliation City:	DALLAS
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	75221
Affiliation Phone:	(800) 828-0711
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Identification Signer
Entity Name:	STEPHEN BOYD
Entity Title:	REGIONAL GASOLINE ENVIRONMENTAL COMPLIANCE MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	7-ELEVEN INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 461-0388
Affiliation Type Desc:	Parent Corporation
Entity Name:	7-ELEVEN INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	7-ELEVEN INC.
Entity Title:	Not reported
Affiliation Address:	P.O.BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT
Affiliation City:	DALLAS
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	75221
Affiliation Phone:	(800) 828-0711

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	STEPHEN BOYD
Entity Title:	REGIONAL GASOLINE ENVIRONMENTAL COMPLIANCE MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(714) 771-5484

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	7-ELEVEN INC.
Entity Title:	Not reported
Affiliation Address:	P.O. BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT
Affiliation City:	DALLAS
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	75221
Affiliation Phone:	(800) 828-0711

Affiliation Type Desc:	Environmental Contact
Entity Name:	JAMIL HERSHEWE
Entity Title:	Not reported
Affiliation Address:	P.O.BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT
Affiliation City:	DALLAS
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75221
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O.BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT
Affiliation City:	DALLAS
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75221
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	7-ELEVEN INC.
Entity Title:	Not reported
Affiliation Address:	P.O.BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT
Affiliation City:	DALLAS
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	75221
Affiliation Phone:	(800) 828-0711

Affiliation Type Desc:	UST Tank Operator
Entity Name:	7-ELEVEN INC.
Entity Title:	Not reported
Affiliation Address:	P.O. BOX 7-11 ATTN: ENVIRONMENTAL DEPARTMENT
Affiliation City:	DALLAS
Affiliation State:	TX
Affiliation Country:	United States

ULTRAMAR STATION #1-744 (Continued) **S106060449**

Affiliation Zip:	75221
Affiliation Phone:	(800) 828-0711
Affiliation Type Desc:	Document Preparer
Entity Name:	Steve Skanderson, Stantec
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

F50 **VALERO CORNER STORE 3744** **LUST** **S101308219**
East **9932 CAMPO RD** **HAZNET** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977** **HIST CORTESE**
0.444 mi. **SAN DIEGO CO LOP**
2343 ft. **Site 3 of 3 in cluster F** **CERS**
HWTS

Relative:
Higher

Actual:
456 ft.

LUST REG 9:

Region:	9
Status:	Remedial action (cleanup) Underway
Case Number:	9UT235
Local Case:	H04860-001
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Pump and Treat Ground Water - generally employed to remove dissolved contaminants
Local Agency:	San Diego
How Found:	Not reported
How Stopped:	Not reported
Source:	Not reported
Cause:	Not reported
Lead Agency:	Local Agency
Case Type:	Aquifer affected
Date Found:	12/11/1978
Date Stopped:	/ /
Confirm Date:	10/03/1985
Submit Workplan:	Not reported
Prelim Assess:	/ /
Desc Pollution:	Not reported
Remed Plan:	/ /
Remed Action:	7/30/87
Began Monitor:	Not reported
Release Date:	11/13/1986
Enforce Date:	7/9/87
Closed Date:	Not reported
Enforce Type:	Cleanup and Abatement Orders
Pilot Program:	LOP
Basin Number:	909.21
GW Depth:	5’
Beneficial Use:	Municipal groundwater use
NPDES Number:	Not reported
Priority:	2A
File Dispn:	Not reported
Interim Remedial Actions:	Yes

VALERO CORNER STORE 3744 (Continued) **S101308219**

Cleanup and Abatement order Number: 87-107
Waste Discharge Requirement Number: Not reported

LUST:

Name:	ULTRAMAR STATION #1-744
Address:	9932 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771608
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607301121
Global Id:	T0607301121
Latitude:	32.7481470235579
Longitude:	-116.982200169312
Status:	Completed - Case Closed
Status Date:	02/03/2014
Case Worker:	CF
RB Case Number:	9UT235
Local Agency:	SAN DIEGO COUNTY LOP
File Location:	Local Agency
Local Case Number:	H04860-001
Potential Media Affect:	Aquifer used for drinking water supply, Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Reports of the presence of gasoline in telephone conduits, utility vaults, and manholes in the Campo Road right-of-way were brought to the attention of the County DEH in October 1985. According to telephone company complaints, the source of the unauthorized release appeared to be the gasoline station located at 9932 Campo Road in Spring Valley, California. Gasoline had reportedly been previously encountered in the telephone utility manholes in December 1978, January 1981, and October 1982. An L-shaped trench/sump (Interception Trench) was excavated by the owner/operator of the gas station in March 1983 to intercept product along its southern and western property lines. Groundwater accumulated in the sump at a depth of approximately 8 feet and was overlain by product. The groundwater/product mixture was periodically pumped out of a recovery well located within the sump and disposed offsite. Gasoline vapors in the explosive range continued to be detected in the utility manholes in October and November 1985. One of three, 10,000-gallon capacity, steel, single-walled, underground storage tanks (USTs) was removed from the site on November 6, 1986. A hole with dimensions of approximately 2 x 8 inches was observed at the bottom of the 23-year-old UST following its removal. The UST was inerted with dry ice and sprayed with foam by the fire department due to accumulation of vapors. The Responsible Party estimated that 1,000 gallons of gasoline had been released from the tank. The two remaining USTs were inerted with dry ice; however, available records are incomplete as to when the remaining two USTs were removed. Three, dual-walled, steel, fiberglass-clad, replacement USTs were subsequently installed in a new excavation on the eastern side of the site. A 250-gallon waste oil UST was removed from the site in December 1986. Ongoing pumping and disposal of product and groundwater from the Interception Trench continued following the UST removal. Although DEH opened an unauthorized release case for the site in October 1985, the San Diego Regional Water Quality Control Board (RWQCB) became the lead agency for the unauthorized release case in November 1986 and issued a Cleanup and Abatement Order (No. 87-107) on July 7, 1987. DEH reassumed its lead of the case in 1988. Four groundwater monitoring

VALERO CORNER STORE 3744 (Continued) **S101308219**

wells were installed at the site in December 1986. Three wells were constructed offsite in February 1987 to a maximum depth of 35 feet below ground surface (bgs). Analytical results for soil samples collected from the well borings indicated a maximum fuel hydrocarbon concentration of 920 milligrams per kilogram (mg/kg). Fuel hydrocarbons were detected at a maximum concentration of 40 milligrams per liter (mg/L) in groundwater samples collected from the newly-installed wells. The detected benzene concentration in one groundwater sample was 21 mg/L; the total concentration of benzene, toluene, ethyl-benzene, and xylenes (BTEX) in the sample was reported as 68 mg/L. Fuel oxygenates were not tested in groundwater samples until January 1997, at which time methyl-tert-butyl ether (MTBE) was detected. Additional off-site monitoring wells were installed in March 1989, July 2007, August 2008, and January 2009. Water level data for the monitoring wells indicated a southwesterly groundwater flow direction. Monthly monitoring and sampling of groundwater wells was initiated in January 1988. Free product was first detected in one of the wells in July 1989. The initial free product thickness was measured as 0.76 feet. Product sheens were noted overlying groundwater in three of the off-site wells in January 1991. Free product was periodically detected in other site wells during the 1990s, with a maximum apparent thickness of 1.24 feet. The last indication of free product in monitoring wells occurred in mid-1999.
A Remedial Action Plan (RAP) for the site was submitted to the RWQCB in October 1987. The RAP proposed pumping impacted groundwater from the existing recovery trench/sump and treating it with an air stripper to volatilize gasoline constituents. Construction of the air stripper system was completed in August 1989. However, the water level in the recovery trench/sump fell below the pump intake in the recovery well. The recovery trench was deepened and lengthened in December 1990 to facilitate pumping of impacted groundwater. A passive skimmer was installed in one site monitoring well in August 1994. An air-sparging well and two observation wells were installed at the site in 1995, but results indicated that shallow groundwater hindered its effectiveness. In April 2002, two additional recovery wells were installed (one at the north end of the trench and one on the east end) to expand the existing pump-and-treat system. The air stripper system was decommissioned in 2008 when recovery data indicated asymptotic levels. Impacted groundwater was then routed from the recovery wells into a holding tank and treated in vessels containing granular activated carbon. Approximately a half-million gallons of impacted groundwater were treated and discharged to the sanitary sewer during system operation resulting in the recovery of an estimated one pound of gasoline. The groundwater recovery/treatment system ceased operation on September 30, 2010, in order to evaluate non-pumping conditions. Limited remedial excavation was performed at the site in October 1997 following removal of former product piping and dispensers. Approximately 50 cubic yards of impacted soil was removed during the remedial excavation and an additional 120 cubic yards of soil was excavated in association with upgrade activities. During the former product piping removal, a petroleum sheen was observed on water in the tank cavity. Approximately 21,000 gallons of product water was pumped out of the cavity and transported offsite for treatment. A Correction Action Plan (CAP) was submitted for the site in July 2013. The consultant (Horizon Environmental, Inc.) estimated that the volume of impacted soil from the gasoline release, which underlies the site and a

VALERO CORNER STORE 3744 (Continued) **S101308219**

portion of Campo Road, was 78,500 cubic feet (2,907 cubic yards). Analytical results for groundwater samples collected in March 2013 indicate that remaining dissolved contaminants are MTBE and tert-butyl alcohol (TBA). Benzene, toluene, ethylbenzene, and xylene were not detected above their respective laboratory reporting limits]. MTBE concentrations have been decreasing or stable in groundwater samples collected from the 13 site monitoring wells. TBA concentrations indicate an increasing trend in a well located near the midline of Campo Road, but decreasing or stable trends are indicated for the remaining site wells. A westward-flowing, ephemeral drainage channel is located a half-block south of Campo Road. However, groundwater was not encountered in two well borings advanced south of the drainage channel. According to the CAP, no municipal or domestic wells are located within a mile of the site. Benzene and other volatile aromatic hydrocarbons were not detected in groundwater samples collected during the March 2013 monitoring and sampling round. Gasoline-impacted soil in the subsurface is restricted to the paved service station property and Campo Road. Based on trend analyses, MTBE concentrations in groundwater are decreasing and will fall below its Secondary Maximum Contaminant Level (5 micrograms per liter) within 12 years. Based on these findings, the CAP recommends soil and groundwater remediation by natural attenuation, no further action, and case closure. DEH concurs with these recommendations.

LUST:

Global Id:	T0607301121
Contact Type:	Local Agency Caseworker
Contact Name:	CAROL FENNER
Organization Name:	SAN DIEGO COUNTY LOP
Address:	P.O. Box 129261
City:	San Diego
Email:	carol.fenner@sdcounty.ca.gov
Phone Number:	Not reported

LUST:

Global Id:	T0607301121
Action Type:	RESPONSE
Date:	12/31/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0607301121
Action Type:	Other
Date:	12/11/1978
Action:	Leak Discovery
Global Id:	T0607301121
Action Type:	RESPONSE
Date:	04/30/2011
Action:	Monitoring Report - Semi-Annually - Regulator Responded
Global Id:	T0607301121
Action Type:	RESPONSE
Date:	07/24/2013
Action:	CAP/RAP - Feasibility Study Report - Regulator Responded
Global Id:	T0607301121
Action Type:	ENFORCEMENT

VALERO CORNER STORE 3744 (Continued) **S101308219**

Date: 07/09/1987
Action: Clean-up and Abatement Order

Global Id: T0607301121
Action Type: RESPONSE
Date: 10/31/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0607301121
Action Type: ENFORCEMENT
Date: 10/29/1985
Action: Notice of Responsibility

Global Id: T0607301121
Action Type: RESPONSE
Date: 07/31/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0607301121
Action Type: ENFORCEMENT
Date: 08/11/2008
Action: Letter - Notice

Global Id: T0607301121
Action Type: ENFORCEMENT
Date: 10/10/2008
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301121
Action Type: RESPONSE
Date: 12/31/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0607301121
Action Type: Other
Date: 10/03/1985
Action: Leak Reported

Global Id: T0607301121
Action Type: RESPONSE
Date: 04/30/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0607301121
Action Type: ENFORCEMENT
Date: 03/24/2009
Action: Letter - Notice

Global Id: T0607301121
Action Type: ENFORCEMENT
Date: 07/09/2009
Action: Letter - Notice

Global Id: T0607301121
Action Type: ENFORCEMENT
Date: 12/03/2013
Action: Letter - Notice

VALERO CORNER STORE 3744 (Continued) **S101308219**

Global Id: T0607301121
Action Type: ENFORCEMENT
Date: 02/03/2014
Action: Closure/No Further Action Letter

LUST:
Global Id: T0607301121
Status: Open - Case Begin Date
Status Date: 10/29/1985

Global Id: T0607301121
Status: Open - Remediation
Status Date: 08/29/2007

Global Id: T0607301121
Status: Open - Eligible for Closure
Status Date: 07/16/2013

Global Id: T0607301121
Status: Completed - Case Closed
Status Date: 02/03/2014

Global Id: T0607301121
Status: Open - Eligible for Closure
Status Date: 02/03/2014

HAZNET:
Name: VALERO CORNER STORE 3744
Address: 9932 CAMPO RD
Address 2: Not reported
City,State,Zip: SPRING VALLEY, CA 919771608
Contact: SANDY HUFF
Telephone: 5595833298
Mailing Name: Not reported
Mailing Address: 685 W THIRD ST

Year: 2016
Gepaid: CAL000384039
TSD EPA ID: CAT080013352
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.294

Year: 2016
Gepaid: CAL000384039
TSD EPA ID: NVT330010000
CA Waste Code: 352 - Other organic solids
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.065

Year: 2015
Gepaid: CAL000384039

VALERO CORNER STORE 3744 (Continued) **S101308219**

TSD EPA ID: CAT080013352
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.021

Year: 2015
Gepaid: CAL000384039
TSD EPA ID: NVT330010000
CA Waste Code: 352 - Other organic solids
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.05

Year: 2014
Gepaid: CAL000384039
TSD EPA ID: NVT330010000
CA Waste Code: 352 - Other organic solids
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.04

Year: 2014
Gepaid: CAL000384039
TSD EPA ID: NVT330010000
CA Waste Code: 791 - Liquids with pH <= 2
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.03336

Year: 2014
Gepaid: CAL000384039
TSD EPA ID: CAT080013352
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.21

Year: 2013
Gepaid: CAL000384039
TSD EPA ID: NVT330010000
CA Waste Code: 352 - Other organic solids
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.1125

Additional Info:
Year: 2016
Gen EPA ID: CAL000384039

Shipment Date: 20150901
Creation Date: 11/4/2015 22:15:42
Receipt Date: 20150903
Manifest ID: 008699939FLE

VALERO CORNER STORE 3744 (Continued) **S101308219**

Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.021
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150901
Creation Date:	2/5/2016 22:15:23
Receipt Date:	20150909
Manifest ID:	008699938FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA OPERATIONS
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D018
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2015
Gen EPA ID:	CAL000384039
Shipment Date:	20150901
Creation Date:	11/4/2015 22:15:42
Receipt Date:	20150903
Manifest ID:	008699939FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported

VALERO CORNER STORE 3744 (Continued) **S101308219**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.021
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150901
Creation Date:	2/5/2016 22:15:23
Receipt Date:	20150909
Manifest ID:	008699938FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA OPERATIONS
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D018
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2013
Gen EPA ID:	CAL000384039

Shipment Date:	20130910
Creation Date:	2/24/2014 22:15:07
Receipt Date:	20130918
Manifest ID:	005761804FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA OPERATIONS

VALERO CORNER STORE 3744 (Continued) **S101308219**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.1125
Waste Quantity:	225
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000384039
Shipment Date:	20140929
Creation Date:	6/24/2015 22:15:33
Receipt Date:	20141001
Manifest ID:	007638318FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA OPERATIONS
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D018
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140619
Creation Date:	3/30/2015 22:15:06
Receipt Date:	20140625
Manifest ID:	007616032FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA OPERATIONS
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals

VALERO CORNER STORE 3744 (Continued) **S101308219**

RCRA Code:	D002
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.03336
Waste Quantity:	8
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140414
Creation Date:	9/9/2014 22:15:12
Receipt Date:	20140416
Manifest ID:	007613008FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA OPERATIONS
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D018
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.04
Waste Quantity:	80
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140414
Creation Date:	6/24/2014 22:15:06
Receipt Date:	20140417
Manifest ID:	004665257FLE
Trans EPA ID:	CAR000183913
Trans Name:	BELSHIRE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.21
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported

VALERO CORNER STORE 3744 (Continued) **S101308219**

Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

HIST CORTESE:
edr_fname: ECONO STATION
edr_fadd1: 9932 CAMPO
City,State,Zip: SPRING VALLEY, CA
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT235

SAN DIEGO CO LOP:
Name: ULTRAMAR STATION #1-744
Address: 9932 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Record ID: DEH1985-LSAM-H04860-001
Record Status: Completed
Opened Date: 10/03/1985
Parcel Number: 501-177-13-00
Case Type: LOP - Local Oversight Program
Historical Name: ULTRAMAR/CAMPO RD
SWRCB Global ID: T0607301121
Funding: S - LOP State Fund
Lead Agency: DEH/SAM
Lead Agency Date: 11/18/1986
Census Tract: 136.01
Community: Spring Valley
Jurisdiction: UNINCORPORATED
Watershed Basin Number: 909.12
Water Purveyor: HELIX WATER DISTRICT LAND
Fire Agency: SAN MIGUEL FIRE PROT DIST
Latitude: 32.7482089
Longitude: -116.9821365
X MapCoord: 6336556.245
Y MapCoord: 1852809.389

CERS:
Name: ULTRAMAR STATION #1-744
Address: 9932 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771608
Site ID: 210857
CERS ID: T0607301121
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: CAROL FENNER - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported

VALERO CORNER STORE 3744 (Continued) **S101308219**

Affiliation Phone: Not reported

HWTS:

Name:	VALERO CORNER STORE 3744
Address:	9932 CAMPO RD
Address 2:	Not reported
City,State,Zip:	SPRING VALLEY, CA 919771608
EPA ID:	CAL000384039
Inactive Date:	Not reported
Create Date:	04/03/2013
Last Act Date:	04/20/2018
Mailing Name:	Not reported
Mailing Address:	19500 BULVERDE ROAD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	SAN ANTIONO, TX 782590000
Owner Name:	CST BRANDS, INC.
Owner Address:	19500 BULVERDE ROAD
Owner Address 2:	Not reported
Owner City,State,Zip:	SAN ANTIONO, TX 792590000
Contact Name:	SANDY HUFF
Contact Address:	19500 BULVERDE ROAD
Contact Address 2:	Not reported
City,State,Zip:	SAN ANTONIO, TX 782590000

NAICS:

EPA ID:	CAL000384039
Create Date:	2013-04-03 12:57:37
NAICS Code:	44719
NAICS Description:	Other Gasoline Stations
Issued EPA ID Date:	2013-04-03 12:57:37
Inactive Date:	Not reported
Facility Name:	VALERO CORNER STORE 3744
Facility Address:	9932 CAMPO RD
Facility Address 2:	Not reported
Facility City:	SPRING VALLEY
Facility County:	37
Facility State:	CA
Facility Zip:	919771608

G51 **THE DAIRY STORE** **LUST** **S102438867**
East **9951 CAMPO RD** **HIST CORTESE** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977**
0.482 mi.
2544 ft. **Site 1 of 3 in cluster G**

Relative:
Higher

Actual:
458 ft.

LUST:

Name:	THE DAIRY STORE
Address:	9951 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771610
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607301456
Global Id:	T0607301456
Latitude:	32.7474933001648
Longitude:	-116.981520813492
Status:	Completed - Case Closed

THE DAIRY STORE (Continued) **S102438867**

Status Date: 06/07/2019
Case Worker: CQC
RB Case Number: 9UT2704
Local Agency: Not reported
File Location: Local Agency
Local Case Number: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Unauthorized Release H03567-001 was opened September 6, 2000 following removal of two underground storage tanks. During tank removal, hydrocarbon impacts were observed. Site assessment activities are ongoing. Please see submitted ESI data for further details.

LUST:
Global Id: T0607301456
Contact Type: Regional Board Caseworker
Contact Name: CHARLES Q. CHENG
Organization Name: SAN DIEGO RWQCB (REGION 9)
Address: 2375 NORTHSIDE DRIVE, SUITE 100
City: SAN DIEGO
Email: charles.cheng@waterboards.ca.gov
Phone Number: 6195213359

LUST:
Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 09/06/2000
Action: Notice of Responsibility

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 04/01/2011
Action: Letter - Notice

Global Id: T0607301456
Action Type: Other
Date: 06/12/2000
Action: Leak Discovery

Global Id: T0607301456
Action Type: RESPONSE
Date: 03/06/2012
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0607301456
Action Type: RESPONSE
Date: 07/01/2015
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0607301456
Action Type: RESPONSE
Date: 06/01/2015
Action: Preliminary Site Assessment Workplan - Regulator Responded

Global Id: T0607301456
Action Type: RESPONSE

THE DAIRY STORE (Continued) **S102438867**

Date: 03/07/2014
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0607301456
Action Type: RESPONSE
Date: 10/30/2015
Action: Site Assessment Report - Regulator Responded

Global Id: T0607301456
Action Type: RESPONSE
Date: 12/22/2017
Action: Other Workplan - Regulator Responded

Global Id: T0607301456
Action Type: RESPONSE
Date: 11/15/2017
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 12/19/2011
Action: Letter - Notice

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 02/01/2017
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 11/10/2015
Action: Meeting

Global Id: T0607301456
Action Type: Other
Date: 06/12/2000
Action: Leak Stopped

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 05/03/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 10/17/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 09/26/2018
Action: Notification - Public Notice of Case Closure

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 11/17/2017
Action: Technical Correspondence / Assistance / Other

THE DAIRY STORE (Continued) **S102438867**

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 06/13/2017
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 12/27/2017
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 10/24/2008
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 07/01/2013
Action: Referral to Regional Board

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 08/07/2018
Action: Staff Letter

Global Id: T0607301456
Action Type: Other
Date: 06/12/2000
Action: Leak Reported

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 07/09/2009
Action: Letter - Notice

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 11/15/2013
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: RESPONSE
Date: 08/04/2013
Action: Other Report / Document

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 04/29/2015
Action: Verbal Communication

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 02/26/2015
Action: Verbal Communication

Global Id: T0607301456
Action Type: ENFORCEMENT

THE DAIRY STORE (Continued) **S102438867**

Date: 02/26/2015
Action: Verbal Communication

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 02/03/2015
Action: Verbal Communication

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 12/11/2014
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 06/07/2019
Action: Closure/No Further Action Letter

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 01/20/2010
Action: Letter - Notice

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 11/17/2014
Action: Meeting

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 04/30/2015
Action: Clean Up Fund - Letter to RP

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 08/15/2017
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 09/14/2011
Action: Verbal Enforcement

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 12/04/2018
Action: Staff Letter

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 03/13/2015
Action: Clean Up Fund - Letter to RP

Global Id: T0607301456
Action Type: ENFORCEMENT
Date: 03/13/2015
Action: Clean Up Fund - Letter to RP

THE DAIRY STORE (Continued) **S102438867**

Global Id: T0607301456
Action Type: Other
Date: 06/12/2000
Action: Leak Began

LUST:
Global Id: T0607301456
Status: Open - Case Begin Date
Status Date: 06/12/2000

Global Id: T0607301456
Status: Open - Remediation
Status Date: 02/23/2001

Global Id: T0607301456
Status: Open - Verification Monitoring
Status Date: 06/15/2016

Global Id: T0607301456
Status: Open - Eligible for Closure
Status Date: 08/07/2018

Global Id: T0607301456
Status: Completed - Case Closed
Status Date: 06/07/2019

HIST CORTESE:
edr_fname: THE DAIRY STORE
edr_fadd1: 9951 CAMPO
City,State,Zip: SPRING VALLEY, CA 92077
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT2704

G52 **FAST LANE DAIRY STORE** **LUST** **S104793873**
East **9951 CAMPO RD** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977**
0.482 mi.
2544 ft. **Site 2 of 3 in cluster G**

Relative:
Higher

Actual:
458 ft.

LUST REG 9:
Region: 9
Status: Preliminary site assessment workplan submitted
Case Number: 9UT2704
Local Case: H03567-001
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Local Agency: San Diego
How Found: Tank Closure
How Stopped: Close Tank
Source: Tank
Cause: Unknown
Lead Agency: Local Agency
Case Type: Soil only

FAST LANE DAIRY STORE (Continued) **S104793873**

Date Found: 06/02/2000
Date Stopped: 06/02/2000
Confirm Date: / /
Submit Workplan: 9/6/00
Prelim Assess: / /
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 09/06/2000
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 909.12
GW Depth: >20
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: Not reported
File Dispn: File discarded, case closed
Interim Remedial Actions: Not reported
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

G53 **THE DAIRY STORE** **SAN DIEGO CO. SAM** **U003789133**
East **9951 CAMPO RD** **UST** **N/A**
1/4-1/2 **SPRING VALLEY, CA 91977** **San Diego Co. HMMD**
0.482 mi. **SWEEPS UST**
2544 ft. **Site 3 of 3 in cluster G** **Cortese**
SAN DIEGO CO LOP
Relative: **CERS**
Higher

Actual: **458 ft.**

SAN DIEGO CO. SAM:
Name: THE DAIRY STORE
Address: 9951 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 919771610
Case Number: H03567-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - State Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Remedial Investigation
Date: 6/12/2000
Date Began: 6/12/2000

UST:
Name: THE DAIRY STORE
Address: 9951 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977
Facility ID: H03567
Permitting Agency: SAN DIEGO COUNTY
Latitude: 32.7489337
Longitude: -116.9801487

HMMD SAN DIEGO:
Name: THE DAIRY STORE
Address: 9951 CAMPO RD
City,State,Zip: SPRING VALLEY, CA 91977

THE DAIRY STORE (Continued) **U003789133**

Permit Number:	103567
Business Type:	6HK28
EPA Id Number:	Not reported
APN:	501-243-02-00
Last HMMD Inspection:	06/21/1999
Facility Telephone:	619-465-6084
Permit Status:	INAC
Permit Expiration:	05/24/2000
Date Last Updated:	11/02/2012
Facility Owner:	JESUS & ROSARIO LIZALDE
Facility Mailing Address:	9951 CAMPO RD
Facility Mailing City:	SPRING VALLEY
Facility Mailing State:	CA
Facility Mailing Zip:	91977-1610
UST Owner:	JESUS LIZALDE
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 103567 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	103567
Tank Type:	UNKNOWN
Additional Id:	1
Capacity Gallons:	12000
UST Contents:	LEADED
Other Content Info:	LEADED
Reg Status:	REMOVED
Remove Close Date:	1986-11-08 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	90
UST Monitor Method:	NO MONITORING ALTERNATIVE SELECTED. VERIFY AND ENTER MONITORING ALTERNATIVE DURING INSPECTION.

UST Name:	UNDERGROUND TANK 103567 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	103567
Tank Type:	SINGLE WALL
Additional Id:	2 UNLEADED
Capacity Gallons:	6000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	2000-12-06 00:00:00
Year Installed:	1981-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	PRESSURE
Monitor Code:	02
UST Monitor Method:	SW TANK SW PRESSURE PIPE W/ RESTRICTIVE LLD W/ SIRS: SIR DATA ANALYSIS MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANNUALLY

UST Name:	UNDERGROUND TANK 103567 T003

THE DAIRY STORE (Continued) **U003789133**

Last Update:	2012-11-02 14:17:38
Permit Number:	103567
Tank Type:	SINGLE WALL
Additional Id:	3 DIESEL
Capacity Gallons:	6000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	REMOVED
Remove Close Date:	2000-12-06 00:00:00
Year Installed:	1981-01-01 00:00:00
Pipe Type:	SINGLE WALL
Delivery System:	PRESSURE
Monitor Code:	02
UST Monitor Method:	SW TANK SW PRESSURE PIPE W/ RESTRICTIVE LLD W/ SIRS: SIR DATA ANALYSIS MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANNUALLY

SWEEPS UST:

Name:	THE DAIRY STORE
Address:	9951 CAMPO RD
City:	SPRING VALLEY
Status:	Active
Comp Number:	3567
Number:	9
Board Of Equalization:	44-021891
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003567-000002
Tank Status:	A
Capacity:	6000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	2

Name:	THE DAIRY STORE
Address:	9951 CAMPO RD
City:	SPRING VALLEY
Status:	Active
Comp Number:	3567
Number:	9
Board Of Equalization:	44-021891
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003567-000003
Tank Status:	A
Capacity:	6000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	OTHER
Number Of Tanks:	Not reported

THE DAIRY STORE (Continued) **U003789133**

Name:	THE DAIRY STORE
Address:	9951 CAMPO RD
City:	SPRING VALLEY
Status:	Not reported
Comp Number:	3567
Number:	Not reported
Board Of Equalization:	44-021891
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-003567-000001
Tank Status:	Not reported
Capacity:	12000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	LEADED
Number Of Tanks:	1

CORTESE:

Name:	THE DAIRY STORE
Address:	9951 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771610
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0607301456
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

SAN DIEGO CO LOP:

Name:	THE DAIRY STORE
Address:	9951 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 91977
Record ID:	DEH2000-LSAM-H03567-001
Record Status:	Completed
Opened Date:	06/12/2000
Parcel Number:	501-243-02-00
Case Type:	LOP - Local Oversight Program
Historical Name:	FAST LANE DAIRY STORE

THE DAIRY STORE (Continued) **U003789133**

SWRCB Global ID:	T0607301456
Funding:	S - LOP State Fund
Lead Agency:	RWQCB
Lead Agency Date:	07/01/2013
Census Tract:	135.03
Community:	Spring Valley
Jurisdiction:	UNINCORPORATED
Watershed Basin Number:	909.12
Water Purveyor:	HELIX WATER DISTRICT LAND
Fire Agency:	SAN MIGUEL CONSOL. FIRE PROTECTION DISTRICT
Latitude:	32.7476617
Longitude:	-116.9815016
X MapCoord:	6336850.34027553
Y MapCoord:	1852608.10574928

CERS:

Name:	THE DAIRY STORE
Address:	9951 CAMPO RD
City,State,Zip:	SPRING VALLEY, CA 919771610
Site ID:	192780
CERS ID:	T0607301456
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	CHARLES Q. CHENG - SAN DIEGO RWQCB (REGION 9)
Entity Title:	Not reported
Affiliation Address:	2375 NORTHSIDE DRIVE, SUITE 100
Affiliation City:	SAN DIEGO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	6195213359

Count: 1 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SPRING VALLEY	S124815098	CASA DE ORO REGAL CLEANER	9902 CAMPO RD	91977	HWTS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/26/2020
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/23/2020
Next Scheduled EDR Contact: 11/01/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 86

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 03/01/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/15/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/15/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/21/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77
Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78
Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97
Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84
Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86
Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74
Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 76

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/04/2020
Date Data Arrived at EDR: 06/05/2020
Date Made Active in Reports: 08/17/2020
Number of Days to Update: 73
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81
Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/16/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8
Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82
Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/28/2020
Number of Days to Update: 77
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2020
Date Data Arrived at EDR: 03/13/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 69
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/08/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 04/09/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 08/02/2020
Next Scheduled EDR Contact: 10/18/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 03/27/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/06/2020
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 04/16/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/08/2020
Number of Days to Update: 79

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/07/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/23/2020
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/10/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/19/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/14/2020
Number of Days to Update: 77

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/13/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 1

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 04/24/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 71

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 77
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 87

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/12/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 04/22/2020
Date Data Arrived at EDR: 04/24/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 13
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/26/2020
Next Scheduled EDR Contact: 09/13/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 71
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 77
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 79
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

CASA DEL ORO LIBRARY
9610 CAMPO RD
SPRING VALLEY, CA 91977

TARGET PROPERTY COORDINATES

Latitude (North):	32.74865 - 32° 44' 55.14''
Longitude (West):	116.990147 - 116° 59' 24.53''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	500923.1
UTM Y (Meters):	3623232.5
Elevation:	438 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5629178 JAMUL MOUNTAINS, CA
Version Date:	2012
Northeast Map:	5622884 EL CAJON, CA
Version Date:	2012
Southwest Map:	5629176 NATIONAL CITY, CA
Version Date:	2012
Northwest Map:	5622828 LA MESA, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

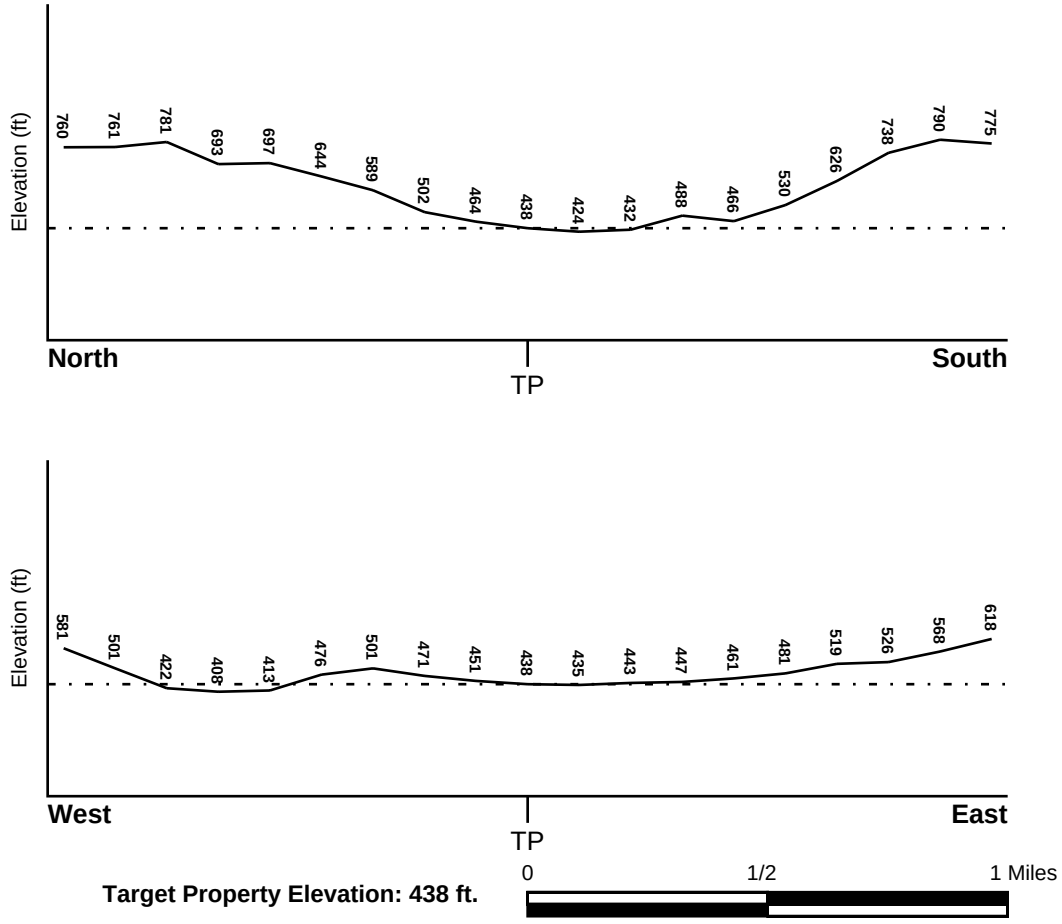
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06073C1930G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06073C1644H	FEMA FIRM Flood data
06073C1663G	FEMA FIRM Flood data
06073C1910G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
JAMUL MOUNTAINS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/2 - 1 Mile WSW	S
2	1/2 - 1 Mile WSW	Not Reported
1G	1/2 - 1 Mile WSW	S
2G	1/2 - 1 Mile WSW	Not Reported

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

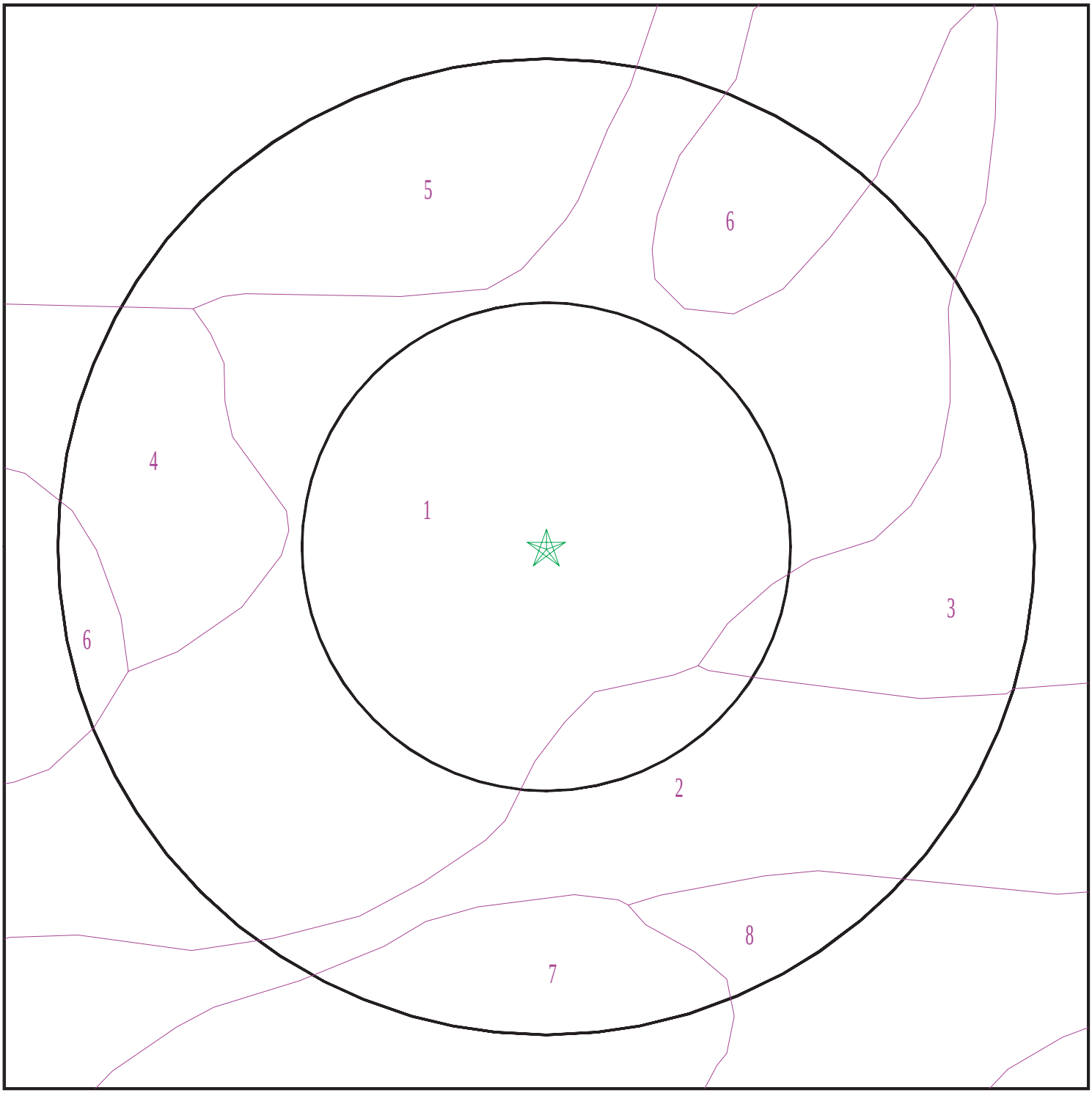
Era:	Mesozoic
System:	Lower Jurassic and Upper Triassic
Series:	Lower Mesozoic
Code:	lMze *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6160544.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Casa Del Oro Library	CLIENT:	Michael Baker International
ADDRESS:	9610 Campo Rd Spring Valley CA 91977	CONTACT:	Danielle Regimbal
LAT/LONG:	32.74865 / 116.990147	INQUIRY #:	6160544.2s
		DATE:	August 18, 2020 5:29 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: VISALIA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1
2	11 inches	40 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1
3	40 inches	59 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1

Soil Map ID: 2

Soil Component Name: SALINAS

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	22 inches	46 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	46 inches	64 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: DIABLO

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:
2	14 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:
3	31 inches	35 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 4

Soil Component Name: HUERHUERO

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	11 inches	55 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
3	55 inches	72 inches	stratified sand to sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 5

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	14 inches	29 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	29 inches	33 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 6

Soil Component Name: ESCONDIDO

Soil Surface Texture: very fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 74 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
2	5 inches	29 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
3	29 inches	33 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 7

Soil Component Name: DIABLO

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:
2	14 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:
3	31 inches	35 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 8

Soil Component Name: DIABLO

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:
2	14 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:
3	31 inches	35 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No PWS System Found

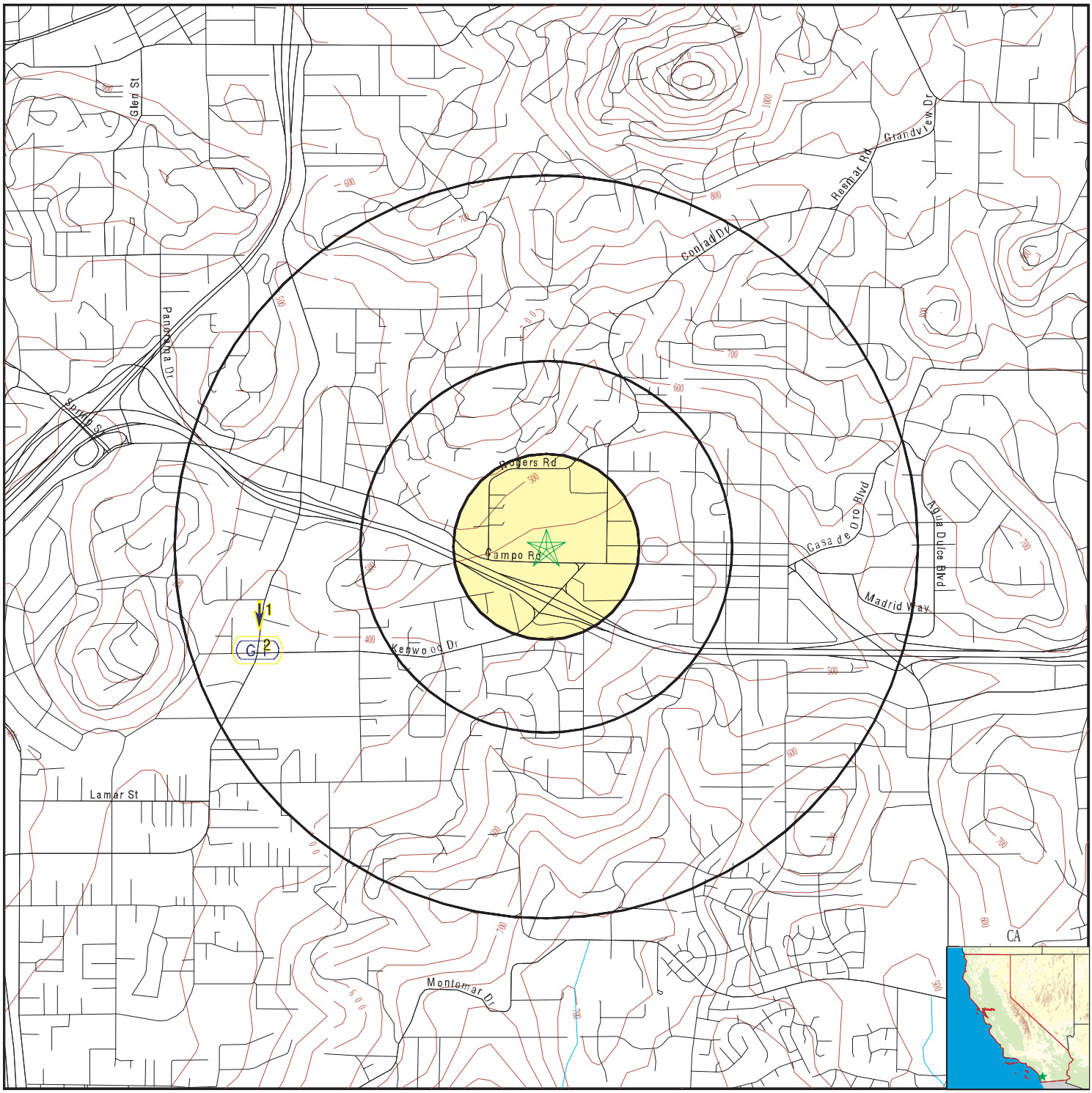
Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No Wells Found

PHYSICAL SETTING SOURCE MAP - 6160544.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

N

SITE NAME:	Casa Del Oro Library	CLIENT:	Michael Baker International
ADDRESS:	9610 Campo Rd Spring Valley CA 91977	CONTACT:	Danielle Regimbal
LAT/LONG:	32.74865 / 116.990147	INQUIRY #:	6160544.2s
		DATE:	August 18, 2020 5:29 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
1 **WSW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	9UT1917 S Not Reported Not Reported 13 08/22/1991	**AQUIFLOW**	**37949**
2 **WSW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	9UT3734 Not Reported Not Reported Not Reported 9 11/22/1996	**AQUIFLOW**	**34204**
1G **WSW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	9UT1917 S Not Reported Not Reported 13 08/22/1991	**AQUIFLOW**	**37949**
2G **WSW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	9UT3734 Not Reported Not Reported Not Reported 9 11/22/1996	**AQUIFLOW**	**34204**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
91977	16	0

Federal EPA Radon Zone for SAN DIEGO County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN DIEGO COUNTY, CA

Number of sites tested: 30

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.677 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.400 pCi/L	100%	0%	0%
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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COUNTY OF SAN DIEGO

UPFP INSPECTION CHECKLIST

INSPECTION DATE: **09/11/2018**
RECORD ID #: **DEH2003-HUPFP-201406**
TIME START: **10:15 AM** END: **2:15 PM**
SPECIALIST: **Joseph Soquiat**
INSPECTION CONTACT: **Chad Kopotic**
TITLE: **Quality Control Manager**
PHONE: **(800) 845-7791**
E-MAIL: **chadkopotic@deeringbanjos.com**

FACILITY NAME: **DEERING BANJO CO**
ADDRESS: **3733 KENORA DR**
CITY/ZIP: **SPRING VALLEY** /**91977**

FACILITY REFERENCE DATA

ACCELA

RECORD STATUS: Expired
PERMIT EXPIRATION DATE: 08/31/2018
BALANCE DUE: $519.00
INSPECTOR: Joseph Soquiat
INSPECTION TYPE: Routine
INSPECTION STATUS: Pending Corrective Action

CERS

EPA ID NUMBER: cal000263364
FACILITY CERS ID NUMBER: 10362982
CERS LEAD USER: Chad Kopotic
LAST CERS SUBMITTAL DATE: 09/29/2015
ENVIRONMENTAL CONTACT EMAIL:
ENVIRONMENTAL CONTACT PHONE: 6194648252

FACILITY INFORMATION

	YES	NO		YES	NO
INACTIVATION INSPECTION:	☐	☒	HAZARDOUS MATERIALS:	☒	☐
CHANGE OF OWNER:	☐	☒	HAZARDOUS WASTE:	☒	☐
CHANGE IN BUSINESS TYPE:	☐	☒	ABOVEGROUND PETROLEUM STORAGE ACT:*	☐	☒
BUSINESS TYPE: Manufacturing-Small One Day Inspection			TOTAL SHELL CAPACITY APSA:		0
ISSUE INITIAL INVOICE:	☐	☒	UNDERGROUND STORAGE TANK:	☐	☒
ASSESS NON-NOTIFICATION FEE:	☐	☒	CALARP PROGRAM (CERS):	☐	☒
ASSESS RE-INSPECTION FEE:	☐	☒	CALARP PROGRAM LEVEL: 1 2 3 **N/A**		
FACILITY SUBJECT TO BASE FEE:	☒	☐	MEDICAL WASTE:	☐	☒
FACILITY SUBJECT TO CUPA FEE:	☒	☐	MW FACILITY GENERATING OVER 200 LBS PER MONTH:	☐	☒
UPDATE FACILITY ADDRESS IN AA:	☐	☒	EPIC PARTICIPANT:	☐	☒
BUSINESS CLOSE DATE:			NUMBER OF TLV GASES AT THE FACILITY:		0

HW GENERATOR STATUS : LQG | SQG | **CESQG** | RCRA LQG | N/A

TIERED PERMIT LEVEL(S) : CESQT | CESW | CE-L | CE-CL | HHW | PBR | CA | **N/A**

PRIMARY BILLING CODE: Not Applicable
SECONDARY BILLING CODE: Not Applicable
TERTIARY BILLING CODE: Not Applicable

INSPECTION SCOPE:*

HAZARDOUS MATERIALS: **GEN HAZMAT** | **APSA** | **UST**
HAZARDOUS WASTE: **SQG** | **LQG**
MEDICAL WASTE: **SQG** | **SQG - TREATS** | **LQG** | **LQG - ABBREVIATED** | **LQG - TREATS**
CALARP: **1** | **2** | **3**
TIERED PERMITTING: **CESQT** | **CESW** | **CE-L** | **CE-CL** | **CA** | **PBR** | **HHW**

CONSENT TO CONDUCT INSPECTION GRANTED BY: INSPECTION CONTACT ☐ NAME: Chad Kopotic TITLE: Quality Control Manager

REMOVE BLANK CHECKLISTS FROM FINAL INSPECTION REPORT ☐ REFUSED TO SIGN ☐

TIME ACCOUNTING (Routine) **TOTAL TIME ENTERED: 4.3**

Date	Time	Group	Type
09/11/2018	1.3	HMD Inspection	Report Writing - Record
09/11/2018	0.3	HMD Inspection	Travel Time - Record
09/11/2018	2.7	HMD Inspection	HM/HW - Record

COUNTY OF SAN DIEGO

UPFP INSPECTION CHECKLIST

FACILITY NAME: **DEERING BANJO CO**
ADDRESS: **3733 KENORA DR**
CITY/ZIP: **SPRING VALLEY** /**91977**

INSPECTION DATE: **09/11/2018**
RECORD ID #: **DEH2003-HUPFP-201406**
TIME START: **10:15 AM** END: **2:15 PM**
SPECIALIST: **Joseph Soquiat**
INSPECTION CONTACT: **Chad Kopotic**
TITLE: **Quality Control Manager**
PHONE: **(800) 845-7791**
E-MAIL: **chadkopotic@deeringbanjos.com**

INSPECTION REPORT EMAILS:

Joseph.Soquiat@sdcounty.ca.gov

RECORD COMMENT:

Routine inspection conducted 09/11/2018.

COUNTY OF SAN DIEGO

NOTICE OF VIOLATION

INSPECTION DATE:	**09/11/2018** PAGE **1** OF **11**
RECORD ID #:	**DEH2003-HUPFP-201406**
TIME START:	**10:15 AM** END: **2:15 PM**
SPECIALIST:	**Joseph Soquiat**
INSPECTION CONTACT:	**Chad Kopotic**
TITLE:	**Quality Control Manager**
PHONE:	**(800) 845-7791**
E-MAIL:	**chadkopotic@deeringbanjos.com**

FACILITY NAME: **DEERING BANJO CO**
ADDRESS: **3733 KENORA DR**
CITY/ZIP: **SPRING VALLEY** /**91977**

OWNER'S NAME **Greg Deering** CITY/ZIP **Spring Valley** /**91977**
ADDRESS **3733 Kenora Dr** PHONE **(619) 464-8252**

On the above date, the County inspected your facility under the authority of the California Health and Safety Code (H&SC), to determine compliance with applicable provisions of the H&SC, the California Code of Regulations (CCR), and the San Diego County Code of Regulatory Ordinances (SDCC). The following statements describe significant violations. This notice requires a formal written response and corrective action within the times specified.

NOTE: Reinspection fees will be charged if additional inspections are required to determine compliance.

CONSENT TO CONDUCT INSPECTION GRANTED BY: Chad Kopotic TITLE: Quality Control Manager

INTRODUCTION:
The Hazardous Materials Division (HMD) of the Department of Environmental Health is the Certified Unified Program Agency (CUPA) for the County of San Diego. As the local CUPA, HMD regulates businesses that generate hazardous waste.

A routine inspection was conducted today at Deering Banjo Co. to verify compliance with hazardous materials/waste regulations. Consent to conduct this inspection, take photos, and take samples, was granted by Chad Kopotic, Quality Control Manager. Chad Kopotic was present for today's inspection.

This facility consists of office space, a production warehouse consisting of a several stage product manufacturing processes, a storage warehouse, and a product paint/stain/lacquer processing room with a spray booth. This facility specializes in the production and manufacturing of hand-crafted banjos.

This facility currently requires a permit with the County HMD for the following programs:
Hazardous Waste generator requirements, for generating hazardous waste in the form of, at least, waste lacquer. At this time, based on my observations, statements made by Chad Kopotic, and review of hazardous waste manifests, this facility appears to be a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste (<100kg/month).

VIOLATION # 1
HMD0131 Unified Program Facility Permit not obtained &/or maintained for the generation of hazardous waste. SDCC 68.905

Classification: Class I

Observations:
The following was observed during today's inspection within a product paint/stain processing room (view photo #1):

- 1 x 30 gallon drum storing at least 3 gallons of flammable waste paint/lacquer

Per Chad Kopotic:

- The waste paint/lacquer is currently generated as part of the product finishing processes
- The drum of waste is disposed of through the hazardous waste hauler approximately every two months.

Per HMD records, this facility's UPF permit for the generation of hazardous expired on 08/31/2018.

Based on the above observations, this facility has failed to maintain a renewed permit for the generation of hazardous waste.

Corrective Action Due By:09/21/2018
Within 10 days pay the remaining balance for your permit fees. You may pay your fees by mail or online at http://www.dehpay.com/ A guidance document on paying fees online was provided today. After payment, your UPF permit (a green

document) will be sent to your facility by mail.

If you have questions related to your permit, including permit status, payment status, requesting invoice/permit copies, etc., you may call the HMD Permits Line at (858) 505-6661 to speak to a representative over the phone.

Be advised, failure to maintain a renewed UPF permit and/or pay your remaining permit fee balance will result in additional delinquent fees and/or further enforcement action.

Specialist should verify the identification of facility representative using a standard form of ID (e.g., CDL#, CA ID# or DOB).

PRINTED NAME OF ENV. HEALTH SPECIALIST **Joseph Soquiat**	SIGNATURE		DATE SIGNED **09/11/2018**
PRINTED NAME OF FACILITY REPRESENTATIVE **Deering Banjo Company**	SIGNATURE		DATE SIGNED **09/11/2018**
TITLE OF FACILITY REPRESENTATIVE **Quality Control Manager**			

You must submit a written response within 30 days (or as specified) addressing all violations noted. The written response must demonstrate all violations have been corrected or include a written notice of disagreement that clearly states the reason for any disputed violations. The County may initiate formal enforcement action including the imposition of substantial penalties for any significant violations addressed in this notice. Any violations that are not promptly corrected will result in liability for additional days in violation and additional penalties. Any failure to provide the information requested will also be a factor in determining penalties. For these purposes, "significant violations" include violations that represent a significant threat to human health or safety or the environment, chronic violations, violations committed by a recalcitrant violator and Class I hazardous waste violations (CCR 66260.10 and H&SC 25110.8.5).

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

FACILITY NAME: **DEERING BANJO CO**
ADDRESS: **3733 KENORA DR**
CITY/ZIP: **SPRING VALLEY** /**91977**

INSPECTION DATE: **09/11/2018** PAGE **3** OF **11**
RECORD ID #: **DEH2003-HUPFP-201406**
TIME START: **10:15 AM** END: **2:15 PM**
SPECIALIST: **Joseph Soquiat**
INSPECTION CONTACT: **Chad Kopotic**
TITLE: **Quality Control Manager**
PHONE: **(800) 845-7791**
E-MAIL: **chadkopotic@deeringbanjos.com**

On the above date, the County inspected your facility under the authority of the California Health and Safety Code (H&SC), to determine compliance with applicable provisions of the H&SC, the California Code of Regulations (CCR), and the San Diego County Code of Regulatory Ordinances (SDCC). **This report serves as a Notice to Comply (H&SC 25187.8 & 25404.1.2) for any minor violations as defined in H&SC 25404 and 25117.6.** This report may contain both minor and more significant (Class II) violations. Minor violations do not include repeat violations or violations remaining uncorrected for more than 30 days (or as specified below). Minor violations do not include knowing, willful, intentional, or chronic violations; nor do they include violations showing a pattern of neglect or disregard. The remarks below are intended to provide guidance to correct any violations indicated on the attached violation report. You must submit a written response to this report within 30 days (or as specified below) demonstrating that all violations have been corrected or include a written notice of disagreement that clearly states the reason for any disputed violations. Prompt correction can protect you from penalties for a "minor violation". Penalties can be imposed for each day in violation for all other violations even if they are corrected promptly. However, correction within 30 days (or as specified below) will make a penalty less likely.

NOTE: Reinspection fees will be charged if additional inspections are required to determine compliance.

Yes	N/A		Yes	N/A	
☐	☐	Unified Program Facility Permit Current	☒	☐	Contingency Plan Available ☐ LQG ☒ SQG
☐	☒	Hazardous Materials Business Plan Available	☐	☒	Employee Training Records Available
☒	☐	Employee Training is Adequate	☒	☐	Universal Waste Managed Properly
☒	☐	Waste Disposal Records Available for Review	☒	☐	Waste Containers ☐ Closed ☒ Labeled
☒	☐	Emergency Contacts Current ☐ Updated today	☒	☐	Waste Containers in Good Condition
☒	☐	Chemical Inventory/Map Current ☐ Updated today			Permit Expires On 08/31/2018

CONSENT TO CONDUCT INSPECTION GRANTED BY: Chad Kopotic TITLE: Quality Control Manager

VIOLATION # 2
3030005 Failed to make a proper waste determination. 22 CCR 66262.11, 66262.40(c)

Classification: Class II

Observations:
A spray paint booth was observed within a product paint/stain processing room. Within the spray paint booth, a single filter at least 6 feet by 4 feet was observed in processes.

Per Chad Kopotic:
- Within the spray paint/stain booth, banjo's are processed with several coats of lacquer and/or coloring stains depending on the product specification
- Spray paint/stain booth filters are changed out every day
- Spent spray paint/stain booth filters are disposed of in the dumpster

A spent spray/stain booth filter was observed within this facility's dumpster during inspection (view Photo #2). Per Chad Kopotic, the filter in the trashcan is likely from yesterday's spraying operations.

Safety Data Sheets (SDS) for the lacquers and stains used were requested for review. A SDS binder was provided by Chad Kopotic and was reviewed. At least four stain solution SDSs from "Homestead Finishing Products" was observed to contain the hazardous ingredients "Propriety chromium complex ($Cr^{+}3$) dye compounds - 1-10% by weight".

Per Chad Kopotic
- He is not familiar with Homestead Finishing Products staining solutions and is not sure if Homestead Finishing Products products are in use at this facility.
- Out of the SDSs provided, they do use staining solutions from the provider, Mohawk.

RPM Wood Finishers Group - Mohawk, SDSs were reviewed. At least two Mohawk branded SDSs refer to chromium compounds within their composition/ingredients section, including "Chromium Compound - <1%" and "Proprietary Chromium Compounds - 1-10%". Additionally, the ingredient "Cobalt compound - 1-10%" was also observed within Mohawk SDSs.

Based on the above listed observations, this facility has failed to make a proper waste determination for spent filters generated by this facility's manufacturing processes.

Sample

During inspection a sample was taken for laboratory analysis of the spent spray/stain booth filter observed in the facility dumpster. The spent filter was removed from the dumpster and spent filter fibers were sampled from the filter by myself (view photo #2 & #3). A duplicate sample was referred and provided to Chad Kopotic.

Corrective Action Due By:10/11/2018

Within 30 days, submit to me the results of your waste determination for all above mentioned wastes referenced. You may use the following methods to conduct a proper waste determination:

1) Determine if the waste is Federally listed in Title 40 of the Code of Federal Regulations (CFR), California listed hazardous waste in Title 22 of the California Code of Regulations (CCR), or a Characteristic Waste that is hazardous due to characteristics such as Ignitability, Corrosivity, Reactivity, or Toxicity.

2) Conduct analytical testing using a California CERTIFIED LAB to determine if the waste is hazardous or not OR apply knowledge of the hazard characteristic(s) of the waste in light of the materials (i.e. read the Safety Data Sheet) or the processes used through your business activities. For more information on California Certified Labs: https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html

For more information: https://www.sandiegocounty.gov/content/dam/sdc/deh/hmd/pdf/hm-984%20(02-11).pdf

Be advised, a proper waste determination must be conducted for all waste contained on your property. This includes those wastes that were not observed during the 09/11/2018 inspection.

INSPECTION REMARKS:

The Following Minor Violations Were Corrected During Today's Inspection

A) Failed to properly close hazardous waste container(s). 22 CCR 66262.34 (d)(2); 40 CFR 262.34(d)(2) 265.174

The following containers of hazardous waste were observed to not be properly closed:

- 1 x 30 gallon drum storing flammable waste paint/lacquer

During inspection, Chad Kopotic closed the above listed container of hazardous waste.

Be advised, ensure all containers of hazardous waste/used oil are kept closed when not actively adding or removing hazardous waste.

CORRECTIVE ACTION DOCUMENTATION

When corrective actions are complete as listed above for violations #1 & #2 fill out the Corrective Action form found at the end of this report documenting how you returned to compliance. Send the filled out Corrective Action form and any necessary supporting documents/photos/laboratory analysis test results/information to me within 30 days (contact information below).

Be advised, repeating citing of violations during future inspections may result in further/substantial penalties.

Further Remarks

The following documents were available for review:

- 3 years of hazardous waste disposal records

The following hazardous materials were observed below reportable thresholds at this time:

- At least 3 x 5 gallon containers storing acetone/solvents,

- At least 2 x 5 gallon containers storing wood adhesives
- 1 x 200 cu.ft. cylinder of Argon/CO2 compressed gas

A propane operated forklift was observed within the materials storage warehouse. Per Chad Kopotic:
- Spare propane tanks are not stored at this facility
- The single propane tank is refilled at local gas stations

Spare propane tanks were not observed at this time. Be advised, if hazardous materials are regularly stored above reportable thresholds they must be reported in your hazardous materials inventory within the California Environmental Reporting System (CERS). Reportable thresholds include ≥55 gal of a liquid, 500 lbs of a solid, and 200 cu.ft. of a gas.

An outdoor ventilation machine was observed on the south side of the building. Per Chad Kopotic:
- The ventilation machines capture fine wood/dust particles from sanding during the banjo manufacturing processes
- Any metal shavings/components are collected are are recycled as scrap metal

CESQG Accumulation Time and Hazardous Waste Labeling
At this time, based on my observations, statements made by Chad Kopotic, and review of hazardous waste manifests, this facility appears to be a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste (<100kg/month). CESQGs have 180 days from the accumulation start date to dispose of hazardous waste OR 90 days from when 100 kg (220 lbs/~27 gallons) of total hazardous waste has accumulated on site. Additionally, an accumulation start date must be included on hazardous waste labels once 100 kg (220 lbs/~27 gallons) of total hazardous waste has accumulated on site.

Be advised, a facility's hazardous waste generator status can change from month to month depending on the volume of hazardous wastes generated. It is up to the generator to know their facility's hazardous waste generator status.

The following guidance documents were provided:
- Pay Permit Fees Online
- Empty Container Management
- Aerosol Can Waste Management
- California Hazardous Waste Generator Summary Chart

For more information on Universal Waste Management,view "Conditionally Exempt Small Quantity Universal Waste Generators" within the following link: https://www.sandiegocounty.gov/content/dam/sdc/deh/hmd/pdf/hm_dtsc_uwaste.pdf

DIRECT QUESTIONS AND/OR CORRESPONDENCE TO:
Joseph Soquiat
Environmental Health Specialist I
San Diego County | Department of Environmental Health |Hazardous Materials Division
P.O. Box 129261
San Diego, CA 92112-9261
E-mail: Joseph.Soquiat@sdcounty.ca.gov
Cell #: (619)-804-2321
Hours: M-F; 07:00AM – 03:30PM

Helpful Websites:
• For guidance documents on hazardous materials-related topics,
go to: http://www.sandiegocounty.gov/content/sdc/deh/hazmat/hmd_publications.html
• For information on the California Environmental Reporting System (CERS),
go to: http://www.sandiegocounty.gov/content/sdc/deh/hazmat/hmd_cers.html
• If you have questions on: permit fees, business plan requirements, or hazardous waste regulations,

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

Handlers of Hazardous Materials and Small and Large Quantity Generators of Hazardous Waste

FACILITY NAME: * **DEERING BANJO CO**

ADDRESS: * **3733 KENORA DR** CITY/ZIP: * **SPRING VALLEY** **91977**

Each violation checked below is for the section(s) of the California Health and Safety Code (HSC), California Code of Regulations (CCR), or the San Diego County Code (SDCC) indicated in italics. Incorporated provisions of Title 40 of the Code of Federal regulations (CFR) are noted for reference. All violations must be corrected. Submit documentation of return to compliance to your Specialist. You may use the Corrective Action Form (HM-926) to document your return to compliance. Please call (858) 505-6880 or your Specialist if you have any questions. HMBP = Hazardous Materials Business Plan; CUPA = Certified Unified Program Agency; CERS = California Environmental Reporting System; SQG = Small Quantity Hazardous Waste Generator; LQG = Large Quantity Hazardous Waste Generator

HAZARDOUS MATERIALS REQUIREMENTS

#	VIOLATION DESCRIPTION
☐ 1010001	Failed to establish and implement a HMBP. HSC 25505(a) and 25507(a)
☐ 1010002	HMBP not submitted to the CUPA in CERS. HSC 25508(a)(1)(A); 27 CCR 15188(a),(b),(d)
☐ 1010003	Business Activities &/or Business Owner/Operator page not completed in CERS. 19 CCR 2652(a)(1); SDCC 68.904(b); HSC 25508(a)(1)(A)
☐ 1010004	Chemical inventory incomplete or not submitted in CERS. HSC 25505(a)(1); 25507(a); 25508.1(a-b); 19 CCR 2654 (a) or (d)
☐ 1010005	Site map not submitted in CERS or not sufficient. HSC 25505(a)(2); 25508.1(f); 19 CCR 2652(a)(3)
☐ 1010006	Failed to update HMBP in CERS within 30 days of a substantial change to any portion of the HMBP, including inventory changes or facility information. HSC 25508.1(a-f); 19 CCR 2654(d); SDCC 68.904(c)(6)
☐ 1010008	HMBP not certified annually as complete and accurate in CERS. HSC 25508(a)(1)(A), 25508.2, 19 CCR 2654(b)
☐ 1010010	Emergency response plan and procedures to mitigate a release or threatened release not adequate, not established or not submitted in CERS. HSC 25505(a)(3), 25508(a)(1)(A); 19 CCR 2658
☐ 1010011	Failure to notify property owner in writing that the business is subject to the HMBP program. HSC 25505.1
☐ 1010012	Failure to provide a copy of HMBP to the property owner within five working days upon request from property owner. HSC 25505.1
☐ 1010014	Failure to submit emergency response plan in CERS, when not meeting agricultural handler exemption. HSC 25507.1(a) and 25508(a)(1)(A); 19 CCR 2670, 2671
☐ 1010015	Failure to submit employee training plan in CERS, when not meeting agricultural handler exemption. HSC 25507.1(a) and 25508(a)(1)(A)
☐ 1010016	HMBP not established or submitted in CERS, when not meeting the remote site exemption. HSC 25507.2 and 25508(a)(1)(A)
☐ 1020001	Employee training and/or plan for safety procedures in the event of a release or threatened release of a hazardous material not adequate, not established or not submitted in CERS. HSC 25505(a)(4) and 25508(a)(1)(A); 19 CCR 2659(a)
☐ 1020002	Initial &/or annual employee training not conducted in safety procedures for a hazardous material release or threatened release &/or employee training records not available or not maintained for 3 years. HSC 25505(a)(4); 19 CCR 2659(b)
☐ 1040001	Hazardous materials release or threatened release not immediately reported to the CUPA and OES upon discovery. HSC 25510(a); 19 CCR 2631(a)
☐ HMD1001	Unified Program Facility permit not obtained for hazardous materials. SDCC 68.905; 68.906, 68.907
☐ HMD1005	Emergency contact not provided or current in CERS. HSC 25508.1(f); SDCC 68.904(b)
☐ HMD1007	Highly toxic gas (TLV<10 ppm) not disclosed in CERS. SDCC 68.1113(a)
☐ HMD1008	Annual carcinogen/reproductive toxin list not submitted in CERS. SDCC 68.1113(b)
☐ 1010017	HMBP not readily available to facility personnel or the CUPA. HSC 25505(c)

HAZARDOUS WASTE REQUIREMENTS FOR SQGS ONLY

#	VIOLATION DESCRIPTION
☐ HMD0226	Did not accumulate waste in a container or tank. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(2)
☐ 3030007	Failed to properly label/date hazardous waste container &/or tank. 22 CCR 66262.34(f)
☐ 3030010	Accumulated waste too long (>180 or 270 days) or (>90 days). HSC 25201(a), 25123.3(h)(1); 22 CCR 66262.34(d); 40 CFR 262.34(e) and/or (f)
☐ 3030013	Failed to accumulate hazardous waste in a container that is in good condition. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(2), 265.171
☐ 3030015	Failed to accumulate or store hazardous waste in a lined &/or compatible container. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(2), 265.172
☐ 3030017	Failed to properly close hazardous waste container(s). 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(2), 265.173
☐ 3030019	Failed to inspect hazardous waste storage area at least weekly. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(2), 265.174
☐ 3030022	Failed to properly separate incompatible waste. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(2), 265.177
☐ 3030030	Failed to maintain &/or operate facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(4), 265.31
☐ 3030036	Failed to maintain adequate aisle space. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(4), 265.35
☐ 3010022	Failed to post, next to the telephone, emergency information containing the location of emergency equipment, contact names and phone numbers. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(5)(ii)
☐ 3020001	Failure to ensure employees are thoroughly familiar with proper waste handling and emergency procedures during normal facility operations and emergencies. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(5)(iii)
☐ 3030032	Failed to maintain the following emergency response equipment or equivalent: 1) An internal communication or alarm system; 2) A communication device, such as a telephone; 3) Portable fire extinguishers, fire/spill control equipment and decontamination equipment; and 4) Water at adequate volume and pressure. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(4), 265.32
☐ 3030039	Failed to have an emergency coordinator on the premises or on call, and available during an emergency. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(5)(i)
☐ HMD0412	Failed to implement and/or coordinate emergency response measures during an emergency, spill/release. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(5)(iv)

HAZARDOUS WASTE TANK SYSTEMS FOR SQGS ONLY

#	VIOLATION DESCRIPTION
☐ 3030024	Failed to operate uncovered tank to ensure at least 2 ft. of freeboard to prevent overtopping, unless the tank is equipped with a containment structure, a drainage control system, or a diversion structure with a capacity that equals or exceeds the volume of the top 2 ft. of the tank. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(3), 265.201(b)(c)

☐	3030025	Failed to provide an overfill protection device on continuously fed hazardous waste tank(s). 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(3), 265.201(b)(4)
☐	3030027	Failed to conduct daily tank inspection of discharge control system, monitoring equipment and waste level. 22 CCR 66262.34(d)(2); 40 CFR 265.201(c)(1-3), 262.34(d)(3)
☐	3030028	Failed to conduct weekly hazardous waste tank inspection(s) to detect signs of leakage and ensure that the construction materials, fixtures and surrounding areas of the tank are in good condition. 22 CCR 66262.34(d)(2); 40 CFR 265.201(c)(4 & 5), 262.34(d)(3)
☐	3050007	Failed to properly remove all waste upon closure, decontaminate, and document the closure of a hazardous waste tank system. 22 CCR 67383.3; 40 CFR 262.34(d)(3), 265.201(f)
☐	HMD1612	Hazardous waste improperly stored in a tank system causing leaks, corrosion, or failure. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(3), 265.201(b)
☐	HMD1614	Failed to pre-notify the CUPA in writing prior to closing a hazardous waste tank system. 22 CCR 67383.3(a)(1)
☐	HMD1615	Failed to properly accumulate ignitable or reactive waste in a tank system. 22 CCR 66262.34(d)(2); 40 CFR 262.34(d)(3), 265.201(g)

HAZARDOUS WASTE REQUIREMENTS FOR SQGS AND LQGS

RECORD KEEPING/OPERATIONAL REQUIREMENTS

#		VIOLATION DESCRIPTION
1	☒ HMD0131	Unified Program Facility Permit not obtained &/or maintained for the generation of hazardous waste. SDCC 68.905
	☐ HMD0150	Failed to submit complete and accurate Facility Information in CERS. 27 CCR 15188(b-c); SDCC 68.904(b)
	☐ 3030053	Failed to maintain waste analysis records, analytical records &/or waste determination results for at least 3 years. 22 CCR 66262.40(c)
	☐ 3010002	Failed to obtain &/or maintain an active EPA ID Number. 22 CCR 66262.12(a)
	☐ 3010008	Failed to properly complete a uniform hazardous waste manifest. 22 CCR 66262.23(a)
	☐ 3010009	Failed to submit an Exception Report to DTSC for hazardous waste manifest. HSC 25123.3(h)(2); 22 CCR 66262.42(b), (c), &/or (d)
	☐ 3010010	Failed to maintain copies of Uniform Hazardous Waste Manifest, consolidated manifest, or Bills of Lading for 3 years. HSC 25160.2(b)(3), 25185(a)(4); 22 CCR 66262.40(a), 66262.23(a)(3)
	☐ 3010011	Failed to send copy of the uniform hazardous waste manifest to DTSC within 30 days of shipment. 22 CCR 66262.23(a)(4)
	☐ 3010013	Failed to meet the consolidated manifesting requirements for waste shipment. HSC 25160.2(b)(3) &/or (c)
	☐ 3010014	Failed to retain at the generator's place of business disposal records of spent lead-acid batteries for at least 3 years. 22 CCR 66266.81(a)(4)(A) &/or (B)
	☐ 3030006	Failed to determine if a hazardous waste is restricted or prohibited from land disposal and has to be treated. 22 CCR 66268.7(a)(1)
	☐ 3010016	Failure of recycler who recycles more than 100 kilograms per month of a recyclable material to submit the biennial Recyclable Materials Report (RMR) in CERS when claiming exclusion or exemption. HSC 25143.10(a), (c) &/or (d)
	☐ HMD0149	Failed to keep disposal receipts for drained used oil filters and/or drained fuel filters for 3 years. HSC 25250.22; 22 CCR 66266.130(c)(5)
	☐ HMD0152	Failed to report &/or update the required inventory information for hazardous waste(s) generated at the facility in CERS. SDCC 68.904(a)(2)
	☐ HMD0140	Failed to have Land Disposal Restriction documentation onsite for 3 years. 22 CCR 66268.7(a)(8)
	☐ 3250005	Failed to obtain a Treatment, Storage and Disposal Facility (TSDF) permit or authorization to store/treat/dispose of hazardous waste. HSC 25201(a)
	☐ 3050005	Failed to have adequate records demonstrating claim of exemption or exclusion for recyclable materials. HSC 25143.2(f)
	☐ HMD0142	Failed to notify the CUPA in CERS for onsite hazardous waste treatment/tiered permitting. HSC 25201(a)
	☐ HMD0138	Manifest signed by the TSDF not available for inspection. 22 CCR 66262.40(a); HSC 25185(a)(4)

DISPOSAL AND TRANSPORTATION

#		VIOLATION DESCRIPTION
	☐ 3010007	Failed to prepare a hazardous waste manifest for the transport of a waste for off-site transfer, treatment, storage, or disposal. HSC 25160(b)(1) or (2), 25160.2(b)(9); 22 CCR 66262.20(a)
2	☒ 3030005	Failed to make a proper waste determination. 22 CCR 66262.11, 66262.40(c)
	☐ 3050001	Failed to use a DTSC registered hazardous waste transporter to transport hazardous waste. HSC 25163(a)
	☐ 3050002	Failed to properly dispose of hazardous waste at an authorized facility. HSC 25189.5(a)
	☐ HMD0308	Impermissible dilution of hazardous waste. 22 CCR 66268.3(a)
	☐ HMD0305	Disposed of used oil illegally. HSC 25250.5(a), 25189.5(a)
	☐ HMD0306	Failed to properly dispose of oil-based paint &/or hazardous waste latex paint liquid. HSC 25217.1, 25189.5(a)

STORAGE AND HANDLING

#		VIOLATION DESCRIPTION
	☐ 3030001	Failed to meet the management requirements when handling or storing spent lead-acid batteries. 22 CCR 66266.81(a)
	☐ 3030003	Failed to properly manage 'damaged' spent lead acid batteries so as to minimize the release of acid and lead and to protect the handlers and the environment 22 CCR 66266.81(b)
	☐ 3030004	Failed to properly manage, store, label &/or recycle used oil filters &/or used fuel filters. HSC 25250.22; 22 CCR 66266.130
	☐ 3050004	Generator intentionally contaminated used oil with another hazardous waste other than minimal amounts of fuel. HSC 25250.7(a), (c)
	☐ HMD0222	Failed to properly label Excluded Recyclable Materials (ERM) accumulated in a container or tank. HSC 25143.9(a)
	☐ HMD0216	Failed to label hazardous material container within 10 days after the container was discovered to be mislabeled or inadequately labeled. HSC 25124(b)(3)(A); 22 CCR 66262.34(f)
	☐ HMD0217	Failed to repackage and properly label damaged/deteriorated hazardous material container within 96 hours. HSC 25124(b)(3)(B); 22 CCR 66262.34(f)
	☐ HMD0219	Failed to properly segregate used oil &/or fuel drained from filters. HSC 25250.22(b)(4); 22 CCR 66266.130(c)(6)
	☐ 3030057	Failed to comply with hazardous waste satellite container regulation. 22 CCR 66262.34(e)
	☐ HMD0023	Failed to properly empty container, failed to manage non-empty container, or inner liner removed from a container. 22 CCR 66261.7(b), (d), (e) &/or (r)
	☐ 3030058	Failed to mark date on empty container larger than 5 gallons &/or manage it within one year. 22 CCR 66261.7(f)
	☐ 3030059	Failure of the owner or operator managing laboratory hazardous waste in a laboratory accumulation area to comply with the quantity limitations, management, training, or documentation requirements. HSC 25200.3.1(b)

UNIVERSAL WASTE HANDLER REQUIREMENTS

#	VIOLATION DESCRIPTION
☐ 3010004	Failed to obtain a California ID Number from DTSC or federal ID Number from USEPA prior to accumulating 5,000 kgs or more of Universal Waste. 22 CCR 66273.32(a-b)
☐ HMD0151	Failed to maintain universal waste handler training records for 3 years. 22 CCR 66273.36(c),(d)
☐ 3020003	Failed to properly train handlers of universal waste in universal waste management and response procedures. 22 CCR 66273.36(a),(b)
☐ 3030008	Failed to properly label or mark Universal Waste container, package, or pallet (excluding CESQUWG) 22 CCR 66273.34
☐ 3030011	Failed to properly dispose of Universal Waste within one year. 22 CCR 66273.35(a) &/or (b)
☐ HMD0147	Failed to keep records of offsite Universal Waste shipment(s) available for inspection for 3 years. 22 CCR 66273.39(c),(d)(2)
☐ 3030051	Failed to meet accumulation, labeling, marking, &/or containment standards for Universal Waste aerosol containers. HSC 25201.16(f)
☐ 3040004	Failed to manage universal waste in a manner to prevent release(s) to the environment. 22 CCR 66273.33; 66273.33.5
☐ HMD0307	Disposal of universal waste (UW) to an unauthorized point. HSC 25189.5(a); 22 CCR 66273.31(a), 66273.8(b)
☐ 3010005	Failure of a universal handler of electronic devices or CRTs from an offsite source to notify DTSC 30 days prior to acceptance. 22 CCR 66273.32(c)
☐ 3030055	Failure of certified appliance recycler (CAR) to properly remove and dispose of all materials that require special handling (MRSH). HSC 25211.3, 25212, 25212(c)

COUNTY OF SAN DIEGO
DEPARTMENT OF HEALTH SERVICES

C1382
H04394

FOR HMMU USE:
Plan Check # AT0922
Date Received 6/22/87
Fee Paid 120
Plan Approval 11/3/88
Estab # H04394
Hydro Unit 9
Benef. Use 435

UNDERGROUND HAZARDOUS MATERIALS STORAGE TANK FACILITY

PERMIT APPLICATION

PART I

GENERAL PROJECT INFORMATION

A. SITE ADDRESS: 3838 Conrad Drive (Street) ~~Spring Valley, CA 92077~~ (City) (Zip Code)

B. PROPERTY OWNER:
Company La Mesa-Spring Valley School District Contact Richard B. Newman
Mailing Address 4750 Date Ave. City La Mesa Zip 92041
Phone (619) 469-6171
24 Hr. Emergency Contact Stan Olson Phone (619) 465-5010

MOV 11/3/88

C. TANK OPERATOR:
Company _____ Contact _____
Mailing Address _____ City _____ Zip _____
Phone ( ) _____
24 Hr. Emergency Contact _____ Phone ( ) _____

IMPORTANT: CONTACT THE DEPT. OF HEALTH SERVICES AT [illegible] WORKING DAYS PRIOR TO SCHEDULE THE FIRST FIELD INSPECTION.

D. CONTRACTOR:
Primary Contractor Reynolds Contact _____
Mailing Address _____ City _____ Zip _____
Phone ( ) _____
State Contractor License No. _____
Worker's Compensation Insurance Company _____ Phone ( ) _____
Check Here if Owner/Builder: ☐

E. APPLICATION SUBMITTAL, PLAN APPROVAL, PERMIT ISSUANCE, AND REQUIRED INSPECTIONS:

Submit three (3) copies of this application package, including plan drawings, with the required fee to the Department of Health Services, Hazardous Materials Management Unit, Room 311, 1700 Pacific Highway, San Diego, CA 92101. Checks should be made payable to the County of San Diego.

A permit will be issued by the Department of Health Services (DHS) upon review and approval of the application and plans. The required fees must be submitted with the application package. Information in addition to that presented in this application package may be needed in order to obtain final approval. No work is to begin on the proposed project until a permit has been issued. The required inspections cannot be scheduled until a permit has been issued.

Once the permit has been issued, it is the permittee's responsibility to notify the DHS at least two (2) working days in advance to schedule each required inspection.

Construction stages at which inspections are required are indicated in each subpart of this application form (i.e., Part II, III and IV).

DEPARTMENT OF HEALTH SERVICES
1700 Pacific Highway, San Diego, CA 92101
JAMES A. FORDE, Director

FOR HMMU USE
COMPLAINT # _____
PC # _____
EST. _____

To: California Water Resources Control Board, San Diego Region
From: Hazardous Materials Management Unit (HMMU)
Re: Unauthorized Release of Hazardous Material from an Underground Storage Tank

FILE
T0641
C1382
H04394

Date: 10-19-87

Evidence of an unauthorized release of a hazardous material has been noted by HMMU staff at the site described below:

Site Address 3838 Conrad Dr. (Street) Spring Valley (City) 92077 (Zip Code)

Property Owner La Mesa Spring Valley School District (Name)
Attention: Garth Calkins
Same as above (Street) _____ (City) _____ (Zip Code)
Telephone 469-6171 X326

Tank Operator _____ (Name) _____ (Telephone)

The following information is provided for your consideration and action in accordance with the authority and responsibilities of the Regional Board.

Suspected Source(s): _____

Amount Released: _____ (Gallons) _____ (Time Period)

Release Detected By:

- X Routine Tank Testing 6-8-87
- ___ Test of Piping
- ___ Inventory Audit
- ___ Monitoring Device/Well
- X Evidence of Soil Contamination
- ___ Detected During Tank Removal
- ___ Evidence of Leaky Tank
- ___ Detected During Tank Removal
- ___ Other

Description of underground tank systems on property (number, type, age, capacity, material stored, evidence of leakage).

Date Release Reported to or Detected by HMMU: 10-19-87
Contact With Other Agencies: _____
Additional Comments:

Please call the HMMU at 236-2222 if you have questions or comments regarding the above

HMMU Staff: _____

TETRA TECH, INC.
A HONEYWELL SUBSIDIARY
3346 INDUSTRIAL COURT
SAN DIEGO, CA 92121
TELEPHONE (619) 450-0365

22 February 1988

FEB 25 3 19 PM '88
HMMD

Mr. David Felix
Hazardous Materials Management Division
Department of Health Services
P.O. Box 85261
San Diego, CA 92138-5261

Subject: Unauthorized Release Control No. T0641
La Mesa-Spring Valley School District
3838 Conrad Drive
Spring Valley, CA 92077

Dear Mr. Felix:

Tank No. C1382-003 (2,000 gal waste oil) at the subject facility suffered an Unauthorized Release during a routine precision tank test on 29 April 1987 (Figure 1). A formal Unauthorized Release Report was filed shortly thereafter and the tank then exposed to determine the source of the problem. Site personnel (Mr. Garth Calkins and Mr. Stan Olson) stated that even after the open-up and further testing no leak could be observed even though test results still indicated a potential problem.

On 29 January 1988 the offending tank was pulled by Wm. Reynolds Construction Company. The HMMD representative could find no holes in the tank but did note an oily film on water in the excavation. Immediately after a site investigation was ordered by the regulator. I was contacted and asked to examine the excavation.

I arrived late in the afternoon of 29 January. The tank had already been removed from the site and was, thus, unavailable for inspection. The water table was located approximately 6 ft below grade and did have what appeared to be a faint hydrocarbon appearance. There was, however, no sheen indicative of low molecular weight hydrocarbons but rather only a "dull" appearance. There was no black line along the edge of the excavation at the water table which would have likewise indicated hydrocarbon contamination. There was only one fiberglass line entering the excavation, the original waste oil line leading from the adjoining building.

A ladder was placed in the excavation. I entered the excavation and took four water samples (2 - 1 liter and 2 VOA vials) immediately under the water surface by inverting the bottles/vials. A soil sample was then taken immediately under the fiberglass feed line in formational material (the line was originally laid in pea gravel; any product lost would thus be found in formational material). This sample was placed in a wide mouth glass jar with a teflon liner. All sample bottles were obtained from Quality Assurance Laboratory (QAL). The samples were then placed on ice and then refrigerated. The samples were delivered to QAL at 0812 hrs on Monday, 1 February 1988 (see attached chain of custody form). QAL was instructed to run the following tests:

- o Soil Sample: EPA Methods 418.1, 8020, 8080 and organic lead
- o Water Samples: EPA Methods 418.1, 601/8010, 602/8020 and 608/8080

RESULTS

QAL results are attached. Results for the soil sample using EPA Methods 8020 and 8080 were negative. Results for the water samples using EPA Methods 601, 602 and 608 were likewise negative. It thus seems that the waste oil tank never held any purgeable halocarbons, purgeable aromatics or organochlorine pesticides or PCBs.

Total petroleum hydrocarbons (TPH) and organic lead results using EPA Methods 418.1 and 7420 are presented below:

Sample I.D.	Sample Type	Organic lead, mg/kg	TPH, mg/l or mg/kg
1	Soil	0.94	11
2	Water	-	1.1

None of these results are indicative of hydrocarbon contamination generally considered to be worthy of concern even for potable water supplies.

DISCUSSION

One of the things which can easily invalidate a precision tank test is the presence of high ground water. It seems likely that the tank was not leaking but rather that the testing company assumed that the bottom of the tank was above ground water. It was not.

The excavation itself was open for about six months prior to pulling the tank. This was ample time for rain water runoff to carry contaminants from the surrounding asphalt parking area into the excavation and account for the minor contamination noted. In retrospect, it is somewhat surprising that contamination levels were not higher than those recorded given the heavy rains experienced between open-up and tank pulling.

RECOMMENDATIONS

Further site work seems unnecessary. The most prudent course of action seems to be to close the excavation so that it will not act as a direct conduit to additional contamination from the adjoining parking area.

Please do not hesitate to contact me should you have any questions.

Yours truly,

David W. Valentine, Ph.D.
Senior Program Director

County of San Diego

J. WILLIAM COX, M.D., Ph.D
DIRECTOR
(619) 236-2237

DEPARTMENT OF HEALTH SERVICES

1700 PACIFIC HIGHWAY, SAN DIEGO, CALIFORNIA 92101-2417

OFFICE OF THE DEPUTY DIRECTOR
ENVIRONMENTAL HEALTH SERVICES
P. O. BOX 85261
SAN DIEGO, CA 92138-5261
(619) 236-2243

March 10, 1988

Garth Calkins
La Mesa-Spring Valley School District
3838 Conrad Street
Spring Valley, CA 92077

RE: UNAUTHORIZED RELEASE #T0641/H04394
3838 CONRAD STREET, SPRING VALLEY, CA

Dear Mr. Calkins:

The site remediation report submitted to this Department by Tetra Tech Inc. summarizing the site characterization and mitigation activities at the above referenced location has been reviewed. This report has also been discussed with staff of the Regional Water Quality Control Board (RWQCB). The RWQCB concurs with the determination of this Department that this site has been adequately mitigated. Based on current requirements and policies, no further action is indicated at this time.

Please be advised that if the current use of the site changes, additional site characterization and mitigation activity may be required. As the property owner, it is your responsibility to notify this Department prior to any such changes.

Thank you for your efforts in resolving this matter. Please contact the Hazardous Materials Management Division at (619) 236-2222, if you require any additional assistance.

Sincerely,

GARY R. STEPHANY, Deputy Director
Environmental Health Services

GRS:jj

cc: RWQCB
HMMD

40-9085

SITE REMEDIATION SUMMARY

File No. T0641/H04394 Date Submitted FEB 26, 1988

Facility Name LA MESA-SPRING VALLEY SCHOOL DISTRICT

Operator _____ Phone _____

Address at Site 3838 CONRAD STREET SPRING VALLEY 92077

Mailing Address (if different) _____

Corporate Contact Person GARTH CALKINS Phone 469-6171 X326

HAZMAT Specialist DAVID FELIX Phone 236-2222

	Yes	No	NA
Off Site Impacts	____	X	____
Beneficial Use Area for Ground Water	____	X	____
Known Public Health Risks	____	X	____
Further Environmental Monitoring Required	____	X	____
Consultant's Report on File	X	____	____
RWQCB Concurrence with Remediation 2/26 S.H.	X	____	____
Manifests Provided (Quantity Removed _____)	____	____	X

Contaminant: Waste Oil

Cleanup Levels Established: 100 mg/kg TPH SOIL

Maximum Concentrations Remaining On-Site: 11 mg/kg SOIL TPH, 1.1 mg/l TPH WATER, 0.94 mg/kg ORG. Pb SOIL

Comments: PCB's, PESTICIDES, BTX N.D.* IN SOIL AND WATER. CLORINATED H-C N.D. IN WATER

*N.D. - NOT DETECTED

H04394-001
SAM case closed
3-21-88

NON-TANK CONTAMINATION REPORT / SOIL SAMPLING PROGRAM
LA MESA - SPRING VALLEY SCHOOL DISTRICT
OPERATIONS BUILDING
3838 CONRAD DRIVE
SPRING VALLEY, CALIFORNIA

PREPARED FOR:

LA MESA - SPRING VALLEY SCHOOL DISTRICT
4750 Date Avenue
La Mesa, California 91941

PREPARED BY:

CH&A CORPORATION
3467 Kurtz Street
San Diego, California 92110

Job No. 98365-52956
15 January 1996

CH&A CORPORATION

DESCRIPTION OF RELEASE

SUBSTANCE RELEASED

Hydraulic Oil was released from a hydraulic line running under the western end of the Operations Building approximately midway between the northwestern and southwestern corners.

CONTAMINANT CHARACTERIZATION

CH&A Corporation conducted subsurface sampling of the soil and perched water to delineate the horizontal and vertical extents of contamination. Details regarding these characterization efforts are presented in a succeeding section of this report.

QUANTITY OF SUBSTANCE RELEASED

An estimate of approximately 30 gallons of hydraulic oil was released during the rupture. This estimate was based upon the amount of oil required to refill the system following the release.

BACKGROUND INFORMATION

A leak from the hydraulic line located on the west side of the operations building was detected. The flow was immediately arrested, the leak was repaired, and the visually stained soil was excavated. In an effort to confirm that all impacted media was excavated from the site, CH&A was obtained to conduct verification sampling of the soil underlying the ruptured hydraulic line.

EXPOSURE CONCERNS

A perched water condition was observed at approximately five and a half feet below the ground surface within one borehole at the site. Visual observation of a slight sheen combined with chemical analysis of the water verified the presence of petroleum hydrocarbon contamination in the perched water. Migration of petroleum contaminants may potentially occur in this perched water source along the gradient pathway depending upon how extensive an area this water layer occupies. However, no water was detected in any of the strataprobe boreholes that were advanced around the periphery of the excavation. Based on this information it would appear that the perched water layer is an isolated, perched, fixed water source; and not contiguous with a drinking water aquifer.

An absorbent pillow was placed in the bottom of the excavation to absorb the hydraulic oil from the perched water. The pillow selectively absorbed a very small amount of oil. No additional pillows have been required due to the very limited volume of hydraulic oil observed/present. Based upon our subsurface investigation it appears that the perched water condition is limited, generally, to a small area along the western foundation wall.

As observed, petroleum hydrocarbon contamination is expected to exist along the building foundation wall, as well as along the hydraulic line trench. Excavation of impacted material along the perimeter wall is infeasible due to concerns that such activities may undermine building integrity.

The pressurized nature of the release (from the hydraulic system), combined with the large percentage of clay present in the soil, may account for the relatively widespread migration of contaminants, laterally, from the source of the release.

Due to the subsurface nature of the contamination, its situation beneath the building's concrete slab and exterior pavement, exposure to biological receptors is low. Workers inside the western section of the building, in closest proximity to the excavation, are at greatest risk of exposure; however, due to the low volatility of the contaminants combined with the restricted access to the excavation, a health risk appears to be low.

MANAGEMENT OF STOCKPILED SOILS

Excavated soil was stockpiled in a concrete open end unit on a concrete slab along the western property boundary. The stockpile was lined and covered with visqueen, and the opening to the enclosure was bermed. Approximately 10 cubic yards of soil have been stockpiled on the site to date. Due to the fact that the operations yard is fenced, gated, and locked, unauthorized access to the site, and consequently to the stockpile and the excavation, is inhibited.

Stockpiled soils will be transported off-site to a licensed treatment facility for degradation of the petroleum hydrocarbons present in the material.

CONCLUSIONS

Interpolation of the laboratory results verified that the contamination does not extend beyond the footprint of the building with the exception of the westernmost extent which has migrated beneath the concrete surface west of the building less than 40 feet from the west wall.

The La Mesa-Spring Valley School District attempted to remove the notably impacted soil from the vicinity of the ruptured hydraulic line without compromising worker safety or building integrity; however, petroleum hydrocarbon contaminated soil remains in the subsurface soils at the site. Further excavation of the remaining impacted material appears to be unwarranted based upon the following considerations:

- The ruptured hydraulic line was repaired (ie. the source of the release has been stopped).

- The lateral and vertical extents of contamination have been determined. Based upon CH&A's subsurface investigation it appears that the impacted media is generally limited to the area within the footprint of the building. The surface overlying the contaminated media is paved. The pavement acts as a barrier to prevent the evaporation of the petroleum hydrocarbon molecules from the underlying surface; inhibiting potential exposure from this route. The pavement similarly prevents contact of the underlying contaminated soil with overhead rains.

- The site has been utilized as an operations yard for the past 20 years, and future changes to site usage are not anticipated.

- A perched water condition appears to exist beneath the southwestern corner of the westernmost bay at approximately 5.5 feet beneath the ground surface; however, the perched condition appears to be limited in extent. No water was detected in any of the strataprobe boreholes that were advanced around the periphery of the excavation. Based on this information it would appear that the perched water condition is an isolated/confined fixed water source; and is not contiguous with a drinking water aquifer.

- Further excavation of the impacted media beneath the operations facility would impair the operations essential to the maintenance of the district's transportation vehicles, may threaten the building's integrity, and would pose an increased risk of exposure as opposed to leaving the contaminated material undisturbed.

- No gradient exists to propel the significant migration of the contaminants at the site.

- Based on available scientific data, hydraulic oil does not appear to present a significantly increased health risk.

PLAN VIEW OF SOIL SAMPLING LOCATIONS

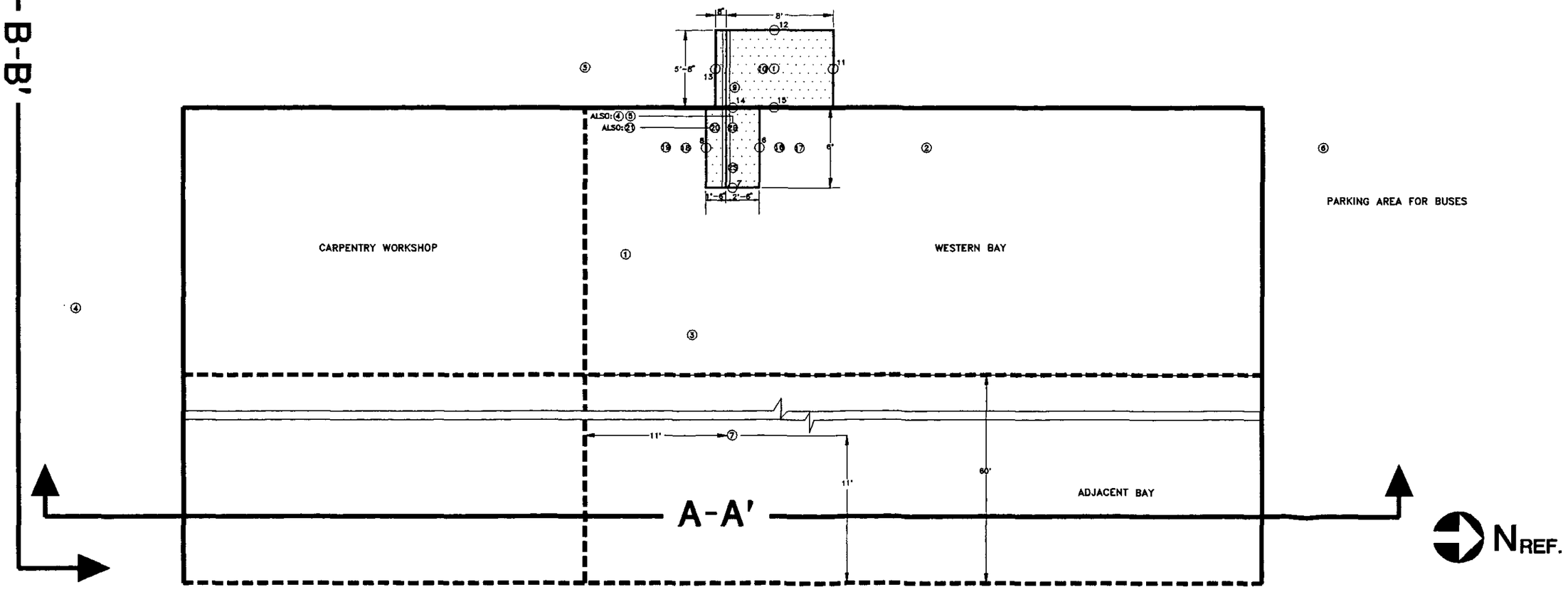
UNDERGROUND STORAGE TANKS/FUEL DISPENSER ISLAND
Ⓑ

BUS PRESSURE WASH FACILITIES/
OIL-WATER SEPARATOR

LEGEND

- INTERIOR WALLS
- EXTERIOR WALLS
- OUTLINE OF EXCAVATIONS
- ○ INDICATES STRATAPROBE SAMPLES
- ○ INDICATES LOCATION OF BORINGS
- (NUMBER) INDICATES THE CONCENTRATION OF TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (mg/kg) IN THE SOIL SAMPLE OBTAINED AT THIS LOCATION.
- (ND) NON DETECT

APPROXIMATE SCALE: 1" ≈ 8'



CH&A JOB NO. 98365-52956
01-15-96

OPERATIONS BUILDING
3838 CONRAD DRIVE
SPRING VALLEY, CA.

F:\USER\MARK\ACAD\CORPUS\52956-1

LA MESA-SPRING VALLEY SCHOOL DISTRICT
OPERATIONS BUILDING
FIGURE 2-PLAN VIEW

CORPORATION
HOUSTON-NEW ORLEANS-ATLANTA
SAN DIEGO-WASHINGTON D.C.
3467 KURTZ STREET
SAN DIEGO, CA. 92110
(619) 225-9641
(619) 224-8950 FAX

ENVIRONMENTAL
ENGINEERING & CONTRACTING, INC.
CA CONTR. LIC. #A-743267
150 EL CAMINO REAL, SUITE #120, TUSTIN, CALIFORNIA 92780
PHONE (714) 573-4441 FAX (714) 573-2876

WORKPLAN
ADDITIONAL SUBSURFACE ENVIRONMENTAL INVESTIGATION

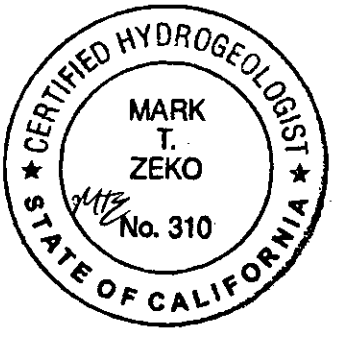
at

La Mesa Spring Valley School District
3838 Conrad Drive (Operations Center)
(SDCDEH #H04394-003) ✓
and
3900 Conrad Drive (Middle School)
(SDCDEH #H04394-002)
Spring Valley, California

September 22, 1999
EEC Job No. S592-2

Prepared for

La Mesa Spring Valley School District
4750 Date Avenue
La Mesa, California 91941



by

James A. Leist
Project Manager

Mark Zeko
Registered Geologist # 6278
Certified Hydrogeologist # 310

monitoring well; and collecting a water sample from each well. Upon completion of the field work, EEC will prepare a report presenting the results of our field activities and tabulating laboratory analyses. All work conducted during the course of this investigation will be performed by, or under, the direct supervision of a California Registered Geologist and Certified Hydrogeologist.

2.0 BACKGROUND

The area of investigation encompass two sites: 1) an active middle school (3900 Conrad Drive); and 2) an active maintenance yard facility (3838 Conrad Drive) known as the Operations Center. Both sites are located in Spring Valley, California. The UST formerly located at the Middle School site contained diesel fuel which fed a boiler located onsite. The two tanks formerly located at the Operations Center supplied gasoline and diesel fuel to the school district's buses and maintenance vehicles.

2.1 Middle School

One steel 2,500-gallon diesel UST was removed from the Middle School site on August 18, 1998 by Advanced Environmental, Inc. (Advanced). Groundwater was encountered during tank removal activities, and was measured at 5.5 feet below ground surface (bgs), by the SDCDEH inspector. In addition, numerous holes were observed on the ends and sides of the tank following its removal from the excavation, and hydrocarbon odors were noted in the stockpiled soil. The inspector noted globules of free product on the surface of groundwater. The location of the former UST is shown on Figure 2.

One soil sample was collected at each end of the UST. Soil sample BTW was collected at the west end of the excavation, while BTE was collected at the east end of the excavation. According to the chain of custody, sample BTW was collected at a depth of 11.5 feet bgs. Sample BTE was collected at a depth of 12 feet bgs. Both samples were analyzed for total petroleum hydrocarbon (TPH) full range. Sample BTE

yielded a total petroleum hydrocarbon as diesel (TPHd) concentration of 210 milligrams per kilogram (mg/kg), and a total petroleum hydrocarbon as motor oil (TPHmo) concentration of 11 mg/kg. Sample BTW yielded non-detectable concentrations for both TPHd and TPHmo. Locations where soil samples were collected are included on Figure 2. Analytical results of soil samples are summarized in Appendix B - Table 1.

On April 9, 1999 EEC conducted a Geoprobe Investigation to address subsurface conditions in the vicinity of the removed UST. Three borings (MID B1 through MID B3) were advanced at the locations shown on Figure 2. All three borings were advanced to a depth of approximately 10 feet bgs. Groundwater was encountered during soil sampling at depths ranging from 6 feet to 8.8 feet bgs.

Soil and groundwater samples were collected during the investigation. All soil and groundwater samples collected during the Geoprobe investigation were analyzed for TPHd, total petroleum hydrocarbons as gasoline (TPHg), the aromatic hydrocarbons benzene, toluene, ethylbenzene, and total xylene isomers (BTEX), and methyl tertiary butyl ether (MTBE). Soil sample results were reported at non-detectable concentrations for all constituents. With the exception of the water sample collected from MID B2, all hydrocarbon constituents were reported at non-detectable concentrations. However, water sample WMB2 yielded a TPHd concentration of 170,000 micrograms per liter (ug/L); other constituents were reported at non-detectable concentrations. A hydrocarbon sheen was noted on the surface of the groundwater during sample collection of MID B2. Locations of the borings are shown on Figure 2. Tables of soil and groundwater results are included in Appendix B, Tables A-1 and A-2, respectively.

In addition to the collection of soil and groundwater samples, EEC installed temporary monitoring wells in each of the borings, measured water levels in each temporary well, and surveyed casing elevations. Using this data, groundwater flow direction was determined to be to the southeast, with a gradient of 0.12 (Figure 3).

2.2 Operations Center

Two USTs were removed from the Operations Center site on December 31, 1998 by EEC. Groundwater was encountered during tank removal activities, and was measured by EEC at 4.7 feet bgs. Both tanks were constructed of fiberglass. The 12,000-gallon UST previously contained gasoline; the 6,000-gallon UST previously contained diesel fuel. No holes or deterioration of the tanks was noted. However, stained soil and petroleum odors were noted in the capillary fringe of the gasoline tank excavation. No odors or discoloration was noted in the diesel tank excavation. The location of the former USTs are shown on Figure 4.

One soil sample was collected below the ends of each UST at the Operations Center site. Due to the presence of groundwater in the excavation, the soil samples were collected immediately above the static groundwater elevation at a depth of 4.7 feet bgs. Additionally, four product line samples were collected below bends in the product line. All soil samples were analyzed for TPHg, BTEX, and MTBE. Soil samples collected from the diesel tank excavation and dispenser were additionally analyzed for TPHd. Locations where soil samples were collected are included on Figure 4. Analytical results of soil samples are summarized in Appendix B - Table 1.

Initially, one groundwater sample was collected from each excavation at the Operations Center site. These characterization water samples were analyzed for TPHd, TPHg, BTEX, and MTBE. After

analytical results indicated elevated hydrocarbon concentrations in the former gasoline tank excavation, a vacuum truck was utilized to remove water from the excavation. A second water sample was collected from the gasoline tank excavation approximately one month after the tank was removed. Hydrocarbon concentrations were reported at significantly lower concentrations. Analytical results of water samples are shown in Appendix B - Table 2.

On April 9, 1999 EEC conducted a Geoprobe Investigation to address subsurface conditions in the vicinity of USTs removed at the site. Four borings (OPER B1 through OPER B4) were advanced at the locations shown on Figure 4. With the exception of boring B3, all four borings were advanced to a depth of approximately 10 feet bgs. Boring B3 was advanced to a depth of 8 feet bgs - at which depth refusal was encountered. Groundwater was encountered during soil sampling at depths ranging from 4.1 feet to 5.7 feet bgs. However, groundwater was not encountered in OPER B2 and OPER B3 during drilling activities, but was measured after a period of time in the two borings.

Soil and groundwater samples were collected during the investigation. All soil and groundwater samples collected during the Geoprobe investigation were analyzed for TPHd, TPHg, BTEX, and MTBE. Soil sample results were reported at non-detectable concentrations for all constituents. The water sample collected from boring B4 (sample WOB4) yielded non-detectable concentrations for all hydrocarbon constituents. The water sample collected from boring B1 (sample WOB1) was reported at non-detectable hydrocarbon concentrations with the exception of MTBE reported at 19 ppb. The water sample collected from boring B2 (sample WOB2) was reported at non-detectable hydrocarbon concentrations with the exception of toluene reported at 5.5 ppb. Locations of the borings are shown on Figure 4. Tables of soil and groundwater results are included in Appendix B, Tables 3 and 4, respectively.

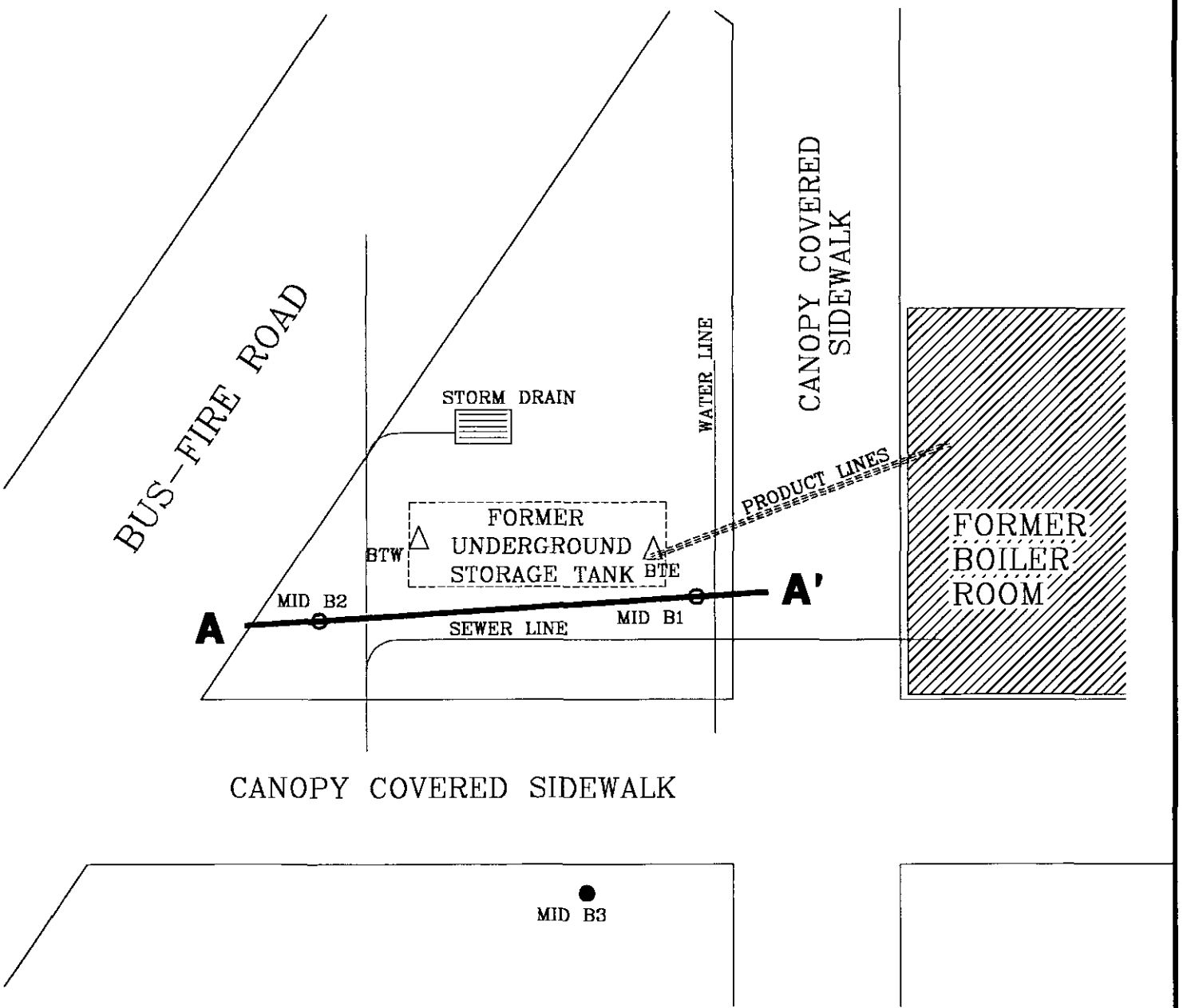
In addition to the collection of soil and groundwater samples, EEC installed temporary monitoring wells in each of the borings, measured water levels in each temporary well, and surveying casing elevations. Using this data, groundwater flow direction was determined to be to the southeast, with a gradient of 0.12 (Figure 5).

3.0 REGIONAL GEOLOGY AND HYDROGEOLOGY

The site is located in the Peninsular Range Geomorphic Province. The Peninsular Range is characterized by northwest-southeast trending mountain ranges and similarly trending faults. A California Regional Water Quality Control Board (CRWQCB, 1986) map indicates that the site is underlain by Santiago Peak Volcanics at the near surface. The volcanic rocks are predominately dacite and andesite and appear as breccias, agglomerates, volcanic conglomerates and tuffs. Locally, the volcanics are overlain by several feet of alluvium.

The Water Quality Control Plan for the San Diego Basin (Basin Plan) indicates that the site is located in the Sweetwater Hydrologic Unit of the Lower Sweetwater Hydrologic Area, of the La Nacion Hydrologic Subarea. According to the Basin Plan, groundwater within the La Nacion Subunit Area is classified as having existing beneficial value for municipal, agricultural, and industrial use. However, the Santiago Peak Volcanics which underlie the site are classified as non-water bearing. These rocks may transmit small amounts of water through joints and fractures in sufficient quantities to supply water to small farms or single family residences.

Sediments encountered during the EEC Geoprobe investigation (conducted on April 9, 1999) consisted primarily of clayey and sandy silt to a depth of 10 feet, the total depth drilled. Groundwater was encountered in several of the borings at a depth of 5 feet below ground surface. Groundwater flow



LEGEND

△ BTW	TANK REMOVAL SAMPLES
● MID B3	GEOPROBE/HYDROPUNCH LOCATIONS AND NAME
A — A'	LINE OF CROSS SECTION

N

0 5 10 20

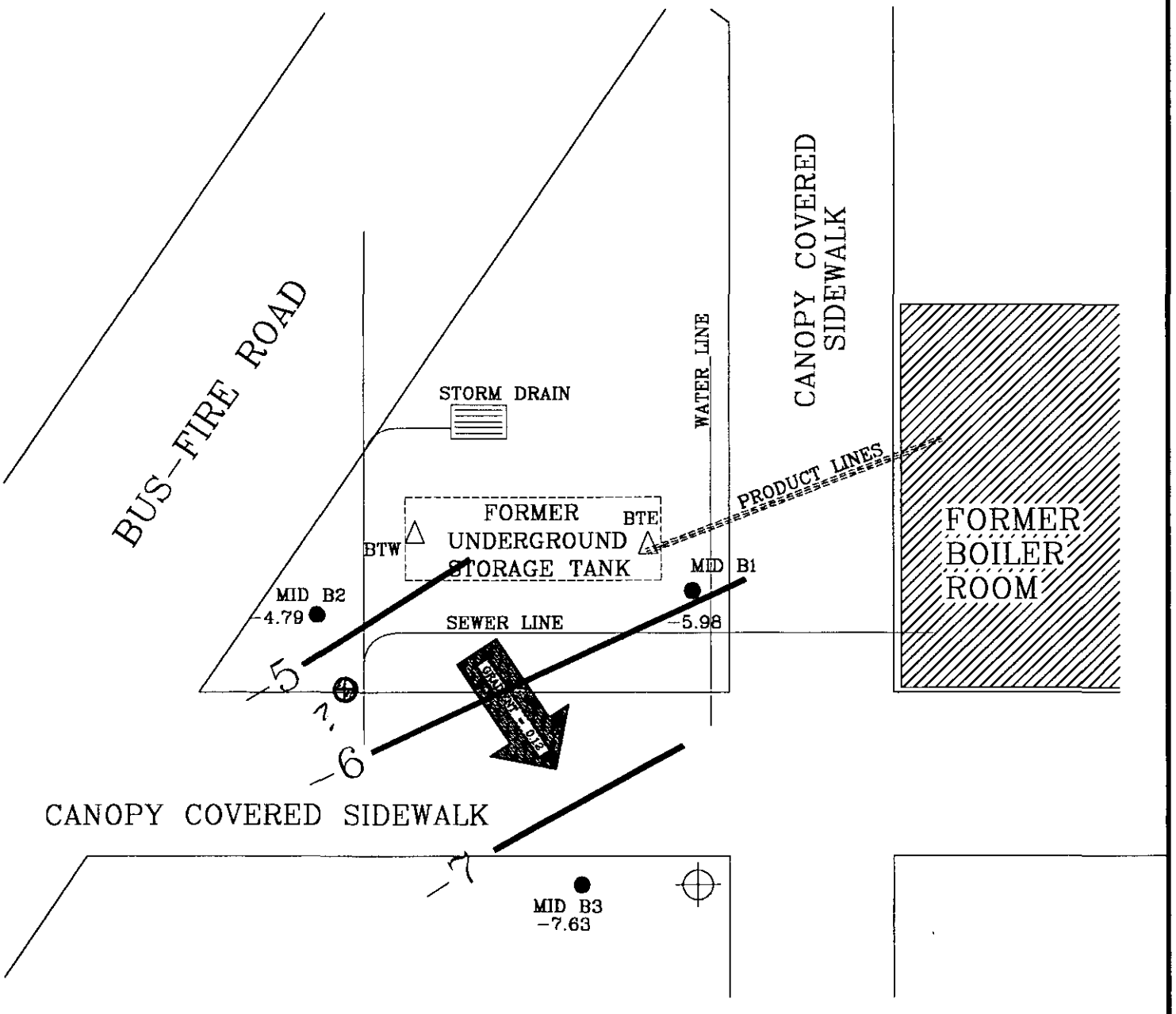
SCALE IN FEET

ENVIRONMENTAL ENGINEERING & CONTRACTING, INC.

Map Source: La Mesa-Spring Valley School District

BORING LOCATIONS
MIDDLE SCHOOL SITE
LA MESA-SPRING VALLEY SCHOOL DISTRICT
3900 CONRAD DRIVE
SPRING VALLEY, CALIFORNIA

File:	Date:	PM:	R.G./P.E.	PROJECT NO.	FIGURE
S5920002a	09/23/99	MTZ	MTZ	S592-2	2



LEGEND

- PROPOSED MONITORING WELL LOCATION
- LINE OF EQUAL GROUNDWATER ELEVATION
- BTW — TANK REMOVAL SAMPLES
- MID B3 -4.79 — GEOPROBE/HYDROPUNCH LOCATIONS AND NAME AND RELATIVE GROUNDWATER ELEVATION

N

0 5 10 20

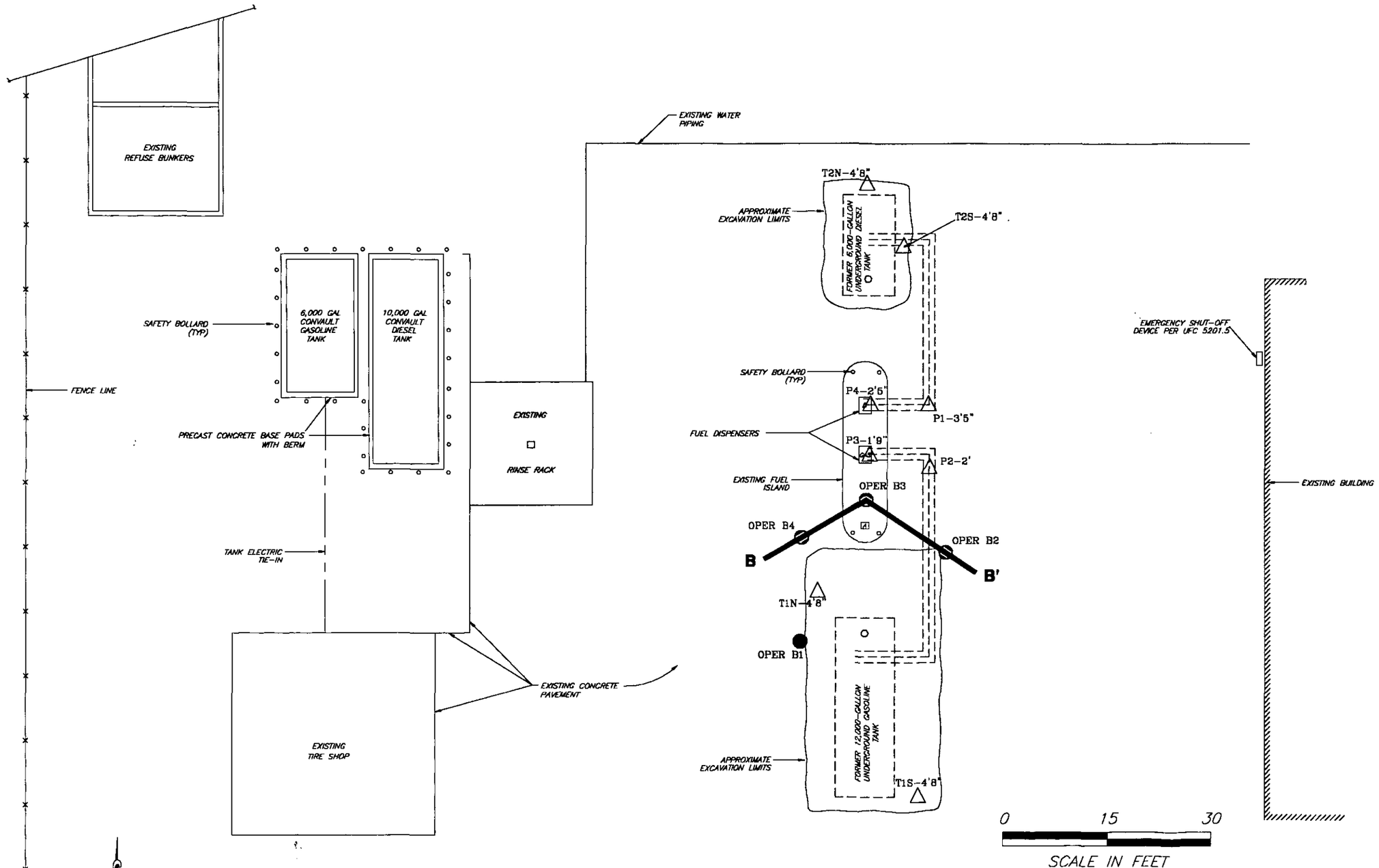
SCALE IN FEET

ENVIRONMENTAL ENGINEERING & CONTRACTING, INC.

Map Source: La Mesa-Spring Valley School District

PROPOSED MONITORING WELL LOCATION
MIDDLE SCHOOL SITE
LA MESA-SPRING VALLEY SCHOOL DISTRICT
3900 CONRAD DRIVE
SPRING VALLEY, CALIFORNIA

File:	Date:	PM:	R.G./P.E.	PROJECT NO.	FIGURE
S5920002a	09/23/99	MTZ	MTZ	S592-2	3



ENVIRONMENTAL ENGINEERING & CONTRACTING, INC.

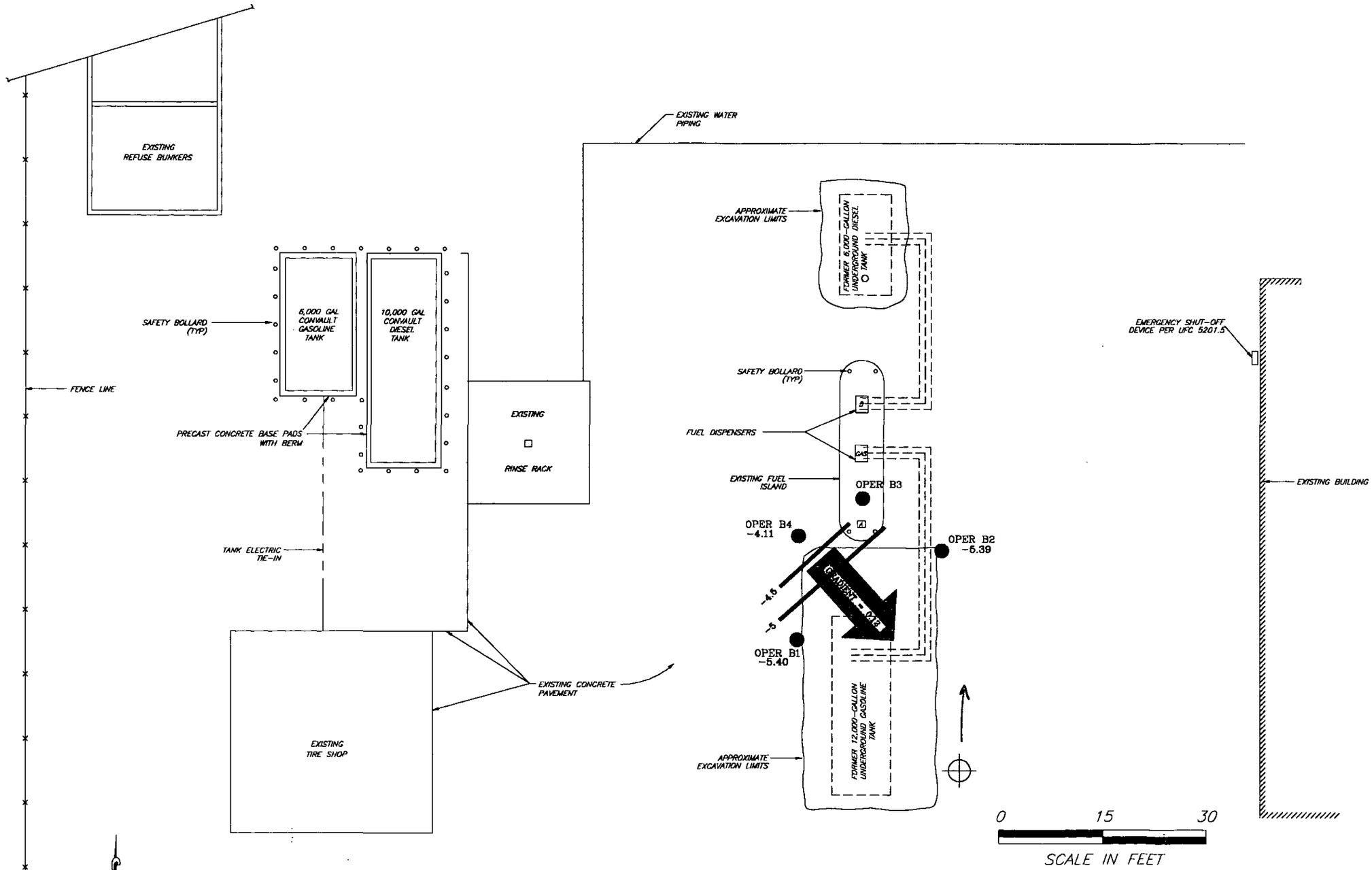
LEGEND

△T1N-4'8"	SOIL SAMPLE COLLECTED DURING TANK REMOVAL ACTIVITIES (12/31/98)
●OPER B4	GEOPROBE/HYDROPUNCH LOCATIONS AND NAME
B — B'	LINE OF CROSS SECTION

PROJECT NO.	S507-1		
Drawn by: J. SHAFFER	Date: 04/16/99	Revision:	File No. S507site

BORING LOCATIONS
OPERATIONS CENTER
LA MESA SPRING VALLEY SCHOOL DISTRICT
SCHOOL BUS MAINTENANCE FACILITY
3838 CONRAD DRIVE, SPRING VALLEY, CA 91977

FIGURE 4



ENVIRONMENTAL ENGINEERING & CONTRACTING, INC.

LEGEND

- PROPOSED MONITORING WELL LOCATION
- LINE OF EQUAL GROUNDWATER ELEVATION
- OPER B4 -4.11 GEOPROBE/HYDROPUNCH LOCATIONS AND NAME AND RELATIVE GROUNDWATER ELEVATION

PROJECT NO.	S507-1		
Drawn by: J. SHAFFER	Date: 04/16/99	Revision:	File No. S507site

PROPOSED MONITORING WELL LOCATION - OPERATIONS CENTER

LA MESA SPRING VALLEY SCHOOL DISTRICT
SCHOOL BUS MAINTENANCE FACILITY
3838 CONRAD DRIVE, SPRING VALLEY, CA 91977

FIGURE 5

ENVIRONMENTAL
ENGINEERING & CONTRACTING, INC.
CA CONTR. LIC. #A-743267
150 EL CAMINO REAL, SUITE #120, TUSTIN, CALIFORNIA 92780
PHONE (714) 573-4441 FAX (714) 573-2876

JUN 2 10 29 AM '99
ENVIRONMENTAL
HEALTH SERVICES

REPORT
SUBSURFACE ENVIRONMENTAL INVESTIGATION

at

La Mesa Spring Valley School District
3838 Conrad Drive - Operations Center
and
3900 Conrad Drive - Middle School
Spring Valley, California
(SDDEH #H04394-002)

EEC Job No. S592-1

May 6, 1999

Prepared for

La Mesa Spring Valley School District
3838 Conrad Drive
Spring Valley, California 91977

by

James A. Leist
Project Manager

Mark Zeko
Registered Geologist # 6278
Certified Hydrogeologist # 310

2.0 BACKGROUND

The subject site is an active middle school and maintenance yard facility located in Spring Valley, California. The UST previously located at the middle school site (3900 Conrad Drive) previously contained diesel fuel for a boiler. The two tanks at the operations center (3838 Conrad Drive) previously supplied gasoline and diesel fuel to the school district's buses and maintenance vehicles.

2.1 Tank Removal Activities

A total of three USTs were removed from the two sites. A County of San Diego inspector was present during tank removal activities. Groundwater was encountered during tank removal activities at each site. Groundwater at the Middle School site was measured at 5.5 feet below ground surface (bgs). Groundwater at the Operations Center was measured at 4.7 feet bgs.

2.1.1 Middle School Site

One steel 2,500-gallon diesel UST was removed from the Middle School site on August 18, 1998 by Advanced Environmental. According to the SDDEH inspector's field report, numerous holes were observed on the ends and sides of the tank following its removal from the excavation. Additionally, hydrocarbon odors were noted in the stockpiled soil, and globules of free product were observed on the excavation's groundwater surface. The location of the former UST is shown on Figure 2.

2.1.2 Operations Center

Two USTs were removed from the Operations Center site on December 31, 1998 by EEC. Both tanks were constructed of fiberglass. The 12,000-gallon UST previously contained gasoline; the 6,000-gallon UST previously contained diesel fuel. No holes or deterioration of the tanks was noted. However, stained soil and petroleum odors were noted in the capillary fringe of the gasoline tank excavation. No

odors or discoloration was noted in the diesel tank excavation. The location of the former USTs are shown on Figure 3.

2.2 Tank Removal - Soil and Groundwater Sampling and Analytical Results

Following tank removal activities at both sites, soil samples were collected from the tank excavations. Additionally, groundwater samples were collected after water accumulated in the two excavations at the Operations Center site.

2.2.1 Middle School Site

According to SDDEH field inspector notes, one soil sample was collected at each end of the UST at the Middle School site. Soil sample BTW was collected at the west end of the excavation, while BTE was collected at the east end of the excavation. Sample BTE indicated a total petroleum hydrocarbon as diesel (TPHd) concentration of 221 milligrams per kilogram (mg/kg). No other information was available.

2.2.2 Operations Center Site

One soil sample was collected below the ends of each UST at the Operations Center site. Additionally, four product line samples were collected below bends in the product line. All soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by CA DHS method for total petroleum hydrocarbons, the aromatic hydrocarbons benzene, toluene, ethylbenzene, total xylene isomers (BTEX) and methyl tertiary butyl ether (MTBE) by Environmental Protection Agency (EPA) Method 8020. Soil samples collected from the diesel tank excavation and dispenser were also analyzed for total petroleum hydrocarbons as diesel (TPHd). Analytical results of soil samples are shown in Appendix A - Table A.

One groundwater sample was collected from each excavation at the Operations Center site. These characterization water samples were analyzed for TPHd, TPHg, BTEX, and MTBE. After analytical results indicated elevated hydrocarbon concentrations in the former gasoline tank excavation, a vacuum truck was utilized to remove water from within the excavation. A second water sample was collected from the gasoline tank excavation approximately one month after the tank was removed. Hydrocarbon concentrations were reported at significantly lower concentrations. Analytical results of water samples are shown in Appendix A - Table B.

3.0 REGIONAL GEOLOGY AND HYDROGEOLOGY

The site is located in the Peninsular Range Geomorphic Province. The Peninsular Range is characterized by northwest-southeast trending mountain ranges and similarly trending faults. A California Regional Water Quality Control Board (CRWQCB, 1986) map indicates that the site is underlain by Santiago Peak Volcanics at the near surface. The volcanic rocks are predominately dacite and andesite and appear as breccias, agglomerates, volcanic conglomerates and tuffs. Locally, the volcanics are overlain by several feet of alluvium.

The Water Quality Control Plan for the San Diego Basin (Basin Plan) indicates that the site is located in the Sweetwater Hydrologic Unit of the Lower Sweetwater Hydrologic Area, of the La Nacion Hydrologic Subarea. According to the Basin Plan, groundwater within the La Nacion Subunit Area is classified as having existing beneficial value for municipal, agricultural, and industrial use. However, the Santiago Peak Volcanics which underlie the site are classified as non-water bearing. These rocks may transmit small amounts of water through joints and fractures in sufficient quantities to supply water to small farms or single family residences.

County of San Diego

GARY W. ERBECK
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

RICHARD HAAS
ASSISTANT DIRECTOR

December 24, 2001

Mr. Gerry Spicer, Director of Purchasing
La Mesa/Spring Valley School District
Attn: Gerry Spicer, Director of Purchasing
4750 Date Ave.
La Mesa, CA 91941

Dear Mr. Spicer:

UNAUTHORIZED RELEASE #H04394-003
LMSVSD OPERATIONS CENTER
3839 CONRAD DRIVE, SPRING VALLEY, CA 91977

This letter confirms the completion of a site investigation and corrective action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code. Please contact Lars Skinner at (619) 338-2396 if you have questions regarding this matter.

Sincerely,

GARY ERBECK, Director
Department of Environmental Health

GM:LS:kd

Enclosure

cc: Regional Water Quality Control Board
Allan Patton, SWRCB, UST Cleanup Fund Program

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

DATE: 12-18-01

Agency Name: County of San Diego, Environmental Health, SAM	Address: P.O. Box 129261
City/State/ZIP: San Diego, CA 92112-9261	Phone: (619) 338-2222 FAX: (619) 338-2377
Responsible Staff Person: Lars Skinner	Title: Environmental Health Specialist

II. CASE INFORMATION

Site Facility Name: La Mesa/Spring Valley School District Operations Center		
Site Facility Address: 3839 Conrad Dr., Spring Valley, CA		
RB LUSTIS Case No: N/A	Local Case No: H04394-003	LOP Case No: N/A
URF Filing Date: 02/12/99	SWEEPS No: N/A	
Responsible Parties: La Mesa/Spring Valley School Dist. Attn: Gerry Spicer	Address: 4750 Date Ave., La Mesa, CA 91941	Phone Number: 619-668-5700, Ext. 6358

Tank No.	Size in Gal.	Contents	Closed in Place/Removed	Date
1	12,000 Gal. (Fiberglass)	Gas	Removed	12/31/98
2	6,000 Gal. (Fiberglass)	Diesel	Removed	12/31/98
3				
4				

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Leaking UST System (Piping)			
Site Characterization complete? Yes	Date Approved By Oversight Agency: 08/28/01		
Monitoring Wells Installed? Yes	Number: 1	Proper Screened Interval? Yes	
Highest GW Depth Below Ground Surface: 5 Ft. Bg.	Lowest Depth: 19 Ft. Bg.	Flow Direction: Southeast	
Most Sensitive Current Use: Groundwater – Municipal use; Surface Water - Municipal use			
Are Drinking Water Wells Affected? No	Aquifer Name: Sweetwater Hydrologic Unit, La Nacion Hydrologic Subarea (909.12)		
Is Surface Water Affected? No	Nearest SW name: Unnamed Creek (1500 Ft. SW)		
Off-Site Beneficial Use Impacts (addresses/locations): None			
Report(s) on file? Yes	Where is Report(s) Filed? County of San Diego, Environmental Health		

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank(s)	1 X 12,000 Gal. 1 X 6,000 Gal.	Both disposed of @ AMR, Ontario, CA	12/31/98
Piping	56'	Disposed of @ AMR, Ontario, CA	12/31/98
Free Product	N/A	-----	-----
Soil	7 Drums	Disposed of @ TPS Technologies, Adelanto, CA	01/10/00 02/12/01
Groundwater	6 Drums	Disposed of @ Demenno-Kerdoon, Compton, CA	01/10/00 04/12/01
Barrels	-----	-----	-----

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued) H04394-003

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS - - BEFORE AND AFTER CLEANUP

Contaminant	Soil (ppm)		Water (ppm)		Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After		Before	After	Before	After
TPH (Gas)	290	<5.0	<0.50	<0.10	MTBE	<0.035	<0.035	0.019	<0.005
TPH (Diesel)	<10.0	<10.0	<1.0	<0.50	Ethylbenzene	<.005	<.005	0.004	<0.0003
Benzene	<0.005	<0.005	<0.0003	<0.0003	Oil & Grease	----	----	----	----
Toluene	<0.005	<0.005	0.005	<0.0003	Heavy Metals	----	----	----	----
Xylene	<0.015	<0.015	<0.0006	<0.0003	Other	----	----	----	----

Comments: Several rounds of sampling the well have shown the groundwater to be non-detect for TPH & BTEX/MtBE. The consultant estimates that 15 yds^3 of impacted soil remain in place.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes

Does corrective action protect public health for current land use? Yes

Case oversight completed based upon the current site use as parking lot adjacent to school.

Site Management Requirements:

Any contaminated soil excavated as part of subsurface construction work must be managed in accordance with the legal requirements at that time.

Should corrective action be reviewed if land use changes? Yes

Monitoring Wells Decommissioned: Yes | Number Decommissioned: 1 | Number Retained: 0

List Enforcement Actions Taken: Notice of Corrective Action and Reimbursement Responsibility

List Enforcement Actions Rescinded: None

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Tony Sawyer	Title: Hydrogeologist Land and Water Quality Division
Signature: Tony V. Sawyer	Date: 12-24-01

VI. RWQCB NOTIFICATION

Date Submitted to RB: 08/28/00	RB Response: Closure approved	
RWQCB Staff Name: Sue Pease	Title: Environmental Specialist III	Date: 08/28/00

VII. ADDITIONAL COMMENTS, DATA, ETC.

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

County of San Diego

GARY W. ERBECK
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

RICHARD HAAS
ASSISTANT DIRECTOR

December 24, 2001

Mr. Gerry Spicer, Director of Purchasing
La Mesa/Spring Valley School District
Attn: Gerry Spicer, Director of Purchasing
4750 Date Ave.
La Mesa, CA 91941

Dear Mr. Spicer:

UNAUTHORIZED RELEASE #H04394-002
LMSVSD MIDDLE SCHOOL
3900 CONRAD DRIVE, SPRING VALLEY, CA 91977

This letter confirms the completion of a site investigation and corrective action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code. Please contact Lars Skinner at (619) 338-2396 if you have questions regarding this matter.

Sincerely,

GARY ERBECK, Director
Department of Environmental Health

GM:LS:kd

Enclosure

cc: Regional Water Quality Control Board
Allan Patton, SWRCB, UST Cleanup Fund Program

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

DATE: 12-18-01

Agency Name: County of San Diego, Environmental Health, SAM	Address: P.O. Box 129261
City/State/ZIP: San Diego, CA 92112-9261	Phone: (619) 338-2222 FAX: (619) 338-2377
Responsible Staff Person: Lars Skinner	Title: Environmental Health Specialist

II. CASE INFORMATION

Site Facility Name: La Mesa/Spring Valley Middle School		
Site Facility Address: 3900 Conrad Dr., Spring Valley, CA		
RB LUSTIS Case No: N/A	Local Case No: H04394-002	LOP Case No: N/A
URF Filing Date: 10/01/98	SWEEPS No: N/A	
Responsible Parties: La Mesa/Spring Valley School Dist. Attn: Gerry Spicer	Address: 4750 Date Ave., La Mesa, CA 91941	Phone Number: 619-668-5700, Ext. 6358

Tank No.	Size in Gal.	Contents	Closed in Place/Removed	Date
1	2500 gal. (Steel)	Diesel	Removed	08/18/98
2				
3				
4				

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Leaking UST System (Dispenser)			
Site Characterization complete? Yes	Date Approved By Oversight Agency: 08/28/00		
Monitoring Wells Installed? Yes	Number: 1	Proper Screened Interval? Yes	
Highest GW Depth Below Ground Surface: 5 Ft. Bg.	Lowest Depth: 12 Ft. Bg.	Flow Direction: Southeast	
Most Sensitive Current Use: Groundwater – Municipal use; Surface Water - Industrial use			
Are Drinking Water Wells Affected? No	Aquifer Name: Sweetwater Hydrologic Unit, La Nacion Hydrologic Subarea (909.12)		
Is Surface Water Affected? No	Nearest SW name: Unnamed Creek (1500 Ft. SW)		
Off-Site Beneficial Use Impacts (addresses/locations): None			
Report(s) on file? Yes	Where is Report(s) Filed? County of San Diego, Environmental Health		

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank(s)	1 X 2500 Gal	Disposed of @ AMR, Ontario, CA	08/18/98
Piping	26'	Disposed of @ AMR, Ontario, CA	08/18/98
Free Product	N/A	-----	-----
Soil	7 Drums	Disposed of @ TPS Technologies, Adelanto, CA	01/10/00 02/12/01
Groundwater	6 Drums	Disposed of @ Demenno-Kerdoon, Compton, CA	01/10/00 04/12/01
Barrels	-----	-----	-----

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued) H04394-002

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS - - BEFORE AND AFTER CLEANUP

Contaminant	Soil (ppm)		Water (ppm)		Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After		Before	After	Before	After
TPH (Gas)	<5.0	<5.0	<12.5	<.100	MTBE	<.035	<.035	<.875	<0.005
TPH (Diesel)	221	<10.0	170	<.500	Ethylbenzene	<.005	<.005	0.002	<0.0003
Benzene	<.005	<.005	0.002	<.0003	Oil & Grease	-----	-----	-----	-----
Toluene	<.005	<.005	.0003	<.0003	Heavy Metals	-----	-----	-----	-----
Xylene	<.015	<.015	<.375	<.0006	Other	-----	-----	-----	-----

Comments: Several rounds of sampling the well have shown non-detect levels of TPH & BTEX/MtBE in the groundwater. The consultant estimates that 21 yds^3 of impacted soil (>100 ppm TPH) remain in place.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes

Does corrective action protect public health for current land use? Yes

Case oversight completed based upon the current site use as parking lot adjacent to school.

Site Management Requirements:

Any contaminated soil excavated as part of subsurface construction work must be managed in accordance with the legal requirements at that time.

Should corrective action be reviewed if land use changes? Yes

Monitoring Wells Decommissioned: Yes	Number Decommissioned: 1	Number Retained: 0

List Enforcement Actions Taken: Notice of Corrective Action and Reimbursement Responsibility

List Enforcement Actions Rescinded: None

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Tony Sawyer	Title: Hydrogeologist Land and Water Quality Division
Signature: Tony N. Sawyer	Date: 12-24-01

VI. RWQCB NOTIFICATION

Date Submitted to RB: 08/28/00	RB Response: Closure approved	
RWQCB Staff Name: Sue Pease	Title: Environmental Specialist III	Date: 08/28/00

VII. ADDITIONAL COMMENTS, DATA, ETC.

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

COUNTY OF SAN DIEGO

EST. NO. H 50016
DATE 1-5-99
TIME START 1145 END 1220
BUS. CODE A10
SPECIALIST John Barr
CONTACT Judy White
TITLE Office Manager
PHONE (619) 461-7285

COMPLIANCE INSPECTION REPORT

BUSINESS NAME Dr. Sons Family Dentistry
ADDRESS 9628 Campo Rd
CITY/ZIP Spring Valley, 91977

On the above date an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (H&S) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR), and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

JAN 15 1999

JAN 15 1999

Office Use Only

Routine Inspection

Violation

1) Hazardous Waste Manifest / Disposal receipt could not be located during inspection to verify proper disposal of silver waste from silver recovery Units. Possibly company All ways Recycling is not providing receipt. Corrective Action: Locate disposal receipts from All ways recycle and maintain on site for 3 years minimum to demonstrate proper disposal of hazardous waste. Be sure that company All ways Recycle is providing proper manifest for disposal of your waste.

Remarks

- Health Permit valid till 1/31/99.
- Medical Waste Management Plan submitted 3/98 and reviewed. Continue to submit a new plan once per year to our office. (Blank Plan given this date.)
- Medical Solid Waste stored in locked room as required

Judy M White — Signature of Business Representative
1-5-99 — Date Signed
Office Manager — Title

Department of Environmental Health, Hazardous Materials Management Division, P.O. Box 129261, San Diego, CA, 92112-9261

(619) 338-2222

DEH:HM-924 (Rev. 2/98) NCR

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

County of San Diego
Department of Environmental Health

COUNTY OF SAN DIEGO

EST. NUMBER H 50016

DATE 1-5-99

PAGE 2 OF 2

MEDICAL WASTE GENERATOR REQUIREMENTS

BUSINESS ADDRESS: 9628 Campo Rd Spring Valley ZIP: 91977

VIOLATION REPORT: *The items checked below refer to specific section numbers of the California Health and Safety Code Sections 25100 and 117600 et. al.; the San Diego County Code of Regulatory Ordinances Sections 68.1201 et. al.; and the California Code of Regulations, Title 22 Sections 65600 et. al. and 66262.10 et. al.* **All violations must be corrected. Please call (619) 338-2222 or your Inspector if you have any questions.**

GENERAL REQUIREMENTS:

- [ ] An Environmental Health Permit as a medical waste generator has not been obtained. 68.1203, 68.1204, and 117705 ..... V4101 W___
- [ ] Unlawful disposal of untreated medical waste to an unauthorized point. 118340 ..... V4102 W___
- [ ] Improper treatment of medical waste using an unapproved method or procedure. 118215 ..... V4103 W___
- [ ] Medical SOLID WASTE is not stored in a locked trash receptacle or enclosure so as to deny access to unauthorized persons. 68.1202 ..... V4104 W___
- [ ] Improper clipping or cutting of sharps waste at the point of generation. 68.1205 ..... V4105 W___
- [ ] Medical waste was not separated from other waste at the point of origin. 118275 ..... V4106 W___
- [ ] Generator has not maintained reusable containers/bins for medical waste storage in a clean and sanitary manner. 118295 and 118305 ..... V4107 W___
- [ ] Storage time exceeded for frozen medical waste, e.g. greater than 90 days. 118280 ..... V4108 W___
- [ ] Generator did not clean-up a leak or spill of medical waste in an approved manner. 118300 ..... V4109 W___
- [ ] Generator has not secured the enclosure or designated accumulation area for medical waste containers so as to deny access to unauthorized persons. 118310 ..... V4110 W___
- [ ] Operator did not post an approved and legible biohazardous waste "warning sign" in English and Spanish at the waste storage area(s). 118310 ..... V4111 W___
- [ ] Generator did not store medical waste in approved and properly marked red bags (non-sharps). 118275 ..... V4112 W___
- [ ] Did not place a label with the generator's name, address, and phone number on the outside of the red bag and/or sharps container. 68.1201 and 68.1205 ..... V4113 W___
- [ ] Generator did not store sharps waste in approved and properly marked sharps container. 118275 ..... V4114 W___
- [ ] Transportation of medical waste without State Hauler Registration or without a limited-quantity hauling exemption from County HMMD. 118025 ..... V4115 W___
- [ ] Generator did not have standardized written operating procedures for a steam sterilizer available onsite. 118215 ..... V4116 W___
- [ ] Did not have recording thermometer checked for calibration annually. 118215 ..... V4117 W___
- [ ] Generator did not maintain records of thermometer calibration checks for at least 3 years. 118215 ..... V4118 W___
- [ ] Operator did not use heat-sensitive tape or other approved method for each load of medical waste treated onsite. 118215 . V4119 W___
- [ ] Need to use a biological indicator or other approved method at least once a month to confirm proper disinfection conditions. 118215 ..... V4120 W___
- [ ] Must tie-off red bags to prevent leakage or expulsion of contents during handling and storage. 118280 ..... V4121 W___
- [ ] Did not containerize and place red bags in rigid, leak resistant, and covered containers or bins. 118280 ..... V4122 W___
- [ ] Must have waste container/bin labeled on the lid and side so as to be clearly visible. 118280 ..... V4123 W___
- [ ] Did not tape closed or tightly-lid a full sharps container ready for disposal, to preclude loss of contents. 118285 ..... V4124 W___

SMALL QUANTITY GENERATOR REQUIREMENTS:

(< 200 pounds per month of waste)

- [ ] Medical Waste Management Plan has not been submitted to County HMMD (Annual Requirement) 68.1206 and 117935 .. V4025 W___
- [ ] Must maintain and show proof of "onsite" medical waste treatment records for 3 years. 118215 and 117943 ..... V4026 W___
- [ ] Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 2 years. 117945 ..... V4027 W___
- [ ] Need to apply for and receive a limited-quantity hauling exemption for "self-hauled" medical waste (< 20 pounds of waste per week). 118030 and 118025 ..... V4028 W___
- [ ] Did not renew a limited-quantity hauling exemption annually. 118030 ..... V4029 W___
- [ ] Storage time exceeded for full sharps container(s), e.g. greater than 7 days at room temperatures (for > 20 pounds/month generator). 118285 ..... V4030 W___
- [ ] Storage time exceeded for red bag waste, e.g..more than 7 days at room temperature (> 20 pounds/month generator). 118280 . V4031 W___
- [ ] Very small quantity generator (e.g.. < 20 pounds per month) improperly storing waste for greater than 30 days onsite at room temperature. 118280 ..... V4032 W___
- [ ] Maximum holding time exceeded for non-putrescible medical waste, e.g. greater than 180 days. 68.1203 ..... V4033 W___

LARGE QUANTITY WASTE GENERATORS:

(≥ 200 pounds of waste in a month)

- [ ] Medical Waste Management Plan has not been submitted to County HMMD (Annual Requirement) . 117960 and 68.1206 . V4034 W___
- [ ] Must maintain and show proof of "onsite" medical waste treatment records for 3 years. 118215 and 117975 ..... V4035 W___
- [ ] Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 3 years. 117975 ..... V4036 W___
- [ ] Storage time exceeded for full sharps container(s), e.g. greater than 7 days at room temperature. 118285 ..... V4037 W___
- [ ] Storage time exceeded for red bag waste, e.g. more than 7 days at room temperature. 118280 ..... V4038 W___

PATHOLOGY WASTE AND CHEMOTHERAPY WASTE HANDLING:

- [ ] Did not segregate chemotherapy waste from other medical waste. 118275 ..... V4039 W___
- [ ] Generator did not label container holding chemotherapy waste with the words "chemotherapy waste" or other approved markings on the lid and sides. 118275 ..... V4040 W___
- [ ] Did not segregate pathology waste from other medical waste. 118275 ..... V4041 W___
- [ ] Generator did not label container holding pathology waste with the words "pathology waste" or other approved markings on the lid and side. 118275 ..... V4042 W___
- [ ] Unlawful disposal of pathology waste or chemotherapy waste to an unauthorized point. 118340 ..... V4043 W___

PHARMACEUTICAL WASTE HANDLING:

- [ ] Generator did not segregate pharmaceutical waste from other medical waste. 118275g ..... V4044 W___
- [ ] Generator did not label container holding pharmaceutical waste with the words "incineration only" or other approved markings on the lid and side. 118275g ..... V4045 W___
- [ ] Storage time exceeded for pharmaceutical waste, e.g. more than 90 days. (≥ 10 pounds per calendar year generated) 118280e . V4046 W___
- [ ] Very small quantity generator of pharmaceutical waste (e.g. < 10 pounds waste /calendar year) improperly storing waste for longer than one year. 118280e ..... V4047 W___
- [ ] Unlawful disposal of pharmaceutical waste to an unauthorized point. 118340 and 118222 ..... V4048 W___

ON-SITE MEDICAL WASTE TREATMENT FACILITY REQUIREMENTS:

- [ ] Operator has not obtained an onsite medical waste treatment permit from the County. 117950, 118130, 118155, and CCR 65620 ..... V4049 W___
- [ ] Must maintain an updated and complete copy of the medical waste treatment permit onsite and available for review. CCR 65621(f), 65623, 118165, and 118180 ..... V4050 W___
- [ ] Did not comply with a condition of the medical waste treatment permit issued by the County. CCR 65623 ..... V4051 W___

PHOTOCHEMICAL and HAZARDOUS WASTE MGMT. AND DISPOSAL:

- [ ] Illegal disposal of photoprocessing/ hazardous waste to the sewer, trash, etc. 25189.5 ..... V4052 W___
- [ ] Generator has not maintained waste disposal records. e.g. manifests/milk-run receipts..onsite for 3 years. 66262.40 .... V4053 W___
- [ ] Generator has not obtained an EPA Identification Number from the State DTSC for hazardous waste generation. e.g. photoprocessing/hazardous waste. 66262.12 ..... V4054 W___
- [ ] Generator did not properly label the container holding hazardous waste. 66262.34 ..... V4055 W___
- [ ] Generator did not maintain the container holding hazardous waste tightly closed except when adding or removing waste. 66265.173 ..... V4056 W___
- [ ] Generator did not submit a notification to the County prior to treating photochemical waste onsite (e.g. > 10 gallons/month: tiered permitting). 25201.5 ..... V4057 W___

ESTABLISHMENT REPRESENTATIVE — DATE SIGNED Jan 5, 1999 — TITLE Office Manager

DEH:HM-9253 (5/97) NCR

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE 1 OF 1
EST. NO. H 50016
DATE 4/27/01
TIME START 1:40 END 1:50
BUS. CODE K10
SPECIALIST A. Seiap
CONTACT None
TITLE
PHONE

BUSINESS NAME Dr. Song Family Dentistry
ADDRESS 9628 Campo Rd #W
CITY/ZIP Spring Valley 91977

On the above date, an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (H&S) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

Office Use Only	

Status Verification:
Facility is closed
No sign of activity
Will inactivate site.

FILE

Signature of Business Representative | Date Signed | Title

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261; (619) 338-2222

DEH:HM-924 (Rev. 2/99) NCR

DISTRIBUTION: WHITE- RETURN TO HMD
YELLOW-BUSINESS RETAINS

County of San Diego
Department of Environmental Health

RECEIVED
FEB 2 11 13 AM '01
ENVIRONMENTAL
HEALTH SERVICES

February 1, 2001

TO: COUNTY OF SAND DIEGO
HAZ MAT DEPARTMENT
PO BOX 129261
SAN DIEGO CA 92112-9261

FROM: JIN S. SONG, DDS
2260 OTAY LAKES ROAD #108
CHULA VISTA CA 91915
(619) 656-4646

Re: HAZ MAT PERMIT H50016

To Whom it may concern:

The dental office located at 9628 CAMPO ROAD SUITE W, SPRING VALLEY CA 91977 is **closed and no longer in business since May 30, 2000.**

Please make the proper corrections in your records.

Thank-you;

Jin S. Song, DDS 2-1-01

F

County of San Diego

H03233-001

J. WILLIAM COX, M.D., Ph.D
DIRECTOR
(619) 236-2237

DEPARTMENT OF HEALTH SERVICES

1700 PACIFIC HIGHWAY, SAN DIEGO, CALIFORNIA 92101-2417

OFFICE OF THE DEPUTY DIRECTOR
ENVIRONMENTAL HEALTH SERVICES
1700 PACIFIC HIGHWAY, ROOM 103
SAN DIEGO, CA 92101
(619) 236-2243

June 23, 1987

Mr. Frank Fossati
Shell Oil Company
P. O. Box 4848
Anaheim, CA 92803

RE: UNAUTHORIZED RELEASE #T0037
9663 CAMPO ROAD, SPRING VALLEY

C0454

Dear Mr. Fossati:

The Unauthorized Release Report submitted to this Department by Shell Oil Company summarizing the site characterization and mitigation activities at the above referenced location has been reviewed. This Unauthorized Release Report has also been discussed with staff of the Regional Water Quality Control Board (RWQCB). The RWQCB concurs with the determination of this Department that this site has been adequately mitigated. Based on current requirements and policies, no further action is indicated at this time.

Please be advised that if the current use of the site changes, additional site characterization and mitigation activity may be required. As the property owner, it is your responsibility to notify this Department prior to any such changes.

Thank you for your efforts in resolving this matter. Please contact the Hazardous Materials Management Division at (619) 236-2222, if you require any additional assistance.

Very truly yours,

GARY STEPHANY, Deputy Director
Environmental Health Services

GS:KMH:bfb

cc: RWQCB
HMMD

Unauthorized Release of Hazardous Substance
from an Underground Storage Tank for
Division Chief's Signature

File No. T0037 Date Submitted 6-22-87

Facility Name Shell Station

Operator Shell Oil Company Phone 1-800-447-4355

Address at Site 9663 Campo Rd. Spring Valley

Mailing Address (if different) P.O. Box 4848, Anaheim, CA 92803

Corporate Contact Person Frank Fossati Phone (800) 447-4355 ex 362

Name of Specialist Filing Letter Kevin Heaton Phone 236-2222

	Yes	No	NA
Source Contained	✓		
Off Site Impacts		✓	
Beneficial Use Area	✓		
Known Public Health Risks		✓	
Further Environmental Monitoring Required		✓	
Consultant's Report on File	✓		

Waste oil tank removed, Shallow ground water tested no contamination found

DHS:HM-987 (5/86)

County of San Diego
Department of Health Services

County of San Diego

ELISE ROTHSCHILD
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 565-5173 Fax: (858) 694-3670
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

August 9, 2016

Ms. Deborah R. Pryor
c/o Shell Oil Products US
20945 S. Wilmington Ave.
Carson, CA 90810

Clow Family Survivors Trust
P.O. Box 188
Rancho Santa Fe, CA 92067

Dear Responsible Parties:

UNAUTHORIZED RELEASE H03233-002
FORMER SHELL STATION
9663 CAMPO ROAD, SPRING VALLEY, CA 91977

This letter confirms the completion of a site investigation and corrective action for the underground storage tanks currently located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the underground storage tanks is greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tanks site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code, and that no further action related to the petroleum release at the site is required.

Claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code. Please contact Ewan Moffat, at (858) 505-6856, if you have questions regarding this matter.

Sincerely,

Elise Rothschild

ELISE ROTHSCHILD, REHS
Director, Department of Environmental Health

Enclosure: Case Closure Summary

cc: Ms. Cristi Farrell, Wayne Perry, Inc.

UST Case Closure Summary Form

Agency Information **Date: August 5, 2016**

Agency Name: County of San Diego, Department of Environmental Health	Address: 5500 Overland Avenue, Suite 110
City/State/Zip: San Diego, CA 92123	Phone: (858) 505-6856
Staff Person: Ewan Moffat	Title: Environmental Health Specialist II

Case Information:

Facility Name: Shell-Branded Service Station		
Facility Address: 9663 Campo Road, Spring Valley, CA 91977		
RB LUSTIS Case No: 9UT4006	Local Case No.: H03233-002	LOP Case No.: N/A
URF Filing Date:11/23/99	Sweeps No.: N/A	
Responsible Party(s):	Address:	Phone:
Ms. Deborah R. Pryor c/o Shell Oil Products US	20945 S. Wilmington Ave., Carson, CA 90810	(323) 291-9595
Clow Family Survivors Trust	P.O. Box 188 Rancho Santa Fe, CA 92067	

Tank Information

Tank No.	Size (gal)	Contents	Closed in-Place/ Removed/Active	Date
T001	10,000	Gasoline (Unleaded)	Removed	12/99
T002	10,000	Gasoline (Unleaded)	Removed	12/99
T003	10,000	Gasoline (Unleaded)	Removed	12/99
T004	550	Used Oil	Removed	12/99
T005	12,000	Gasoline (Unleaded)	Active	12/99
T006	12,000	Gasoline (Unleaded)	Active	12/99
T007	12,000	Gasoline (Unleaded)	Active	12/99

Conceptual Site Model: The GeoTracker CSM Report is attached.

Closure Criteria Met: The GeoTracker Low-Threat Case Closure Policy [LTCP] Checklist is attached.

Optional Site maps: Two figures are attached.

UST Case Closure Summary Form

Additional Information: Date: August 5, 2016 H03233-002

This site is currently an active gas station. The former release (H03323-001) was opened to investigate a release around the used oil Underground Storage Tanks (UST) pit in December 1985. A groundwater monitoring well (B1) indicated no impacts and the case was closed in June 1987.

This case (H03323-002) was opened in June 1998 due to hydrocarbon contaminated soils noted in a March 1999 Phase II Site Assessment Report. In December 1999, all four USTs, piping and dispensers were removed and replaced with three gasoline tanks (no new used oil tank was installed). Approximately 880 cubic yards of soil was disposed ofoffsite. Other than excavation of soil during the December 1999 tank removal, no other form of remediation has been performed on site.

Between 2000 and 2013 a total of 10 soil borings, 7 hydropunch borings and 9 groundwater monitoring wells were drilled / installed to investigate both groundwater and soil impacts.

Soil impacts were limited to the immediate area around the former underground storage tank location and the fuel dispenser island. There is an estimated 234 cubic yards of impacted soils (above 100 mg/kg) remaining on site. The location of the residual soil impacts is depicted on the attached Figure 8 which is from the August 2013 Corrective Action Plan (CAP).

Groundwater flow beneath the site is towards the southwest, paralleling Kenwood Drive. Groundwater beneath the site is approximately 5.6 to 6.0 feet below grade whereas off site south of Kenora Drive groundwater is approximately 7.5 to 8.5 feet below grade. The attached Figure 5 provides a groundwater contour map and the results from the most recent sampling event.

Residual groundwater impacts are limited to MTBE. Trend analysis of the groundwater monitoring data indicates that the dissolved plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation processes. It is estimated that the MTBE will drop below MTBEs primary and secondary maximum contaminant level (MCL) by 2034 and 2047, respectively.

Since this case pre-dates the GeoTracker upload requirements for soil and groundwater data, the following supplemental information to the SCM is provided. The following tables provide the maximum and residual concentrations of the contaminants of concern (COCs) historically reported at the site

Maximum Concentrations	LPH (feet)	TPH-g	TPH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA
Groundwater (ug/l)	0.0'	6,500	--	74	2.3	510	123	5,800	5,800
Soil (mg/kg)	N/A	2,300	<10	14	81	23	170	110	<1.3

Residual Concentrations	LPH (feet)	TPH-g	TPH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA
Groundwater (ug/l)	0.0'	70	--	<0.5	<0.5	<0.5	<1.0	73	<10
Soil (mg/kg)*	N/A	2,300	<10	14	81	23	170	110	<1.3

On August 2013, a CAP, and on October 2013, a CAP Addendum were submitted for natural attenuation and were approved by DEH.

The consultant proposed natural attenuation because:

- The plume is stable and shrinking.
- No Liquid Phase Hydrocarbons (LPH) have ever observed on the groundwater.
- There are no supply wells within 1/2 mile of the site.
- Utilities include a westward trending concrete lined channel (Spring Valley Creek) that is located about 40 feet west of the southwest corner of the site. The consultant claims that even though MtBE has been detected around the area of this channel, it is concrete-lined and the levels of MtBE are low and decreasing. Based on this, the creek will not be impacted by the MtBE.
- Sweetwater reservoir is about 2.75 miles south of the site and would not be impacted by the low residuals of MtBE in the groundwater, per the consultant. A site visit indicated that the bottom of this channel was 7 feet bgs with weep holes located one foot above the base (about 6' bgs). Since groundwater is at an average of 7.5 -8.5 feet bgs, and MW-6, on the opposite side of the channel, has trace levels of MtBE, the channel does not appear to be a pathway of MtBE migration, nor does it seem that MtBE-impacted water would seep into the channel.
- There are no health risks based on the absence of benzene or ethylbenzene in the groundwater.
- Benzene is currently below the MCL of 1 ug/l.
- Based on a degradation analysis, it is estimated that MtBE in groundwater will degrade to the primary MCL of 13 ug/l by 2034 and the secondary MtBE MCL of 5 ug/l would be reached by 2047.

DEH concurs with the consultant's conclusions and approves case closure.

Permit # DEH2015-LMWP-002277 was issued by DEH for destruction of the 9 wells associated with the site.

UST Case Closure Summary Form

Additional Information: **Date: August 5, 2016** **H03223-002**

Corrections to SCM

- The most recent concentrations in groundwater on the SCM report the word "Other" has been placed in the TPHg Xylenes column. The data uploaded was not in the correct format for the GeoTracker Report. The values should have been reported as follows.

Well#	Gasoline Range Organics (C4-C12) (ug/l)	Total Xylenes (ug/l)
MW-1	<50	<1
MW-2	<50	<1
MW-3	<50	<1
MW-4	<50	<1
MW-5	<50	<1
MW-6	<50	<1
MW-7	70	<1
MW-8	<50	<1
MW-9	57	<1

Local Agency Representative

Name: Kevin Heaton PG 4163, CHg 163	Title: Senior Hydrogeologist,
Signature:	Date: 8/9/2016

CSM Report Go

GEOTRACKER HOME | MANAGE PROJECTS | REPORTS | SEARCH | LOGOUT

GAS DEPOT/QWIK KORNER (T0607399215) - MAP THIS SITE

OPEN - VERIFICATION MONITORING

9663 CAMPO RD
SPRING VALLEY , CA 919771228
SAN DIEGO COUNTY

ACTIVITIES REPORT

PUBLIC WEBPAGE

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

CLEANUP OVERSIGHT AGENCIES

SAN DIEGO COUNTY LOP *(LEAD)* - *CASE #: H03233-002*
CASEWORKER: *EWAN MOFFAT* - ***SUPERVISOR:*** *COLLEEN HINES*
SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT4006*

THIS PROJECT WAS LAST MODIFIED BY ***EWAN MOFFAT*** ON 8/3/2016 6:10:32 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CSM REPORT - VIEW PUBLIC NOTICING VERSION OF THIS REPORT

UST CLEANUP FUND CLAIM INFORMATION (DATA PULLED FROM SCUFIIS)

CLAIM NO	PRIORITY	CLAIMANT	SITE ADDRESS	AMT REIMB TO DATE	AGE OF LOC	IMPACTED WELLS?	FIVE YEAR REVIEW INFORMATION				
							REVIEW NUM	REVIEWER	FUND RECOMMENDATION	TO OVERSIGHT DATE	TO CLAIMANT DATE

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
GAS DEPOT/QWIK KORNER (Global ID: T0607399215) 9663 CAMPO RD SPRING VALLEY, CA 919771228	Open - Verification Monitoring	5/5/2016	11/23/1999	17	SAN DIEGO COUNTY LOP *(LEAD)* - *CASE #: H03233-002* ***CASEWORKER:*** *EWAN MOFFAT* - ***SUPERVISOR:*** *COLLEEN HINES* SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT4006*

STAFF NOTES (INTERNAL)
<NO STAFF NOTES ENTERED>

SITE HISTORY

This site is currently an active gas station. The former release (H03323-001) was opened to investigate a release around the used oil Underground Storage Tanks (UST) pit in December 1985. A groundwater monitoring well (B1) indicated no impacts and the case was closed in June 1987.

This case (H03323-002) was opened in June 1998 due to hydrocarbon contaminated soils noted in a March 1999 Phase II Site Assessment Report. In December 1999, all four USTs, piping and dispensers were removed and replaced with three gasoline tanks (no new used oil tank was installed). Approximately 880 cubic yards of soil was disposed ofoffsite. Other than excavation of soil during the December 1999 tank removal, no other form of remediation has been performed on site.

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Groundwater flow beneath the site istowards the southwest, paralleling Kenwood Drive. Groundwater beneath the site is approximately 5.6 to 6.0 feet below grade whereas off site south of Kenora Drive groundwater is approximately 7.5 to 8.5 feet below grade. Figure 5 provides a groundwater contour map and the results from the most recent sampling event.

Residual groundwater impacts are limited to MTBE. Trend analysis of the groundwater monitoring data indicates that the dissolved plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation processes. It is estimated that the MTBE will drop below MTBEs primary and secondary maximum contaminant level (MCL) by 2034 and 2047, respectively.

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of MtBE, the channel does not appear to be a pathway of MtBE migration, nor does it seem that MtBE-impacted water would seep into the channel.

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DEH concurs with the consultant's conclusions and approves case closure.

Permit # DEH2015-LMWP-002277 was issued by DEH for destruction of the 9 wells associated with the site.

RESPONSIBLE PARTIES

NAME	ORGANIZATION	ADDRESS	CITY	EMAIL
CLOW FAMILY SURVIVORS TRUST	CLOW FAMILY SURVIVORS TRUST	P O BOX 188	Rancho Santa Fe	
DEBORAH PRYOR	SHELL OIL PRODUCTS	20945 WILMINGTON AVENUE	CARSON	deborah.pryor@shell.com

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	12/15/1999	12/15/1999	Soil	630 Tons	

RISK INFORMATION VIEW LTCP CHECKLIST VIEW PATH TO CLOSURE PLAN VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline	Commercial	GW - Agricultural Supply, GW - Industrial Service Water Supply (IND), GW - Municipal and Domestic Supply, SW - Industrial Service Supply, SW - Municipal and Domestic Supply, SW - Non-Contact Water Recreation, SW - Warm Freshwater Habitat, SW - Water Contact Recreation, SW - Wildlife Habitat		11/23/1999	Close and Remove Tank	0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
NO	NO	Helix Water District	8/2/2016	10/20/2015	8/29/2013		9/3/2013

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
5002614000		Sweetwater - Lower Sweetwater - La Nacion (909.12)

COUNTY
San Diego

PUBLIC WATER SYSTEM(S)

- **HELIX WATER DISTRICT** - 7811 UNIVERSITY AVE., LA MESA, CA 91941
- **METROPOLITAN WATER DIST. OF SO. CAL.** - P.O. BOX 54153, LOS ANGELES, CA 90054

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER - HIDE VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
HP-1	4/22/2004	<50 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	51 UG/L	<10 UG/L
HP-2	4/22/2004	<50 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	66 UG/L	<10 UG/L
HP-3	4/25/2002	<100 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	47 UG/L	11 UG/L
HP-4	4/24/2002	130 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	150 UG/L	<10 UG/L
HP-6	4/24/2002	<100 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	69 UG/L	12 UG/L
MW-03	4/8/2002	OTHER	0.77 UG/L	ND	3.2 UG/L	ND	15 UG/L	ND
MW-04	4/8/2002	OTHER	ND	ND	ND	ND	54 UG/L	ND
MW-05	4/8/2002	OTHER	ND	ND	ND	ND	110 UG/L	64 UG/L
MW-1	7/19/2013	OTHER	ND	ND	ND	ND	2.1 UG/L	ND
MW-2	7/19/2013	OTHER	ND	ND	ND	ND	4.8 UG/L	ND
MW-3	7/19/2013	OTHER	ND	ND	ND	ND	2.2 UG/L	ND
MW-4	7/19/2013	OTHER	ND	ND	ND	ND	2.7 UG/L	ND
MW-5	7/19/2013	OTHER	ND	ND	ND	ND	3.4 UG/L	ND
MW-6	7/19/2013	OTHER	ND	ND	ND	ND	5.4 UG/L	ND
MW-7	7/19/2013	OTHER	ND	ND	ND	ND	73 UG/L	ND
MW-8	7/19/2013	OTHER	ND	ND	ND	ND	0.63 UG/L	ND
MW-9	7/19/2013	OTHER	ND	ND	ND	ND	56 UG/L	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL - HIDE VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
HP-1 D10.0	4/25/2002	700 MG/KG	<130 UG/KG	<130 UG/KG	9200 UG/KG		<130 UG/KG	<1300 UG/KG
HP-1 D12.0	4/25/2002	<0.5 MG/KG	<5 UG/KG	<5 UG/KG	<5 UG/KG		<5 UG/KG	<50 UG/KG
HP-1 D15.0	4/25/2002	1.4 MG/KG	<5 UG/KG	<5 UG/KG	<5 UG/KG		22 UG/KG	<50 UG/KG
HP-1 D20.0	4/25/2002	<0.5 MG/KG	<5 UG/KG	<5 UG/KG	<5 UG/KG		6.3 UG/KG	<50 UG/KG
HP-1 D6.5	4/25/2002	130 MG/KG	5.1 UG/KG	<5 UG/KG	190 UG/KG		<5 UG/KG	<50 UG/KG

LTCP Checklist ▼ Go

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GAS DEPOT/QWIK KORNER (T0607399215) - MAP THIS SITE

OPEN - VERIFICATION MONITORING

9663 CAMPO RD
SPRING VALLEY , CA 919771228
SAN DIEGO COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT

PUBLIC WEBPAGE

CLEANUP OVERSIGHT AGENCIES
SAN DIEGO COUNTY LOP *(LEAD)* - *CASE #: H03233-002*
CASEWORKER: *EWAN MOFFAT* - ***SUPERVISOR:*** *COLLEEN HINES*
SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT4006*

THIS PROJECT WAS LAST MODIFIED BY ***EWAN MOFFAT*** ON 7/28/2016 7:12:52 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CLOSURE POLICY

THIS VERSION IS FINAL AS OF 6/17/2016 — *CHECKLIST INITIATED ON 3/9/2013* — CLOSURE POLICY HISTORY

General Criteria - *The site satisfies the policy general criteria* - CLEAR SECTION ANSWERS		**YES**
a. Is the unauthorized release located within the service area of a public water system? **Name of Water System :** Helix Water District		◉ YES ○ NO
b. The unauthorized release consists only of petroleum (info).		◉ YES ○ NO
c. The unauthorized ("primary") release from the UST system has been stopped.		◉ YES ○ NO
d. Free product has been removed to the maximum extent practicable (info).	◉ FP Not Encountered	○ YES ○ NO
e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info).		◉ YES ○ NO
f. Secondary source has been removed to the extent practicable (info).		◉ YES ○ NO
g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15.	○ Not Required	◉ YES ○ NO
h. Does a nuisance exist, as defined by Water Code section 13050.		○ YES ◉ NO
1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.* - CLEAR SECTION ANSWERS		**YES**
EXEMPTION - Soil Only Case (Release has not Affected Groundwater - Info)		○ YES ◉ NO
Does the site meet any of the Groundwater specific criteria scenarios?		◉ YES ○ NO
1.2 - The contaminant plume that exceeds water quality objectives is <250 feet in length. There is no free product. The nearest existing water supply well or surface water body is >1,000 feet from the defined plume boundary. The dissolved concentration of benzene is <3,000 µg/L. The dissolved concentration of MTBE is <1,000 µg/L.		◉ YES ○ NO
2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c* - CLEAR SECTION ANSWERS		**YES**
EXEMPTION - Active Commercial Petroleum Fueling Facility		◉ YES ○ NO
3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.* - CLEAR SECTION ANSWERS		**YES**
EXEMPTION - The upper 10 feet of soil is free of petroleum contamination		○ YES ◉ NO
Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios?		◉ YES ○ NO
3.1 - Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the following table (LINK) for the specified depth below ground surface.		◉ YES ○ NO
Additional Information		
This case should be kept OPEN in spite of meeting policy criteria.		○ YES ◉ NO
Has this LTCP Checklist been updated for FY 15/16?		◉ YES ○ NO

SPELL CHECK

Save Form as Partially Completed | Save Form as Complete

LOGGED IN AS EMOFFAT

CONTACT GEOTRACKER HELP

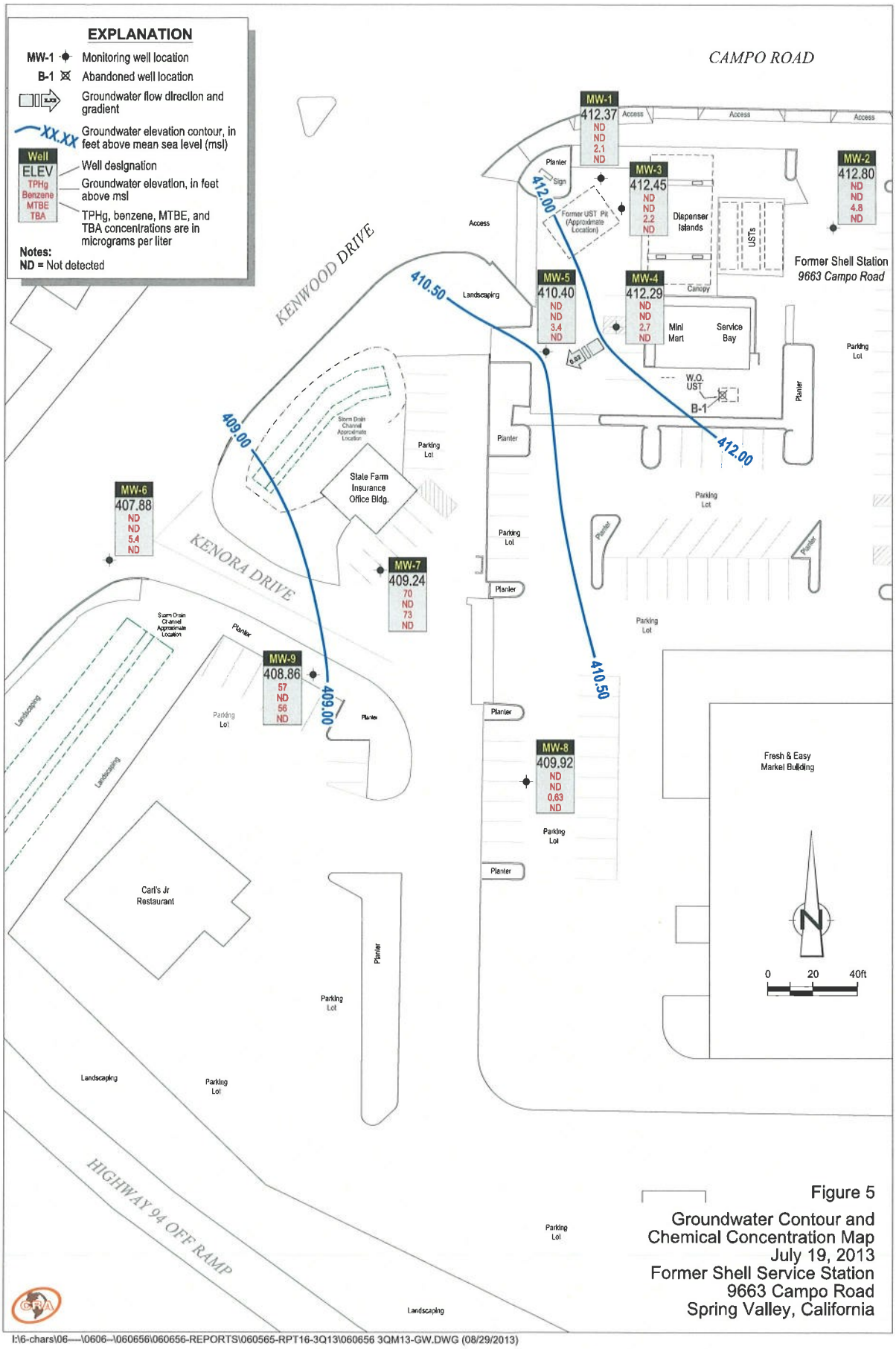

Figure 5

Groundwater Contour and Chemical Concentration Map
July 19, 2013
Former Shell Service Station
9663 Campo Road
Spring Valley, California

I:\6-chars\06---\0606--\060656\060656-REPORTS\060565-RPT16-3Q13\060656 3QM13-GW.DWG (08/29/2013)

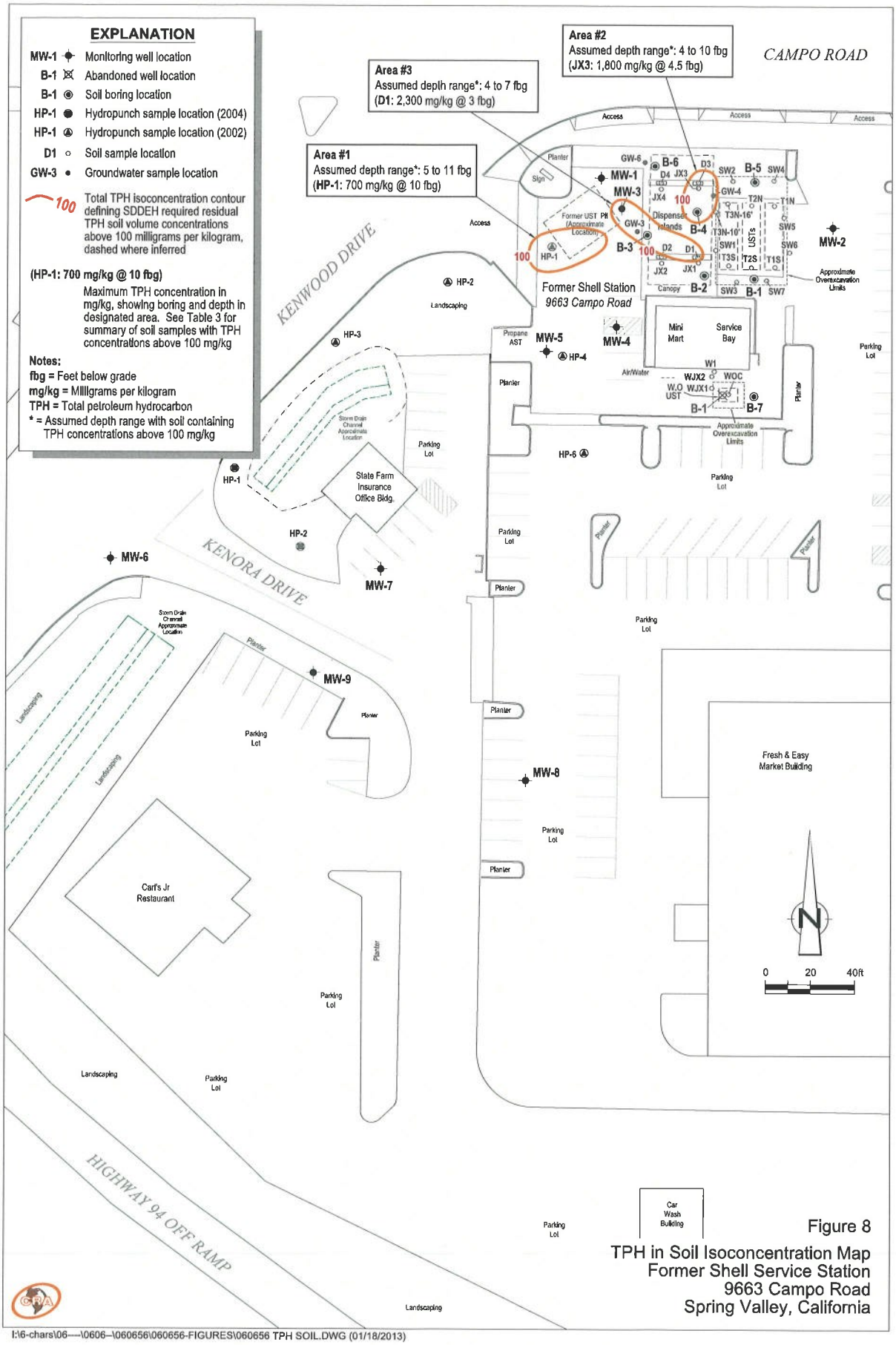

Figure 8

TPH in Soil Isoconcentration Map
Former Shell Service Station
9663 Campo Road
Spring Valley, California

I:\6-chars\06----\0606--\060656\060656-FIGURES\060656 TPH SOIL.DWG (01/18/2013)

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -

UNKNOWN

CREATED BY

UNKNOWN

III. SITE LOCATION

FACILITY NAME

L M S V OPERATIONS CENTER

FACILITY ADDRESS

3838 CONRAD DR

SPRING VALLEY, CA 919771422

SAN DIEGO COUNTY

FACILITY ID

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED

HOW DISCOVERED

DESCRIPTION

DATE STOPPED

STOP METHOD

DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER

H04394-001

REGIONAL BOARD CASE NUMBER

9UT741

LOCAL AGENCY

UNKNOWN

REGIONAL BOARD

UNKNOWN

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE
12/6/1985

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -

UNKNOWN

CREATED BY

UNKNOWN

III. SITE LOCATION

FACILITY NAME
GAS DEPOT/QWIK KORNER

FACILITY ID

FACILITY ADDRESS
9663 CAMPO RD
SPRING VALLEY, CA 919771228
SAN DIEGO COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

GASOLINE

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED
12/6/1985

HOW DISCOVERED

DESCRIPTION

DATE STOPPED

STOP METHOD

DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE
Soil

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER
H03233-001

REGIONAL BOARD CASE NUMBER
9UT472

LOCAL AGENCY

CONTACT NAME	INITIALS	ORGANIZATION_NAME	EMAIL ADDRESS
KEVIN HEATON	KH	SAN DIEGO COUNTY LOP	kevin.heaton@sdcounty.ca.gov

ADDRESS
P.O. Box 129261
San Diego, CA 92112-9261

CONTACT DESCRIPTION
SAN DIEGO COUNTY LOP

PHONE TYPE	PHONE NUMBER	EXTENSION
Office	(858)-505-6878	

REGIONAL BOARD

UNKNOWN

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STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE
11/23/1999

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -

UNKNOWN

CREATED BY

UNKNOWN

III. SITE LOCATION

FACILITY NAME
GAS DEPOT/QWIK KORNER

FACILITY ID

FACILITY ADDRESS
9663 CAMPO RD
SPRING VALLEY, CA 919771228
SAN DIEGO COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

GASOLINE

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED	HOW DISCOVERED	DESCRIPTION
7/22/1999	UST System Modification	

DATE STOPPED	STOP METHOD	DESCRIPTION
12/21/1999	Close and Remove Tank	CLOSE AND REMOVE TANK

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE
U

CAUSE OF DISCHARGE
U

DISCHARGE DESCRIPTION
UNKNOWN

VIII. CASE TYPE

CASE TYPE
Aquifer used for drinking water supply

IX. REMEDIAL ACTION

REMEDIAL ACTION	BEGIN DATE	END DATE	DESCRIPTION
Excavation	12/15/1999	12/15/1999	

X. GENERAL COMMENTS

This site is currently an active gas station. The former release (H03323-001) was opened to investigate a release around the used oil Underground Storage Tanks (UST) pit in December 1985. A groundwater monitoring well (B1) indicated no impacts and the case was closed in June 1987.

This case (H03323-002) was opened in June 1998 due to hydrocarbon contaminated soils noted in a March 1999 Phase II Site Assessment Report. In December 1999, all four USTs, piping and dispensers were removed and replaced with three gasoline tanks (no new used oil tank was installed). Approximately 880 cubic yards of soil was disposed of offsite. Other than excavation of soil during the December 1999 tank removal, no other form of remediation has been performed on site.

Between 2000 and 2013 a total of 10 soil borings, 7 hydropunch borings and 9 groundwater monitoring wells were drilled / installed to investigate both groundwater and soil impacts.

Soil impacts were limited to the immediate area around the former underground storage tank location and the fuel dispenser island. There is an

estimated 234 cubic yards of impacted soils (above 100 mg/kg) remaining on site. The location of the residual soil impacts is depicted on Figure 8 which is from the August 2013 Corrective Action Plan (CAP).

Groundwater flow beneath the site is towards the southwest, paralleling Kenwood Drive. Groundwater beneath the site is approximately 5.6 to 6.0 feet below grade whereas off site south of Kenora Drive groundwater is approximately 7.5 to 8.5 feet below grade. Figure 5 provides a groundwater contour map and the results from the most recent sampling event.

Residual groundwater impacts are limited to MTBE. Trend analysis of the groundwater monitoring data indicates that the dissolved plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation processes. It is estimated that the MTBE will drop below MTBEs primary and secondary maximum contaminant level (MCL) by 2034 and 2047, respectively.

On August 2013, a CAP, and on October 2013, a CAP Addendum were submitted for natural attenuation and were approved by DEH.

The consultant proposed natural attenuation because:

- The plume is stable and shrinking.
- No Liquid Phase Hydrocarbons (LPH) have ever observed on the groundwater.
- There are no supply wells within 1/2 mile of the site.
- Utilities include a westward trending concrete lined channel (Spring Valley Creek) that is located about 40 feet west of the southwest corner of the site. The consultant claims that even though MtBE has been detected around the area of this channel, it is concrete-lined and the levels of MtBE are low and decreasing. Based on this, the creek will not be impacted by the MtBE.
- Sweetwater reservoir is about 2.75 miles south of the site and would not be impacted by the low residuals of MtBE in the groundwater, per the consultant. A site visit indicated that the bottom of this channel was 7 feet bgs with weep holes located one foot above the base (about 6 bgs). Since groundwater is at an average of 7.5 -8.5 feet bgs, and MW-6, on the opposite side of the channel, has trace levels of MtBE, the channel does not appear to be a pathway of MtBE migration, nor does it seem that MtBE-impacted water would seep into the channel.
- There are no health risks based on the absence of benzene or ethylbenzene in the groundwater.
- Benzene is currently below the MCL of 1 ug/l.
- Based on a degradation analysis, it is estimated that MtBE in groundwater will degrade to the primary MCL of 13 ug/l by 2034 and the secondary MtBE MCL of 5 ug/l would be reached by 2047.

DEH concurs with the consultant's conclusions and approves case closure.

Permit # DEH2015-LMWP-002277 was issued by DEH for destruction of the 9 wells associated with the site.

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER	REGIONAL BOARD CASE NUMBER
H03233-002	9UT4006

LOCAL AGENCY

CONTACT NAME	INITIALS	ORGANIZATION_NAME	EMAIL ADDRESS
EWAN MOFFAT	EM	SAN DIEGO COUNTY LOP	ewan.moffat@sdcounty.ca.gov

ADDRESS	CONTACT DESCRIPTION
P.O. Box 129261 San Diego, CA 92123-9261	SAN DIEGO COUNTY LOP

PHONE TYPE	PHONE NUMBER	EXTENSION
Office	(858)-505-6856	

REGIONAL BOARD

UNKNOWN

County of San Diego

ELIZABETH A. POZZEBON
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 505-6700 or (800) 253-9933 Fax: (858) 505-6786
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

DETERMINATION OF NO FURTHER ACTION

January 15, 2015

Ms. Deborah Pryor
Shell Oil Products US
20945 S. Wilmington Avenue
Carson, CA 90810

Clow Family Survivors Trust
P.O. Box 188
Rancho Santa Fe, CA 92067

Dear Responsible Parties:

UNAUTHORIZED RELEASE #H03233-002
FORMER SHELL SERVICE STATION
9663 CAMPO ROAD
SPRING VALLEY, CALIFORNIA

This letter is to inform you that the County of San Diego, Department of Environmental Health, Site Assessment and Mitigation Program, intends to make a determination that no further action is required for the above-referenced case. Please notify this agency of any input you may have on the proposed action within 30 days this letter.

If you have any questions about these proposed actions, please contact me at (858) 505-6798.

Sincerely,

JON SENAHA, Environmental Health Specialist
Site Assessment and Mitigation Program

cc: Nick Alvaro, Conestoga-Rovers & Associates

UST Case Closure Summary Form

Agency Information **Date: August 5, 2016**

Agency Name: County of San Diego, Department of Environmental Health	Address: 5500 Overland Avenue, Suite 110
City/State/Zip: San Diego, CA 92123	Phone: (858) 505-6856
Staff Person: Ewan Moffat	Title: Environmental Health Specialist II

Case Information:

Facility Name: Shell-Branded Service Station		
Facility Address: 9663 Campo Road, Spring Valley, CA 91977		
RB LUSTIS Case No: 9UT4006	Local Case No.: H03233-002	LOP Case No.: N/A
URF Filing Date:11/23/99	Sweeps No.: N/A	
Responsible Party(s):	Address:	Phone:
Ms. Deborah R. Pryor c/o Shell Oil Products US	20945 S. Wilmington Ave., Carson, CA 90810	(323) 291-9595
Clow Family Survivors Trust	P.O. Box 188 Rancho Santa Fe, CA 92067	

Tank Information

Tank No.	Size (gal)	Contents	Closed in-Place/ Removed/Active	Date
T001	10,000	Gasoline (Unleaded)	Removed	12/99
T002	10,000	Gasoline (Unleaded)	Removed	12/99
T003	10,000	Gasoline (Unleaded)	Removed	12/99
T004	550	Used Oil	Removed	12/99
T005	12,000	Gasoline (Unleaded)	Active	12/99
T006	12,000	Gasoline (Unleaded)	Active	12/99
T007	12,000	Gasoline (Unleaded)	Active	12/99

Conceptual Site Model: The GeoTracker CSM Report is attached.

Closure Criteria Met: The GeoTracker Low-Threat Case Closure Policy [LTCP] Checklist is attached.

Optional Site maps: Two figures are attached.

UST Case Closure Summary Form

Additional Information: Date: August 5, 2016 H03233-002

This site is currently an active gas station. The former release (H03323-001) was opened to investigate a release around the used oil Underground Storage Tanks (UST) pit in December 1985. A groundwater monitoring well (B1) indicated no impacts and the case was closed in June 1987.

This case (H03323-002) was opened in June 1998 due to hydrocarbon contaminated soils noted in a March 1999 Phase II Site Assessment Report. In December 1999, all four USTs, piping and dispensers were removed and replaced with three gasoline tanks (no new used oil tank was installed). Approximately 880 cubic yards of soil was disposed ofoffsite. Other than excavation of soil during the December 1999 tank removal, no other form of remediation has been performed on site.

Between 2000 and 2013 a total of 10 soil borings, 7 hydropunch borings and 9 groundwater monitoring wells were drilled / installed to investigate both groundwater and soil impacts.

Soil impacts were limited to the immediate area around the former underground storage tank location and the fuel dispenser island. There is an estimated 234 cubic yards of impacted soils (above 100 mg/kg) remaining on site. The location of the residual soil impacts is depicted on the attached Figure 8 which is from the August 2013 Corrective Action Plan (CAP).

Groundwater flow beneath the site is towards the southwest, paralleling Kenwood Drive. Groundwater beneath the site is approximately 5.6 to 6.0 feet below grade whereas off site south of Kenora Drive groundwater is approximately 7.5 to 8.5 feet below grade. The attached Figure 5 provides a groundwater contour map and the results from the most recent sampling event.

Residual groundwater impacts are limited to MTBE. Trend analysis of the groundwater monitoring data indicates that the dissolved plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation processes. It is estimated that the MTBE will drop below MTBEs primary and secondary maximum contaminant level (MCL) by 2034 and 2047, respectively.

Since this case pre-dates the GeoTracker upload requirements for soil and groundwater data, the following supplemental information to the SCM is provided. The following tables provide the maximum and residual concentrations of the contaminants of concern (COCs) historically reported at the site

Maximum Concentrations	LPH (feet)	TPH-g	TPH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA
Groundwater (ug/l)	0.0'	6,500	--	74	2.3	510	123	5,800	5,800
Soil (mg/kg)	N/A	2,300	<10	14	81	23	170	110	<1.3

Residual Concentrations	LPH (feet)	TPH-g	TPH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA
Groundwater (ug/l)	0.0'	70	--	<0.5	<0.5	<0.5	<1.0	73	<10
Soil (mg/kg)*	N/A	2,300	<10	14	81	23	170	110	<1.3

On August 2013, a CAP, and on October 2013, a CAP Addendum were submitted for natural attenuation and were approved by DEH.

The consultant proposed natural attenuation because:

- The plume is stable and shrinking.
- No Liquid Phase Hydrocarbons (LPH) have ever observed on the groundwater.
- There are no supply wells within 1/2 mile of the site.
- Utilities include a westward trending concrete lined channel (Spring Valley Creek) that is located about 40 feet west of the southwest corner of the site. The consultant claims that even though MtBE has been detected around the area of this channel, it is concrete-lined and the levels of MtBE are low and decreasing. Based on this, the creek will not be impacted by the MtBE.
- Sweetwater reservoir is about 2.75 miles south of the site and would not be impacted by the low residuals of MtBE in the groundwater, per the consultant. A site visit indicated that the bottom of this channel was 7 feet bgs with weep holes located one foot above the base (about 6' bgs). Since groundwater is at an average of 7.5 -8.5 feet bgs, and MW-6, on the opposite side of the channel, has trace levels of MtBE, the channel does not appear to be a pathway of MtBE migration, nor does it seem that MtBE-impacted water would seep into the channel.
- There are no health risks based on the absence of benzene or ethylbenzene in the groundwater.
- Benzene is currently below the MCL of 1 ug/l.
- Based on a degradation analysis, it is estimated that MtBE in groundwater will degrade to the primary MCL of 13 ug/l by 2034 and the secondary MtBE MCL of 5 ug/l would be reached by 2047.

DEH concurs with the consultant's conclusions and approves case closure.

Permit # DEH2015-LMWP-002277 was issued by DEH for destruction of the 9 wells associated with the site.

UST Case Closure Summary Form

Additional Information: **Date: August 5, 2016** **H03223-002**

Corrections to SCM

- The most recent concentrations in groundwater on the SCM report the word "Other" has been placed in the TPHg Xylenes column. The data uploaded was not in the correct format for the GeoTracker Report. The values should have been reported as follows.

Well#	Gasoline Range Organics (C4-C12) (ug/l)	Total Xylenes (ug/l)
MW-1	<50	<1
MW-2	<50	<1
MW-3	<50	<1
MW-4	<50	<1
MW-5	<50	<1
MW-6	<50	<1
MW-7	70	<1
MW-8	<50	<1
MW-9	57	<1

Local Agency Representative

Name: Kevin Heaton PG 4163, CHg 163	Title: Senior Hydrogeologist,
Signature:	Date: 8/9/2016

CSM Report Go

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GAS DEPOT/QWIK KORNER (T0607399215) - MAP THIS SITE

OPEN - VERIFICATION MONITORING

9663 CAMPO RD
SPRING VALLEY , CA 919771228
SAN DIEGO COUNTY

ACTIVITIES REPORT

PUBLIC WEBPAGE

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

CLEANUP OVERSIGHT AGENCIES

SAN DIEGO COUNTY LOP *(LEAD)* - *CASE #: H03233-002*
CASEWORKER: *EWAN MOFFAT* - ***SUPERVISOR:*** *COLLEEN HINES*
SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT4006*

THIS PROJECT WAS LAST MODIFIED BY ***EWAN MOFFAT*** ON 8/3/2016 6:10:32 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CSM REPORT - VIEW PUBLIC NOTICING VERSION OF THIS REPORT

UST CLEANUP FUND CLAIM INFORMATION (DATA PULLED FROM SCUFIIS)

CLAIM NO	PRIORITY	CLAIMANT	SITE ADDRESS	AMT REIMB TO DATE	AGE OF LOC	IMPACTED WELLS?	FIVE YEAR REVIEW INFORMATION				
							REVIEW NUM	REVIEWER	FUND RECOMMENDATION	TO OVERSIGHT DATE	TO CLAIMANT DATE

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
GAS DEPOT/QWIK KORNER (Global ID: T0607399215) 9663 CAMPO RD SPRING VALLEY, CA 919771228	Open - Verification Monitoring	5/5/2016	11/23/1999	17	SAN DIEGO COUNTY LOP *(LEAD)* - *CASE #: H03233-002* ***CASEWORKER:*** *EWAN MOFFAT* - ***SUPERVISOR:*** *COLLEEN HINES* SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT4006*

STAFF NOTES (INTERNAL)
<NO STAFF NOTES ENTERED>

SITE HISTORY

This site is currently an active gas station. The former release (H03323-001) was opened to investigate a release around the used oil Underground Storage Tanks (UST) pit in December 1985. A groundwater monitoring well (B1) indicated no impacts and the case was closed in June 1987.

This case (H03323-002) was opened in June 1998 due to hydrocarbon contaminated soils noted in a March 1999 Phase II Site Assessment Report. In December 1999, all four USTs, piping and dispensers were removed and replaced with three gasoline tanks (no new used oil tank was installed). Approximately 880 cubic yards of soil was disposed ofoffsite. Other than excavation of soil during the December 1999 tank removal, no other form of remediation has been performed on site.

Between 2000 and 2013 a total of 10 soil borings, 7 hydropunch borings and 9 groundwater monitoring wells were drilled / installed to investigate both groundwater and soil impacts.

Soil impacts were limited to the immediate area around the former underground storage tank location and the fuel dispenser island. There is an estimated 234 cubic yards of impacted soils (above 100 mg/kg) remaining on site. The location of the residual soil impacts is depicted on Figure 8 which is from the August 2013 Corrective Action Plan (CAP).

Groundwater flow beneath the site istowards the southwest, paralleling Kenwood Drive. Groundwater beneath the site is approximately 5.6 to 6.0 feet below grade whereas off site south of Kenora Drive groundwater is approximately 7.5 to 8.5 feet below grade. Figure 5 provides a groundwater contour map and the results from the most recent sampling event.

Residual groundwater impacts are limited to MTBE. Trend analysis of the groundwater monitoring data indicates that the dissolved plume is stable in aerial extent and the mass is decreasing with time due to natural attenuation processes. It is estimated that the MTBE will drop below MTBEs primary and secondary maximum contaminant level (MCL) by 2034 and 2047, respectively.

On August 2013, a CAP, and on October 2013, a CAP Addendum were submitted for natural attenuation and were approved by DEH.

The consultant proposed natural attenuation because:

- The plume is stable and shrinking.
- No Liquid Phase Hydrocarbons (LPH) have ever observed on the groundwater.
- There are no supply wells within 1/2 mile of the site.
- Utilities include a westward trending concrete lined channel (Spring Valley Creek) that is located about 40 feet west of the southwest corner of the site. The consultant claims that even though MtBE has been detected around the area of this channel, it is concrete-lined and the levels of MtBE are low and decreasing. Based on this, the creek will not be impacted by the MtBE.
- Sweetwater reservoir is about 2.75 miles south of the site and would not be impacted by the low residuals of MtBE in the groundwater, per the consultant. Asite visit indicated that the bottom of this channel was 7 feet bgs with weep holes located one foot above the base (about 6' bgs). Since groundwater is at an average of 7.5 -8.5 feet bgs, and MW-6, on the opposite side of the channel, has trace levels

of MtBE, the channel does not appear to be a pathway of MtBE migration, nor does it seem that MtBE-impacted water would seep into the channel.

- There are no health risks based on the absence of benzene or ethylbenzene in the groundwater.
- Benzene is currently below the MCL of 1 ug/l.
- Based on a degradation analysis, it is estimated that MtBE in groundwater will degrade to the primary MCL of 13 ug/l by 2034 and the secondary MtBE MCL of 5 ug/l would be reached by 2047.

DEH concurs with the consultant's conclusions and approves case closure.

Permit # DEH2015-LMWP-002277 was issued by DEH for destruction of the 9 wells associated with the site.

RESPONSIBLE PARTIES

NAME	ORGANIZATION	ADDRESS	CITY	EMAIL
CLOW FAMILY SURVIVORS TRUST	CLOW FAMILY SURVIVORS TRUST	P O BOX 188	Rancho Santa Fe	
DEBORAH PRYOR	SHELL OIL PRODUCTS	20945 WILMINGTON AVENUE	CARSON	deborah.pryor@shell.com

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	12/15/1999	12/15/1999	Soil	630 Tons	

RISK INFORMATION VIEW LTCP CHECKLIST VIEW PATH TO CLOSURE PLAN VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline	Commercial	GW - Agricultural Supply, GW - Industrial Service Water Supply (IND), GW - Municipal and Domestic Supply, SW - Industrial Service Supply, SW - Municipal and Domestic Supply, SW - Non-Contact Water Recreation, SW - Warm Freshwater Habitat, SW - Water Contact Recreation, SW - Wildlife Habitat		11/23/1999	Close and Remove Tank	0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
NO	NO	Helix Water District	8/2/2016	10/20/2015	8/29/2013		9/3/2013

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
5002614000		Sweetwater - Lower Sweetwater - La Nacion (909.12)

COUNTY
San Diego

PUBLIC WATER SYSTEM(S)

- **HELIX WATER DISTRICT** - 7811 UNIVERSITY AVE., LA MESA, CA 91941
- **METROPOLITAN WATER DIST. OF SO. CAL.** - P.O. BOX 54153, LOS ANGELES, CA 90054

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER - HIDE VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
HP-1	4/22/2004	<50 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	51 UG/L	<10 UG/L
HP-2	4/22/2004	<50 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	66 UG/L	<10 UG/L
HP-3	4/25/2002	<100 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	47 UG/L	11 UG/L
HP-4	4/24/2002	130 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	150 UG/L	<10 UG/L
HP-6	4/24/2002	<100 UG/L	<0.5 UG/L	<1 UG/L	<1 UG/L	OTHER	69 UG/L	12 UG/L
MW-03	4/8/2002	OTHER	0.77 UG/L	ND	3.2 UG/L	ND	15 UG/L	ND
MW-04	4/8/2002	OTHER	ND	ND	ND	ND	54 UG/L	ND
MW-05	4/8/2002	OTHER	ND	ND	ND	ND	110 UG/L	64 UG/L
MW-1	7/19/2013	OTHER	ND	ND	ND	ND	2.1 UG/L	ND
MW-2	7/19/2013	OTHER	ND	ND	ND	ND	4.8 UG/L	ND
MW-3	7/19/2013	OTHER	ND	ND	ND	ND	2.2 UG/L	ND
MW-4	7/19/2013	OTHER	ND	ND	ND	ND	2.7 UG/L	ND
MW-5	7/19/2013	OTHER	ND	ND	ND	ND	3.4 UG/L	ND
MW-6	7/19/2013	OTHER	ND	ND	ND	ND	5.4 UG/L	ND
MW-7	7/19/2013	OTHER	ND	ND	ND	ND	73 UG/L	ND
MW-8	7/19/2013	OTHER	ND	ND	ND	ND	0.63 UG/L	ND
MW-9	7/19/2013	OTHER	ND	ND	ND	ND	56 UG/L	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL - HIDE VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
HP-1 D10.0	4/25/2002	700 MG/KG	<130 UG/KG	<130 UG/KG	9200 UG/KG		<130 UG/KG	<1300 UG/KG
HP-1 D12.0	4/25/2002	<0.5 MG/KG	<5 UG/KG	<5 UG/KG	<5 UG/KG		<5 UG/KG	<50 UG/KG
HP-1 D15.0	4/25/2002	1.4 MG/KG	<5 UG/KG	<5 UG/KG	<5 UG/KG		22 UG/KG	<50 UG/KG
HP-1 D20.0	4/25/2002	<0.5 MG/KG	<5 UG/KG	<5 UG/KG	<5 UG/KG		6.3 UG/KG	<50 UG/KG
HP-1 D6.5	4/25/2002	130 MG/KG	5.1 UG/KG	<5 UG/KG	190 UG/KG		<5 UG/KG	<50 UG/KG

LTCP Checklist ▼ Go

GEOTRACKER HOME | MANAGE PROJECTS | REPORTS | SEARCH | LOGOUT

GAS DEPOT/QWIK KORNER (T0607399215) - MAP THIS SITE

OPEN - VERIFICATION MONITORING

9663 CAMPO RD
SPRING VALLEY , CA 919771228
SAN DIEGO COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT

PUBLIC WEBPAGE

CLEANUP OVERSIGHT AGENCIES
SAN DIEGO COUNTY LOP *(LEAD)* - *CASE #: H03233-002*
CASEWORKER: *EWAN MOFFAT* - ***SUPERVISOR:*** *COLLEEN HINES*
SAN DIEGO RWQCB (REGION 9) - *CASE #: 9UT4006*

THIS PROJECT WAS LAST MODIFIED BY ***EWAN MOFFAT*** ON 7/28/2016 7:12:52 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CLOSURE POLICY

THIS VERSION IS FINAL AS OF 6/17/2016 — *CHECKLIST INITIATED ON 3/9/2013* — CLOSURE POLICY HISTORY

General Criteria - *The site satisfies the policy general criteria* - CLEAR SECTION ANSWERS		**YES**
a. Is the unauthorized release located within the service area of a public water system? **Name of Water System :** Helix Water District		◉ YES ○ NO
b. The unauthorized release consists only of petroleum (info).		◉ YES ○ NO
c. The unauthorized ("primary") release from the UST system has been stopped.		◉ YES ○ NO
d. Free product has been removed to the maximum extent practicable (info).	◉ FP Not Encountered	○ YES ○ NO
e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info).		◉ YES ○ NO
f. Secondary source has been removed to the extent practicable (info).		◉ YES ○ NO
g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15.	○ Not Required	◉ YES ○ NO
h. Does a nuisance exist, as defined by Water Code section 13050.		○ YES ◉ NO
1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.* - CLEAR SECTION ANSWERS		**YES**
EXEMPTION - Soil Only Case (Release has not Affected Groundwater - Info)		○ YES ◉ NO
Does the site meet any of the Groundwater specific criteria scenarios?		◉ YES ○ NO
1.2 - The contaminant plume that exceeds water quality objectives is <250 feet in length. There is no free product. The nearest existing water supply well or surface water body is >1,000 feet from the defined plume boundary. The dissolved concentration of benzene is <3,000 µg/L. The dissolved concentration of MTBE is <1,000 µg/L.		◉ YES ○ NO
2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c* - CLEAR SECTION ANSWERS		**YES**
EXEMPTION - Active Commercial Petroleum Fueling Facility		◉ YES ○ NO
3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.* - CLEAR SECTION ANSWERS		**YES**
EXEMPTION - The upper 10 feet of soil is free of petroleum contamination		○ YES ◉ NO
Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios?		◉ YES ○ NO
3.1 - Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the following table (LINK) for the specified depth below ground surface.		◉ YES ○ NO
Additional Information		
This case should be kept OPEN in spite of meeting policy criteria.		○ YES ◉ NO
Has this LTCP Checklist been updated for FY 15/16?		◉ YES ○ NO

SPELL CHECK

Save Form as Partially Completed | Save Form as Complete

LOGGED IN AS EMOFFAT

CONTACT GEOTRACKER HELP

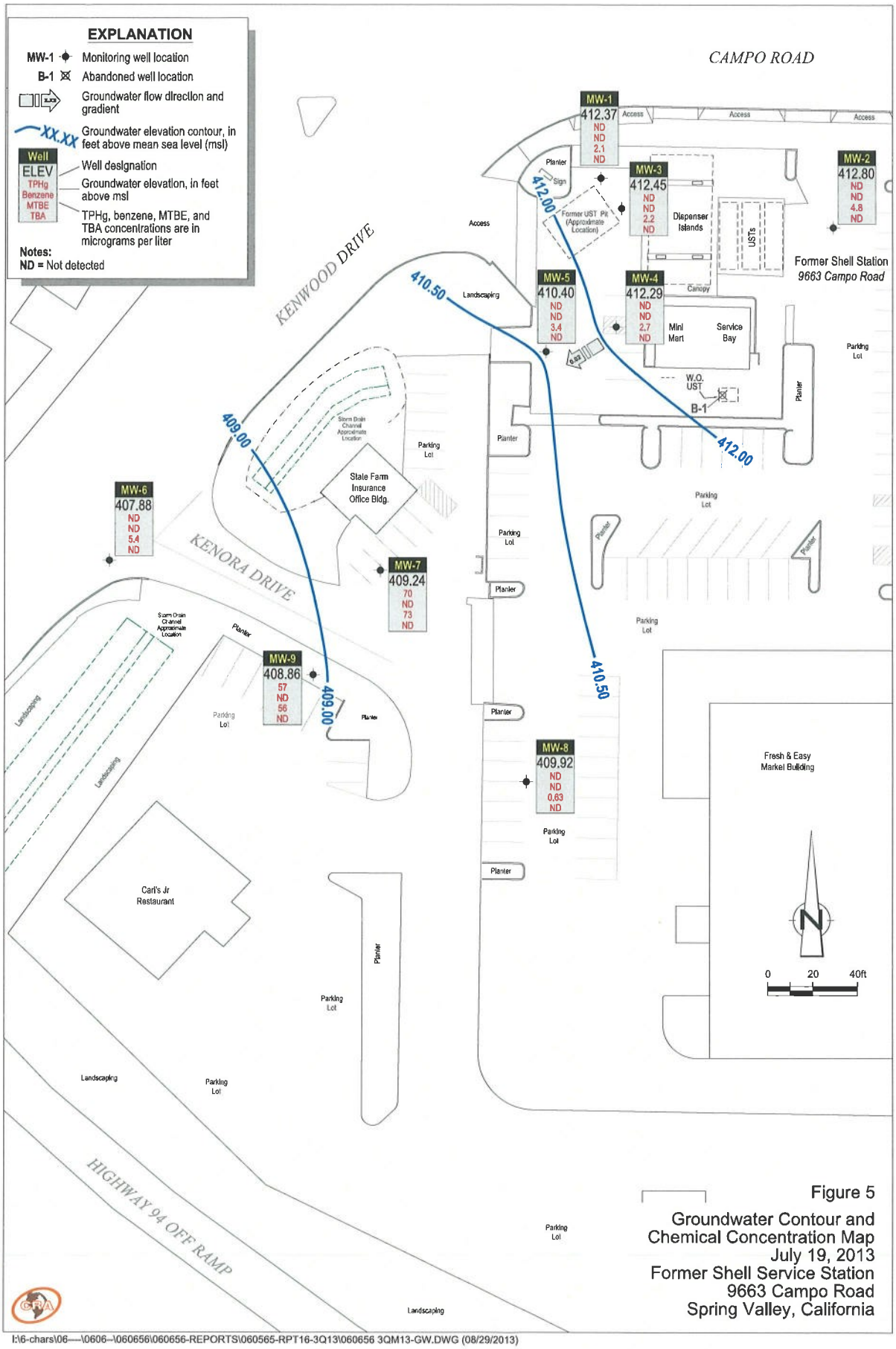

Figure 5

Groundwater Contour and Chemical Concentration Map
July 19, 2013
Former Shell Service Station
9663 Campo Road
Spring Valley, California

I:\6-chars\06---\0606--\060656\060656-REPORTS\060565-RPT16-3Q13\060656 3QM13-GW.DWG (08/29/2013)

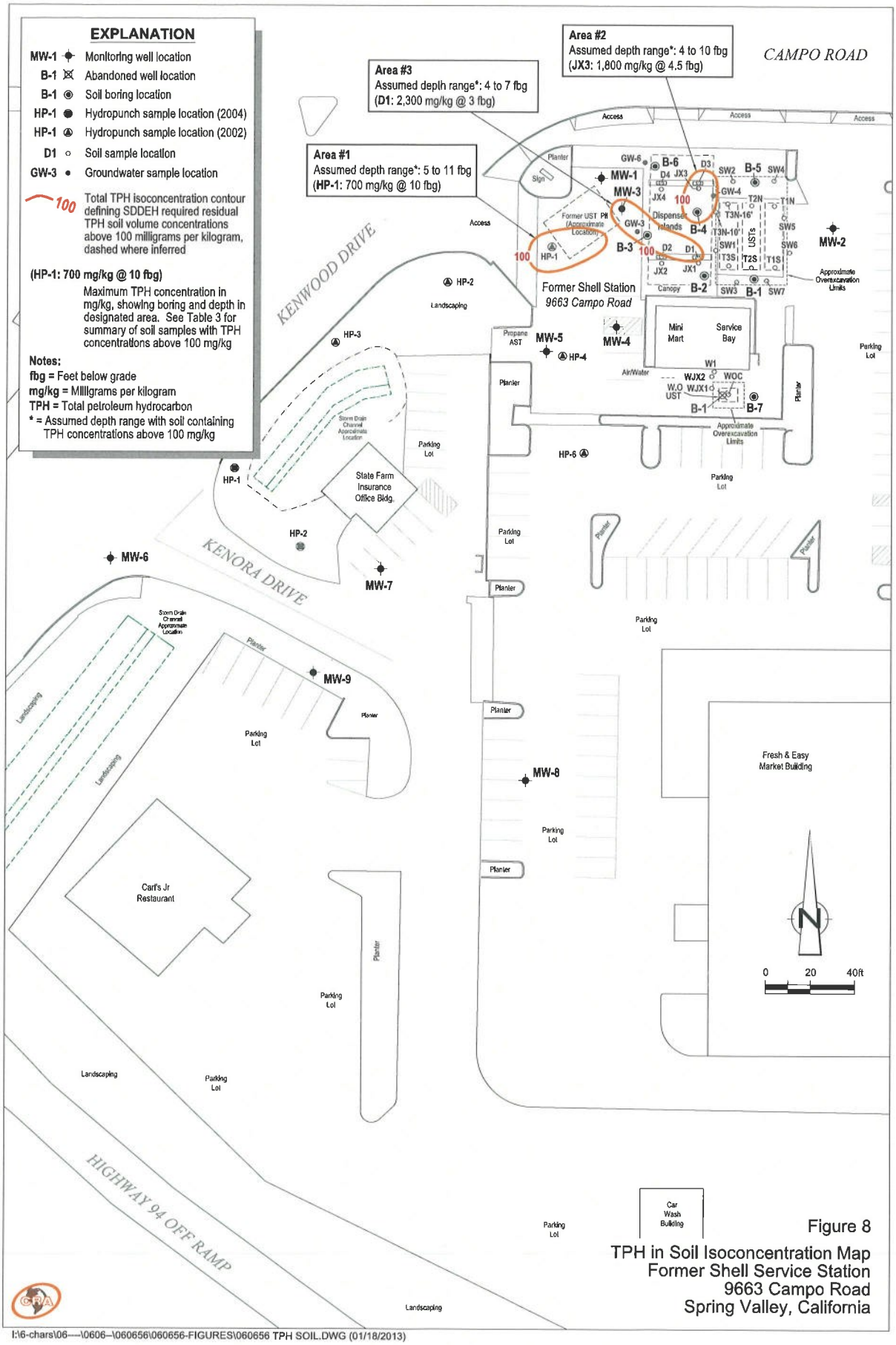

Figure 8

TPH in Soil Isoconcentration Map
Former Shell Service Station
9663 Campo Road
Spring Valley, California

I:\6-chars\06----\0606--\060656\060656-FIGURES\060656 TPH SOIL.DWG (01/18/2013)

APPENDIX C:
DOCUMENTATION

Casa Del Oro Library

9610 Campo Rd

Spring Valley, CA 91977

Inquiry Number: 6160544.8

August 18, 2020

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

08/18/20

Site Name:

Casa Del Oro Library
9610 Campo Rd
Spring Valley, CA 91977
EDR Inquiry # 6160544.8

Client Name:

Michael Baker International
14725 Alton Parkway
Irvine, CA 92618
Contact: Danielle Regimbal

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1995	1"=500'	Acquisition Date: October 02, 1995	USGS/DOQQ
1989	1"=500'	Flight Date: August 14, 1989	USDA
1985	1"=500'	Flight Date: July 29, 1985	USDA
1979	1"=500'	Flight Date: January 27, 1979	EDR Proprietary Landiscor
1970	1"=500'	Flight Date: March 06, 1970	EDR Proprietary Landiscor
1966	1"=500'	Flight Date: November 02, 1966	USGS
1964	1"=500'	Flight Date: April 07, 1964	USDA
1953	1"=500'	Flight Date: April 14, 1953	USDA
1949	1"=500'	Flight Date: February 16, 1949	USDA

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YEAR: 2016
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EDR


INQUIRY #: 6160544.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 6160544.8
YEAR: 2009
= 500'
N
EDR



INQUIRY #: 6160544.8

YEAR: 2005

= 500'

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EDR


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YEAR: 1995
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EDR



INQUIRY #: 6160544.8

YEAR: 1949

= 500'

N

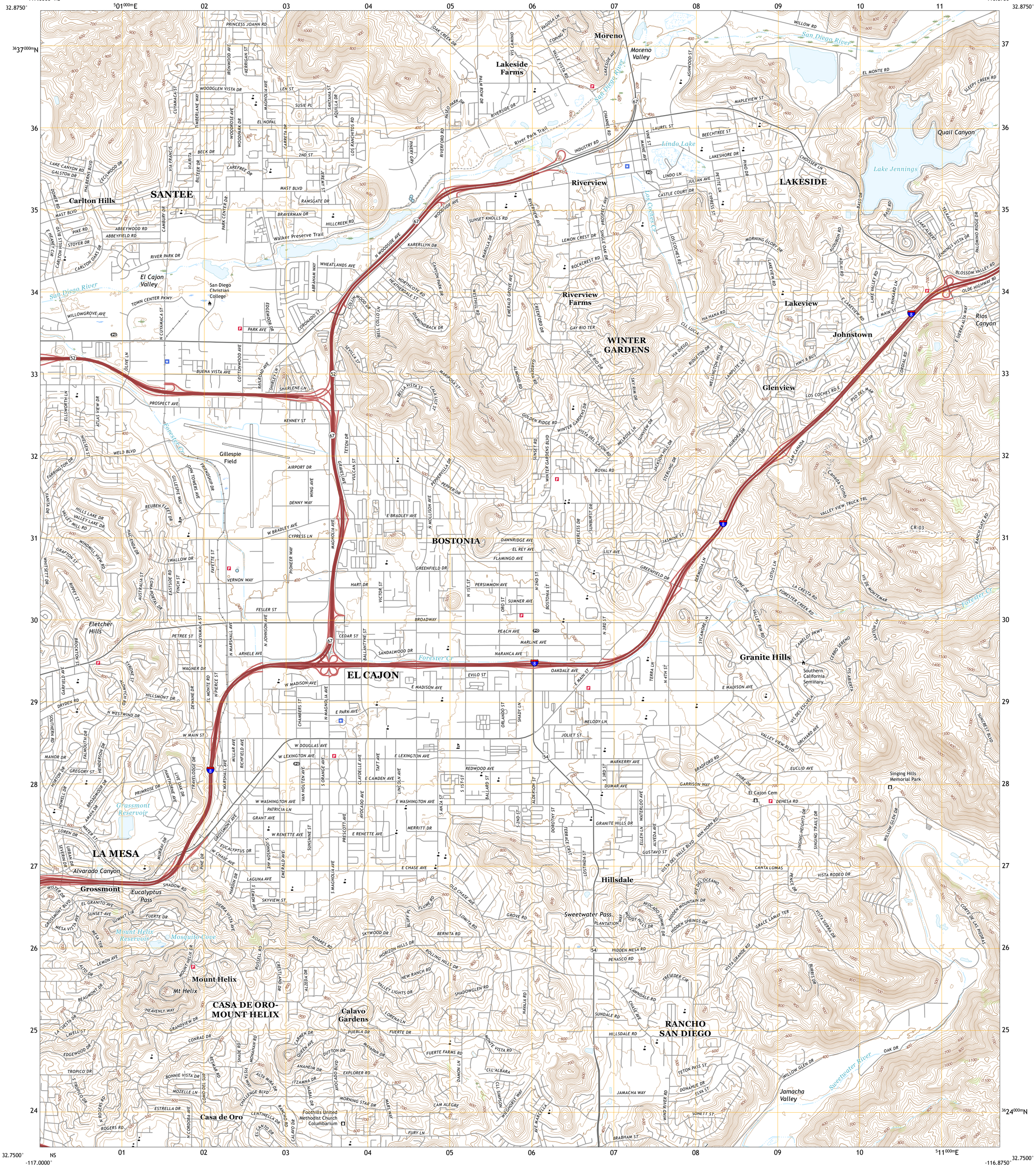
EDR

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

EL CAJON QUADRANGLE
CALIFORNIA - SAN DIEGO COUNTY
7.5-MINUTE SERIES

-117.0000° NS 32.8750° | 501000mE | -116.8750° 32.8750°



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 11S

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Imagery	NAIP,	April 2016 - October 2016
Roads	U.S. Census Bureau,	2016
Names	GNIS,	1981 - 2018
Hydrography	National Hydrography Dataset,	2001 - 2016
Contours	National Elevation Dataset,	2016 - 2018
Boundaries	Multiple sources; see metadata file	2016 - 2017
Public Land Survey System	BLM,	2018
Wetlands	FWS National Wetlands Inventory	1985 - 2005

MN GN 11°32′ 205 MILS 0°2′ 1 MILS
UTM GRID AND 2017 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
NS
Grid Zone Designation 11S

SCALE 1:24 000
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1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

CALIFORNIA
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 Poway
2 San Vicente Reservoir
3 El Cajon Mountain
4 La Mesa
5 Alpine
6 National City
7 Jamul Mountains
8 Dulzura

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

EL CAJON, CA
2018

NSN 7643016356246
NGA REF NO. USGSX24K137784

USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
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The National Map
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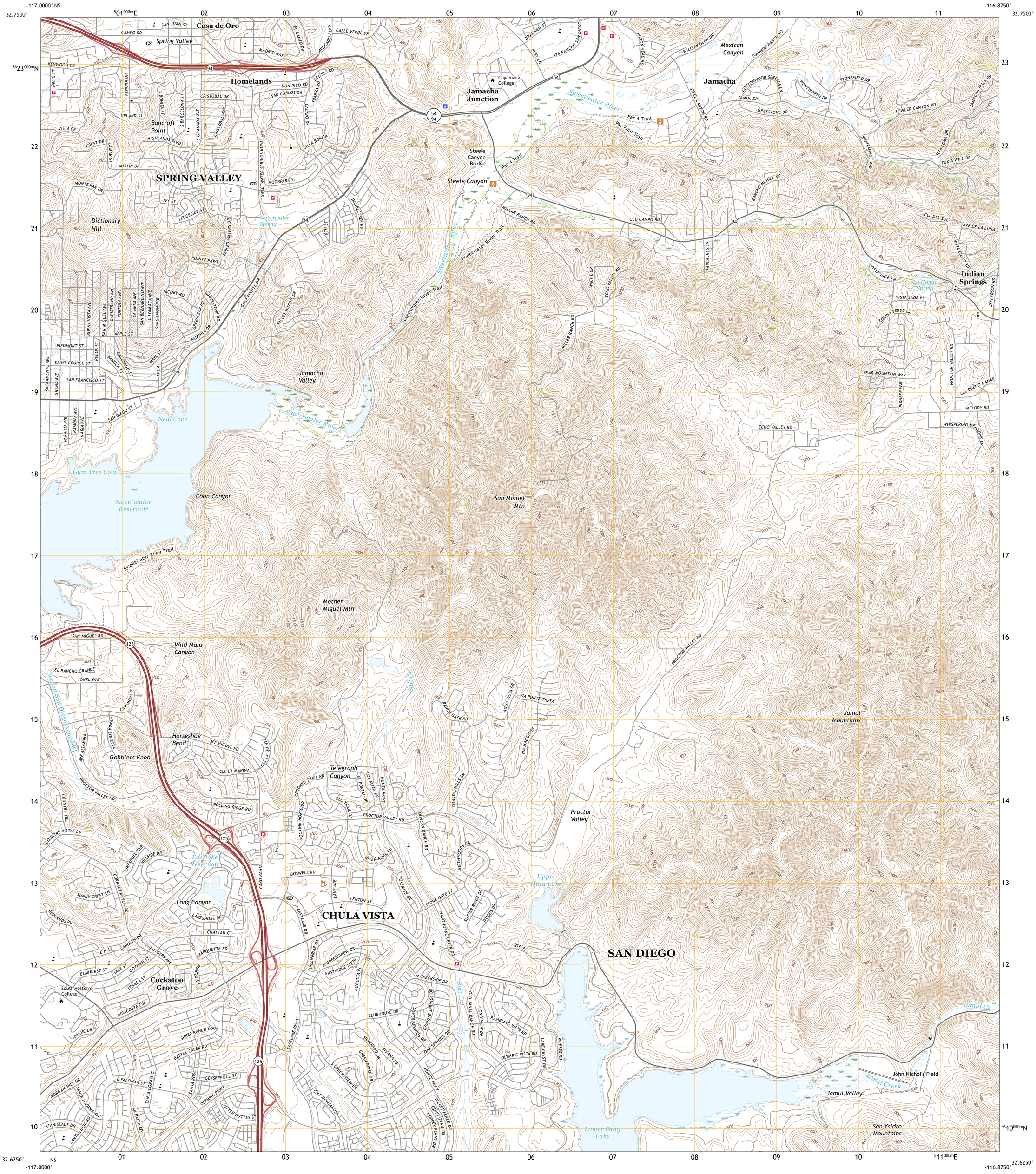
JAMUL MOUNTAINS QUADRANGLE
CALIFORNIA - SAN DIEGO COUNTY
7.5-MINUTE SERIES



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1 000-meter grid:Universal Transverse Mercator, Zone 11S

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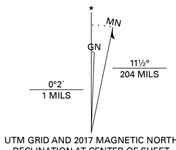
Imagery	NAIP,	April 2016 - October 2016
Roads	U.S. Census Bureau,	2016
Names	GNIS,	1981 - 2018
Hydrography	National Hydrography Dataset,	2001
Contours	National Elevation Dataset,	2016 - 2018
Boundaries	Multiple sources; see metadata file	2015
Public Land Survey System	BLM,	2018
Wetlands	FWS National Wetlands Inventory	1985 - 2005



UTM GRID AND 2017 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
NS
Grid Zone Designation
11S

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18



QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 La Mesa
2 El Cajon
3 Alpine
4 National City
5 Dulzura
6 Imperial Beach
7 Otay Mesa
8 Otay Mountain

ROAD CLASSIFICATION

Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

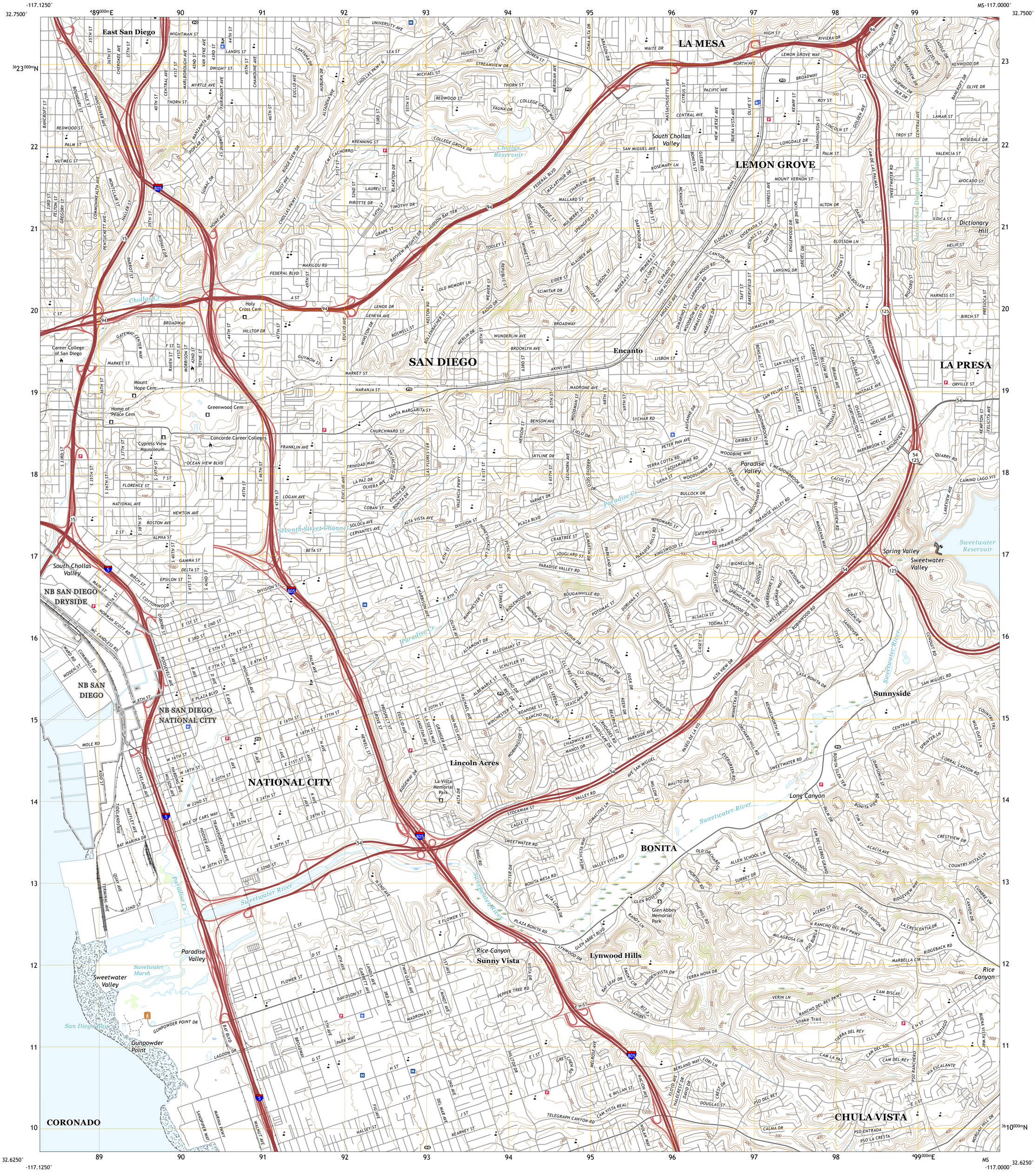
JAMUL MOUNTAINS, CA
2018

NSN 7643016356685
NGA REF NO. USGSX24K22390

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

NATIONAL CITY QUADRANGLE
CALIFORNIA - SAN DIEGO COUNTY
7.5-MINUTE SERIES



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World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 11S

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Contours	National Elevation Dataset,	2016
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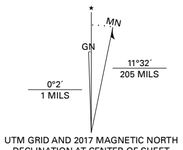
Public Land Survey System	BLM,	2018
Wetlands	FWS National Wetlands Inventory	1994 - 2005



UTM GRID AND 2017 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
MS
Grid Zone Designation
11S

SCALE 1:24 000

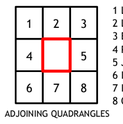
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18



QUADRANGLE LOCATION



ADJOINING QUADRANGLES

1 La Jolla
2 La Mesa
3 El Cajon
4 Point Loma
5 Jamul Mountains
6 Imperial Beach OE W
7 Imperial Beach
8 Otay Mesa

ROAD CLASSIFICATION

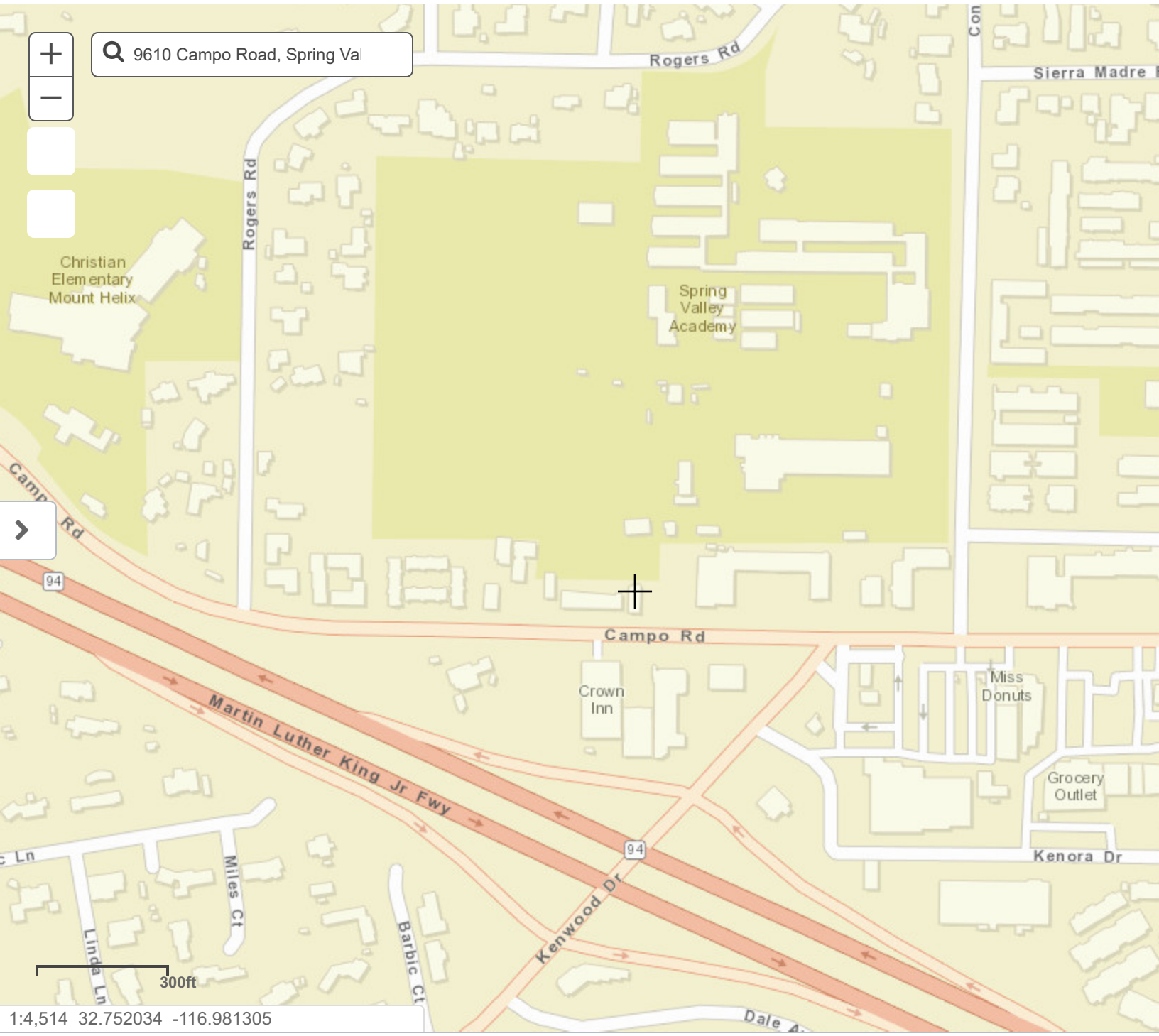
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

NATIONAL CITY, CA
2018

NSN 7643016357169
NGA REF NO. USGSX24K31388

Well Finder
CalGEM GIS

More Info | Help | ©



Casa Del Oro Library
9610 Campo Rd
Spring Valley, CA 91977

Inquiry Number: 6160544.5
August 24, 2020

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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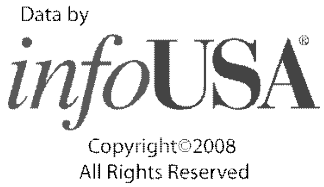

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☑	EDR Digital Archive
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1986	☑	☑	Haines Criss-Cross Directory
1982	☑	☑	Haines Criss-Cross Directory
1979	☑	☑	Haines Criss-Cross Directory
1975	☑	☑	Haines Criss-Cross Directory
1971	☑	☑	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

9610 Campo Rd
Spring Valley, CA 91977

Year	*CD Image*	*Source*
CAMPO RD		
2017	pg A2	EDR Digital Archive
2014	pg A7	EDR Digital Archive
2010	pg A11	EDR Digital Archive
2005	pg A15	EDR Digital Archive
2000	pg A21	EDR Digital Archive
1995	pg A26	EDR Digital Archive
1992	pg A30	EDR Digital Archive
1986	pg A33	Haines Criss-Cross Directory
1986	pg A34	Haines Criss-Cross Directory
1982	pg A36	Haines Criss-Cross Directory
1982	pg A37	Haines Criss-Cross Directory
1979	pg A39	Haines Criss-Cross Directory
1975	pg A42	Haines Criss-Cross Directory
1971	pg A46	Haines Criss-Cross Directory
1971	pg A47	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
CONRAD DR		
2017	pg. A4	EDR Digital Archive
2014	pg. A9	EDR Digital Archive
2010	pg. A13	EDR Digital Archive
2005	pg. A18	EDR Digital Archive
2000	pg. A23	EDR Digital Archive
1995	pg. A28	EDR Digital Archive
1992	pg. A32	EDR Digital Archive
1986	pg. A35	Haines Criss-Cross Directory
1982	pg. A38	Haines Criss-Cross Directory
1979	pg. A40	Haines Criss-Cross Directory
1979	pg. A41	Haines Criss-Cross Directory
1975	pg. A43	Haines Criss-Cross Directory
1975	pg. A44	Haines Criss-Cross Directory
1975	pg. A45	Haines Criss-Cross Directory
1971	pg. A48	Haines Criss-Cross Directory
1971	pg. A49	Haines Criss-Cross Directory

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2017

9520	ADAMS, MARSH
	AGUNOS, DON P
	BASNET, NIRAJ B
	BOGNOT, ROSALYNN
	BUGGS, CLAUDIA
	CORTEZ, JOANNA
	ENGLE, GARY P
	FAIRCHILD, FRANCES L
	HAMILTON, RITA
	HARRIS, CLAYTON
	MICHOT, WAYNE
	ROBERSHAW, CARLOS
	SINDAL, JOHN A
	SINGLETON, MICHELE
	SOLIS, NORMA L
9550	AGUILAR, JUDY B
	BIBO, ROBERT
	BRITTON, RON D
	BRUNNER, ROSEMARIE S
	CASA DE ORO SENIOR APARTMENTS
	CAZARES, RAY
	CLARK, GERRY M
	COFFELT, PATRICIA D
	DHANIFU, RONALD
	DIAZ, SHIRLEY L
	DUDLEY, BENJAMIN
	EPSTEIN, O
	FARBER, DIANE
	FLAKES, DORETHA M
	GARCIA, ALICIA E
	GARNICA, DOMINGO C
	HICKS, JENNIFER S
	JEFFERSON, BRENT R
	JOHNSON, LOUISE
	LUCIO, BAYARDO
	MAJKA, LINDA A
	MARICH, SOPHIA S
	PARKER, CHRISTINE A
	POWERS, SKYHORSE
	RAMIREZ, JUANA
	SERRANO, FRANK E
	SHIFAJI, GORGE
	SIMMONS, JOYCE Y
	SNYDER, SABINA
	THOMAS, MERRILY E
	TIBUS, DOROTHY M
	TODD, SUZANNE
9558	UKRANIAN ORTHODOX CHURCH
9600	BALBOA DRIVING SCHOOL
	GRASS DOCTOR LANDSCAPE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2017 (Cont'd)

9600	THUNDER STUDIOS
9603	CROWN INN
9610	PHO INTERNATIONAL
9620	YOUNG ACTORS THEATRE
9621	ACCUTECH LEGAL SUPPORT SERVICE
	GARDEN GETHESEMANE CHURCH
	WATSON & ASSOCIATES
9628	CASA DE ORO EYE CARE
	CENTER FOR POSITIVE CHANGES
	GOGUE INSURANCE AGENCY
	JOHN C FLEMING OD
	LIVELY CONSTRUCTION CO
	RICKS SEPTIC TANK SERVICE
	SOLA FITNESS STUDIO
	TD COMPANY
	YOUNG ACTORS THEATRE
9663	QWIK KORNER GAS STATION & MARKET
9665	FRESH & EASY NEIGHBORHOOD MARKET
9676	GRECIAN CAFE
	NAILS BY TWEE SALON
	ROUND TABLE PIZZA
	SOLA FITNESS STUDIO
	WILLIAMS CHIROPRACTIC
9679	UFC GYM
9683	FETIQS HAIR STUDIO
	RANAS COM
	WELLS FARGO ATM
9710	AUTOZONE
9716	BANK OF AMERICA ATM
9726	CHEF CHINA

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2017

3827	BARNES, NANCY J
	CHARLES, JAMES E
	DALLY, JAKOIA M
	DEBARBERA, LOUISA M
	DIAZ, JAVIER
	DURAZO, RAMON C
	EGYPT, FRANKLIN
	FRY, ANNE M
	GADDY, KIT C
	GARCIA, D
	GOLDEN, TERRANCE W
	GUTIERREZ, WENDY
	HARPER, MICHELLE
	HARRIS, SRVILLA
	HENDERSON, LIONEL A
	IRELAN, LOUISE B
	JENKINS, ISAAC
	JENKINS, TANYA M
	JOHN, HENDERSON
	KIPER, MICHAEL L
	LIPPERT, JAMES
	MARRUFO, MIGUEL A
	MITCHELL, MIESHA
	MONTGOMERY, LANCE A
	MOORE, MITCHELLE
	PASOS, MIKE G
	PHAN, NGAN N
	RANGUELOV, ROSTISLAV
	ROBERTS, KIRA
	SALAZAR, TATIANA
	SHILTS, STEVEN
	THOMPSON, JAMES M
	TOBIAS, JONATHEN H
	TURNER, BESSIE L
	WALKER, MELVA
	WALKER, NICOLE
	WIMBLEY, DIANE R
3849	BUMBAR, DANIEL J
	CHARGUALAF, FELICIA M
	CORTEZ, MARIA
	DARBEAU, CHARLENE C
	FOXWORTH, LEVONNE
	GLOVER, LAVOY
	HILTON, VICTOR
	JABRO, FAIQA
	JABRO, JALAL A
	MAEJIL, NAJAT
	MURRAY, WILLIAM F
	NAOUM, RAZOOK
	SINCLAIR, STACY R

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2017 (Cont'd)

3849	TIOFIL, ANTONIO
	TIOFIL, LUIS
	WATKINS, CHARLES E
	WEAVER, RONALD E
3903	ARMSTRONG, BRYAN M
	BLADH, ERIN M
	BLEVINS, GEONELLE
	BOONE, RONALD L
	BROWN, MONIQUE
	BRUMFIELD, TONIA
	CASA DE HELIX APTS
	CASTILLO, SHEYLA
	CHUKWUEKE, INNOCENT E
	COKENOUR, JESSICA
	CORELLA, MAXINE
	CURTIS, TERI A
	DEAM, CARY
	DIAZ, MARIA A
	DIETRICH, ROBERT E
	DUCKETT, DEMETRIUS
	DURAN, ZULMA
	ELLTON, JASON A
	ESTRADA, TAYLOR
	FERRE, RADFORD G
	FOOTE, INGRID K
	FUENTES, HENRY
	FUTCH, AIDA V
	GARBE, ADAM J
	GONZALES, AMANDA
	GREENBERG, DANIEL R
	GREY, VALERIE H
	GRONDAHL, VIVIANNA
	HOLM, DOROTHY M
	HOWARD, LIANE T
	JACKSON, ALWYN L
	JACKSON, TYLER
	JOHNSON, SAMUEL
	KEITA, LAMOU N
	KEMPTON, BRADEN
	KIM, YOUNG
	LOPEZ, FELIX T
	MCKEE, PATRICIA A
	MOUTON, NATALIA
	NAFTALOV, NAFTALI
	OBRIEN, JOHN J
	OROZCO, RALPH
	OWENS, SUSHEELA
	PARR, ANTHONY
	PETREE, WHITNEY D
	PILLET, PHILLIP

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2017 (Cont'd)

3903	PINTADO, TAMARA L
	POHM, JOHN F
	PYBUS, AMANDA E
	RIEDEMANN, WALTER J
	ROBERTS, AMANDA
	RODRIGUEZ, ELADIO G
	ROSATI, SHELLY M
	RUBENACKER, FRANCES
	SANCHEZ, SOELY
	SANTIAGO, ALICIA B
	SHACKELFORD, JO A
	SHOREY, ELIZABETH R
	SIGWARDT, SHANTEL
	SILVERS, JOLENE
	SMITH, DOROTHY J
	SMITH, VOND D
	TIDWELL, CELESTE
	VALLANCE, MARCIA E
	VARGAS, JANIS E
	WALKER, MARGUERITE A
	WILLIAMS, DOMINIQUE
	WILLIAMS, PATRICIA
	WRIGHT, GEORGETTE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2014

9520	AGUNOS, DON P
	BATES, PHILIP M
	BOSTER, C
	CORTEZ, JOANNA
	ENGLAND, MICHELLE
	FAIRCHILD, FRANCES L
	HAMILTON, IMARA G
	HAMILTON, RITA
	HARRIS, CLAYTON
	HELIX TENNIS APARTMENTS
	MICHAEL, GREG
	ROBERSHAW, YOLANDA
	SINDAL, JOHN A
	SOLIS, NORMA L
9550	AGUILAR, JUDY B
	ARIAS, MARIA E
	BARRAGAN, JOSE C
	BISHOP, MICHAEL W
	BOHREN, MICHEAL A
	BRUNNER, ROSEMARIE S
	CALVILLO, LUCY
	CASA DE ORO SENIOR APARTMENTS
	CLARK, GERRY M
	COFFELT, PATRICIA D
	CRUZ, FRANCISCO
	DELEON, JOSEFINA C
	DUDLEY, BENJAMIN
	EPSTEIN, O
	FLAKES, DORETHA M
	GARCIA, ALICIA E
	KEENE, MICHAEL
	KRESS, BILL J
	LARA, JUAN V
	LUCIO, BAYARDO
	MARICH, SOPHIA S
	PARKER, CHRISTINE A
	POWERS, SKYHORSE
	RIVERA, JOSE
	RODOLFO, CATALAN
	ROOKS, JOY M
	SHIFAJI, GORGE
	TIBUS, DOROTHY M
	TODD, SUZANNE
9600	GRASS DOCTOR LANDSCAPE
	THUNDER STUDIOS
9603	CROWN INN
9620	YOUNG ACTORS THEATRE
9621	ALWA ALLYN DR & ASSOCIATES
	GARDEN GETHESEMANE CHURCH
	KONG SUBMISSION ACADEMY

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2014 (Cont'd)

9621	LUGAR DE ENCUENTRO
	WATSON & ASSOCIATES
9628	BRANCH INC
	CASA DE ORO EYE CARE
	CENTER FOR POSITIVE CHANGES
	FLEMING JOHN C OD
	GOGUE INSURANCE AGENCY
	LIVELY CONSTRUCTION CO
9663	QWIK KORNER GAS STATION & MARKET
9664	SILVAS MEXICAN FOOD
9665	FRESH & EASY NEIGHBORHOOD MARKET
9676	GRECIAN CAFE
	NAILS BY TWEE SALON
	ROUND TABLE PIZZA
	SOLA FITNESS STUDIO
	WILLIAMS CHIROPRACTIC
9679	PROFESSIONAL CONSULTING GROUP
9683	FETIQS HAIR STUDIO
	RANAS COM
9710	AUTOZONE
9716	STARBUCKS COFFEE
9718	EC WIRELESS
9724	PALOMAR CLEANERS INC
9726	CHEF CHINA

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2014

3827	ANDREA PRINTING SERVICES
	BARNES, NANCY J
	BARNETT, MARTIN D
	BEAULIEU, CHERYL
	BRAZLEY, LARRY S
	CLACK, PENNY
	COLEMAN, JOSHUA
	DEBARBERA, LOUISA M
	DIAZ, JAVIER
	EGYPT, FRANKLIN
	GADDY, KIT C
	GOLDEN, TERRANCE W
	GUTIERREZ, WENDY
	HARRIS, LATASHA A
	IRELAN, LOUISE B
	JENKINS, TANYA M
	KIPER, MICHAEL L
	MONTGOMERY, LANCE A
	PASOS, MIKE G
	PATTERSON, COURTNEY
	PAZ, SHALA
	ROSS, NICK
	SCOTT, LASHANDA
	SIERRA, NURIAH
	STEPHENSON, JEN
	STRATTON, SAMANTHA D
	TEAGUE, LL L
	VLASSICH, WINSTON
	WIMBLEY, MAX L
3849	DARBEAU, CHARLENE B
	FIGUEROA, DONNA
	FOXWORTH, LEVONNE
	GLOVER, LAVOY
	HILTON, RONNY L
	JABRO, FAIQA
	MAEJIL, NAJAT
	MARBINKORA, RAND
	MORRIS, BRIAN L
	NAOUM, SOUAD T
	PRAHL, MARY
	TUTHILL, WESLEY
	WATKINS, CHARLES E
	WEAVER, RONALD E
3900	SPRING VALLEY MIDDLE SCHOOL
3903	ABBUEG, KAREN
	ARMSTRONG, BRYAN M
	AWREY, PRISCILLA
	BERGER, RYLINN N
	BERRYHILL, MARGARET S
	BESSETTE, SHAUNA L

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2014 (Cont'd)

3903	BLADH, ERIN M
	BROWN, SCOTT
	CASTILLE, ANTHONY
	CASTLEBERRY, MALCOLM
	CHUKWUEKE, CHINYERE N
	CLARK, ARTESHA
	COTTON, SHAWNTEL R
	COUSSA, CHRISTOPHER
	CURTIS, SHAUNA
	DESLAURIERS, JANIS
	DIAZ, MARIA A
	DIETRICH, ROBERT E
	DURRANT, JERRY
	ELLTON, JASON A
	FIELDING, JOLENE R
	FOOTE, INGRID K
	GIBSON, JOB
	GIETZEN, JESSICA S
	GROTHAUS, JENNIFER J
	HOTUAREIDERMANN, MARY
	JARDIM, FRANCISCO S
	KNEELAND, KELLI
	LLANOS, CHRISTOPHER
	LOWMAN, DOROTHEA A
	MARTIN, NANETTE S
	MCCLINTIC, CHARLES E
	MCNULTY, VICTORIA G
	MIRKOV, AMANDA
	MULLEN, KENNETH L
	MWANGI, JOYCE N
	NAVEDO, MATTHEW A
	NORSTROM, CHEYENNE K
	ORTIZ, TRACY
	PETROV, SERGEY
	RAUSCHER, NICHOLE
	REMBERT, JOHNNIE
	REYES, MIGUEL L
	RIOS, ALEXIS M
	RODRIGUEZ, ADOLFO
	RYAN, DOROTHY A
	SANCHEZ, SOELY
	SCOTT, DANA L
	SHACKELFORD, JAIME
	SMITH, JOHN A
	STEINREICH, GEOFFREY A
	TECHAIRA, PATRICIA A
	TRAVIS, TRACIE L
	TREVINO, JONATHAN
	WRIGHT, GEORGETTE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2010

9520	BOGNOT, ROSALYNN
	CROSS, HUNTER
	DELEON, ROSAURO C
	FAIRCHILD, FRANCES L
	HAMILTON, IMARA
	HARRIS, CLAYTON
	HELIX TENNIS APARTMENTS
	KHAIR, ABDUL S
	PEASON, ADAM
	PRICE, PEGGI
	SIMONS, DAVID L
	SVALSTAD, RONALD L
9545	ASTIZ TENNIS RANCH
9550	ANDERSON, SANDRA
	ARIAS, MARIA E
	ASKEW, NOEL L
	BEAVER, THOMAS C
	BRUNNER, ROSEMARIE S
	CASA DE ORO SENIOR APARTMENTS
	CATALAN, RODOLFO
	CRUZ, FRANCISCO
	DIAZ, SHIRLEY L
	DUBOURG, ANGELE V
	EARP, NANCY
	FLAKES, DORETHA M
	GERALDINE, CLARK
	HEGEDUS, ROZALIA
	IRELAND, LEFAYE J
	JEFFERSON, MARCELINE
	MANN, PAUL
	OWINGS, PRISCILLA
	PARRA, LINDA
	PENA, FRANCES
	POWERS, SKYHORSE
	RIVERA, JOSE
	RODELO, SAUL
	ROOKS, JOYCE M
	RUZEK, EDDIE
	SHIFAJI, GORGE
	TEJADA, DANIEL P
9558	UKRAINIAN ORTHODOX CHURCH
9600	GRASS DOCTOR LANDSCAPE INC
9603	CROWN INN
9617	APOSTOLIC ASSEMBLY
9620	YOUNG ACTORS THEATRE
9621	ALLYN ALWA & ASSOC
	BALLOONIT
	DENISE HAIR TRIMMERS
	HINE HARRY
	TOLBERT FINANCIAL VENTURES

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2010 (Cont'd)

9621	WATSON & ASSOC
	WORLD CYCLES
9626	WORDS OF LIFE CHRISTIAN
9628	BALLOONATICS
	BOROWSKI
	BOROWSKI, KATARZYNA
	BURGE, PHILLIP
	C FOX FINANCIAL SVC
	CASA DE ORO EYECARE OPTOMETRY
	CLOISTERS OF VALLEY LLC
	ERIC SVALSTAD DESIGN DRAFTING
	HAIR TECHNIQUES
	LIVELY CONSTRUCTION
	NARCISO P EUGENIO REAL ESTATE
	SVALSTAD L RONALD
9631	FEATHERINGILL MORTUARY
9663	QWIK KORNER GAS STATION & MKT
9664	SILVAS MEXICAN FOOD
9665	FRESH & EASY NEIGHBORHOOD MKT
9676	CREGG CHIROPRACTIC CTR
	GRECIAN CAFE
	ROUND TABLE PIZZA
9679	PCG UTILITY CONSULTANTS INC
	TECHNICAL PROFESSIONAL CAREER
9683	FETIQS HAIR STUDIO
	RANASCOM
9716	STARBUCKS
9718	HELP U SELL PACIFIC REALTY CA
9722	VELOCITY AUDIO VISUAL SVC
9724	PALOMAR CLEANERS INC
	SHAKERS FROZEN YOGURT
9726	CHEF CHINA

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2010

3827	ALVAREZ, ANGEL
	CAMPBELL, VICKIE L
	CLACK, PENNY
	DE, BARBERA L
	DEBARBERA, LOUISA M
	ERWIN, TATJANA
	FLETCHER, DOROTHY
	FRY, CHERIE
	HAWKINS, LYNELL
	KIPER, MICHAEL L
	LOTEMPIO, JESSE
	MCGRATH, JAMES
	MITNICK, MELINDA N
	MONTGOMERY, LANCE A
	MURPHY, KELLEEN
	NELSON, NIM
	REED, TIMOTHY
	ROSS, NICK
	ROVID, JENNIFER I
	SHELBURN, DINISHA
	THOMAS, SHANNON
	ULLOA, SIRENA
	WOODAMAN, BOB I
3842	RODGERS, BARBARA D
3849	BADAWI, LUMA
	CARTWRIGHT, DONNA J
	DAINES, DENISE A
	DARBEAU, CHARLENE B
	DUBOIS, ALEX
	FARRELL, DAVID L
	GARCIA, ANNA D
	GROCE, DECOLA Y
	JABRO, FAIQA
	MAEJIL, NAJAT
	MORRIS, BRIAN L
	SINCLAIR, STACY R
	WATKINS, CHARLES E
	WEAVER, RONALD E
3900	SPRING VALLEY MIDDLE SCHOOL
3903	ACOSTA, MANUEL
	ALVAREZ, MACLOVIA
	ANDZANS, MICHAEL B
	AWREY, PRISCILLA
	BEARD, TAMARA M
	BENINTENDE, MARTIN A
	BERRYHILL, MARGARET S
	BOONE, RONALD L
	BROWN, JEFFREY S
	CASA DE HELIX APARTMENTS
	CASTILLO, MARTHA

CONRAD DR 2010 (Cont'd)

3903	CIUFI, SHARLIE L
	CROUCH, NORMA A
	DIAZ, IVONNE
	DIETRICH, ROBERT E
	DURRANT, TREVOR
	FOOTE, INGRID K
	FOSTER, ADELLA
	FUENTES, MICHELLE J
	GAUDIN, TONI
	GENTRY, HAROLD J
	GILL, NICHELLE
	GREGERSON, MARC S
	GREY, VALERIE
	HARROD, GREG
	HODGES, KAREN L
	HORTUA, LUZ M
	LANGILL, KIERSTEN J
	LE, THANH A
	LEWIS, GARLY
	MAMALIAS, RANDALL A
	MARTIN, NANETTE
	MARTINEZ, ROBERTO
	MCCLAIN, ERIC
	MILLER, LEVI
	NEAL, JENNIFER
	PALMER, HANNA M
	PETREE, WHITNEY
	PETROV, GALINA
	RAMIREZ, SERGIO R
	REMBERT, JOHNNIE
	ROBSON, JOSHUA
	RODNEY, CARLSON R
	RUSHING, MONICA A
	SANTIAGO, ALICIA
	SCHROCK, BYRD R
	SINDAL, JOHN A
	SMALL, SHARON
	WILLIAMS, PRECIOUS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2005

9520	AGUNOS, EDWARD E
	AHERN, CAMERON
	BERRY, JAMES M
	CASTILLO, NICK M
	COLLINS, ZACHARY
	DAVIDSON, SHAWN
	EVANS, GREG M
	FAIRCHILD, FRANCES L
	GIBSON, PAIGE W
	HARRIS, CLAYTON
	HELIX TENNIS APARTMENTS
	KENNEDY, NICK
	KIRBY, KAILY
	MEDINA, ANA
	NELON, JAMES M
	ST NICKS POOL & SPA REPAIR
	ST NICKS POOL AND SPA REPAIR
	SUVAIZDIS, GINTARAS
	SVALSTAD, RONALD L
	WEHR, MARILYN V
	WOLFORD, ANGELA M
	WOODWORTH, GREGORY
9545	CHUCK CANTWELL GENERAL CONTR
	HELIX SOUTH TENNIS CLUB
	ZIEGENFUSS TENNIS SHOP
9550	ANDERSON, S
	ASKEW, NOEL L
	BLANCHARD, KATHY
	BLOOD, T S
	CASA DE ORO SENIOR APARTMENTS
	CHAVEZ, MANUEL V
	COOPER, MARY A
	DARPEL, ROBERT L
	DUBOURG, ANGELE V
	ENCISO, MARIA
	HUTCHINSON, DEBRA L
	PARRA, LINDA
	PENA, FRANCES
	POWERS, HENRY P
	PURCELL, LORA
	SANDERS, NATALIE M
	SANTAANA, C
	SERRANO, FRANK
	SHIFAJI, GORGE
	SHIN, KUM S
	TO, WAYNE
	VENCEL, GEORGE
9558	SAINT MARY PROTECTRESS ORTH CH
	UKRAINIAN ORTHODOX CHURCH SAINT MARY
9600	HOME TRUST MORTGAGE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2005 (Cont'd)

9603	THE CROWN INN & SUITES
9621	CALIFORNIA IGCS
	CHRISTIAN SPORTS PRODUCTION
	DION
	GRACE CHURCH
	HAIR TRIMMERS
	HAIR TRIMMERS HAIR BY DENISE
	HELEN AT HAIR TRIMMERS
	LAGUNA MOUNTAIN ENVIRONMENTAL INC
	MICHELLE, LUCIOUS
	MILLER, NIJA
	NANOS JOHN
	RC BIOLOGICAL CONSULTING INC
	THE HOTT SPOT
	TOLBERT FINANCIAL VENTURES
	WATSON & ASSOCIATES
9628	CASA DE ORO EYECARE
	ERIC SVALSTAD DESIGN DRAFTING
	EUGENIO NARCISO P REAL ESTATE
	EUROPEAN COAT OF ARMS
	FLEMING JOHN C OD
	FOX C FINANCIAL SERVICES
	HAIR TECHNIQUES
	HELIX DE ORO A CA PARTNERSHIP
	IRB, A
	MANAGEMENT SKILLS INSTITUTE
	MWF PROPERTY INVESTORS
	REAL BEAUTY INC
	SANDY, BEV
	WORDS OF LIFE CHRISTIAN MINISTRIES
9664	ANGEL MEXICAN FOOD
	ANGELS MEXICAN FOOD
9676	CRE, JAMES B
	CREGG CHIROPRACTIC OFFICE
	CREGG JAMES B DC
	EXCELLENCE IN ACTION
	GRECIAN CAFE
	NAILS BY TWEE
	ROUND TABLE PIZZA
	STEWART MANAGEMENT
9683	CRANE, R
	FETIQS HAIR STUDIO
	FETIQS HAIR STUDIO CHERI LEWIS
	JENNIFER, FETIQ
	RANAS COM
	THAI MEE CHOKE RESTAURANT II
9710	BLOCKBUSTER ENTERTAINMENT CORP
9718	SAN DIEGO REALTY & FINANCIAL
	SAN DIEGO REALTY FINANCIAL GROUP
	SD REALTY & FINANCIAL

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2005 (Cont'd)

9722 KIDS EVENTZ ENTERTAINMENT
KING OF JUMPS / SAN DIEGO JUMP CO
9724 SHAKERS FROZEN YOGURT
9726 CHEF CHINA
FORTUNE GARDEN

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2005

3817	RODRIGUEZ, SANDY
3827	ALVAREZ, GUADALUPE
	BIXLER, JENNFIER
	CADENA, ESTHER
	CUBBERLEY, JAMES M
	ESJRAGHI, FAROKH
	GARMO, MARIA
	GERGLEY, MICHAEL
	GHANIM, AZIZ H
	HOLBROOK, MAUREEN B
	HUNTER, PATRICIA
	JOHNSON, DENISE M
	KIPER, MICHAEL L
	MITNICK, MELINDA N
	MONTGOMERY, LANCE A
	MONTOYA, EVERARDO
	MORRIS, KYLE
	MUHI, AMIN
	ROBERTS, WINONA
	ROVID, JENNIFER I
	SANCHEZ, PRISCILLA
	SANNICOLAS, BRENDA
	SCOTT, VERLA
	SNYDER, JOHN A
	STOREY, EUGENE
	THOMPSON, ULONDA
	TULLY, AMBER
	VALDES, MARIA
	WOODAMAN, BOB A
3838	LAMESA SPRING VALLEY SCHOOL DISTRICT
3849	BLEIGH, GREG C
	CARTWRIGHT, DONNA
	DAINES, DENISE A
	DARBEAU, CHARLENE B
	DESIATKIN, ALEXANDER
	DOBRAYA, TATIANA
	HELIX SOUTH APARTMENTS
	HOLMES, PATTI A
	JABRO, FAIQA
	NUDE WIRELESS
	PEREZ, HONORIA T
	SON, RI S
	TATIANA, DOBRAYA
	WEAVER, RONALD E
3900	SPRING VALLEY YOUTH & FAMILY
3903	ARIAS, ANSELMO
	BARRAGAN, MIKE
	BARRON, YESENIA
	BARTOS, ERIC
	BELL, SANDRA

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2005 (Cont'd)

3903	BOONE, RONALD L
	BOWEN, RONALD
	BRADSHAW, MICHAEL G
	BRAMLAGE, MICHAEL G
	BROWN, HAROLD S
	BURSON, LONNIE
	CARROLL, SCOTT
	CASA DE HELIX
	CEJA, LINDA S
	CIUFI, KATHY L
	COOK, DEBORAH N
	COUCH, SARA M
	CREATIVE IMPACTS
	DAMBROSE, LANCE D
	DANBURY, JOHN D
	DARAGOVA, SELENA
	DECKER, RAY A
	DEMENT, SHARON L
	DOMKA, ERIN
	ELDERTON, LEE
	ESPINOZA, HECTOR C
	FAIRLEE, JIM
	FANCY, DAVID R
	FLYNN, WILLIAM
	FORE, DANIEL
	GAMBRELL, A D
	GORDON, CHERYL
	GRAY, DAVID A
	GREGERSON, MARC S
	HENDERSON, SARA
	HENNESSEY, JESSICA
	HOBSON, RICHARD
	HORN, DAVID L
	HORTUA, LUZ M
	JEDELE, AMY N
	KIMANI, CHARITY M
	LANGILL, KIERSTEN J
	LEBOEUF, CHRISTINA
	LOBATON, KRISTIN
	LUEVANO, MARIANA
	MCKEE, RK
	MELNIKE, ED G
	MENYON, ANDREW
	MISHKIN, EBEN
	MONTALVO, CARLOS S
	MUNSON, JOHN
	MUREKATETE, MARIE C
	OKONEK, JAY
	OSMIRANDA, MANUEL A
	OTOOLE, MARY I

CONRAD DR 2005 (Cont'd)

3903	PARFET, STEPHANIE D
	PICKUP, GREG R
	PIEPKORN, LUCAS
	POTTER, KEN E
	ROBERTS, DEVD
	ROBSON, JOSHUA
	RUGIRA, PAUL
	SMITH, TIM W
	STEPHENS, K J
	STRAZA, GEORGE C
	TARBUTTON, SCOTT
	TAYAR, DAVID
	THOMAS, ROBERTA
	ULLOA, JONATHAN C
	VANDERWYST, MARGARET
	VONDETTE, CHAD M
	WALSH, DENNIS
	WHARTON, JEFF
	WRIGHT, LISKU L
3909	LUJAN, LUIS V

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 2000

9520	BERRY, JAMES M
	BLAIR, MARK
	BUNCH, JEREMY C
	CONEY, MAXINE
	GARA, J F
	GILLIS, CAIN
	HELIX TENNIS APARTMENTS
	HENNING, DONALD
	SANCHEZ, JOANNE
	WELLS, C
	WILLIAM, E
9545	HELIX SOUTH TENNIS CLUB
9550	CASA DEORO SENIOR APARTMENTS
	DUBOURG, ANGELE V
	GRAHAM, R
	LENYOUN, BULA M
	MILAZZO, PETER
	PENA, FRANCES
9558	UKRAINIAN ORTHODOX CHURCH ST MARYS
9600	VALLEY VINEYARD CHRISTIAN PRESCHOOL
	VINEYARD SATURDAY NIGHT
9603	CROWN INN AND SUITES
9610	BACK IN THE DAY FISH GROTTO
9621	ALWA ALLYN DR & ASSOCIATES
	COLLECTION CONNECTION
	DION
	GOODMAN GLORIA FULL CHARGE BOOKKEEPING INDIVIDUAL INCOME TA
	HAIR TRIMMERS
	HAIR TRIMMERS MICHELLE LUCIOUS
	HELEN AT HAIR TRIMMERS
	INDULGENCES
	MCGILL FRANKIE HAIR STYLIST
	MICHELLE LUCIOUS
	PRISON FELLOWSHIP
	SAN DIEGO MERCHANTS ASSOCIATION
9628	BIOMDR INCORPORATED
	BRIGHTON HEALTH ALLIANCE
	CASA DEORO EYE CARE OPTOMETRY
	FLEMING JOHN C OD
	LAKESIDE EYECARE OPTOMETRY
	LIVELY CONSTRUCTION
	LOVE RUSSELL E DR OPTMTRST
	MASCARI FRANK S INCOME TAX SERVICE
	OVIVIANS HAIR SALOON
	POWERS MICHAEL J DDS INCORPORATED
	SAN DIEGO COUNTY OF LIBRARY
	SONG JIN S DDS
	SVALSTAD RONALD L ATTORNEY
	WORDS OF LIFE CHRISTIAN MINISTRIES
9631	FAMILY TRADITION BARBER & SALON

Target Street	Cross Street	Source
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CAMPO RD 2000 (Cont'd)

9631	FAMILY TRADITION DEELEGANT
	MCCLELLAN LATISHA
	MOORE LAVETRA
	TOMMIE T HAIR STYLIST
9663	CASA DEORO SHELL
	GUS PERFORMANCE AUTOMOTIVE
	SHELL SERVICE STN DLRS
9664	NEW PEKING RESTAURANT
	TOP SIRLOIN RESTAURANT THE
9665	CALIFORNIA STATE OF MOTOR VEHICLES DEPARTMENT
9671	CHILDRENS HOSPITAL & HEALTH CENTER THRIFT HOUSE
	DESERET INDUSTRIES THRIFT STORE
9676	BABY BARN THE
	BASEBALL CARD HOUSE
	CREGG JAMES B DC
	GRECIAN CAFE
	RACE & STUFF RACING COLLECTABLES
	ROUND TABLE PIZZA
9679	CALIFORNIA AUTO LICENSING
9683	DOROTHY MARY
	EXPRESSIONS HAIR DESIGN STUDIO
	KATHY SPILLER'S HAIR STYLING
	LITTLE CAESARS PIZZA
	MITCHELL JESSICA
9710	BLOCKBUSTER VIDEO
9714	CASA DEORO MANUFACTURING JEWELERS
9716	DEANS 50 MINUTE PHOTOS
9724	BASIC-H DISTRIBUTOR SPRING VALLEY
9726	CHEF CHINA

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2000

3827	ASHBAUGH, M
	BADLISSI, FAYEZ
	BALL, L E
	BARTON, MICHAEL C
	BLANKS, DAVID C
	BRAUN, AARON R
	BUTZIER, SCOTT A
	CALLEROS, G
	DAINES, B
	ESHRAGHI, A
	FERRARO, MICHELL L
	GAGE, GEORGE P
	GALLEGOS, DEANNA L
	GHANIM, AZIZ H
	HARMSE, ELMER
	HELIX SQUARE APARTMENTS
	HOLM, MARK R
	LEBLANC, PAMELA S
	MADISON, CANDACE R
	MUHY, AMIN
	REBOUT, KIM M
	SADLO, E A
	SILVERS, WILLIAM A
	STOUT, LUCILLE F
	STRADER, JOEL
	TEAGUE, STRIDER
	WADLEY, JULIE A
	WELLS, JOHN E
3838	LAMESA SPG VALLEY SCHOOL DISTRICT OPERATION CENTER
	MORENO, FIDEL J
3849	BALDWIN, JESSE B
	BRODIE, SYLVIA J
	CRISTMAN, D M
	DESIATKIN, ELENA
	GREATER CALIFORNIA HOME CARE
	GRUNICHEVA, S V
	HELIX SOUTH APARTMENTS
	KATTE, JOHN F
	LIZAMA, DOROTHY A
	MICHELLI, DAVID C
	PARTRIDGE, PAULA A
	POWELL, PATRICK E
	RODGERS, DEANNA L
	WEAVER, RONALD E
3900	R E A C H CENTER
	SPRING VALLEY ASB MIDDLE SCHOOL
	SPRING VALLEY MIDDLE SCHOOL
3903	ADRIANO, J
	ALDULAIMI, NAZAR
	ALTHEIMER, VERDIE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2000 (Cont'd)

3903	ANDERSON, CINDY J
	ARIAS, ANSELMO
	ARMSTRONG, SANFORD D
	BAKER, JOE K
	BECK, S M
	BROWN, HAROLD
	CASA DEHELIX
	CEREZO, PAOLA E
	CHANTOS, TERI J
	CLAYTON, JOHN L
	COLLINS, SARAH L
	COUCH, SARA M
	DAVIS, WILLIAM R
	DOBRAYA, TATIANA
	DOBRY, A
	DOUGLASS, JAMES B
	DUAMY, MARIE
	ESPINOZA, HECTOR
	FORAN, KRISSY
	FRIEDLAND, STAN
	GALE, CHAD T
	GARCIA, ANNA
	GLAWE, C G
	GOEDERT, JULIA Q
	GUZMAN, CEASAR
	HEFNER, LAILA R
	HENRICKSON, DAVID R
	HIGGINS, RUSSELL
	HOY, BETTY J
	HUGHES, JOHN E
	HULTZ, EARNEST
	HURTADO, RICHARD
	HYNES, LELAND W
	KUESTER, SHAWN P
	LARSON, MARTIN C
	LEMING, GARY W
	MCCLURE, G
	MCGUIRE, MERILYN D
	MERLO, RACHEL
	MOLLENHAUER, BONNIE
	NEWBERRY, SARAH M
	NIETO, SARAH T
	OWENS, KENNETH L
	PALLESCHI, C
	PENNY, MIKE
	POGEMILLER, MAT
	POUPARD, KIM E
	RESSLER, M L
	ROMERO, R
	ROSE, DEBORAH A

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 2000 (Cont'd)

3903	SAMPLE, AMY M
	SMIT, TALJA M
	TRUONG, Q T
	TSUTSUI, BOBBY
	YOUNG, J T
3909	MCCOOK, JAMES J

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CAMPO RD 1995

9520	BILONO, ELMER
	BUENCONSEJO, NOEL F
	GILLILAN, JOHN
	HELIX TENNIS APARTMENTS
	PILOTTE, AL J
	PINA, DAVID A
	ROBLES, MARTIN
	SMITH, JANETTE
	THARPE, NATASHA
	WOODS, ERIC
9545	HELIX SOUTH TENNIS CLUB
	ZIEGENFUSS TENNIS SHOP
9550	BASHOR, JACK
	BLOCK, MATHILD
	BROWN, BARBARA E
	DOCKSTADER, EXTELLE
	DUNCAN, TERESA
	FOY, JOSEPH J
	GALLEGOS, LUCY M
	GRIBBLE, EVELYN V
	HUTSON, CHERISE
	KENNEDY, OTIS
	LARSEN, SHIRLEY N
	PENA, FRANCES
	QUEEN, B
	RICCA, LOUIS
	TATE, WELCA
	TORRESCOTTO, ANDRES
9558	SHEVCHENKO, PANAS
	UKRAINIAN ORTHODOX CHURCH
9566	OCCUPANT UNKNOWNN
	TIM W LILLIE DDS
9600	FUN CHANNEL
	VINEYARD CHRISTIAN FELLOWSHIP
9603	TRAVELODGE
9610	DE ORO FREEZE
9620	DON R MANNING
9621	CHRISTOPHER M MATTHEW LAW OFCS
	CONNOLLY CONSTRUCTION CO
	FAMILY PRACTICE
	GLORIA GOODMAN FULL CHARGE
	MCGILL, FRANKIE
	NORM GRAHAM & ASSOC
	NUTCRACKER BUSINESS SVC
	QUILTED ROSE
9628	BIOGENETICS
	BRIGHTON HEALTH ALLIANCE
	CASA DE ORO PUBLIC LIBRARY
	CREATIVE NAIL SALON
	DON R MANNING

Target Street	Cross Street	Source
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CAMPO RD 1995 (Cont'd)

9628	FAMILY VISION CARE
	FLEMING & LOVE
	FRANK S MASCARI INCOME TAX SVC
	J S SONG DDS
	LIVELY CONSTRUCTION
	MICHAEL J POWERS DDS
	PERSPECTIVE PRESS
	RONALD L SVALSTAD
	RUSSELL LOVE OD
	SONG, JIN
	SVALSTAD, RONALD
	THOMAS ZIMMERMAN
	TINKERS TAX SVC & BOOKKEEPING
9663	CASA DE ORO SHELL
	GUS PERFORMANCE AUTOMOTIVE
9664	NEW PEKING RESTAURANT
9665	MOTOR VEHICLE DEPT
9671	DESERET INDUSTRIES THRIFT
9676	CREGG CHIROPRACTIC CTR
	GRECIAN CAFE
	HAIR TRIMMERS
	HAIR TRIMMERS MANICURIST
	JAMES B CREGG DC
	ROUND TABLE PIZZA
9679	FITNESS ADVANTAGE
9683	EXPRESSIONS HAIR DESIGN STUDIO
	LITTLE CAESARS PIZZA
	PAI CHAMBERS HAIR STYLIST
9714	CASA DE ORO MFG JEWELERS RUGS
9716	DEANS PHOTO SVC INC
9718	HANDI DELI
9722	CASA DE ORO BEAUTY SUPPLY
9724	HONG KONG RESTAURANT
	SHAKLEE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CONRAD DR 1995

3827	ASUNCION, GEORGE
	BARR, CECILIA
	CALLEROS, GILBERT
	DAINES, B
	ESHRAGHI, ABDOLLA
	HANNAH, SCOTT
	JONES, DEBORAH
	NGO, TAYMENG
	REID, GARY
	VITALE, JASON
3849	COLBURN, HELEN R
	CORBETT, M M
	CRISOSTOMO, NADINE
	CRISTMAN, DOROTHY M
	DUNHAM, MARION
	GILPIN, LAVONNE M
	HABIDULLAH, SAYED
	HELIX SOUTH APARTMENTS
	KIECOLT, P
	MILLER, STACY
	NORTON, DENISE A
	RENSON, LYNNE
	REZAEE, GULSOME
	ROBINSON, PHIL
	SON, RI
	THACKER, GEORGE H
	WEAVER, RONALD E
3900	SPRING VALLEY MIDDLE SCHOOL
3903	ADKINS, KENNETH A
	ANGIUS, ROBERT S
	BABINCHAK, M
	BARIBEAU, MICHAEL S
	BEACH, LELALU
	BOONE, JAMES R
	CASA DE HELIX
	CIUFI, K L
	CLARK, DEAN
	ESPINOZA, VILDA C
	ESTRADA, YSIDRO
	FLITCRAFT, KAREN
	GAINES, TAMI I
	HARRIS, ALGIE
	HECKMAN, SHEILA
	HUTCHISON, MIKE
	KALVIN, MARIA
	KELLEY, MIRANDA
	KERR, ROBERT J
	KINOFF, KEVIN D
	LOWE, RYAN
	LYNCH, WILLIAM K

CONRAD DR 1995 (Cont'd)

3903	MOUANNER, NAYLA
	OBERG, BRUCE P
	OLSON, JESSE
	PADILLA, LAURA
	PENNY, MICHAEL
	PEREZ, ESDRAS G
	PIAZZA, C L
	PRIDDY, TROY
	RAGATZ, BILL
	RENY, KORYNNE
	SALCHENBERG, WAYNE
	SHAW, STEVE
	SNYDER, J
	SULLIVAN, JOEL T
	SYKES, GEORGE
	UMATUM, TERRANC
	VALLE, DEBRA
	WHITLOCK, LOUISE
	WILSON, GRACE
3909	OCCUPANT UNKNOWNN

Target Street	Cross Street	Source
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CAMPO RD 1992

9520	BILONO, ELMER
	HELIX TENNIS APTS
9545	HELIX SOUTH TENNIS
9550	BRAWDY, EARLENE
	BROWN, BARBARA E
	BURD, NANCY J
	DUBOURG, ANGELE V
	HICKS, WAYMOND
	KALMAR, ROSE
	RICCA, LOUIS
	STCLAIR, HARRY
	TATE, WELCA
9558	UKRAINIAN ORTHDX CH
9561	PERROTTA, E
9566	LILLIE TIM W DDS
9600	INTEGRETEL INC
	VINEYARD FELLOWSHIP
9603	CASA DE ORO TRVLDGE
9610	DE ORO FREEZE
	DEORO, FREEZE
9621	BRANDWEIN T FMLY DR
	CONNOLLY CONSTR CO
	DOMINOS PIZZA
	GOODMAN G BKKPR TAX
	MATTHEW C M ATTY
	NUTCRACKER BUS SV
	PRIMERICA FNCL SERV
	QUILTED ROSE THE
	T V PLUS
9628	BIOGENETICS COMPANY
	BRIGHTON HLTH ALLNC
	CONTRACT DR&HDW SPL
	COSMO TECH LTD
	CREATIVE NAIL SALON
	DONAHOO JAMES R DDS
	FLEMING JOHN C DR
	GARDNER CONTRG
	LASER FOIL GRAPHICS
	LIVELY CONSTRUCTION
	MANNING DON R
	MANNING, DON R
	MASCARI F S INCM TX
	POWERS MICHAEL DDS
	POWERS, MICHAEL J
	SCHNELL&TARDIFF INC
	SD CO LBRY BRANCH
	SVALSTAD R L ATTY
	TINKERS TAX SERVICE
9631	HEARTLAND SVNGS&LN
9663	SHELL SV STA DEALER

Target Street	Cross Street	Source
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CAMPO RD 1992 (Cont'd)

9664	NEW PEKING RSTRNT
9665	CA ST MTR VHCL DEPT
9671	CHURCH JESUS CHRIST
9676	CREGG CHIROPRTC CTR
	GRECIAN CAFE
	HAIR TRIMMERS
	ROUND TABLE PIZZA
9679	FITNESS ADVANTAGE
9683	EXPRESSIONS HR DSGN
	LITTLE CAESARS PZZA
9714	CASA DE ORO JWLRS
9716	DEANS PHOTO SRV INC
9718	HANDI DELI
9722	CASA DE ORO BTY SPL
9724	BASIC H DISTRIBUTOR
	HONG KONG RESTAURNT

Target Street	Cross Street	Source
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CONRAD DR 1992

3827	DIAZ, GERARDO
	ESHRAGHI, A
	MONOHAN, RUTH
	PEREZ, ARMANDO
	SMALLEY, MARIA
3849	GARSKE, M A
	HELIX SOUTH APTS
	ROSE, RICK
3900	SPRING VLY ASB SC
3903	ALARIE, PAUL F
	ANGIUS, ROBERT S
	BABINCHAK, M
	BLACKWELL, JOEY
	BOONE, M
	CASA DE HELIX
	CASA, DE H
	CIUFI, K L
	GREENUP, SHANE
	KIECOLT, HERBERT
	NIXON, ELMO
	REST, TIM
	ROBB, GRANT M
	SHARPE, PAUL
	SHAW, STEVE
	SLOAN, B B
	WAGNER, K
	WILLIAMS, DARRYL

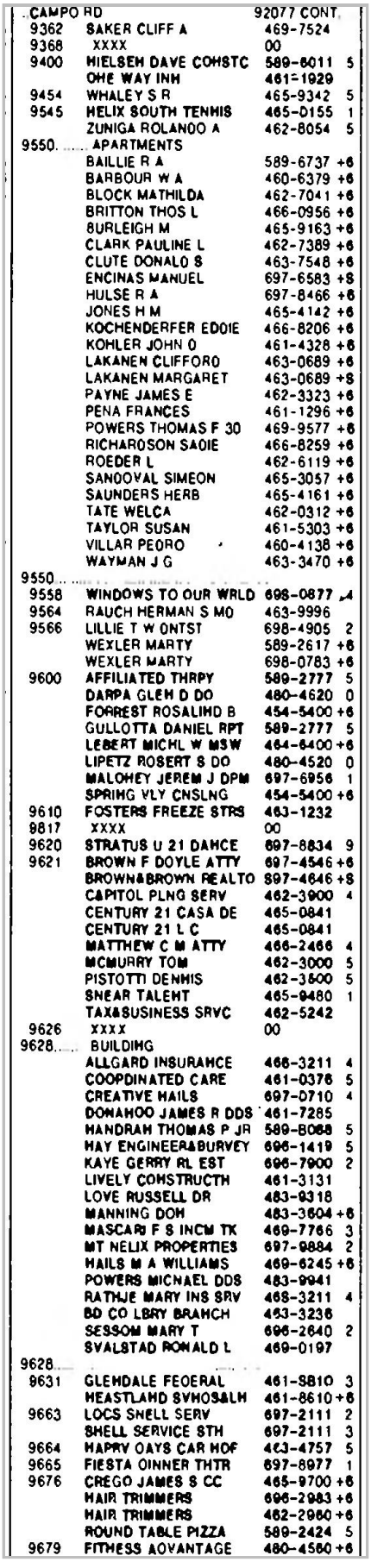
Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CAMPO RD 1986

9308	MCGUFFIN RICHARD L	466-0048	
9318	ROBERTS CLAYTON O	466-3503	
9322	GEPHART DAVE	696-3319	+6
9332	MCGRORTY JOHN	464-1575	0
9333	PINCOTT DONALD	460-3905	
	PINCOTT RICHARD	460-3905	
9338	OVERGAAG HENRY	466-0120	
9354	REINWAND RUSSELL L	466-6424	

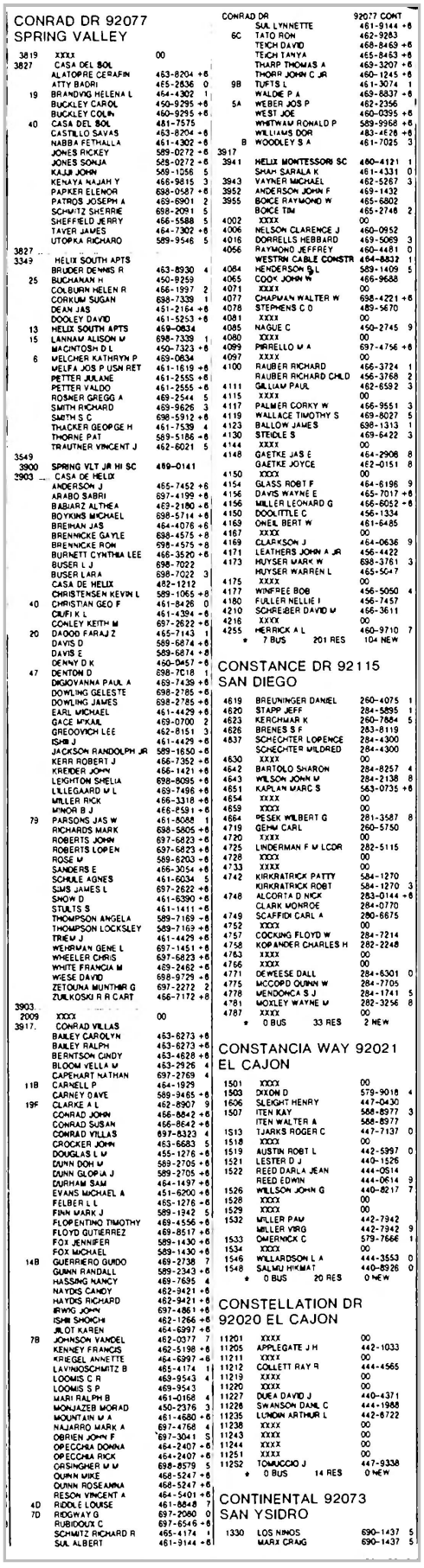
Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CAMPO RD 1986



CAMPO RD		92077 CONT	
9362	SAKER CLIFF A	469-7524	
9368	XXXX	00	
9400	NIELSEN DAVE CONSTC	589-8011	5
	ONE WAY INN	461-1929	
9454	WHALEY S R	465-9342	5
9545	HELIX SOUTH TENNIS	465-0155	1
	ZUNIGA ROLANDO A	462-8054	5
9550	APARTMENTS		
	BAILLIE R A	589-6737	+6
	BARBOUR W A	460-6379	+6
	BLOCK MATHILDA	462-7041	+6
	BRITTON THOS L	466-0956	+6
	BURLEIGH M	465-9163	+6
	CLARK PAULINE L	462-7389	+6
	CLUTE DONALD S	463-7548	+6
	ENCINAS MANUEL	697-6583	+6
	HULSE R A	697-8466	+6
	JONES H M	465-4142	+6
	KOCHENDERFER EDDIE	466-8206	+6
	KOHLER JOHN O	461-4328	+6
	LAKANEN CLIFFORD	463-0689	+6
	LAKANEN MARGARET	463-0689	+6
	PAYNE JAMES E	462-3323	+6
	PENA FRANCES	461-1296	+6
	POWERS THOMAS F 30	469-9577	+6
	RICHARDSON SADIE	466-8259	+6
	ROEDER L	462-6119	+6
	SANDOVAL SIMEON	465-3057	+6
	SAUNDERS HERB	465-4161	+6
	TATE WELCA	462-0312	+6
	TAYLOR SUSAN	461-5303	+6
	VILLAR PEDRO	460-4138	+6
	WAYMAN J G	463-3470	+6
9550			
9558	WINDOWS TO OUR WRLD	698-0877	4
9564	RAUCH HERMAN S MD	463-9996	
9566	LILLIE T W ONTST	698-4905	2
	WEXLER MARTY	589-2617	+6
	WEXLER MARTY	698-0783	+6
9600	AFFILIATED THRPY	589-2777	5
	DARPA GLEN D DO	480-4620	0
	FORREST ROSALIND B	454-5400	+6
	GULLOTTA DANIEL RPT	589-2777	5
	LEBERT MICHL W MSW	464-6400	+6
	LIPETZ ROBERT S DO	480-4520	0
	MALOHEY JEREM J DPM	697-6956	1
	SPRING VLY CNSLNG	454-5400	+6
9610	FOSTERS FREEZE STRS	463-1232	
9817	XXXX	00	
9620	STRATUS U 21 DANCE	697-8834	9
9621	BROWN F DOYLE ATTY	697-4546	+6
	BROWN&BROWN REALTO	697-4646	+6
	CAPITOL PLNG SERV	462-3900	4
	CENTURY 21 CASA DE	465-0841	
	CENTURY 21 L C	465-0841	
	MATTHEW C M ATTY	466-2466	4
	MCMURRY TOM	462-3000	5
	PISTOTTI DENNIS	462-3500	5
	SNEAR TALENT	465-9480	1
	TAX&BUSINESS SRVC	462-5242	
9626	XXXX	00	
9628	BUILDING		
	ALLGARD INSURANCE	466-3211	4
	COORDINATED CARE	461-0376	5
	CREATIVE NAILS	697-0710	4
	DONAHOO JAMES R DDS	461-7285	
	HANDRAH THOMAS P JR	589-8068	5
	HAY ENGINEER&SURVEY	696-1419	5
	KAYE GERRY RL EST	696-7900	2
	LIVELY CONSTRUCTN	461-3131	
	LOVE RUSSELL DR	483-9318	
	MANNING DON	483-3604	+6
	MASCARI F S INCM TX	469-7766	3
	MT NELIX PROPERTIES	697-9884	2
	NAILS M A WILLIAMS	469-6245	+6
	POWERS MICHAEL DDS	483-9941	
	RATHJE MARY INS SRV	466-3211	4
	SD CO LBRY BRANCH	463-3236	
	SESSOM MARY T	696-2640	2
	SVALSTAD RONALD L	469-0197	
9628			
9631	GLENDALE FEDERAL	461-9810	3
	HEASTLAND SVHOS&LH	461-8610	+6
9663	LOCS SHELL SERV	697-2111	2
	SHELL SERVICE STH	697-2111	3
9664	HAPPY DAYS CAR HOP	463-4757	5
9665	FIESTA DINNER THTR	697-8977	1
9676	CREGO JAMES S CC	465-9700	+6
	HAIR TRIMMERS	696-2983	+6
	HAIR TRIMMERS	462-2960	+6
	ROUND TABLE PIZZA	589-2424	5
9679	FITNESS ADVANTAGE	480-4580	+6

CONRAD DR 1986



CONRAD DR 92077
SPRING VALLEY

3819	XXXX	00	
3827	CASA DEL SOL		
	ALATORRE CERAFIN	463-8204	+6
	ATTY BADRI	465-2636	0
19	BRANDVIG HELENA L	464-4302	1
	BUCKLEY CAROL	460-9295	+6
	BUCKLEY COLIN	460-9295	+6
40	CASA DEL SOL	481-7575	
	CASTILLO SAVAS	463-8204	+6
	NABBA FETHALLA	461-4302	+6
	JONES RICKEY	589-0272	+6
	JONES SONJA	588-0272	+6
	KAUR JOHN	589-1056	5
	KENAYA NAJAH Y	466-9815	3
	PAPKER ELENOR	698-0587	+6
	PATROS JOSEPH A	469-6901	2
	SCHMITZ SHERRIE	698-2091	5
	SHEFFIELD JERRY	466-5588	5
	TAYER JAMES	464-7302	+6
	UTOPKA RICHARD	589-9548	5
3827			
3349	HELIX SOUTH APTS		
	BRUDER DENNIS R	463-8930	4
25	BUCHANAN H	450-9259	
	COLBURN HELEN R	466-1997	2
	CORKUM SUSAN	698-7339	1
	DEAN JAS	451-2164	+6
	DOOLEY DAVID	461-5253	+6
13	HELIX SOUTH APTS	459-0834	
15	LANNAM ALISON M	698-7339	1
	MACINTOSH D L	450-7323	+6
6	MELCHER KATHRYN P	469-0634	
	MELFA JOS P USN RET	461-1619	+6
	PETTER JULANE	461-2555	+6
	PETTER VALDO	461-2555	+6
	ROSNER GREGG A	469-2544	5
	SMITH RICHARD	469-9626	3
	SMITH S C	698-5912	+6
	THACKER GEORGE H	461-7539	4
	THORNE PAT	589-5186	+6
	TRAUTNER VINCENT J	462-6021	5
3549			
3900	SPRING VLY JR HI SC	469-0141	
2903	CASA DE HELIX		
	ANDERSON J	465-7452	+6
	ARABO SABRI	697-4199	+6
	BABIARZ ALTHEA	469-2180	+6
	BOYKINS MICHAEL	698-5714	+6
	BREIMAN JAS	464-4076	+6
	BRENNICKE GAYLE	698-4575	+6
	BRENNICKE RON	698-4575	+6
	BURNETT CYNTHIA LEE	466-3520	+6
	BUSER L J	698-7022	
	BUSER LARA	698-7022	3
	CASA DE HELIX	482-1212	
	CHRISTENSEN KEVIN L	589-1065	+6
40	CHRISTIAN GEO F	461-8426	0
	CIUFI K L	461-4394	+6
	CONLEY KEITH M	697-2622	+6
20	DAOOD FARAJ Z	465-7143	1
	DAVIS D	589-6874	+6
	DAVIS E	589-6874	+6
	DENNY D K	460-0457	+6
47	DENTON D	698-7C18	1
	DIGIOVANNA PAUL A	469-7439	+6
	DOWLING GELESTE	698-2785	+6
	DOWLING JAMES	698-2785	+6
	EARL MICHAEL	461-4429	+6
	GACE MIKAIL	469-0700	2
	GREOOVICH LEE	462-8151	3
	ISHII J	461-4429	+6
	JACKSON RANDOLPH JR	589-1650	+6
	KERR ROBERT J	466-7352	+6
	KREIDER JOHN	466-1421	+6
	LEIGHTON SHELIA	698-8095	+6
	LILLEGAARD M L	469-7496	+6
	MILLER RICK	466-3318	+6
	MINOR B J	466-8591	+6
79	PARSONS JAS W	461-8088	1
	RICHARDS MARK	698-5805	+6
	ROBERTS JOHN	697-6823	+6
	ROBERTS LOREN	697-6823	+6
	ROSE M	589-6203	+6
	SANDERS E	466-3054	+6
	SCHULE AGNES	461-6034	5
	SIMS JAMES L	697-2622	+6
	SNOW D	461-6390	+6
	STULTS S	461-1411	+6
	THOMPSON ANGELA	589-7169	+6
	THOMPSON LOCKSLEY	589-7169	+6
	TRIEM J	461-4429	+6
	WEHRMAN GENE L	697-1451	+6
	WHEELER CHRIS	697-6823	+6
	WHITE FRANCIA M	469-2462	+6
	WIESE DAVID	698-9729	+6
	ZETOUNA MUNTHIR G	697-2272	2
	ZULKOSKI R R CART	466-7172	+6
3903			
2909	XXXX	00	
3917	CONRAD VILLAS		
	BAILEY CAROLYN	463-8273	+6
	BAILEY RALPH	463-8273	+6
	BERNTSON CINDY	463-4628	+6
	BLOOM VELLA M	463-2926	4
	CAPEHART NATHAN	697-2769	4
11B	CARNELL P	464-1929	
	CARNEY DAVE	589-9465	+6
19F	CLARKE A L	462-8907	9
	CONRAD JOHN	466-8842	+6
	CONRAD SUSAN	466-8642	+6
	CONRAD VILLAS	697-8323	4
	CROCKER JOHN	463-6683	5
	DOUGLAS L M	455-1276	+6
	DUNN DON M	589-2705	+6
	DUNN GLORIA J	589-2705	+6
	DURHAM SAM	464-1497	+6
	EVANS MICHAEL A	451-6200	+6
	FELBER L L	465-1276	+6
	FINN MARK J	589-1942	5
	FLORENTINO TIMOTHY	469-4556	+6
	FLOYD GUTIERREZ	469-8517	+6
	FOX JENNIFER	589-1430	+6
	FOX MICHAEL	589-1430	+6
14B	GUERRIERO GUIDO	469-2738	7
	GUINN RANDALL	589-2343	+6
	HASSING NANCY	469-7695	4
	HAYDIS CANDY	462-9421	+6
	HAYDIS RICHARD	462-9421	+6
	IRWIG JOHN	697-4861	+6
	ISHII SHOICHI	462-1266	+6
	JILOT KAREN	464-6997	+6
7B	JOHNSON VANDEL	462-0377	7
	KENNEY FRANCIS	462-5198	+6
	KRIEGEL ANNETTE	464-6997	+6
	LAVINOSCHMITZ B	465-4174	1
	LOOMIS C R	469-9543	4
	LOOMIS S P	469-9543	
	MARI RALPH B	461-0168	4
	MONJAZEB MORAD	450-2376	3
	MOUNTAIN M A	461-4680	+6
	NAJARRO MARK A	697-4768	4
	OBRIEN JOHN F	697-3041	5
	OPECCHIA DONNA	464-2407	+6
	OPECCHIA RICK	464-2407	+6
	ORSINGHER W M	698-8579	5
	QUINN MIKE	468-5247	+6
	QUINN ROSEANNA	468-5247	+6
	RESON VINCENT A	464-5401	+6
4D	RIDDLE LOUISE	461-8648	7
7D	RIDGWAY G	697-2980	0
	RUBIDOUX C	697-6546	+6
	SCHMITZ RICHARD R	465-4174	1
	SUL ALBERT	461-9144	+6

CONRAD DR		92077 CONT	
	SUL LYNNETTE	461-9144	+6
6C	TATO RON	462-9283	
	TEICH DAVID	468-8469	+6
	TEICH TANYA	465-8463	+6
	THARP THOMAS A	469-3207	+6
	THORP JOHN C JR	460-1245	+6
9B	TUFTS L	461-3074	1
	WALDIE P A	469-8837	+6
5A	WEBER JOS P	462-2356	
	WEST JOE	460-0395	+6
	WHITMAN RONALD P	589-9968	+6
	WILLIAMS DOR	483-4628	+6
B	WOODLEY S A	461-7025	3
3917			
3941	HELIX MONTESSORI SC	460-4121	1
	SHAH SARALA K	461-4331	0
3943	VAYNER MICHAEL	462-5267	3
3952	ANDERSON JOHN F	469-1432	
3955	BOICE RAYMOND W	465-6802	
	BOICE TIM	465-2748	2
4002	XXXX	00	
4006	NELSON CLARENCE J	460-0952	
4016	DORRELLS HEBBARD	469-5069	3
4056	RAYMOND JEFFREY	460-4481	0
	WESTRN CABLE CONSTR	464-8832	1
4084	HENDERSON S L	589-1409	5
4065	COOK JOHN W	466-9688	
4071	XXXX	00	
4077	CHAPMAN WALTER W	698-4221	+6
4078	STEPHENS C O	489-5670	
4081	XXXX	00	
4085	NAGUE C	460-2745	9
4080	XXXX	00	
4099	PIRRELLO M A	697-4756	+6
4097	XXXX	00	
4100	RAUBER RICHARD	466-3724	1
	RAUBER RICHARD CHLD	466-3768	2
4111	GILLIAM PAUL	462-6592	3
4115	XXXX	00	
4117	PALMER CORKY W	466-9551	3
4119	WALLACE TIMOTHY S	469-8027	5
4123	BALLOW JAMES	698-1313	1
4130	STEIDLE S	469-8422	3
4144	XXXX	00	
4148	GAETKE JAS E	464-2908	8
	GAETKE JOYCE	462-0151	8
4150	XXXX	00	
4154	GLASS ROBT F	464-6198	9
4156	DAVIS WAYNE E	465-7017	+6
4156	MILLER LEONARD G	466-6052	+6
4150	DOOLITTLE C	456-1334	
4169	ONEIL BERT W	461-6485	
4167	XXXX	00	
4169	CLARKSON J	464-0636	9
4171	LEATHERS JOHN A JR	456-4422	
4173	HUYSER MARK W	698-3761	3
	HUYSER WARREN L	465-5C47	
4175	XXXX	00	
4177	WINFREE BOB	456-5050	4
4180	FULLER NELLIE I	456-7457	
4210	SCHREIBER DAVID M	466-3611	
4216	XXXX	00	
4255	HERRICK A L	460-9710	7
	* 7 BUS 201 RES 104 NEW		

CONSTANCE DR 92115
SAN DIEGO

4619	BREUNINGER DANIEL	260-4075	1
4620	STAPP JEFF	284-5895	1
4623	KERCHMAR K	260-7884	5
4626	BRENES S F	283-8119	
4637	SCHECHTER LORENCE	284-4300	
	SCHECHTER MILDRED	284-4300	
4630	XXXX	00	
4642	BARTOLO SHARON	284-8257	4
4643	WILSON JOHN M	284-2138	8
4651	KAPLAN MARC S	563-0735	+6
4654	XXXX	00	
4659	XXXX	00	
4664	PESEK WILBERT G	281-3587	8
4719	GEHM CARL	260-5750	
4720	XXXX	00	
4725	LINDERMAN F M LCDR	282-5115	
4728	XXXX	00	
4733	XXXX	00	
4742	KIRKPATRICK PATTY	584-1270	
	KIRKPATRICK ROBT	584-1270	3
4748	ALCORTA D NICK	283-0144	+6
	CLARK MONROE	284-0770	
4749	SCAFFIDI CARL A	280-6675	
4752	XXXX	00	
4757	COCKING FLOYD W	284-7214	
4758	KOPANDER CHARLES H	282-2248	
4763	XXXX	00	
4766	XXXX	00	
4771	DEWEESE DALL	284-6301	0
4775	MCCORD QUINN W	284-7705	
4778	MENDONCA S J	284-1741	5
4781	MOXLEY WAYNE M	282-3256	8
4787	XXXX	00	
	* 0 BUS 33 RES 2 NEW		

CONSTANCIA WAY 92021
EL CAJON

1501	XXXX	00	
1503	DIXON D	579-9018	4
1606	SLEIGHT HENRY	447-0430	
1507	ITEN KAY	588-8977	3
	ITEN WALTER A	588-8977	
1513	TJARKS ROGER C	447-7137	0
1518	XXXX	00	
1519	AUSTIN ROBT L	442-5997	0
1521	LESTER D J	440-1526	
1522	REED DARLA JEAN	444-0514	
	REED EDWIN	444-0614	9
1526	WILLSON JOHN G	440-8217	7
1528	XXXX	00	
1529	XXXX	00	
1532	MILLER PAM	442-7942	
	MILLER VIRG	442-7942	9
1533	OMERNICK C	579-7666	1
1534	XXXX	00	
1546	WILLIARDSON L A	444-3553	0
1548	SALMU HIKMAT	440-8926	0
	* 0 BUS 20 RES 0 NEW		

CONSTELLATION DR
92020 EL CAJON

11201	XXXX	00	
11205	APPLEGATE J H	442-1033	
11211	XXXX	00	
11212	COLLETT RAY R	444-4565	
11219	XXXX	00	
11220	XXXX	00	
11227	DUEA DAVID J	440-4371	
11228	SWANSON DANL C	444-1988	
11235	LUNDIN ARTHUR L	442-8722	
11238	XXXX	00	
11243	XXXX	00	
11244	XXXX	00	
11251	XXXX	00	
11252	TOMUCCIO J	447-9338	
	* 0 BUS 14 RES 0 NEW		

CONTINENTAL 92073
SAN YSIDRO

1330	LOS NINOS	690-1437	5
	MARX CRAIG	690-1437	5

Target Street	Cross Street	Source
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CAMPO RD 1982

9308	MCGUFFIN RICHARD L	466-0048	
9318	ROBERTS CLAYTON O	466-3503	
9322	MOSQUEDA PATRICK	462-2150	9
9332	MCGRORTY JOHN	464-1575	0
9333	PINCOTT DONALD	460-3905	
	PINCOTT RICHARD	460-3905	
9338	OVERGAAG HENRY	466-0120	
9354	REINWAND RUSSELL L	466-8424	
9362	BAKER CLIFF A	469-7524	
9368	GODWIN LLOYD W	464-4150	1
9400	FAITN CHAPEL PRE SC	462-7100	5
	ONE WAY INN	461-1928	4
9430	XXXX	00	
9454	WHALEY R A	460-7316	1
9520	XXXX	00	
9545	NELIX SO TENNIS CLB	465-0155	1
	NELIX SOUTN TENNIS	464-9352	0
	SEBASTIAN CHRIS	469-1730	+2
9550	XXXX	00	
9558	PARROTT MEL	697-9131	+2
9564	HAMMACK MICHAEL ODS	464-4079	1
	RAUCH HERMAN S MD	463-9996	
9566	LILLIE T W	690-4905	+2
9600	CHRISMONO CALIF	687-7892	0
	OARPA GLEN DDO	460-4520	0
	LIPETZ ROBERT S OO	460-4520	0
	LIPETZ ROBERT S OO	460-4520	
	MALONEY J J OPM	687-5956	1
	TNOMAS JOHN&ASSOC	462-1270	+2
9610	FOSTERS FREEZE STRS	463-1232	
9617	HELIX COUPT HOUSE	462-0330	5
	SLENDER LAOY FIGURE	462-8330	+2
9620	STRATUS	687-0034	9
9621	BUILDING		
	ALASKAN MINING&PROC	462-0300	1
	CASA DE ORO BOOK ST	463-3048	9
	CENTURY 21 L C	465-8941	
	CENTURY 21 SP VLY	495-8841	0
	ELESS LTD	697-0604	+2
	ERA MINING	490-4900	+2
	JACOBSEN TAX&BUS SV	482-5242	5
	SHEAR TALENT	465-8480	1
	TAX BUSINESS SERV	492-5242	5

Target Street	Cross Street	Source
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CAMPO RD 1982

CAMPO RD		92077 CONT	
	TAX&BUSINESS SERV	462-5160	8
	TAX&BUSINESS SRVS	462-3600	0
8	NAIL CONSPIRACY TNE	897-0474	+2
9621			
9628	BUILDING		
	BEAUTY WORLD	462-1683	7
	BUCHENAU THOMAS M -	460-5500	1
	OONAHOO JAMES R DDS	461-7285	5
	EXCHANGE ENT	696-1661	1
	FARMR INS CASAOEORO	464-2316	7
	FARMR INS CASADEORO	464-2317	7
	NAWKINS VIC	464-2316	7
	KAYE GERRY RL EST	698-7000	+2
	LIVELY CONSTRUCTN	461-3131	
	LOVE RUSSELL DR	463-9318	
	MT NELIX PROPERTIES	697-0884	+2
	POWERS MICNAEL DDS	463-9941	5
	PROFIT TRADE EXCHG	698-1881	1
	RAUBER RICNARD INC	697-7340	+2
	SO CO AGRI WEIGHTS	464-3971	
	SD CO LIBRARY CASA	463-3236	
	SFSSOM MARY T	698-284D	+2
	SVALSTAD RONALD L	460-0197	
9628			
9631	LAJOLLA FED SAVG&LN	461-861D	4
966C	XXXX	00	
9663	LOUS SHELL SERV	697-2111	+2
	SHELL OIL SPRNG VLY	463-2111	3
9664	PIZZA NUT	460-2159	7
9665	FIESTA DINNER TNTR	697-8977	1
9676	XXXX	00	
9679	T G&Y ST SPRING VLY	460-3921	8

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CONRAD DR 1982

CONNOLEY CIR		92011 CONT	
65	HAWKINS JOHN 3D REV	420-1533	+2
66	LE XUAN T	426-5019	9
68	XXXX	00	
69	XXXX	00	
70	MOHONDRO WM JR	422-0835	0
72	XXXX	00	
73	GONZALES JULIO R	426-8471	0
74	PARKER M C	426-6794	1
75	XXXX	00	
76	NEARY JOHN F	427-4656	9
77	BERGADO SIMON JOHN	420-0223	3
78	XXXX	00	
79	PIRES A	420-9118	7
80	XXXX	00	
81	PENA MANUEL HECTOR	426-6908	7
82	XXXX	00	
83	CAMPBELL F N	422-9012	3
84	ANOA BERTHA	425-4140	+2
	ANDA MARTIN	420-4438	3
86	LOPEZ CIRILO	427-6911	3
	LOPEZ M E	427-6911	4
86	RINCON MAGDALENA	425-7577	1
87	BENITEZ JOSE C	426-1658	3
88	MARISCAL MANUEL	425-7280	+2
89	SAGER CLIFF	427-5445	0
90	GRAVELLE JAS E	420-5069	3
91	XXXX	00	
93	SANCHEZ EDNARD M	427-2839	+2
95	XXXX	00	
97	GONSALVES CLIFFORD	420-0413	+2
*	0 BUS 75 RES	8 NEW	

CONRAD DR 92041
LA MESA

4354	MURODCK SCHDDL	461-9507	3
4357	XXXX	00	
4364	CALDER DAVID R CDR	461-2487	9
4372	HAMPTON ROBT C	464-0179	1
	HAMPTON ROBT C	697-9612	1
4379	SMEDSRUD STANLEY	698-2656	+2
	TURNBULL JOANNE L	466-1716	+2
4380	XXXX	00	
4405	VINCENT GRANT M DDS	460-9021	
	VINCENT MIKE	460-9285	7
	VINCENT RITA A	460-9021	
4410	XXXX	00	
4415	CALAMIA CARL J	697-3133	1
4434	XXXX	00	
4437	JOYNER CHARLIE MRS	461-2440	
4438	SACRENTY KOSTA GEO	469-1528	
4442	HANSON J B	466-3780	8
	HANSON PETER B	466-6940	8
4446	SAUTTER F R LCDR	462-6256	9
4452	JOHNSON CLIFFORD B	469-1636	8
4455	XXXX	00	
4470	KOEHLER ROBT E	466-6991	
4475	XXXX	00	
4502	MILLER ROBT G	460-5943	
4518	XXXX	00	
4530	HENNIG ROLF A	697-4288	0
4546	XXXX	00	
4558	XXXX	00	
4561	WHITTLETON H MARK	469-4918	
4570	DAVIS FRANK T	466-3553	9
4588	KEYES RAYMOND S	697-1622	+2
4605	XXXX	00	
4606	TAYLOR EUGENE J	442-9354	
4610	GALAN J F	442-1070	
4614	XXXX	00	
4616	MILLWARD FRANK	444-8294	8
4655	DANIEL DALE M	447-3754	6
4667	SILVEIRA J	588-8204	+2
	SILVEIRA J T DDS	442-4338	
*	1 BUS 38 RES	4 NEW	

CONRAD DR 92077
SPRING VALLEY

3819	XXXX	00	
3827	CASA DEL SOL		
	ADAMS DALE	469-6385	+2
37	ATT, BADRI	465-2836	0
19	B INDVIG HELENA L	464-4302	1
	CARRILLO RANDY L	464-3676	1
40	CASA DEL SOL	461-7575	
43	CASDILLO FELIX	465-5560	9
	DUFF C	698-8498	1
	DUFF C J	697-1454	1
4	GARMO NAJAH	462-3318	1
	GREENE JAMES	464-6081	9
	HANNA WALED F	698-7306	+2
44	JAMOO MIHSIN E	464-8140	9
39	KATTOULA FAIEZ	464-6036	9
12	KENAYA NAJAH Y	465-1485	1
18	MERCER OLIVER	469-9397	0
	MOODY DAN	464-3340	1
	NORBECK DOUG	465-1695	+2
	PATROS JOSEPH A	469-6901	+2
	PEART RAYMOND E	462-6021	+2
42	POOLER MICHAEL E	460-0690	1
17	SARENANA KIM	460-7323	0
3	SYPOLT DENISE	465-3414	5
	UTORKA RICHARD M	698-0824	+2
	WEFLER KEVIN	461-6419	+2
	WILLIAMS C	465-8187	1
	WILLIAMS LORRAINE	466-8823	1
3827			
3849	HELIX SOUTH APTS		
12	ADENIA M C	464-7970	1
	AYEF ALAN S	460-0171	+2
	BOGAN ZELINE MRS	469-5728	+2
25	BUCHANAN H	461-9259	
6	BURNS E F	461-1803	3
	COLBURN HELEN R	466-1997	+2
	CORKUM SUSAN	698-7339	1
	CREATIVE PAINTING	462-6647	+2
14	DECHANT T F	460-1124	0
	HARMENING K A	462-2056	0
13	HELIX SOUTH APTS	469-0834	
	HINCHLIFFE HELEN A	698-0189	+2
22	HOBBS JIM A	697-4598	1
	KOCHENDERFER EDDIE	461-3226	+2
15	LANHAM ALISON M	698-7339	1
2	MCMILLIN ROBT J	469-4790	
18	MCNAMARA B	697-2921	0
	MECKES KURT	462-6750	+2
6	MELCHER KATHRYN P	469-0834	
	PIERCE MICHAEL	464-7358	+2
	PRESTON CARMI G	460-6068	+2
11	SMITH SANDRA C	698-8962	1
9	TURNAGE W E SR	461-5330	
3849			
3900	SPRING VLY JR HI SC	469-0141	
3903	CASA DE HELIX		
	ADAMS ERIC D	461-8048	+2
	ALMOND AARON	697-7154	+2
	BEADLES KELLY	469-2535	+2
	BLOOM CHAS	698-0121	+2
	BOWKER JOHN S	697-4504	1
	BROWN M	464-2073	+2
72	BRUCE MICHAEL F	460-7065	5
	BTURUS IMAD J	466-3722	+2
	CASA DE HELIX	462-1212	5
40	CHRISTIAN GEO F	461-8426	0
	CHRISTY M S	461-7242	+2
38	CHUFCH DOUGLAS O	466-6726	9
	COX BRIAN G	697-3189	+2
20	DAOOD FARAJ Z	465-7143	1
	DAVIDEK FERN F	466-5385	1
	DAVIDSON JEFFREY A	465-1347	1
47	DENTON D	698-7018	1
924	DUGAS ROGER	698-8375	1
7	DURALL WALTER	466-1108	6
	EAGLE C	697-7940	+2

CONRAD DR		92077 CONT	
	FAVORS F	464-7798	+2
	GAGE MIKAIL	469-0700	+2
20	GARCIA RAY	463-8274	7
	GLADFELTER P C	460-6783	+2
84	HARDING S D	464-7192	1
	HOBER MICHAEL W	466-7701	+2
	HODGES JOHN R	698-1647	1
	HOUZE TIMOTHY J	697-2644	1
2E	JABORO USAM	697-6166	1
	JEFFREY PAUL H	698-3998	+2
78	JOHNSON H A	697-1480	1
	KALSHO ADEL	698-1686	+2
	KLINGBEIL HARRY A	465-2204	1
36	LACHANCE ROBT S SR	469-9244	6
	LIU LIANGZEN	697-1524	+2
46	MACK C	462-2218	1
	MANNINA PIETRO	461-0498	1
38	MEIER TONY	462-9199	1
8E	MEIER TONY SR	462-1212	0
15	MELCHOR JIMMY	461-5200	1
24	MELFA JOSEPH	461-1619	9
35	MOUNTAIN DAN W	461-4846	9
35	MOUNTAIN M A	461-4680	0
	NARES JACQUELINE	698-1536	+2
	PANEK CHRIS	698-8710	+2
	PANEK M A	698-6265	+2
79	PARSONS JAS W	461-8088	1
3	SATHER JEANNE	461-5855	9
	SEWELL JACKIE	697-6895	+2
	SHAMMAM MICHAEL	462-1909	+2
	SHOVAN JAMES	464-8212	+2
59	SLOAN BARBARA B	465-3517	6
	SMITH KATHLEEN	469-8464	+2
45	STROH N L	461-3119	1
6	SULLIVAN DONALD M	469-2983	1
68	THACKER GEO H	461-7539	5
100	TREZIOK DNAL L	697-2693	0
	WINGO ROBT J	463-7590	0
	ZETDUNA MUWTHIR G	697-2272	+2
3903			
3909	XXXX	00	
3917	CONRAD VILLAS		
	ARCHER WAYNE	697-1810	+2
	BARNIER E	461-2027	+2
	BEDDOW W H	698-2982	1
	BIRD MICHAEL	462-5757	+2
	BONSLATER GARY	697-0265	+2
	BROADFIELD R	463-2442	+2
	BURR FRITZI	462-8359	+2
	CALVIN LANCE E	466-5616	+2
	CAPAROSO D J	697-4369	1
11B	CARNELL P	464-1929	6
	CARPENTER B A	697-6374	+2
	CHAFEY T	461-2027	+2
19F	CLARKE A L	462-8907	9
	COMBS D O	461-6974	1
	CONRAD VILLAS	469-0155	7
7F	CORWILL D A	462-4726	5
15F	CULPEPPER GLENN C	463-8748	9
4A	DETLOFF JOHN C	464-8091	1
	DONOHUE WILLIAM	460-7283	+2
	EGGER DEBORAH M	698-1116	+2
7E	ELLIOTT T M	697-0781	0
2D	FLUIS J K	461-9868	5
	FRANSK RICHARD	462-7382	+2
	GRAFF INEZ	461-9426	+2
	GRECO R	469-0710	+2
12B	GREGOVICH LEE	463-7005	0
14B	GUERRIERO GUIDO	469-2736	7
10E	GUNTER J	697-6617	0
	HAMILTON DAVID	466-2418	+2
	HJERPE STEPHEN F	464-0617	+2
7B	JOHNSON VANOEL	462-0377	7
	KAMYAR SARWAR G	465-8485	+2
	KIMMICK BRUCE L	697-2029	+2
	KOCHENDERFER K	462-9863	+2
	KROHN ROBT G	460-5485	5
	LAVINIO SCHMITZ B	465-4174	1
	LEMANE STEVEN	460-5067	+2
	LEVIN BEN	463-3160	1
	LIND D J	461-0044	1
6A	LOWERY S	465-9583	0
4B	LUSITANA A M	461-7794	6
	MASHOUD F	462-4682	+2
	MEANS WALTON H	460-4328	+2
	MILLER R J	466-3623	+2
	MONAJAZEB MORAD	460-2376	+2
	MORTIMER DOUG	462-4377	+2
	MURRAY G W	465-2376	+2
	MUTTER JOAN M	461-9053	+2
	OTERO GILBERT G	698-1741	1
11E	PELLETIER STAN	466-3885	8
	RAMIREZ ADOLF	698-2989	+2
4D	RIDDLE LOUISE	461-8848	7
7D	RIDGWAY G	697-2080	0
13B	ROSS LESLIE D	465-9534	5
	SAGEBIEL KENT	462-9123	+2
	SCHMITZ RICHARD R	465-4174	1
5B	SEIBEL CHRISTOPHER	697-2484	0
	SHEPHARD JAMES R	461-5082	8
	SLOAN BOB	461-0431	0
	SMITH RANDY	697-4848	+2
	STUART R	697-3890	+2
	SUNDAHL MARK	463-8292	1
6C	TATO RON	462-9283	5
17F	TUBBS EDDIE J	469-9020	1
9B	TUFTS L	461-3074	1
	VINCENT ELLEN	463-8292	1
	WANO L	460-0259	+2
5A	WEBER JOS P	462-2366	5
	WEINER MARTY	697-1152	+2
	WHEELER PAUL A	697-6446	+2
	WINKEL DAN	461-6739	1
	WOODLEY S A	461-7025	+2
	YOUNAN MAZIN	697-7112	1
3917			
3941	HELIX MONTESSORI SC	460-4121	1
	SHAH SARALA K	461-4331	0
3943	XXXX	00	
3952	ANDERSON JOHN F	469-1432	4
	NELS BEAUTY SALON	462-5850	4
3955	BOICE RAYMOND W	465-6802	
	BOICE TIM	465-2748	+2
4002	XXXX	00	
4006	NELSON CLARENCE J	460-0952	
4016	KOZA FAICY T	466-4679	3
4017	FRANKE ROBT	464-6726	8
4025	XXXX	00	
4033	SEXTON BETTY	461-0194	+2
4044	XXXX	00	
4053	XXXX	00	
4056	RAYMOND JEFFREY	460-4481	0
	WESTERN CBL CNSTRCT	484-8832	1
4064	XXXX	00	
4065	COOK JOHN W	466-9688	
4071	XXXX	00	
4078	STEPHENS C D	469-5670	
4081	BRUNNER RONALD	460-5151	+2
4085	HAGUE WM E JR	460-2745	9
4089	XXXX	00	
4096	RIVERA BEN N	697-9778	+2
4097	SERRANO DIONICIO	698-4140	+2
4104	MASSIE T WAYNE	463-4211	
4109	RAUBER RICHARD	466-3724	1
	RAUBER RICHARD CHLD	466-3788	+2
4111	XXXX	00	
4115	XXXX	00	
4117	XXXX	00	
4119	BELL ROBERT E	698-0907	1
4121	PALMER CORKY W	466-9551	1
4123	BALLOW JAMES	698-1313	1
4130	GARCIA SUZANNE	469-6422	7
4144	XXXX	00	
4148	GAETKE JAMES E	462-0151	8
	GAETKE JAS E	464-2908	8

CONRAD DR		92077 CONT	
4150	XXXX	00	
4154	GLASS ROBT F	464-6196	9
4156	XXXX	00	
4160	DOOLITTLE C	466-1334	
4163	ONEIL BERT W	461-6485	3
4167	XXXX	00	
4169	CLARKSON J	464-0636	9
4171	LEATHERS JOHN A JR	466-4422	
4173	HUYSER WARREN L	465-5047	
4175	JONATHAN CATHY	463-7037	1
	JONATHAN JAS	465-3175	
4177	SOUTH CST LNDSCPNG	461-7477	+2
4180	FULLER NELLIE I	466-7457	
4210	SCHREIBER DAVID M	466-3611	
4216	GREENE DWIGHT L	469-5811	+2
	MDR	469-5611	+2
	MOVING DAMAGE REPR	469-5811	+2
4255	HERRICK A L	460-9710	7
*	13 BUS 228 RES	85 NEW	

CONSTANCE DR 92115
SAN DIEGO

4603	DICK MANUEL GRPHC	284-6964	1
	MANUEL RICHARD E	284-4862	+2
4604	ZUCKER H	281-4073	6
4607	XXXX	00	
4614	XXXX	00	
4615	OLIVER JACK J	280-5984	9
4618	ISRAEL ANDREW G	283-0278	9
4619	BREUNINGER DANIEL	280-4075	1
4620	STAPP JEFF	284-9895	1
4623	XXXX	00	
4626	BRENES S F	283-8119	
4637	SCHECHTER LORENCE W	284-4300	
4638	XXXX	00	
4642	BLACKMON CLIFF	284-6393	
4643	WILSON JOHN M	284-2138	8
4654	HERSEY M E	283-7419	7
4659	XXXX	00	
4664	PESEK WILBERT G	281-3587	8
4665	KILGORE WM G JR	284-3620	
4703	XXXX	00	
4707	ULVESTAD A E	284-7762	
4710	XXXX	00	
4711	FONTENOT M	282 9863	0
4714	MATHIE MARION	280-7954	5
4719	GEHM CARL	280-5750	5
4720	XXXX	00	
4725	LINDERMAN F M LCDR	282-5115	
4728	XXXX	00	
4733	XXXX	00	
4742	XXXX	00	
4746	CLARY MONROE	284-0770	
4749	SCAFFIDI CARL A	280-6675	3
4752	XXXX	00	
4757	COCKING FLOYD W	284-7214	3
4758	KORANDER CHARLES H	282-2248	
4763	MARCHAND ERNEST L	283-8338	
4766	XXXX	00	
4771	DEWEESE DALL	284-6301	0
4775	MCCORD QUINN W	284-7705	4
4778	GONZALES P A	284-2055	0
4781	MOXLEY WAYNE M	282-3256	8
4787	XXXX	00	
*	1 BUS 41 RES	1 NEW	

CONSTANCIA WAY 92021
EL CAJON

1501	XXXX	00	
1502	DELGAUDIO JIMMY C	444-7388	6
1506	SLEIGHT HENRY	447-0430	6
1507	YAM CHHIN TEIN	447-7453	+2
1513	TJARKS ROGER C	447-7137	0
1518	XXXX	00	
1519	AUSTIN ROBT L	442-5997	0
1521	LESTER D J	440-1526	6
1522	REED EDWIN	444-0614	9
1526	WILLSON JOHN G	440-8217	7
1528	XXXX	00	
1529	XXXX	00	
1532	MILLER VIRG	442-7942	9
1533	OMERNICK C	579-7666	1
1534	XXXX	00	
1546	WILLARDSON M E	444-3553	0
1548	SALMU HIKMAT	440-8926	0
*	0 BUS 17 RES	1 NEW	

CONSTELLATION DR
92020 EL CAJON

11205	APPLEGATE J H	442-1039	5
11211	DOCKSTADER S	444-4335	1
11212	COLLETT RAY R	444-4585	
11219	XXXX	00	
11220	XXXX	00	
11227	DUEA DAVID J	440-4371	5
11228	SWANSON DANL C	444 1988	
11235	LUNDIN ARTHUF L	442-8722	
11236	XXXX	00	
11243	XXXX	00	
11244	XXXX	00	
11251	XXXX	00	
11252	TOMUCCIO J	447-9336	4
*	0 BUS 13 RES	0 NEW	

CONTINENTAL 92073
SAN YSIDRO

1330	WEISS PAUL D	690-3512	+2
1333	LOS NINOS	690-1437	1
1424	CTY SD BROWN FIELD	690-9369	1
*	1 BUS 2 RES	1 NEW	

CONTOUR BLVD 92115
SAN DIEGO

4505	ROMERO SANTOS	582 2859	
4509	THOMPSON A O	582 1810	8
4515	STRAW M	582-9150	+2
4517	XXXX	00	
4523	LINDBLOM M	583-9368	+2
4527	SMAL FRANK	583-5660	7
4533	ERLACHER DAN G	286-0067	+2
	KURTZ ANDREW	287-1730	1
	MCINTYRE F W	287-1730	1
	RESNICK MARION	582-2590	7
4541	CRAIL J W	287-8 71	1
4544	PSCHAIDA STEVEN	582 7741	+2
4545	ABRAMS PHILIP	582 4749	4
	PARKS L	286-29	0
	STEWART WM C SR	286 1847	+2
C	MALONE MARSHALL W	286-1 38	5
4517	GERHARD HARVEY	582-5020	8
4534	BISCHKE DAVID	583-9621	
4555	FLOREN E R	583-1449	
4563	CHACE RICHARD A	582-4348	
4564	DANIELS MNTNC	583-9125	+2
4567	CLUGSTON JOS W	582-0396	3
4575	REED REX A	583-2878	6
4577	OXLEY DAVID R	582-1359	
4589	BOYEE BRIDGETTE L	583-2103	+2
	CASON DUNCAN	287-4566	9
4592	GOMEZ ARTHUR A	582-0165	
4595	STE WHOFF RAY	582-1723	
4597	XXXX	00	
4803	BROWN B	265-0620	1
4509	ROLVER BRUCE E	583-0311	+2
4611	XXXX	00	
4613	JOHNSON L H	583-4292	9
4615	HENDERSON R M	583-9631	

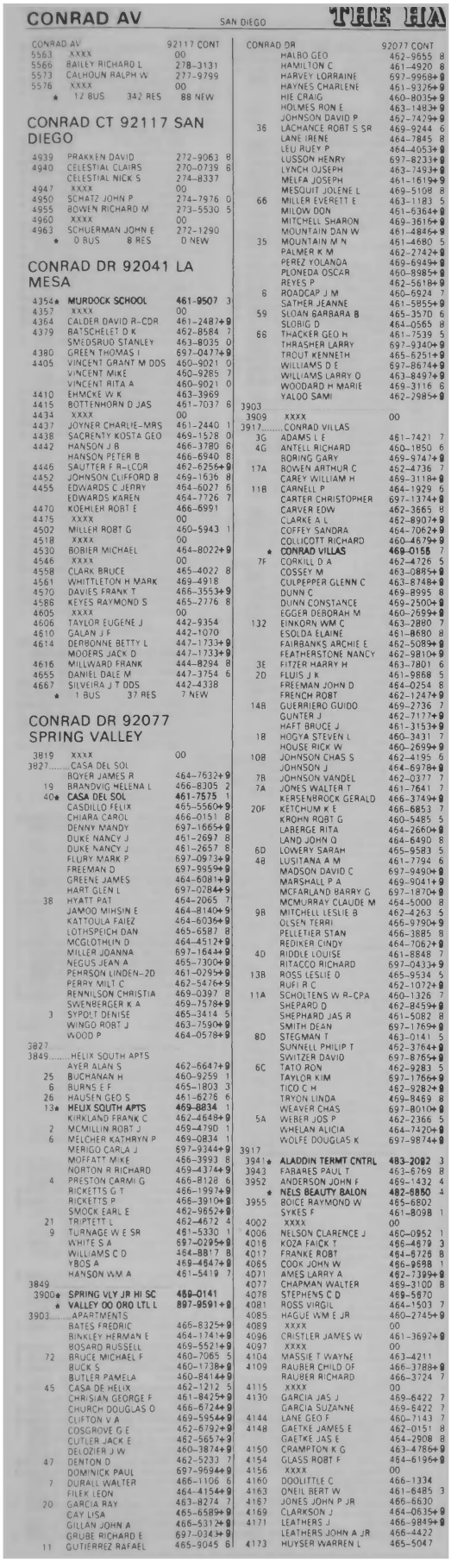
Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CAMPO RD 1979

9308	MCGUFFIN RICHARD L	466-0048
9318	ROBERTS CLAYTON O	466-3503
9322	MOSQUEDA PATRICK	462-2150+9
9332	STANDARD JAS L	469-3267 1
9333	PINCOTT DONALD	460-3905 2
	PINCOTT RICHARD	460-3905 2
9338	OVERGAAG HENRY	466-0120
9354	REINWAND RUSSELL L	466-8424
9362	BAKER CLIFF A	469-7524
9368	HOWARD HENRY L	697-0834+9
9400★	FAITH CHAPEL PRE SC	462-7100 5
★	ONE WAY INN	461-1929 4
9430	WARD V B	462-3662 8
9454	THAANUM P A MRS	460-5342
9520	CATLIN ROBT H	460-9884 8
9545	ENGEL A E	466-1242 5
★	HELIX SOUTH TENNIS	465-0155+9
9550	WATSO JOHN	460-7328+9
9558	TACOMA MICHAEL	460-8563 4
9564	RAUCH HERMAN S MD	463-9996
9566	LILLIE T W	466-6542 4
9600★	HAPPY HOMES REALTY	464-0269+9
★	L A AUTO LEASING	697-1702+9
★	OPERATION SAMAHAN	697-0197+9
9610★	FOSTERS FREEZE STRS	463-1232
9617★	HELIX COURT HOUSE	462-8330 5
9620★	STRATUS	697-8634+9
9621.....	BUILDING	
★	ASSOCTD PLUMBING	464-0089 7
★	CASA DE ORO BOOK ST	463-3048+9
★	CENTURY 21 MISTOWSK	465-8841+9
★	CENTURY 21 SP VLY	465-8841 8
★	GLAD RAGS	465-0312 4
★	GOLDFINGER	697-0474+9
★	JACOBSEN TAX&BUS SV	462-6242 6
★	MELTON CONSTRUCTION	462-3600 4
★	MISTOWSKI P&ASSCTS	468-8841 8
★	RANCHO SD TRVL	454-7425 8
★	SALON DE ELEGANCIA	465-6480 4
★	TAX BUSINESS SERV	462-5242 6
★	TAX&BUSINESS SERV	462-5160 8
★	TAYLOR WHATLEY&ASC	469-6167+9
★	WINFIELD TITLE INC	697-6096+9
9621		
9628.....	BUILDING	
★	BEAUTY WORLD	462-1693 7
★	BROWN F D ATTY	464-3822+9
★	CO SD BD SUPRV 2ND	464-5344+9
★	DONAHOO JAMES R DDS	461-7285 5
★	ELRANCHO REAL EST	461-4200 5
★	FARMR INS CASADEORO	464-2317 7
★	FARMR INS CASADEORO	464-2316 7
★	GEORGE LINDLEY SLS	697-9841+9
★	GLASER ENGINEERING	461-3131+9
★	HAWKINS VIC	464-2317 7
★	HAWKINS VIC	464-2316 7
★	LINDLEY G M SALES C	697-9841+9
★	LIVELY CONSTRUCTN	461-3131 0
★	LOVE RUSSELL DR	463-9318
★	POWERS MICHAEL DDS	463-9941 5
★	SD CO AGRICLTR SPRG	484-3971
★	SD CO LIBRARY CASA	463-3236
★	SD CO WGHTS&MEASRS	464-3971
★	SVALSTAD RONALD L	489-0197
★	UNITED FARM AGCY	462-3680+9
9628		
9631★	LAJOLLA FED SAVG&LN	461-8810 4
9660	XXXX	00
9663★	LOUS SHELL SERVICE	463-2111
★	SHELL OIL SPRNG VLY	463-2111 3
9664★	PIZZA HUT	469-2159 7
9665★	CASA DE ORO PHTGRHY	464-3986+9
★	OORDONS WINE CELLAR	466-5358+9
9676	XXXX	00
9679★	T G&Y ST SPRING VLY	469-3921 8

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CONRAD DR 1979



CONRAD AV SAN DIEGO

CONRAD AV 92117 CONT
5563 XXXX 00
5566 BAILEY RICHARD L 278-3131
5573 CALHOUN RALPH W 277-9799
5576 XXXX 00
★ 12 BUS 342 RES 88 NEW

CONRAD CT 92117 SAN DIEGO

4939 PRAKKEN DAVID 272-9063 8
4940 CELESTIAL CLAIRS 270-0739 6
CELESTIAL NICK S 274-8337
4947 XXXX 00
4950 SCHATZ JOHN P 274-7976 0
4955 BOWEN RICHARD M 273-5530 5
4960 XXXX 00
4963 SCHUERMAN JOHN E 272-1290
★ 0 BUS 8 RES 0 NEW

CONRAD DR 92041 LA MESA

4354★ MURDOCK SCHOOL 461-9507 3
4357 XXXX 00
4364 CALDER DAVID R-CDR 461-2487+9
4379 BATSCHELET D K 462-8584 7
SMEDSRUD STANLEY 463-8035 0
4380 GREEN THOMAS I 697-0477+9
4405 VINCENT GRANT M DDS 460-9021 0
VINCENT MIKE 460-9285 7
VINCENT RITA A 460-9021 0
4410 EHMCKE W K 463-3969
4415 BOTTENHORN D JAS 461-7037 6
4434 XXXX 00
4437 JOYNER CHARLIE-MRS 461-2440 1
4438 SACRENTY KOSTA GEO 469-1528 0
4442 HANSON J B 466-1780 6
HANSON PETER B 466-6940 8
4446 SAUTTER F R-LCDR 462-6256+9
4452 JOHNSON CLIFFORD B 469-1636 8
4455 EDWARDS C JERRY 464-6027 6
EDWARDS KAREN 464-7726 7
4470 KOEHLER ROBT E 466-6991
4475 XXXX 00
4502 MILLER ROBT G 460-5943 1
4518 XXXX 00
4530 BOBIER MICHAEL 464-8022+9
4546 XXXX 00
4558 CLARK BRUCE 465-4022 8
4561 WHITTLETON H MARK 469-4918
4570 DAVIES FRANK T 466-3553+9
4588 KEYES RAYMOND S 465-2776 8
4605 XXXX 00
4606 TAYLOR EUGENE J 442-9354
4610 GALAN J F 442-1070
4614 DEBONNE BETTY L 447-1733+9
MOORS JACK D 447-1733+9
4616 MILLWARD FRANK 444-8294 8
4655 DANIEL DALE M 447-3754 6
4667 SILVEIRA J T DDS 442-4338
★ 1 BUS 37 RES 7 NEW

CONRAD DR 92077 SPRING VALLEY

3819 XXXX 00
3827.....CASA DEL SOL
BOYER JAMES R 464-7632+9
19 BRANDVIG HELENA L 466-8305 2
40★ CASA DEL SOL 461-7575 1
CASDILLO FELIX 465-5560+9
CHIARA CAROL 466-0151 8
DENNY MANDY 697-1665+9
DUKE NANCY J 461-2697 8
DUKE NANCY J 461-2657 8
FLURY MARK P 697-0973+9
FREEMAN D 697-9959+9
GREENE JAMES 464-6081+9
HART GLEN L 697-0284+9
38 HYATT PAT 464-2065 7
JAMOO MIHSIN E 464-8140+9
KATTOULA FAIEZ 464-6036+9
LOTHSPEICH DAN 465-6587 8
MCGLOTHLIN D 464-4512+9
MILLER JOANNA 697-1644+9
NEGUS JEAN A 465-7300+9
PEHRSON LINDEN-2D 461-0295+9
PERRY MILT C 462-5476+9
RENNILSON CHRISTIA 469-0397 8
SWENBERGER K A 459-7578+9
3 SYPOLT DENISE 465-3414 5
WINGO ROBT J 463-7590+9
WOOD P 464-0578+9
3827
3849.....HELIX SOUTH APTS
AYER ALAN S 462-6647+9
25 BUCHANAN H 460-9259 1
6 BURNS E F 465-1803 3
26 HAUSEN GEO S 461-6276 6
13★ HELIX SOUTH APTS 469-8834 1
KIRKLAND FRANK C 462-4648+9
2 MCMILLIN ROBT J 469-4790 1
6 MELCHER KATHRYN P 469-0834 1
MERIGO CARLA J 697-9344+9
MOFFATT MIKE 466-3993 8
NORTON R RICHARD 469-4374+9
4 PRESTON CARMI G 466-8128 6
RICKETTS G T 466-1997+9
RICKETTS P 466-3910+9
SMOCK EARL E 462-9652+9
21 TRIPTETT L 462-4672 4
9 TURNAGE W E SR 461-5330 1
WHITE S A 697-0295+9
WILLIAMS C D 464-8817 8
YBOS A 469-4647+9
HANSON WM A 461-5419 7
3849
3900★ SPRING VLY JR HI SC 469-0141
★ VALLEY OO ORO LTL L 897-9591+9
3903.....APARTMENTS
BATES FREDRIC 466-8325+9
BINKLEY HERMAN E 464-1741+9
BOSARD RUSSELL 469-5521+9
72 BRUCE MICHAEL F 460-7065 5
BUCK S 460-1738+9
BUTLER PAMELA 460-8414+9
45 CASA DE HELIX 462-1212 5
CHRISIAN GEORGE F 461-8425+9
CHURCH DOUGLAS O 466-6724+9
CLIFTON V A 469-5954+9
COSGROVE G E 462-6792+9
CUTLER JACK E 462-5657+9
DELOZIER J W 460-3874+9
47 DENTON D 462-5233 7
DOMINICK PAUL 697-9694+9
7 DURALL WALTER 466-1106 6
FILEK LEON 464-4154+9
20 GARCIA RAY 463-8274 7
GAY LISA 465-6589+9
GILLAN JOHN A 466-5312+9
GRUBE RICHARD E 697-0343+9
11 GUTIERREZ RAFAEL 465-9045 6

CONRAD DR SAN DIEGO THE HA

CONRAD DR 92077 CONT
HALBO GEO 462-9555 8
HAMILTON C 461-4920 8
HARVEY LORRAINE 697-9968+9
HAYNES CHARLENE 461-9326+9
HIE CRAIG 460-8035+9
HOLMES RON E 463-1483+9
JOHNSON DAVID P 462-7429+9
36 LACHANCE ROBT S SR 469-9244 6
LANE IRENE 464-7845 8
LEU RUEY P 464-4053+9
LUSSON HENRY 697-8233+9
LYNCH OJSEPH 463-7493+9
MELFA JOSEPH 461-1619+9
MESQUIT JOLENE L 469-5108 8
66 MILLER EVERETT E 463-1183 5
MILOW DON 461-6364+9
MITCHELL SHARON 469-3616+9
MOUNTAIN DAN W 461-4846+9
35 MOUNTAIN M N 461-4680 5
PALMER K M 462-2742+9
PEREZ YOLANDA 469-6949+9
PLONEDA OSCAR 460-8985+9
REYES P 462-5618+9
6 ROADCAP J M 460-6924 7
SATHER JEANNE 461-5855+9
59 SLOAN BARBARA B 465-3570 6
SLOBIG D 464-0565 8
66 THACKER GEO H 461-7539 5
THRASHER LARRY 697-9340+9
TROUT KENNETH 465-6251+9
WILLIAMS D E 697-8674+9
WILLIAMS LARRY O 463-8497+9
WOODARD H MARIE 469-3116 6
YALOO SAMI 462-2985+9
3903
3909 XXXX 00
3917.....CONRAD VILLAS
3G ADAMS L E 461-7421 7
4G ANTELL RICHARD 460-1850 6
BORING GARY 469-9747+9
17A BOWEN ARTHUR C 462-4736 7
CAREY WILLIAM H 469-3118+9
11B CARNELL P 464-1929 6
CARTER CHRISTOPHER 697-1374+9
CARVER EDW 462-3665 8
CLARKE A L 462-8907+9
COFFEY SANDRA 464-7062+9
COLLICOTT RICHARD 460-4679+9
★ CONRAD VILLAS 469-0155 7
7F CORKILL D A 462-4726 5
COSSEY M 463-0885+9
CULPEPPER GLENN C 463-8748+9
DUNN C 469-8995 8
DUNN CONSTANCE 469-2500+9
EGGER DEBORAH M 460-2699+9
132 EINKORN WM C 463-2880 7
ESOLDA ELAINE 461-8680 8
FAIRBANKS ARCHIE E 462-5089+9
FEATHERSTONE NANCY 462-9810+9
3E FITZER HARRY H 463-7801 6
2D FLUIS J K 461-9868 5
FREEMAN JOHN D 464-0254 8
FRENCH ROBT 462-1247+9
14B GUERRIERO GUIDO 469-2736 7
GUNTER J 462-7177+9
HAFT BRUCE J 461-3153+9
18 HOGYA STEVEN L 460-3431 7
HOUSE RICK W 460-2699+9
108 JOHNSON CHAS S 462-4195 6
JOHNSON J 464-6978+9
7B JOHNSON VANDEL 462-0377 7
7A JONES WALTER T 461-7641 7
KERSENBROCK GERALD 466-3749+9
20F KETCHUM K E 466-6853 7
KROHN ROBT G 460-5485 5
LABERGE RITA 464-2660+9
LAND JOHN Q 464-6490 8
6D LOWERY SARAH 465-9583 5
4B LUSITANA A M 461-7794 6
MADSON DAVID C 697-9490+9
MARSHALL P A 469-9041+9
MCFARLAND BARRY G 697-1870+9
MCMURRAY CLAUDE M 464-5000 8
9B MITCHELL LESLIE B 462-4263 5
OLSEN TERRI 466-9790+9
PELLETIER STAN 466-3885 8
REDIKER CINDY 464-7062+9
4D RIDDLE LOUISE 461-8848 7
RITACCO RICHARD 697-0433+9
13B ROSS LESLIE D 465-9534 5
RUFI R C 462-1072+9
11A SCHOLTENS W R-CPA 460-1326 7
SHEPARD D 462-8459+9
SHEPHARD JAS R 461-5082 8
SMITH DEAN 697-1769+9
8D STEGMAN T 463-0141 5
SUNNELL PHILIP T 462-3764+9
SWITZER DAVID 697-8765+9
6C TATO RON 462-9283 5
TAYLOR KIM 697-1766+9
TICO C H 462-9282+9
TRYON LINDA 459-9469 8
WEAVER CHAS 697-8010+9
5A WEBER JOS P 462-2366 5
WHELAN ALICIA 464-7420+9
WOLFE DOUGLAS K 697-9874+9
3917
3941★ ALADDIN TERMT CNTRL 483-2082 3
3943 FARARES PAUL T 463-5769 8
3952 ANDERSON JOHN F 469-1432 4
★ NELS BEAUTY BALON 482-6850 4
3955 BOICE RAYMOND W 465-6802
SYKES F 461-8098 1
4002 XXXX 00
4006 NELSON CLARENCE J 460-0952 1
4016 KOZA FAICK T 465-4679 3
4017 FRANKE ROBT 464-6726 8
4065 COOK JOHN W 466-9698 1
4071 AMES LARRY A 462-7399+9
4077 CHAPMAN WALTER 469-3100 8
4078 STEPHENS C D 469-5670
4081 ROSS VIRGIL 464-1503 7
4085 HAGUE WM E JR 460-2745+9
4089 XXXX 00
4096 CRISTLER JAMES W 461-3692+9
4097 XXXX 00
4104 MASSIE T WAYNE 463-4211
4109 RAUBER CHILD OF 466-3788+9
RAUBER RICHARD 466-3724 7
4115 XXXX 00
4130 GARCIA JAS J 469-6422 7
GARCIA SUZANNE 469-6422 7
4144 LANE GEO F 460-7143 7
4148 GAETKE JAMES E 462-0151 8
GAETKE JAS E 464-2908 8
4150 CRAMPTON K G 463-4786+9
4154 GLASS ROBT F 464-6196+9
4156 XXXX 00
4160 DOOLITTLE C 466-1334
4163 ONEIL BERT W 461-6485 3
4167 JONES JOHN P JR 466-6630
4169 CLARKSON J 464-0635+9
4171 LEATHERS J 466-9849+9
LEATHERS JOHN A JR 466-4422
4173 HUYSER WARREN L 465-5047

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-	✓	Haines Criss-Cross Directory

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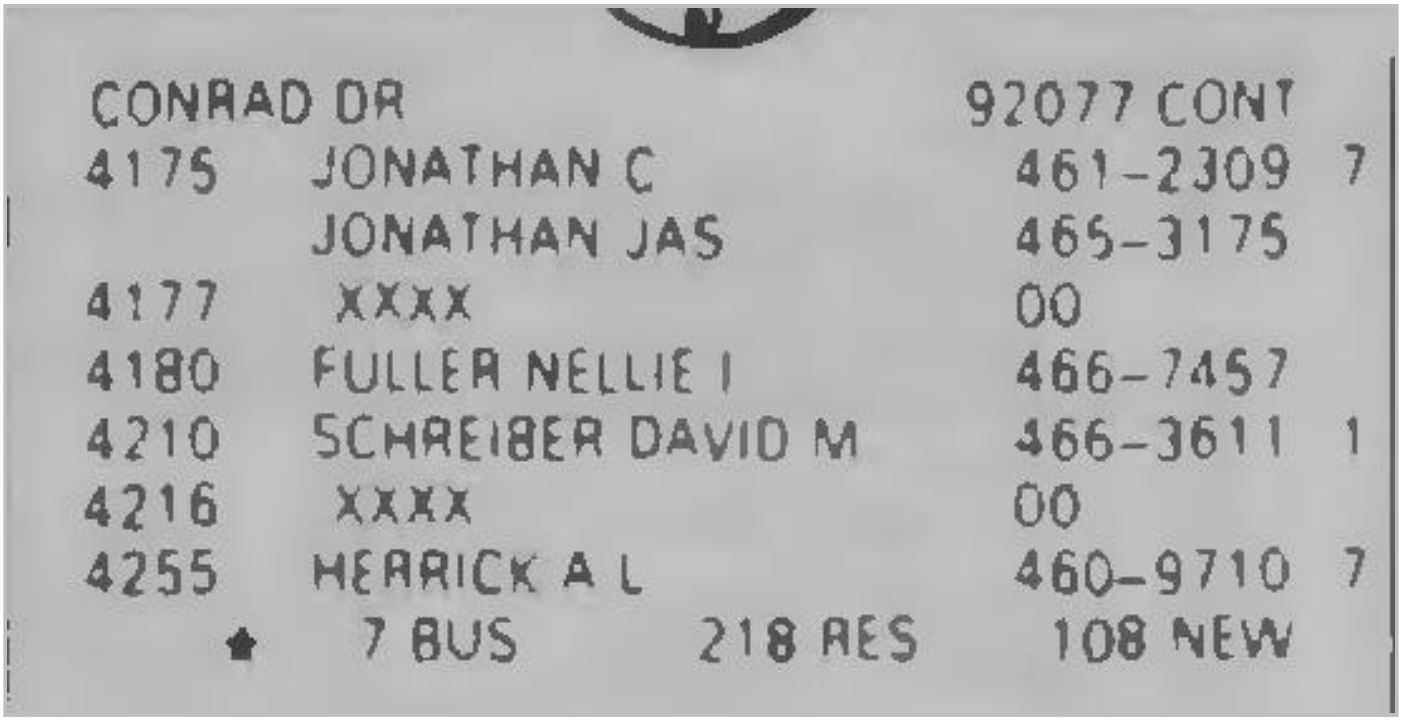

CONRAD DR 92077 CONT

4175	JONATHAN C	461-2309	7
	JONATHAN JAS	465-3175	
4177	XXXX	00	
4180	FULLER NELLIE I	466-7457	
4210	SCHREIBER DAVID M	466-3611	1
4216	XXXX	00	
4255	HERRICK A L	460-9710	7

★ 7 BUS 218 RES 108 NEW

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9308 MCGUFFIN RICHARO L 466-D048
9318 ROBERTS CLAYTON O  466-3503
9322 PASQUIER PETE      466-3046
9332 STANOARD JAS L     469-3267 1
9333 PINCOTT OONALO     46D-3905 2
     PINCOTT RICHARD    460-3905 2
9338 OVERGAAG HENRY     466-D12D
9354 REINWAND RUSSELL L 466-8424
9362 BAKER CLIFF A      469-7524
9368  XXXX              OO
94DD*FAITH CHAPEL PRE SC462-7100+5
    *ONE WAY INN        461-1929 4
9454 THAANUM P A MRS    460-5342
952D GORDON OIANE       462-3177+5
9545 ENGEL A E          466-1242+5
    *HELIX SO TENNIS CL8465-D155+5
9550*JAMUL PLASTERING    46D-4555+5
9558 TACOMA MICHAEL     46D-8563 4
9564 RAUCH HERMAN S MO  463-9996
9566*EXPERNCE IT CAREERS466-4169 4
     LILLIE T W         466-6542 4
96DD*PHILLIPS FRANK L OR460-8464+5
961D*FOSTERS FREEZE STRS463-1232
9617*HELIX COURT HOUSE  462-8330+5
962D*SHOWCASE CINEMA    46D-9781+5
9621*BOUTIQUE OE ELEGNCA462-3500 4
    *C S C CO           463-4416+5
    *CENTURY 21         465-8841+5
    *CENTURY 21 MISTWSKI465-8841+5
    *GLAO RAGS          465-0312 4
    *MELTON CONSTRUCTION462-360D 4
    *MISTOWSKI&ASSOC    465-8841+5
    *PENNYS HAIR STYLING465-848D 4
    *SALON OE ELEGANCIA 465-8480 4
    *SUNFLOWER GALLERY  462-569D 4
9628....BUILDING
    *BIG D CONSTRUCTION 465-985D+5
    *CAHN MERRILL OR    461-731D+5
    *CASA DEORO CAR WASH469-D198
    *CASA OEORO CO LIBRY463-3236
    *OONAHOO JAMES R OOS461-7285+5
    *EL RANCHO REAL EST 461-4200+5
    *FARMERS INS GROUP  460-0532 4
    *FARMERS INSURANCE  460-0547+5
    *FOTOMAT CORPORATION462-3121 4
    *HAWKINS VIC        460-D547+5
    *JACOBSEN PHILIP H  465-7777+5
    *LOVE RUSSELL OR    463-9318
    *MAGUIRE M N        465-7777+5
    *POWERS MICHAEL OOS 463-9941+5
    *RICHAROS BILL      460-0532+5
    *SD CO LIBRARY      463-3236
    *SO CO PUBLIC WELFRE462-3411 4
    *WILSON J H REALTOR 463-66D1+5
   A*SVALSTAO RONALD L  469-0197
   G*LIVELY CONSTRUCTN  461-3131 0
   K*MONGRAIN R H OR    463-71DD
   V*POSTULKA DEWAYNE   465-985D 4
9628.....................
9631*LAJOLLA FED SVGS&LN461-8810 4
9660  XXXX              OO
9663*LOUS SHELL SERVICE 463-2111
    *SHELL SERV STN OLRS463-2111 3
9665*MAYFAIR MARKETS    463-0264
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Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CONRAD DR 1975

CONRAD DR 92077 SPRING VLY

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 3819  XXXX                        00
3827....CASA OEL SOL
  19   BRANDVIG HELENA L          466-8305 2
       BUCHANAN RANDALL           462-6461+5
  10 *CASA OEL SOL                461-7575 1
       DAVIS S J                  463-2454+5
       EVANS LINDA A              462-2847+5
       GERARD LARRY O             465-2491+5
       GERARD MERLE NURSE         466-1275+5
       HERMISTON MICHAEL          462-2847+5
  13   HIBBARD RICHARD O          466-4014 4
       JUNKER DAVID J             461-2935+5
  31   MARTINEZ SOPHIA            461-5110 3
       MCGRIEVY J M               462-1970+5
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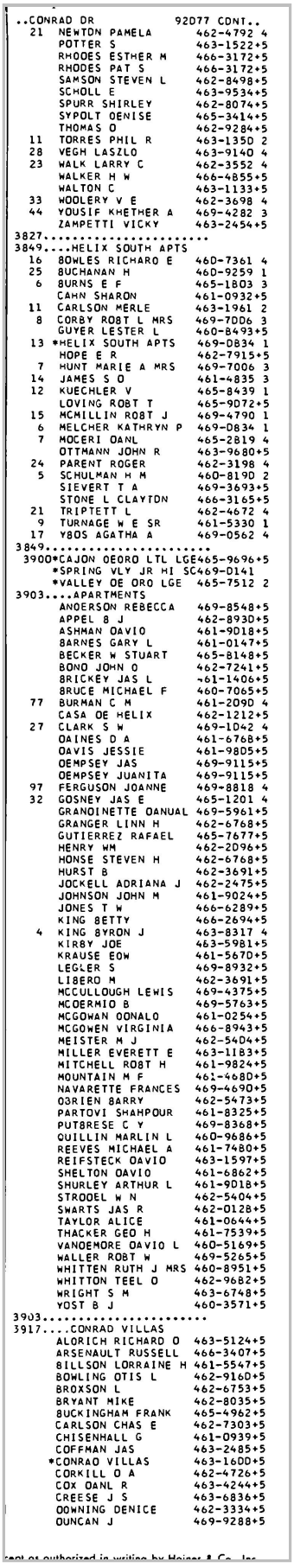

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21 NEWTON PAMELA 462-4792 4
POTTER S 463-1522+5
RHODES ESTHER M 466-3172+5
RHODES PAT S 466-3172+5
SAMSON STEVEN L 462-8498+5
SCHOLL E 463-9534+5
SPURR SHIRLEY 462-8074+5
SYPOLT OENISE 465-3414+5
THOMAS O 462-9284+5
11 TORRES PHIL R 463-135D 2
28 VEGH LASZLO 463-9140 4
23 WALK LARRY C 462-3552 4
WALKER H W 466-4B55+5
WALTON C 463-1133+5
33 WOOLERY V E 462-3698 4
44 YOUSIF KHETHER A 469-4282 3
ZAMPETTI VICKY 463-2454+5
3827.....
3849....HELIX SOUTH APTS
16 BOWLES RICHARD E 46D-7361 4
25 BUCHANAN H 46D-9259 1
6 BURNS E F 465-1B03 3
CAHN SHARON 461-0932+5
11 CARLSON MERLE 463-1961 2
8 CORBY ROBT L MRS 469-7DD6 3
GUYER LESTER L 460-8493+5
13 *HELIX SOUTH APTS 469-DB34 1
HOPE E R 462-7915+5
7 HUNT MARIE A MRS 469-7006 3
14 JAMES S O 461-4835 3
12 KUECHLER V 465-8439 1
LOVING ROBT T 465-9D72+5
15 MCMILLIN ROBT J 469-4790 1
6 MELCHER KATHRYN P 469-DB34 1
7 MOCERI OANL 465-2819 4
OTTMANN JOHN R 463-9680+5
24 PARENT ROGER 462-3198 4
5 SCHULMAN H M 460-819D 2
SIEVERT T A 469-3693+5
STONE L CLAYTON 466-3165+5
21 TRIPTETT L 462-4672 4
9 TURNAGE W E SR 461-5330 1
17 YBOS AGATHA A 469-0562 4
3849.....
3900*CAJON OEORO LTL LGE465-9696+5
*SPRING VLY JR HI SC469-0141
*VALLEY OE ORO LGE 465-7512 2
3903....APARTMENTS
ANOERSON REBECCA 469-8548+5
APPEL B J 462-893D+5
ASHMAN OAVIO 461-9D18+5
BARNES GARY L 461-0147+5
BECKER W STUART 465-8148+5
BONO JOHN O 462-7241+5
BRICKEY JAS L 461-1406+5
BRUCE MICHAEL F 460-7065+5
77 BURMAN C M 461-209D 4
CASA OE HELIX 462-1212+5
27 CLARK S W 469-1D42 4
OAINES D A 461-6768+5
OAVIS JESSIE 461-98D5+5
OEMPSEY JAS 469-9115+5
OEMPSEY JUANITA 469-9115+5
97 FERGUSON JOANNE 469-8818 4
32 GOSNEY JAS E 465-1201 4
GRANOINETTE OANUAL 469-5961+5
GRANGER LINN H 462-6768+5
GUTIERREZ RAFAEL 465-7677+5
HENRY WM 462-2D96+5
HONSE STEVEN H 462-6768+5
HURST B 462-3691+5
JOCKELL ADRIANA J 462-2475+5
JOHNSON JOHN M 461-9024+5
JONES T W 466-6289+5
KING BETTY 466-2694+5
4 KING BYRON J 463-8317 4
KIRBY JOE 463-5981+5
KRAUSE EOW 461-567D+5
LEGLER S 469-8932+5
LIBERO M 462-3691+5
MCCULLOUGH LEWIS 469-4375+5
MCOERMIO B 469-5763+5
MCGOWAN OONALO 461-0254+5
MCGOWEN VIRGINIA 466-8943+5
MEISTER M J 462-54D4+5
MILLER EVERETT E 463-11B3+5
MITCHELL ROBT H 461-9824+5
MOUNTAIN M F 461-468D+5
NAVARETTE FRANCES 469-469D+5
OBRIEN BARRY 462-5473+5
PARTOVI SHAHPOUR 461-8325+5
PUTBRESE C Y 469-8368+5
QUILLIN MARLIN L 460-9686+5
REEVES MICHAEL A 461-74B0+5
REIFSTECK OAVIO 463-1597+5
SHELTON OAVIO 461-6862+5
SHURLEY ARTHUR L 461-9D18+5
STROOEL W N 462-5404+5
SWARTS JAS R 462-0128+5
TAYLOR ALICE 461-0644+5
THACKER GEO H 461-7539+5
VANOEMORE OAVIO L 460-5169+5
WALLER ROBT W 469-5265+5
WHITTEN RUTH J MRS 460-8951+5
WHITTON TEEL O 462-96B2+5
WRIGHT S M 463-6748+5
YOST B J 460-3571+5
3903.....
3917....CONRAD VILLAS
ALORICH RICHARD O 463-5124+5
ARSENAULT RUSSELL 466-3407+5
BILLSON LORRAINE H 461-5547+5
BOWLING OTIS L 462-916D+5
BROXSON L 462-6753+5
BRYANT MIKE 462-8035+5
BUCKINGHAM FRANK 465-4962+5
CARLSON CHAS E 462-7303+5
CHISENHALL G 461-0939+5
COFFMAN JAS 463-2485+5
*CONRAO VILLAS 463-16DD+5
CORKILL O A 462-4726+5
COX OANL R 463-4244+5
CREESE J S 463-6836+5
OOWNING DENICE 462-3334+5
OUNCAN J 469-9288+5

...ept as authorized in writing by Haines & Co., Inc.

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CONRAD DR 1975

..CONRAO DR 92077 CONT..

EARLY JACQUELINE 465-2567+5
FELTS THOS W WO 469-4889+5
FERGUSON 8ILL 462-2616+5
FIELOS S R 460-8986+5
FLUIS J K 461-9868+5
FOSS HELEN C 462-6995+5
GOERTEMILLER D 461-0396+5
GRAFF ALEX A 465-6318+5
HALVORSON R SETH 462-3521+5
HARTIG C A 462-8193+5
HEL8ERT MATT R 462-7125+5
HUNTER HOWARO L 465-7730+5
INGRAM NED D 465-8535+5
JESSUP STEVEN C 465-5641+5
JOHNSON VANDEL 462-0377+5
KELSEY MELVIN JR 462-4187+5
KENNEOY 8ILL 469-7340+5
KROHN RO8T G 460-5485+5
LAM8 NANCY 465-9744+5
LE8Ow J M MRS 461-6554+5
LEGG S OALE 466-3088+5
LEWIS R J 469-8703+5
LONG LAROYE 460-2392+5
LOWERY SARAH 465-9583+5
LUPIOI MICHAEL 462-2143+5
MAURICE PHIL 463-3770+5
MCGRAW 8LANCHE C 460-7353+5
MERIA 8AR8ARA 465-2567+5
MESHOK LIANE 462-7868+5
METHENITIS TIMOTHY 462-4828+5
MITCHELL LESLIE 8 462-4263+5
MITTEER P 469-9288+5
MOEN LYNOA 461-8621+5
MOEN RO8T C 461-8621+5
NASIF RALPH 462-0377+5
NUNNELEE THOS J 460-3036+5
OQUIN MICHAEL O 462-9138+5
PATTEN JAS 469-5892+5
PIERCE JOHN 461-3145+5
PINEDA JOS C JR 462-3041+5
RAMIREZ EDw 8 JR 465-2482+5
RAMIREZ RAMIRO 462-2328+5
ROLL STEVEN 466-6344+5
ROSS LESLIE D 465-9534+5
SANTURRO JOS 461-9371+5
STARR E T 463-2485+5
STEGMAN T 463-0141+5
TATO RON 462-9283+5
TAYLOR RO8T E 462-3174+5
THOMAS TOMI 462-8875+5
WALLACE C 469-8417+5
WE8ER JOS P 462-2366+5
WHITE RU8Y J 460-7353+5

3917.....

3941 *ALADOIN TERMT CNTRL 463-2092 3
LENICHEK HAROLO J 463-0167 4
3943 8RUNJE JOHN 461-2069 3
3952 ANOERSON JOHN F 469-1432 4
*NELS 8EAUTY SALON 462-5850 4
3955 8OICE RAYMCND W 465-6802
SYKES F 461-8098 1
4002 WOODARD JEAN MRS 465-5405+5
4006 NELSON CLARENCE J 460-0952 1
4016 KOZA FAICK T 466-4679 3
4017 FRANKE RO8T 463-9664 3
4025 DAINES OUANE C 466-4792
4044 XXXX 00
4053 GENTILE GARY M 465-5330 3
4056 XXXX 00
4064 GIESSER ART 461-4171+5
4065 COOK JOHN W 466-9688 1
4078 STEPHENS OAVIO 469-5670
4097 XXXX 00
4104 MASSIE T WAYNE 463-4211
4115 LANTAU ARTHUR 460-1273
VICK DAN E 462-5529+5
4144 XXXX 00
4150 XXXX 00
4154 HONAN JAS E 469-4243+5
4156 XXXX 00
4160 DOOLITTLE C 466-1334
4163 ONEIL 8ERT W 461-6485 3
4167 JONES JOHN P JR 466-6630
4171 LEATHERS JOHN A JR 466-4422
4173 HUYSER WARREN L 465-5047
4175 JONATHAN JAS 465-3175
4177 SHETLER SUZANNE L 461-0375 1
4180 FULLER NELLIE I 466-7457
4210 SCHREI8ER OAVID M 466-3611 1
4216 GOOWIN MARY E 463-2160
GOOWIN MARY E TEEN 463-0500 4
* 8 8US 213 RES 153 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CAMPO RD 1971

```
9201*RUSSELL LUKE PLMBNG465-4900 0
    *RUSSELL SP VLY LMBR465-4900
    *RUSSELLS PLUMBING  465-4900 0
    *SPPING VL LMBP&HCHR465-4900
9204 YALE EUGENE P      460-2376 0
9212 ASHLEY LOUISE H    460-1239+1
9220 SULLIVAN GEO C     469-4891
9228  XXXX              00
9235 POLUS JOHN         456-8572
9239 JAMES MICHAEL E    463-7292+1
     PHILLIPS R L       460-9564 0
     PULLEY WM E JR     461-3866+1
     SCHLICHTE JOS &    466-6056
    *SPRING VLY BTY SLN 466-6056
9251 MACIAS ALBEPT C    465-0742
9252 COLGATE ZELLA W    463-3954
9260 ORTEGA JOSE M      469-4003
9269 WHITE S P          466-0353
9276 PARKER RICHARO J   466-3860
9279 BAKER EDW O        461-7431+I
     LAFORTUNE ANNA     463-1722+1
    *SUNGOLD KENNELS    463-1722
5284 MOLINOSKI FRANCIS  463-3891
9288 CAPOZZOLI VINCENT  469-3127
9290 MILLER LEPOY I     460-4497+1
9292 ROMAN LOUIS        463-2786
9308 MCGUFFIN RICHARD L 466-0048
9318 ROBEPTS CLAYTON O  466-3503
9322 PASQUIER PETE      466-3046
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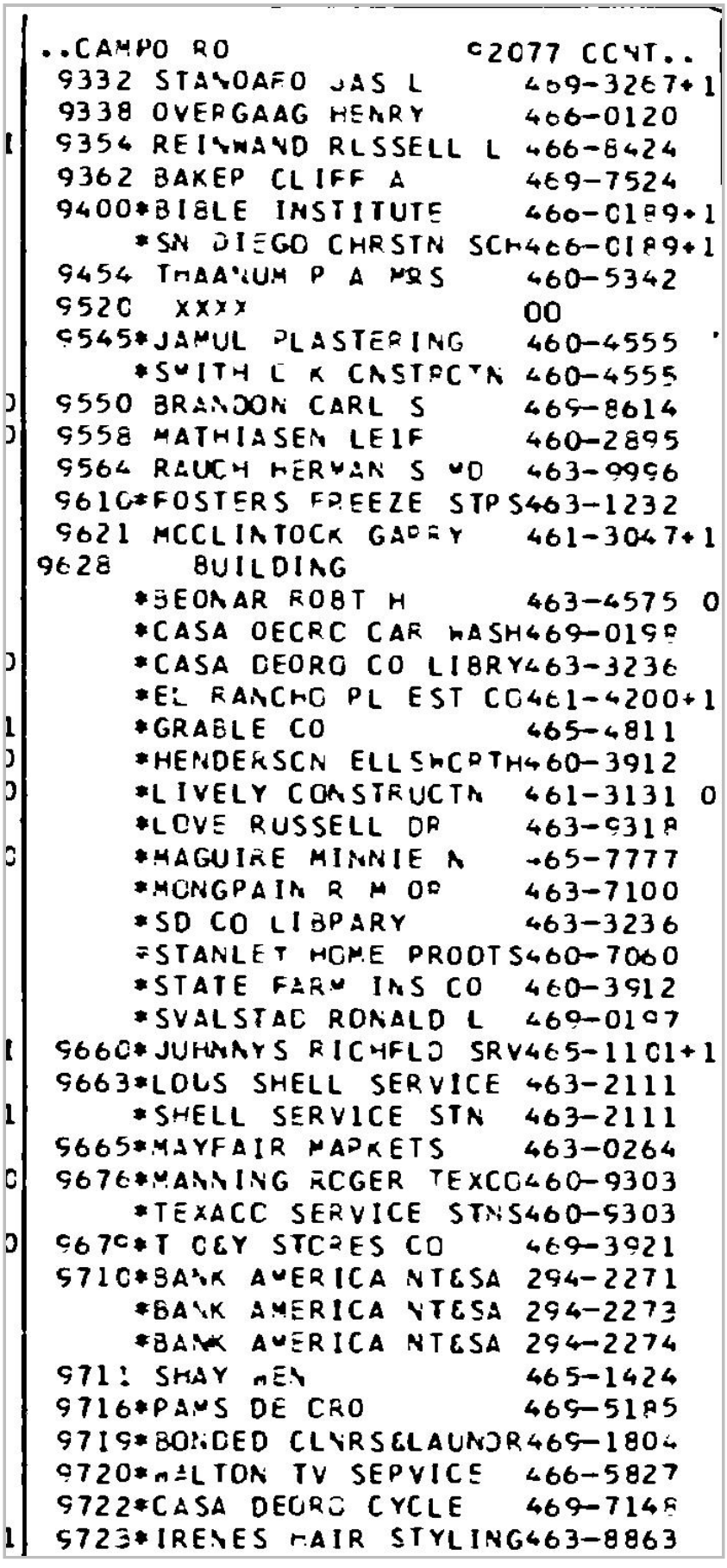
Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CAMPO RD 1971



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..CAMPO RO                ©2077 CCNT..
 9332 STANOARO JAS L       469-3267+1
 9338 OVERGAAG HENRY       466-0120
 9354 REINWAND RLSSELL L   466-8424
 9362 BAKER CLIFF A        469-7524
 9400*BIBLE INSTITUTE      466-0189+1
     *SN DIEGO CHRSTN SCH  466-0189+1
 9454 THAANUM P A MRS      460-5342
 9520  XXXX                00
 9545*JAMUL PLASTERING     460-4555
     *SMITH C K CNSTRCTN   460-4555
 9550 BRANDON CARL S       469-8614
 9558 MATHIASEN LEIF       460-2895
 9564 RAUCH HERMAN S MD    463-9996
 9610*FOSTERS FREEZE STP S463-1232
 9621 MCCLINTOCK GARRY     461-3047+1
9628    BUILDING
     *BEONAR ROBT H        463-4575 0
     *CASA OECRC CAR WASH  469-0198
     *CASA DEORO CO LIBRY  463-3236
     *EL RANCHO PL EST CO  461-4200+1
     *GRABLE CO            465-4811
     *HENDERSCN ELLSWORTH  460-3912
     *LIVELY CONSTRUCTN    461-3131 0
     *LOVE RUSSELL DR      463-9318
     *MAGUIRE MINNIE N     465-7777
     *MONGPAIN R M OR      463-7100
     *SD CO LIBRARY        463-3236
     *STANLEY HOME PRODTS  460-7060
     *STATE FARM INS CO    460-3912
     *SVALSTAD RONALD L    469-0197
 9660*JUHNNYS RICHFLD SRV  465-1101+1
 9663*LOUS SHELL SERVICE   463-2111
     *SHELL SERVICE STN    463-2111
 9665*MAYFAIR MARKETS      463-0264
 9676*MANNING ROGER TEXCO  460-9303
     *TEXACO SERVICE STNS  460-9303
 9679*T C&Y STORES CO      469-3921
 9710*BANK AMERICA NT&SA   294-2271
     *BANK AMERICA NT&SA   294-2273
     *BANK AMERICA NT&SA   294-2274
 9711 SHAY MEN             465-1424
 9716*PAMS DE CRO          469-5185
 9719*BONDED CLNRS&LAUNDR  469-1804
 9720*MELTON TV SERVICE    466-5827
 9722*CASA DEORO CYCLE     469-7148
 9723*IRENES HAIR STYLING  463-8863
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Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CONRAD DR 1971

CONRAD DR 92077 SPRING VLY

3819	COLOMBO MICHAEL S	461-4369+1
3827	APARTMENTS	
	BAUER MICHAEL C	461-5140+1
	BOTTICELLI JOS A	469-4527+1
	*CASA DEL SOL	461-7575+1
	DORTON JIMMY	463-8595+1
	HUGHES DAVID K	463-6921+1
	INMAN K S	461-5845+1
	LAPRADE ROBT R	469-1226+1
	MILLER PATRICIA A	461-4408+1
	MOURNING BEVERLY	460-6587+1
	PIEKUNKA CHARLOTTE	461-2598+1
	REID C L	461-8579+1
	WINN WALTER P	461-5204+1
3849	HELIX SOUTH APTS	
	ANDERSON LYN L	461-5283+1
	BENGE HUBERT J	466-9192+1
	BUCHANAN H	460-9259+1
	BURTON JOHN S	469-1629+1
	DENNY FRANK	463-4364+1
	FRANK RONALD L	461-5083+1
	GIVENS HOWARD W	469-8302+1
	*HELIX SOUTH APTS	469-0834+1
	KUECHLER V	465-8439+1

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CONRAD DR 1971

..CONRAD DR 92077 CONT..

	MARTIN JACQUELINE	469-4825+1
	MCMILLIN ROBT J	469-4790+1
	MCMULLEN JOHN W	460-2654+1
	MELCHER KATHRYN P	469-0834+1
	MILLHOLLAN WM W	461-5974+1
	PIERCE ELIOT N	461-4715+1
	ROBERTS RUSSELL W	460-1859+1
	ROBINSON JILL	461-6323+1
	SHEFFIELD JOE JR	466-1504+1
	TURNAGE W E SR	461-5330+1
	VANBENTHUYSEN THOS	460-7910+1
3900*	SPRING VLY JR HI SC	469-0141
3943	OCONNELL GROVER J	469-8984
3955	BOICE RAYMOND W	465-6802
	SYKES F	461-8098+1
4002	SHANKS WM L	469-8709
4006	NELSON CLARENCE J	460-0952+1
4016	FOSTER COLLEEN	469-7252
	FOSTER DANNY	469-7252
	FOSTER JULIE	469-7252
	FOSTER MARVIN L	466-1083
4017	ECKHART PAUL A	463-3638
4025	CAINES DUANE C	466-4792
4044	MCCUNE HARRY A JR	461-5081+1
4053	SHALGM JOHN	466-7673
4056	XXXX	OD
4064	SHEN SAML P H	465-3698 O
	SHEN SAMUEL	460-5530
4065	COOK JOHN W	466-9688+1
4078	STEPHENS DAVID	469-5670
4097	GODDARD PETER C	466-8453
	STREP S J	466-8453
4104	MASSIE T WAYNE	463-4211
4115	LANTAU ARTHUR	460-1273
4144	MCINTIRE JAS J	461-5992+1
4150	HOLLISTER ROLLIN J	466-8000
4156	ANDREWS L A JR	460-9782
	ANDREWS LINDA L	460-9782
4160	CODLITTLE C	466-1334
4163	LANDGRAF JOHN L	469-0306
	LANDGRAF MARJORIE	469-0306
4167	JONES JOHN P JR	466-6630
4171	LEATHERS JOHN A JR	466-4422
4173	HUYSER WARREN L	465-5047
4175	JONATHAN JAS	465-3175
4177	SHETLER SUZANNE L	461-0375+1
4180	FULLER NELLIE I	466-7457
4210	SCHREIBER DAVID W	466-3611+1
4216	GODWIN MARY E	463-2160
	GODWIN MARY CHLDRN	469-1212+1

* 3 BUS 69 RES 41 NEW

National Flood Hazard Layer FIRMette

FEMA

116°59'43"W 32°45'10"N



116°59'6"W 32°44'40"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/27/2020 at 11:35 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Casa Del Oro Library
9610 Campo Rd
Spring Valley, CA 91977

Inquiry Number: 6160544.4
August 18, 2020

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

08/18/20

Site Name:

Casa Del Oro Library
9610 Campo Rd
Spring Valley, CA 91977
EDR Inquiry # 6160544.4

Client Name:

Michael Baker International
14725 Alton Parkway
Irvine, CA 92618
Contact: Danielle Regimbal

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Michael Baker International were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA

Project: Casa del Oro Library

Coordinates:

Latitude:	32.74865 32° 44' 55" North
Longitude:	-116.990147 -116° 59' 25" West
UTM Zone:	Zone 11 North
UTM X Meters:	500923.03
UTM Y Meters:	3623422.86
Elevation:	438.58' above sea level

Maps Provided:

2012	1947
1994, 1996	1942, 1943
1991	1939
1975	1903
1967, 1971	1901, 1903, 1904
1955	1893
1953, 1955	
1948	

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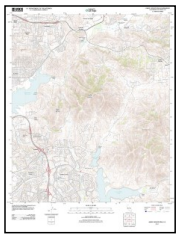
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



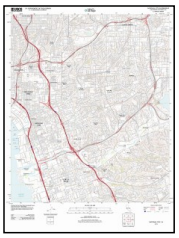
Jamul Mountains
2012
7.5-minute, 24000



El Cajon
2012
7.5-minute, 24000

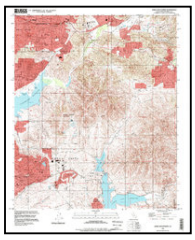


La Mesa
2012
7.5-minute, 24000



National City
2012
7.5-minute, 24000

1994, 1996 Source Sheets



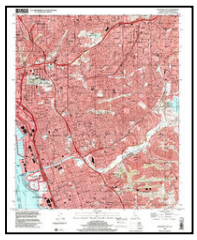
Jamul Mountains
1994
7.5-minute, 24000
Aerial Photo Revised 1994



La Mesa
1994
7.5-minute, 24000
Aerial Photo Revised 1994



El Cajon
1996
7.5-minute, 24000

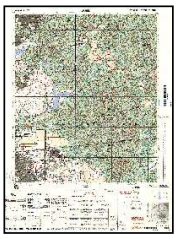


National City
1996
7.5-minute, 24000
Aerial Photo Revised 1996

1991 Source Sheets



SAN DIEGO
1991
15-minute, 50000

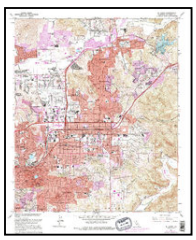


JAMUL
1991
15-minute, 50000

1975 Source Sheets



Jamul Mountains
1975
7.5-minute, 24000
Aerial Photo Revised 1975



El Cajon
1975
7.5-minute, 24000
Aerial Photo Revised 1953



La Mesa
1975
7.5-minute, 24000
Aerial Photo Revised 1975

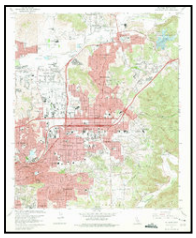


National City
1975
7.5-minute, 24000
Aerial Photo Revised 1975

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1967, 1971 Source Sheets



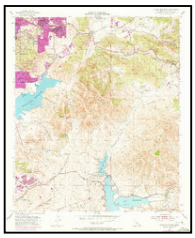
El Cajon
1967
7.5-minute, 24000
Aerial Photo Revised 1966



National City
1967
7.5-minute, 24000
Aerial Photo Revised 1966



La Mesa
1967
7.5-minute, 24000
Aerial Photo Revised 1966



Jamul Mountains
1971
7.5-minute, 24000
Aerial Photo Revised 1971

1955 Source Sheets



Jamul
1955
15-minute, 62500
Aerial Photo Revised 1953

1953, 1955 Source Sheets



La Mesa
1953
7.5-minute, 24000
Aerial Photo Revised 1950



National City
1953
7.5-minute, 24000
Aerial Photo Revised 1950



El Cajon
1955
7.5-minute, 24000
Aerial Photo Revised 1953



Jamul Mountains
1955
7.5-minute, 24000
Aerial Photo Revised 1953

1948 Source Sheets



EL CAJON
1948
15-minute, 50000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947 Source Sheets



El Cajon
1947
15-minute, 62500

1942, 1943 Source Sheets

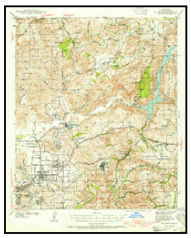


El Cajon
1942
15-minute, 62500



Jamul
1943
15-minute, 62500

1939 Source Sheets



El Cajon
1939
15-minute, 62500

1903 Source Sheets



Cuyamaca
1903
30-minute, 125000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1901, 1903, 1904 Source Sheets



Elcajon
1901
15-minute, 62500



La Jolla
1903
15-minute, 62500



Elcajon
1903
15-minute, 62500



El Cajon
1903
15-minute, 62500



San Diego
1904
15-minute, 62500

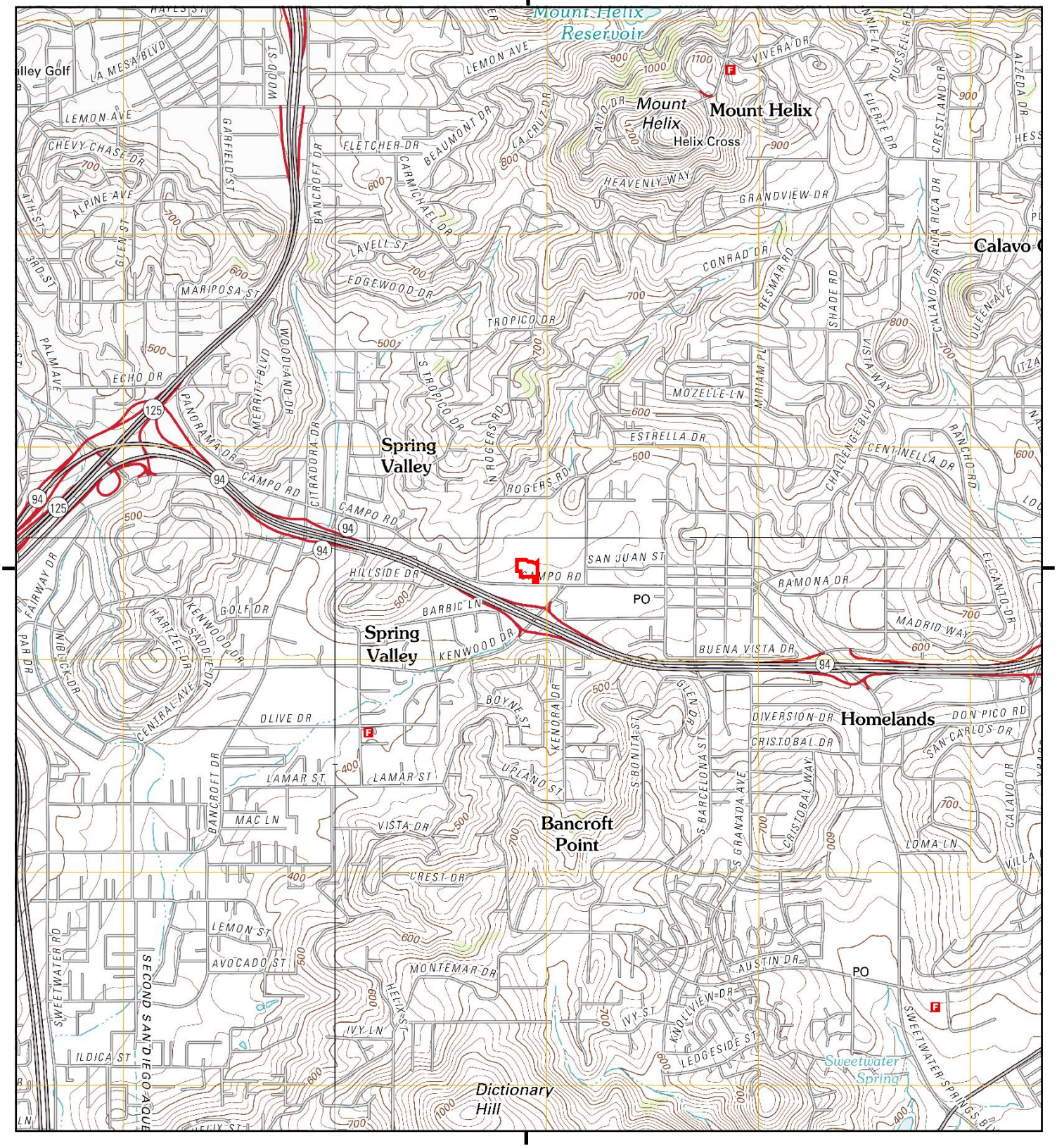
1893 Source Sheets



El Cajon
1893
15-minute, 62500



Elcajon
1893
15-minute, 62500



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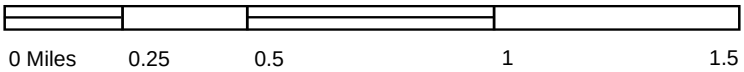
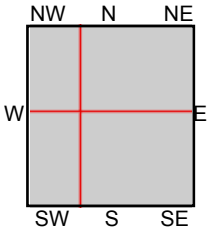
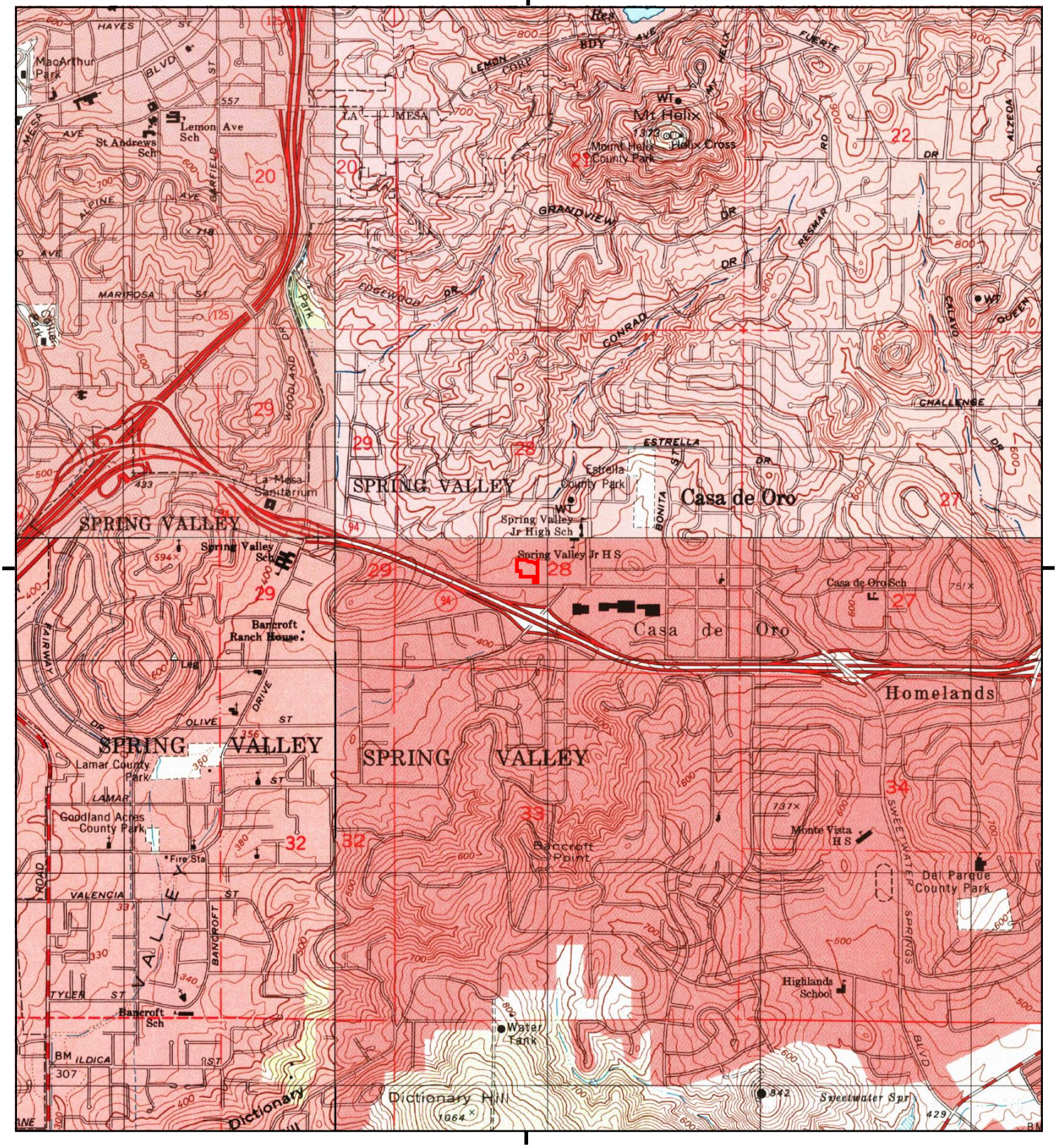




TP, Jamul Mountains, 2012, 7.5-minute
NE, El Cajon, 2012, 7.5-minute
SW, National City, 2012, 7.5-minute
NW, La Mesa, 2012, 7.5-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International





This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Jamul Mountains, 1994, 7.5-minute
NE, El Cajon, 1996, 7.5-minute
SW, National City, 1996, 7.5-minute
NW, La Mesa, 1994, 7.5-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N

UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED
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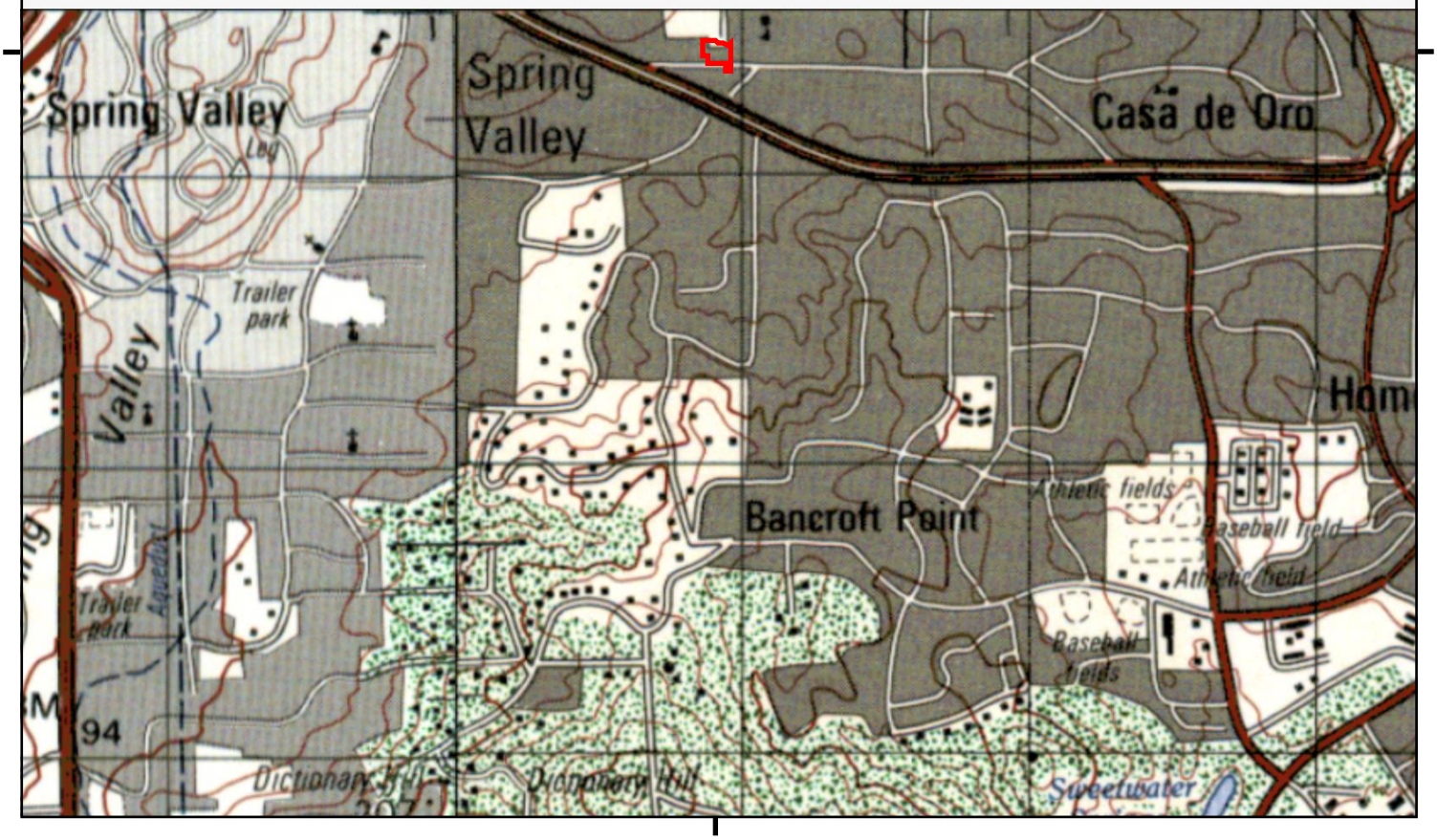


This report includes information from the following map sheet(s).

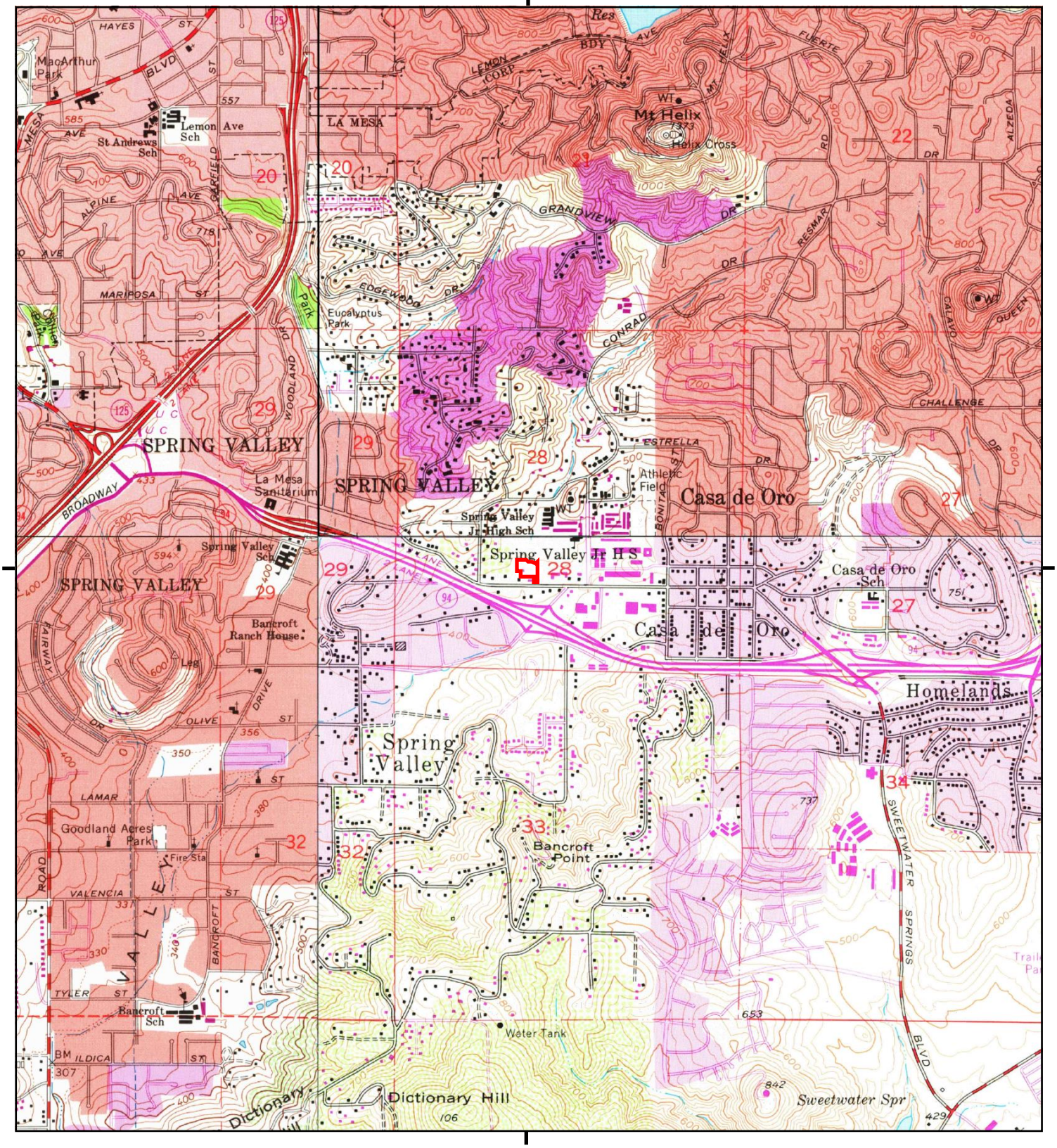
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, JAMUL, 1991, 15-minute
SW, SAN DIEGO, 1991, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

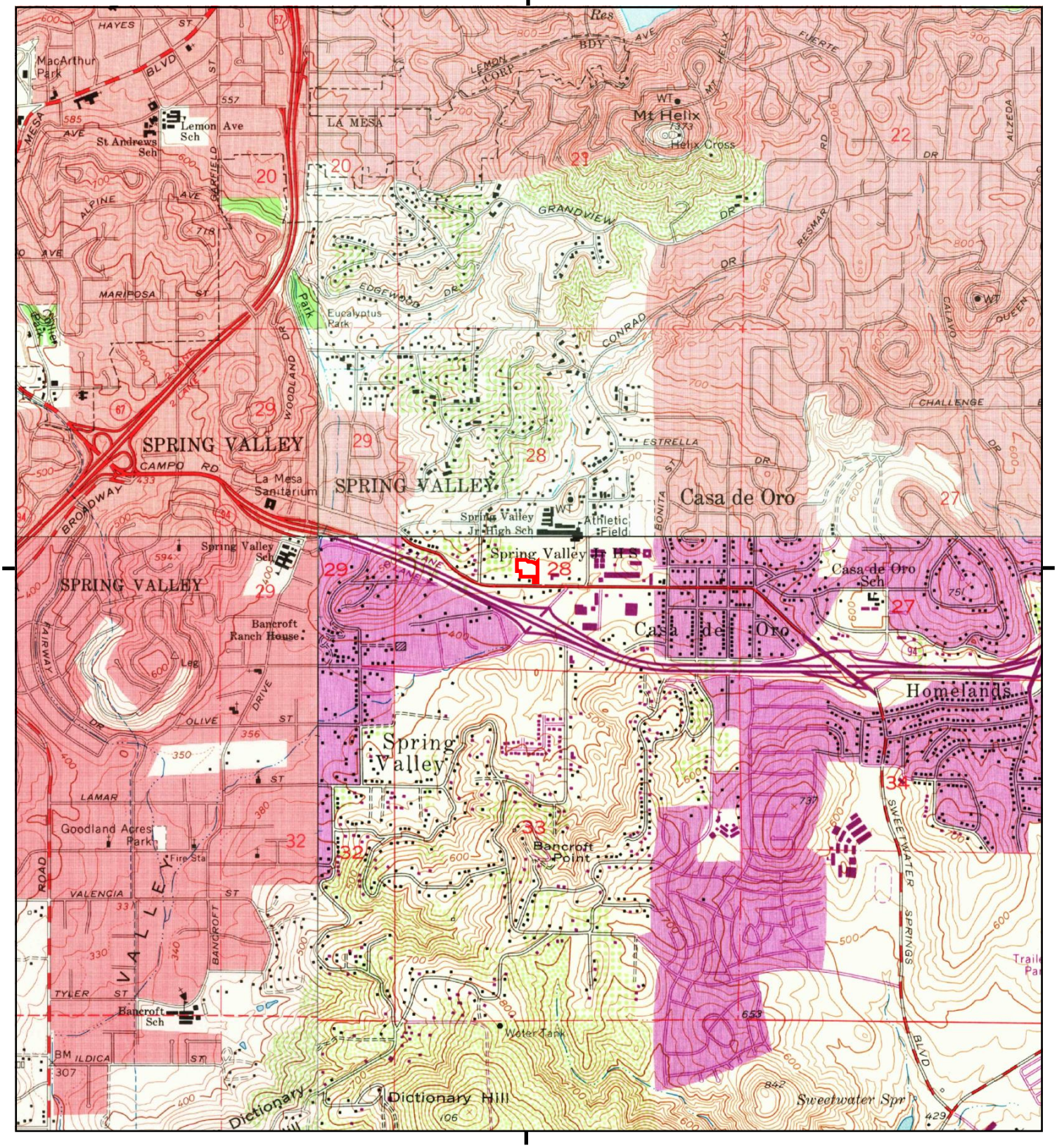
TP, Jamul Mountains, 1975, 7.5-minute
NE, El Cajon, 1975, 7.5-minute
SW, National City, 1975, 7.5-minute
NW, La Mesa, 1975, 7.5-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N

Historical Topo Map

1967, 1971



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

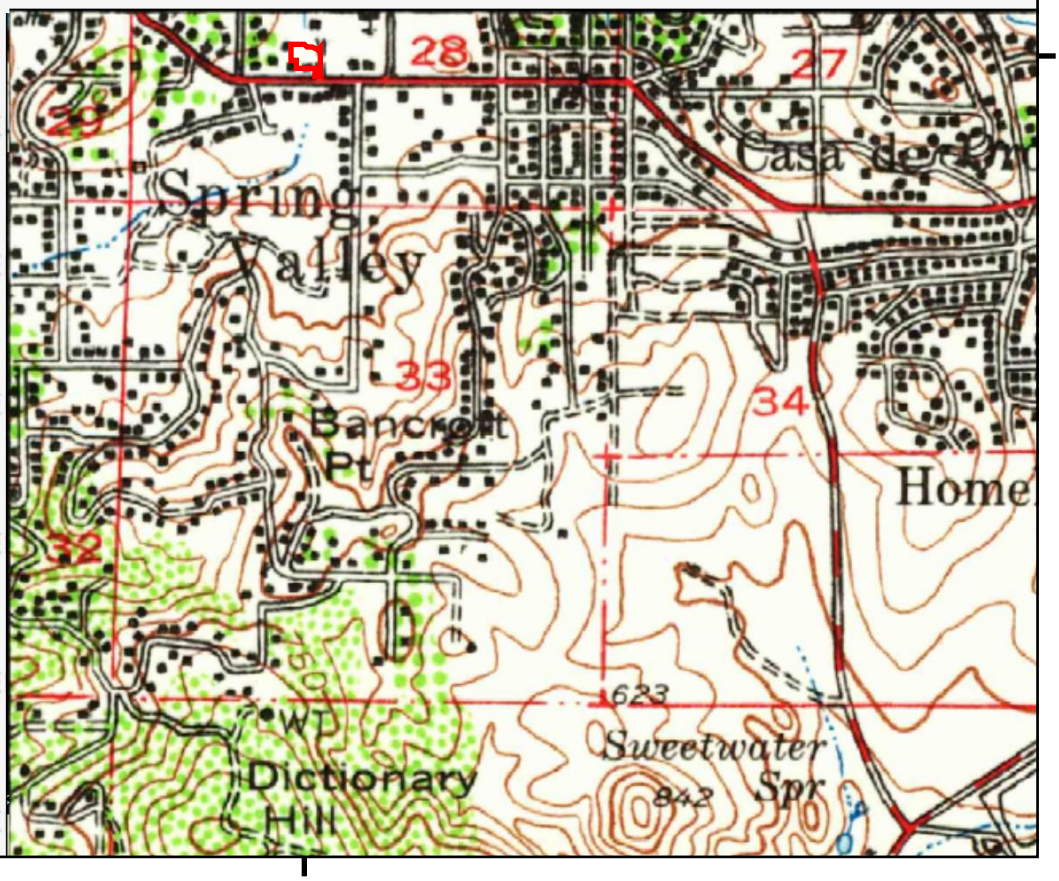
NW N NE
W E
SW S SE

TP, Jamul Mountains, 1971, 7.5-minute
NE, El Cajon, 1967, 7.5-minute
SW, National City, 1967, 7.5-minute
NW, La Mesa, 1967, 7.5-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N

UNMAPPED



This report includes information from the following map sheet(s).

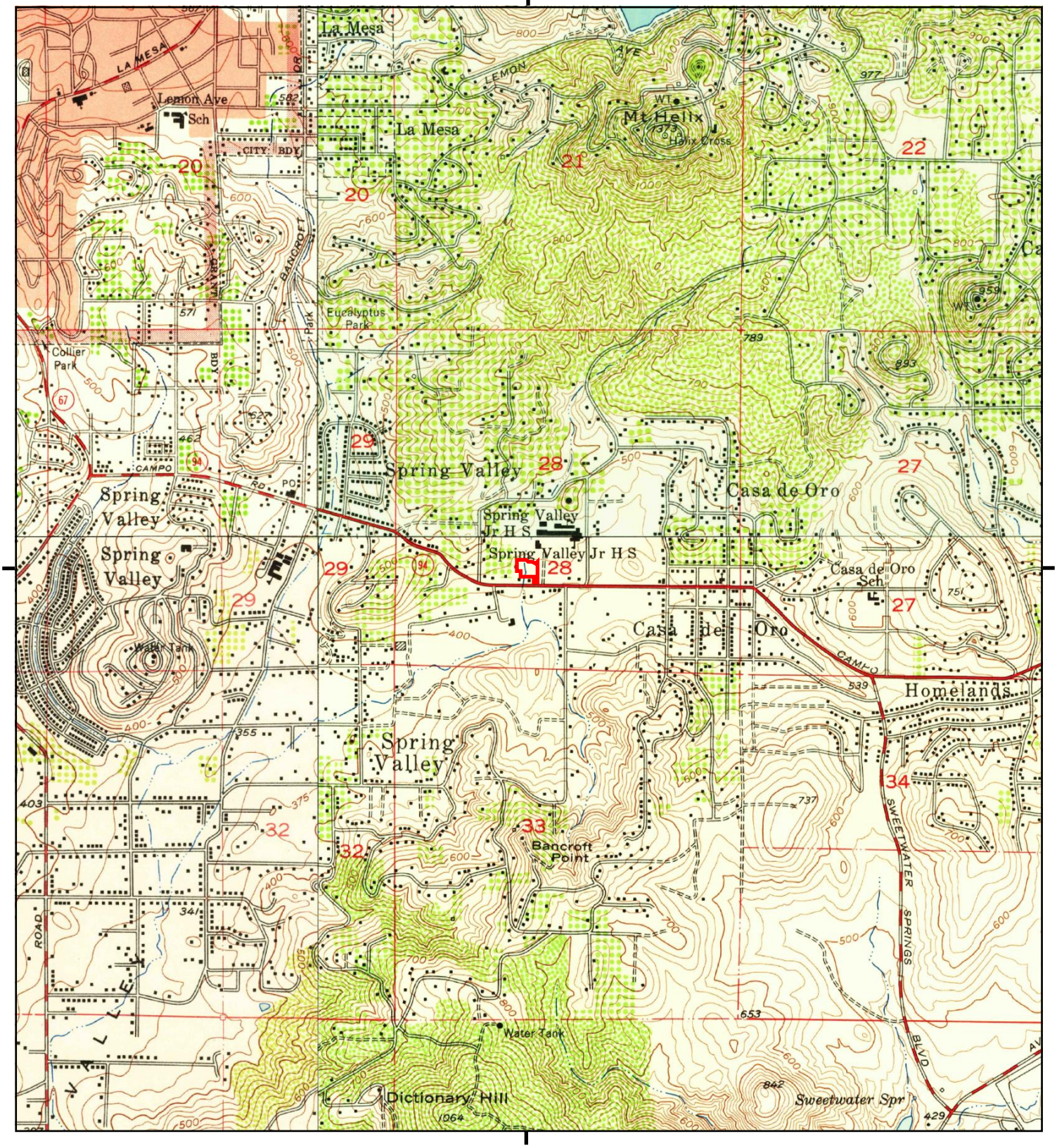
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Jamul, 1955, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



This report includes information from the following map sheet(s).

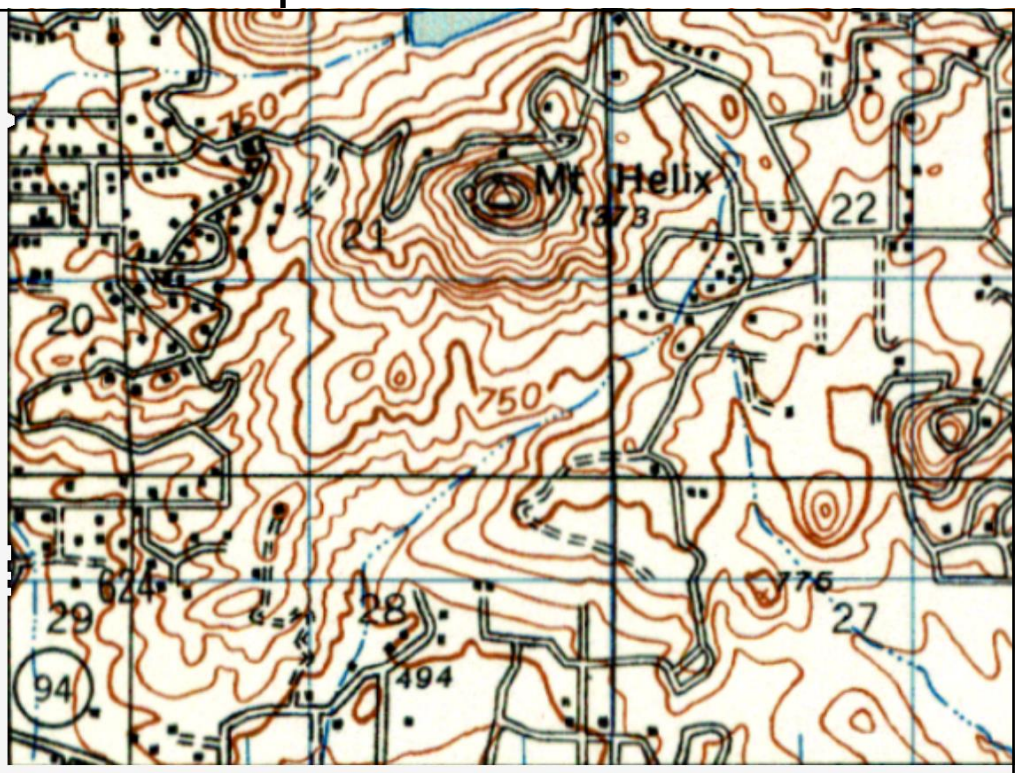
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Jamul Mountains, 1955, 7.5-minute
NE, El Cajon, 1955, 7.5-minute
SW, National City, 1953, 7.5-minute
NW, La Mesa, 1953, 7.5-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



UNMAPPED

This report includes information from the following map sheet(s).

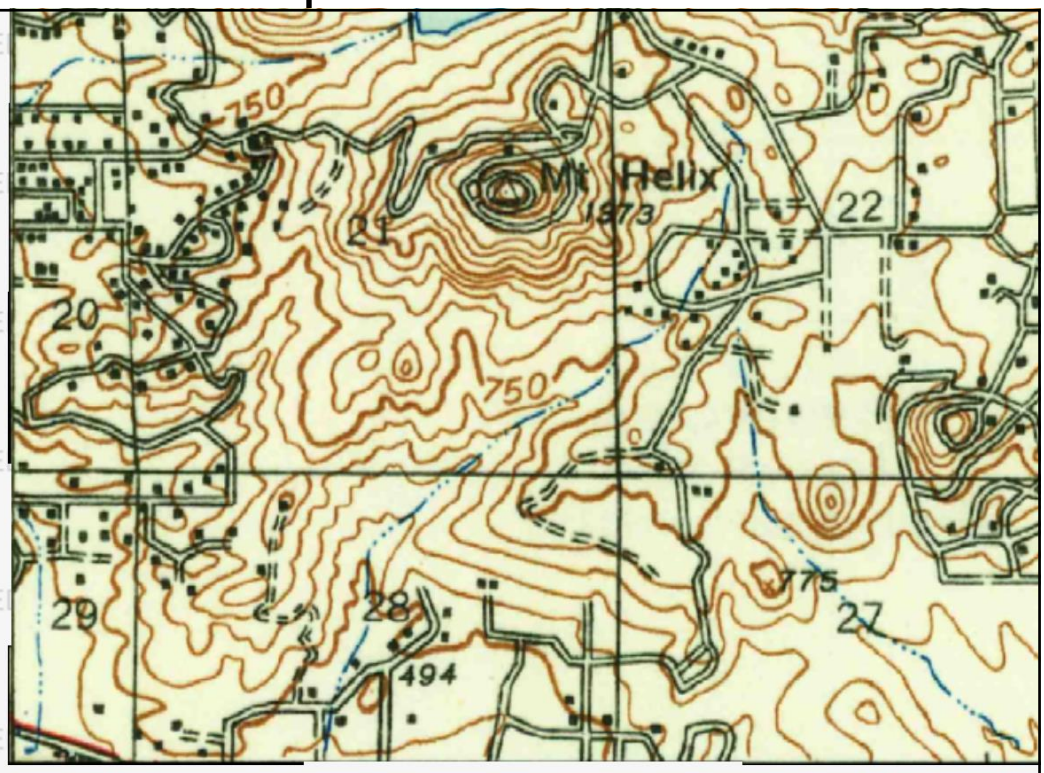
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

NE, EL CAJON, 1948, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



UNMAPPED

This report includes information from the following map sheet(s).

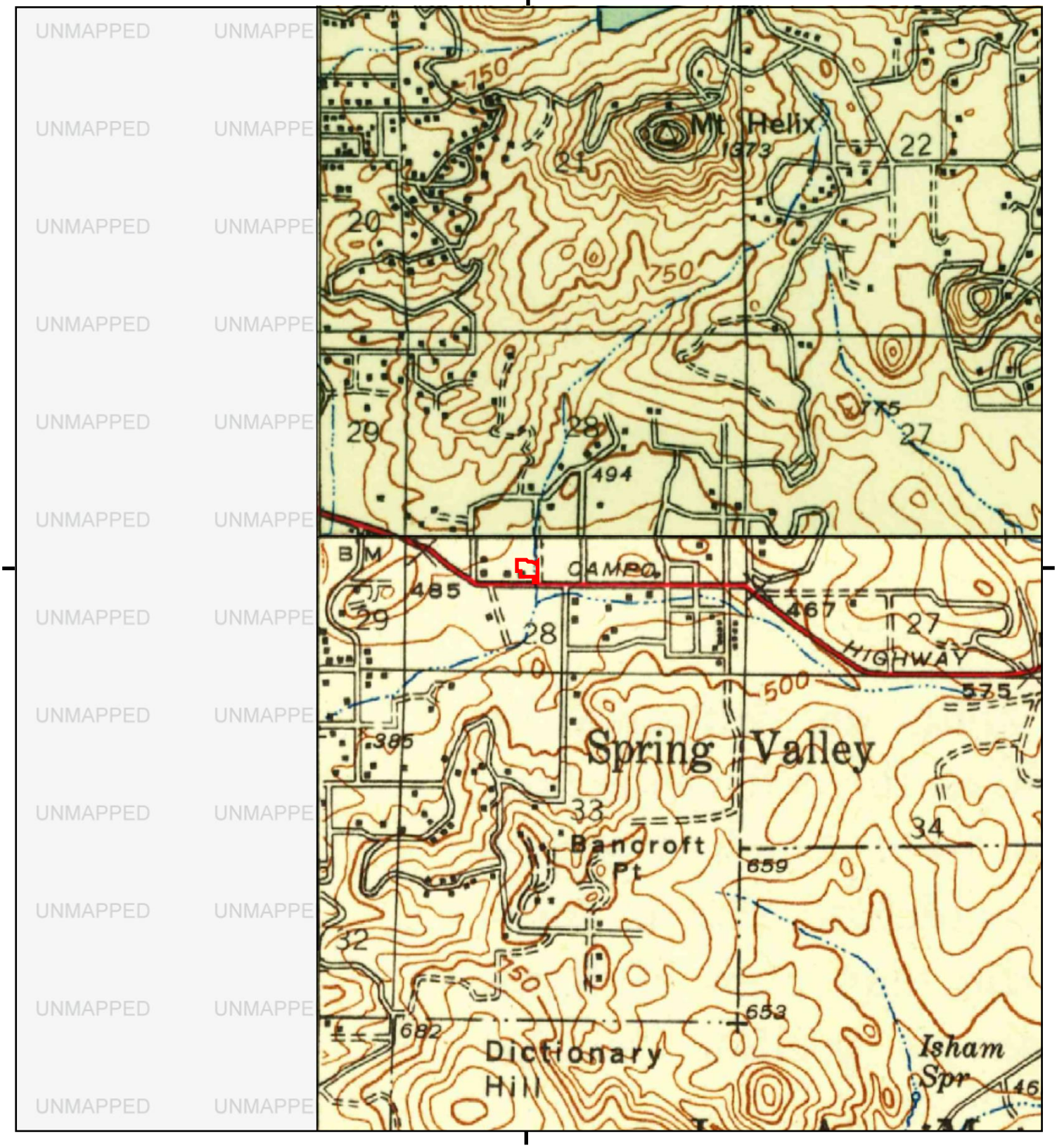
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

NE, El Cajon, 1947, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



This report includes information from the following map sheet(s).

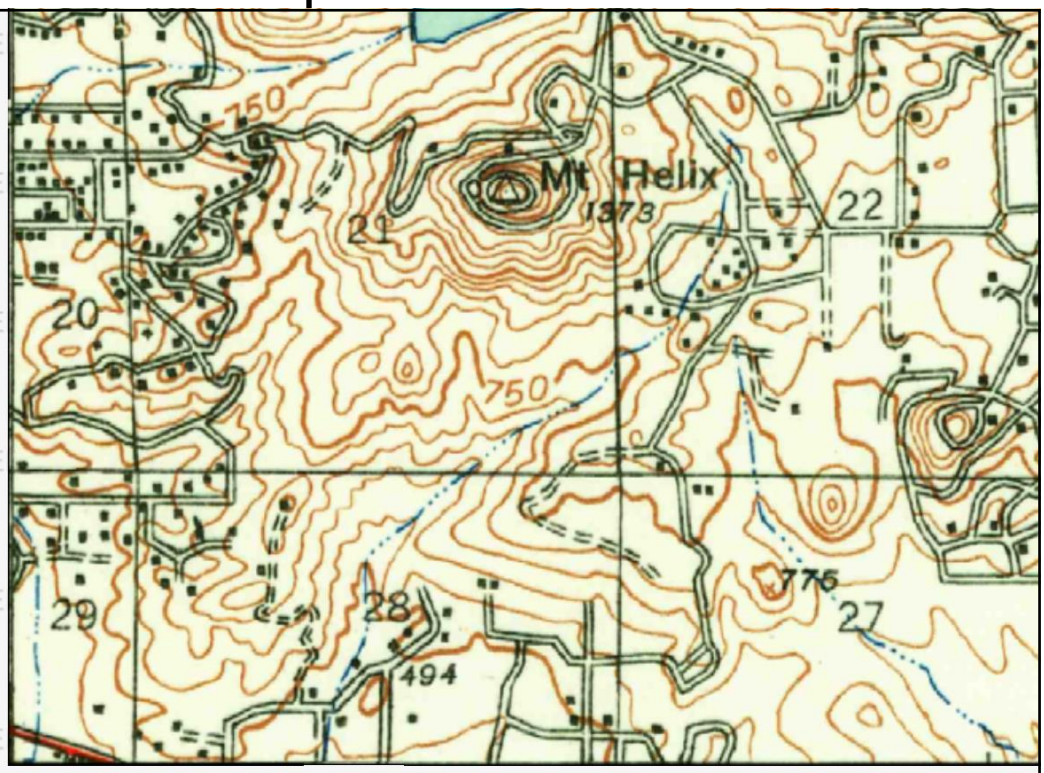
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Jamul, 1943, 15-minute
NE, El Cajon, 1942, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



UNMAPPED

This report includes information from the following map sheet(s).

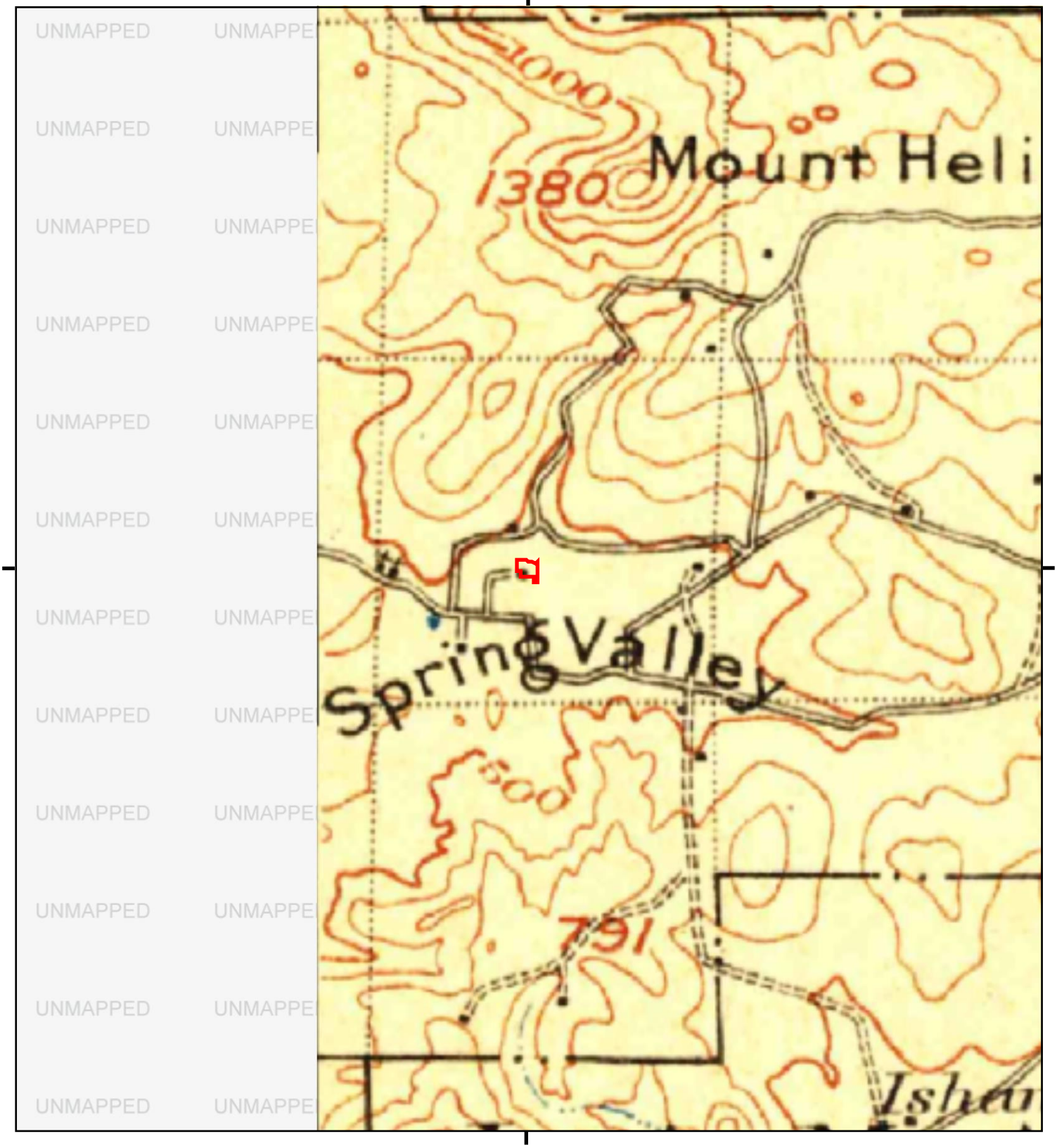
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

NE, El Cajon, 1939, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



This report includes information from the following map sheet(s).

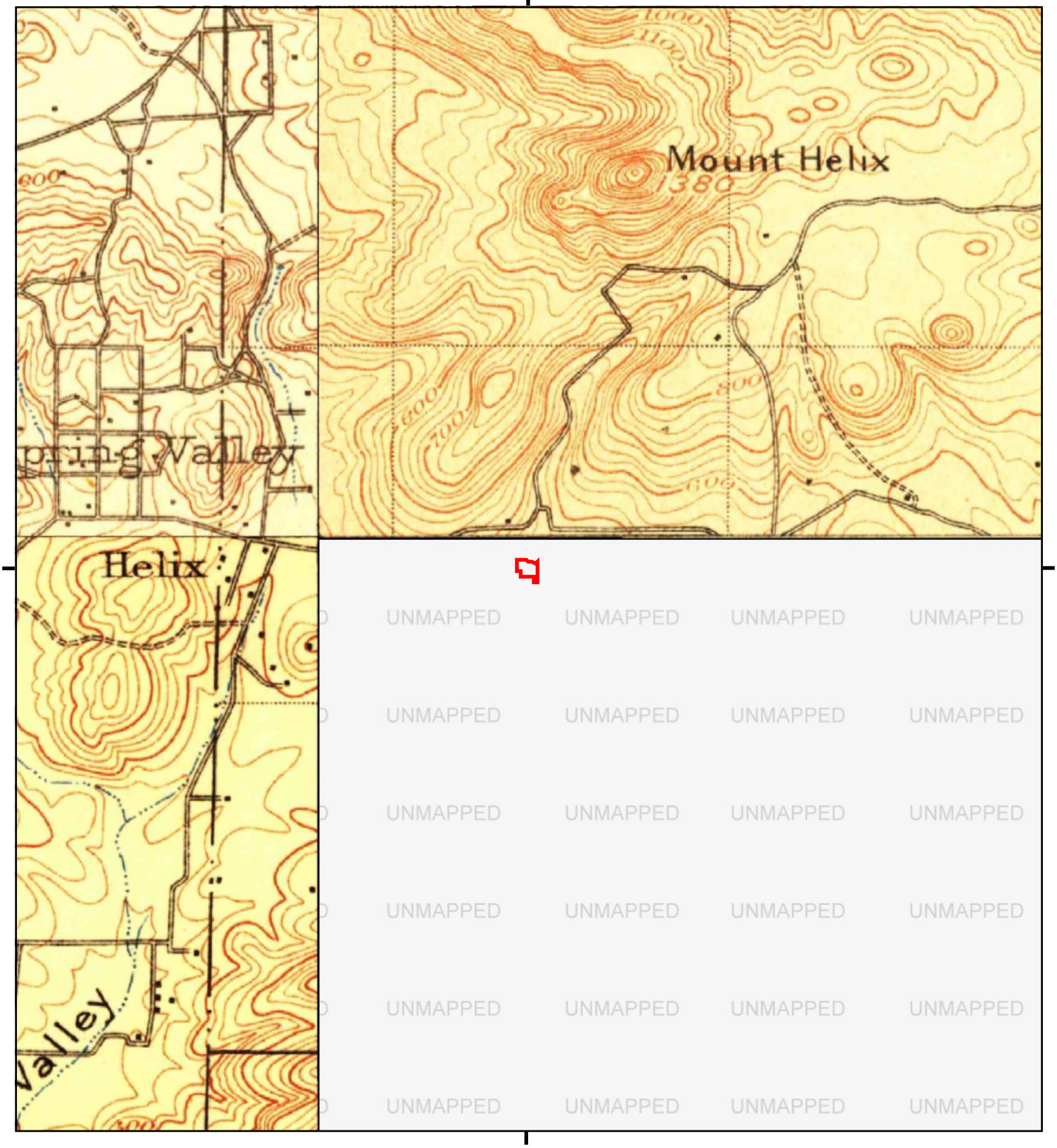
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Cuyamaca, 1903, 30-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



This report includes information from the following map sheet(s).

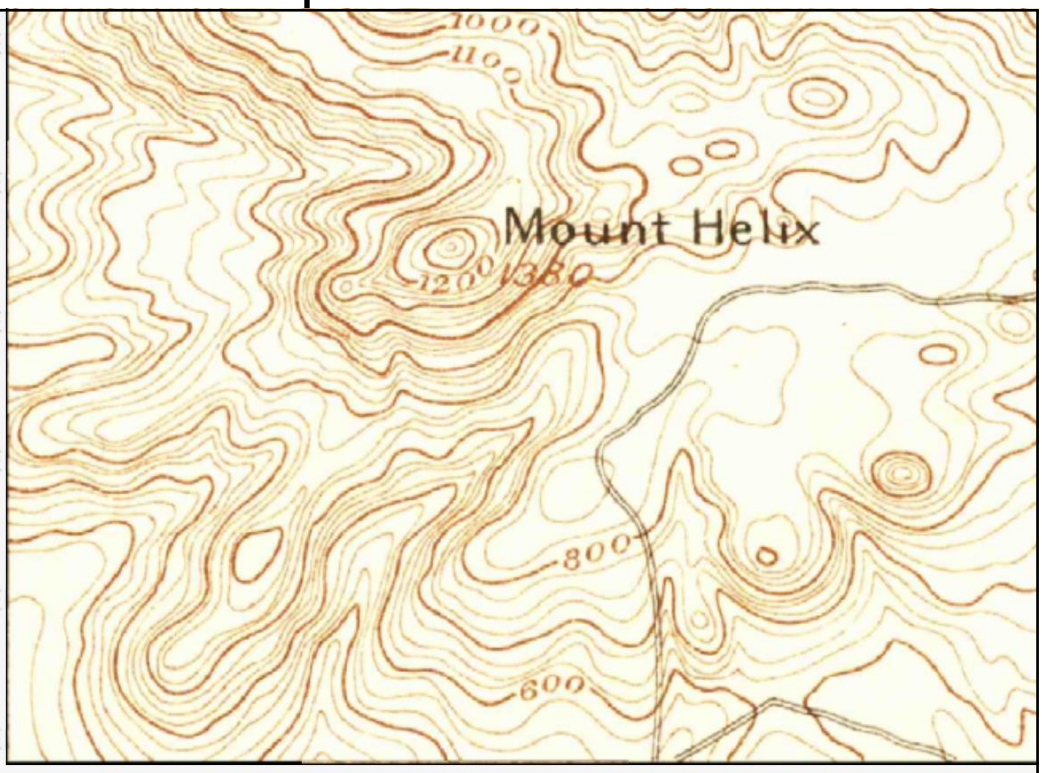
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

NE, Elcajon, 1901, 15-minute
SW, San Diego, 1904, 15-minute
NW, La Jolla, 1903, 15-minute
NE, Elcajon, 1903, 15-minute
NE, El Cajon, 1903, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N



UNMAPPED

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

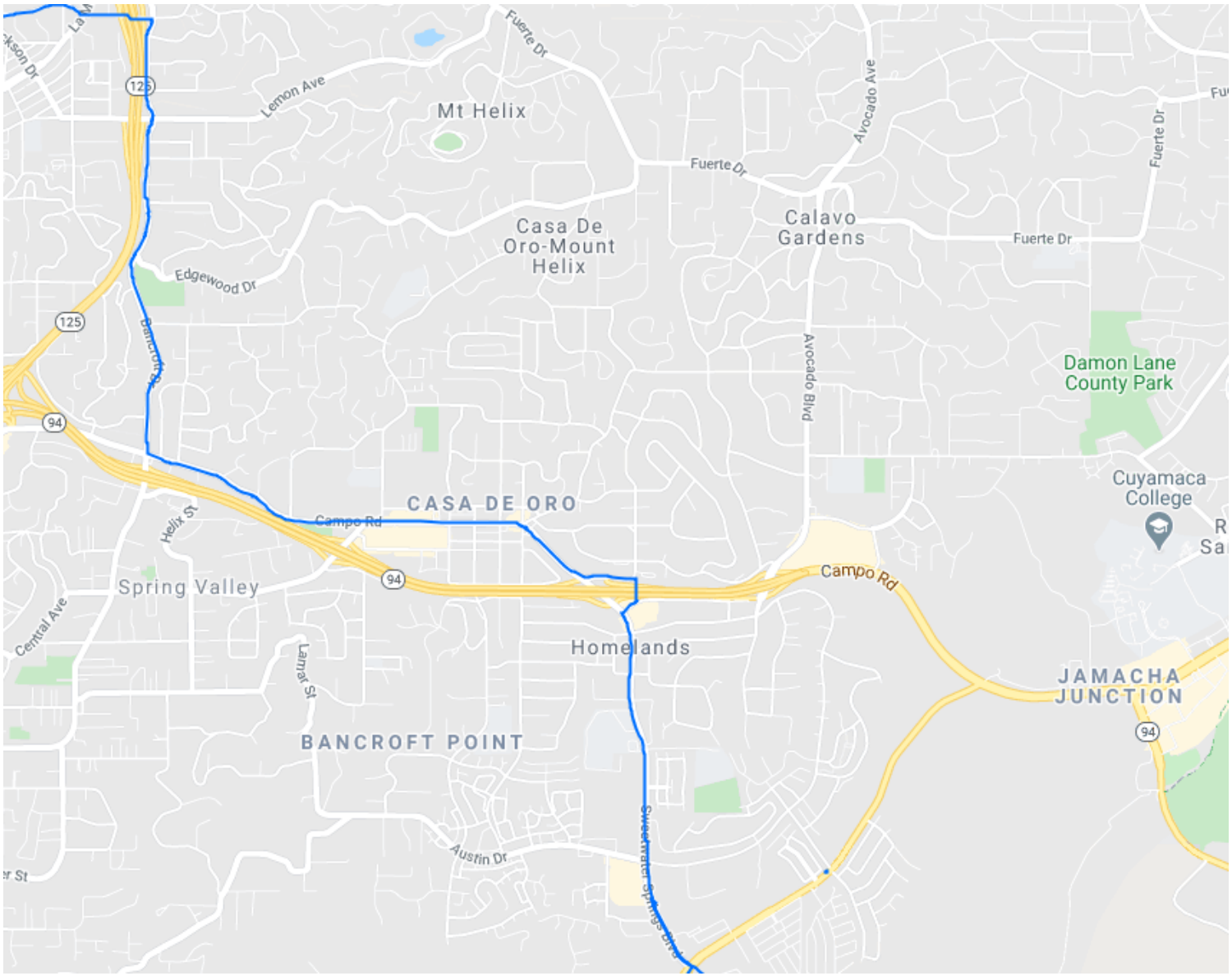
NE, El Cajon, 1893, 15-minute
NE, Elcajon, 1893, 15-minute

SITE NAME: Casa Del Oro Library
ADDRESS: 9610 Campo Rd
Spring Valley, CA 91977
CLIENT: Michael Baker International

N

Pipeline and Hazardous Materials Safety Administration

NATIONAL PIPELINE MAPPING SYSTEM



Legend

- Accidents (Liquid)
- Incidents (Gas)
- LNG Plants
- Breakout Tanks
- Gas Transmission Pipelines
- Hazardous Liquid Pipelines

500 m
1000 ft

Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.

This map should never be used as a substitute for contacting a one-call center prior to excavation activities. Please call 811 before any digging occurs.

Questions regarding this map or its contents can be directed to npms@dot.gov.

Projection: Geographic

Datum: NAD83

Map produced by the Public Viewer application at www.npms.phmsa.dot.gov

Date Printed: Sep 16, 2020

811 Know what's below. Call before you dig.

Casa Del Oro Library
9610 Campo Rd
Spring Valley, CA 91977

Inquiry Number: 6160544.3
August 18, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/18/20

Site Name:

Casa Del Oro Library
9610 Campo Rd
Spring Valley, CA 91977
EDR Inquiry # 6160544.3

Client Name:

Michael Baker International
14725 Alton Parkway
Irvine, CA 92618
Contact: Danielle Regimbal

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Michael Baker International were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 67EB-44F6-A206

PO # NA

Project Casa del Oro Library

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 67EB-44F6-A206

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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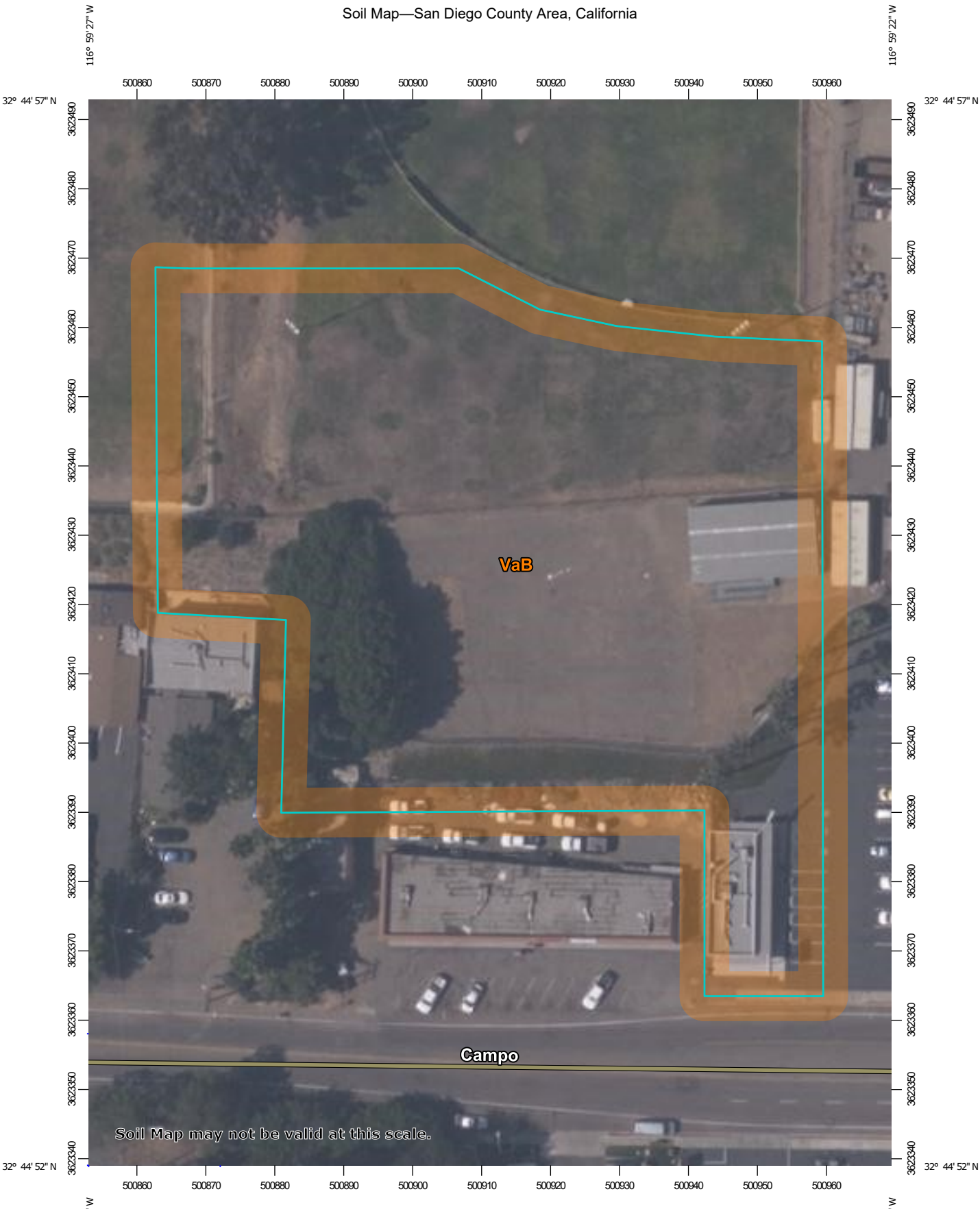


Map Scale: 1:751 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
Survey Area Data: Version 15, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 18, 2018—Aug 22, 2018

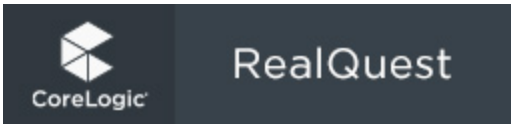
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
VaB	Visalia sandy loam, 2 to 5 percent slopes	1.8	100.0%
Totals for Area of Interest		**1.8**	**100.0%**

Property Detail Report

For Property Located At :
, LA MESA, CA



Owner Information

Owner Name:	**LA MESA-SPRING VALLEY SCHOOL DISTRICT**
Mailing Address:	
Vesting Codes:	**/ /**

Location Information

Legal Description:	**6.67 AC M/L IN SWQ SEC 28-16-1W**		
County:	**SAN DIEGO, CA**	APN:	**500-170-10-00**
Census Tract / Block:	**137.01 / 1**	Alternate APN:	
Township-Range-Sect:		Subdivision:	
Legal Book/Page:	**500-17**	Map Reference:	**62-F2 /**
Legal Lot:		Tract #:	
Legal Block:		School District:	**GROSSMONT UN**
Market Area:		School District Name:	**GROSSMONT UN**
Neighbor Code:		Munic/Township:	

Owner Transfer Information

Recording/Sale Date:	**/**	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information

Recording/Sale Date:	**/**	1st Mtg Amount/Type:	**/**
Sale Price:		1st Mtg Int. Rate/Type:	**/**
Sale Type:		1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	**/**
Deed Type:		2nd Mtg Int. Rate/Type:	**/**
Transfer Document #:		Price Per SqFt:	
New Construction:		Multi/Split Sale:	
Title Company:			
Lender:			
Seller Name:			

Prior Sale Information

Prior Rec/Sale Date:	**/**	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:		Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:			

Property Characteristics

Gross Area:		Parking Type:		Construction:	
Living Area:		Garage Area:		Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:		Porch Type:	
Total Rooms:		Basement Area:		Patio Type:	
Bedrooms:		Finish Bsmnt Area:		Pool:	
Bath(F/H):	**/**	Basement Type:		Air Cond:	
Year Built / Eff:	**/**	Roof Type:		Style:	
Fireplace:	**/**	Foundation:		Quality:	
# of Stories:		Roof Material:		Condition:	
Other Improvements:	**Building Permit**				

Site Information

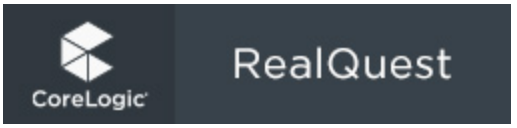
Zoning:		Acres:	**6.67**	County Use:	
Lot Area:	**290,545**	Lot Width/Depth:	**x**	State Use:	
Land Use:		Res/Comm Units:	**/**	Water Type:	
Site Influence:				Sewer Type:	

Tax Information

Total Value:		Assessed Year:	**2020**	Property Tax:	
Land Value:		Improved %:		Tax Area:	**83171**
Improvement Value:		Tax Year:		Tax Exemption:	
Total Taxable Value:					

Property Detail Report

For Property Located At :
, LA MESA, CA



Owner Information

Owner Name:	**LA MESA-SPRING VALLEY SCHOOL DISTRICT**
Mailing Address:	
Vesting Codes:	**/ /**

Location Information

Legal Description:	**0.75 AC M/L IN SWQ SEC 28-16-1W**		
County:	**SAN DIEGO, CA**	APN:	**500-170-11-00**
Census Tract / Block:	**137.01 / 1**	Alternate APN:	
Township-Range-Sect:		Subdivision:	
Legal Book/Page:	**500-17**	Map Reference:	**62-F2 /**
Legal Lot:		Tract #:	
Legal Block:		School District:	**GROSSMONT UN**
Market Area:		School District Name:	**GROSSMONT UN**
Neighbor Code:		Munic/Township:	

Owner Transfer Information

Recording/Sale Date:	**/**	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information

Recording/Sale Date:	**/**	1st Mtg Amount/Type:	**/**
Sale Price:		1st Mtg Int. Rate/Type:	**/**
Sale Type:		1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	**/**
Deed Type:		2nd Mtg Int. Rate/Type:	**/**
Transfer Document #:		Price Per SqFt:	
New Construction:		Multi/Split Sale:	
Title Company:			
Lender:			
Seller Name:			

Prior Sale Information

Prior Rec/Sale Date:	**/**	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:		Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:			

Property Characteristics

Gross Area:		Parking Type:		Construction:	
Living Area:		Garage Area:		Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:		Porch Type:	
Total Rooms:		Basement Area:		Patio Type:	
Bedrooms:		Finish Bsmnt Area:		Pool:	
Bath(F/H):	**/**	Basement Type:		Air Cond:	
Year Built / Eff:	**/**	Roof Type:		Style:	
Fireplace:	**/**	Foundation:		Quality:	
# of Stories:		Roof Material:		Condition:	
Other Improvements:	**Building Permit**				

Site Information

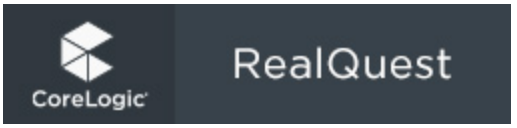
Zoning:		Acres:	**0.76**	County Use:	
Lot Area:	**33,106**	Lot Width/Depth:	**x**	State Use:	
Land Use:		Res/Comm Units:	**/**	Water Type:	
Site Influence:				Sewer Type:	

Tax Information

Total Value:		Assessed Year:	**2020**	Property Tax:	
Land Value:		Improved %:		Tax Area:	**83171**
Improvement Value:		Tax Year:		Tax Exemption:	
Total Taxable Value:					

Property Detail Report

For Property Located At :
9610 CAMPO RD, SPRING VALLEY, CA 91977-1224



Owner Information

Owner Name:	**LIVELY ONIE O/LIVELY JOHN S TR**
Mailing Address:	**9628 CAMPO RD #G, SPRING VALLEY CA 91977-1233 C032**
Vesting Codes:	**/ / TR**

Location Information

Legal Description:	**POR NE 1/4 OF SW 1/4 SEC 28-16-1W**		
County:	**SAN DIEGO, CA**	APN:	**500-170-41-00**
Census Tract / Block:	**137.01 / 1**	Alternate APN:	
Township-Range-Sect:		Subdivision:	
Legal Book/Page:	**500-17**	Map Reference:	**62-F3 /**
Legal Lot:		Tract #:	
Legal Block:		School District:	**GROSSMONT UN**
Market Area:		School District Name:	**GROSSMONT UN**
Neighbor Code:		Munic/Township:	

Owner Transfer Information

Recording/Sale Date:	**07/24/2000 / 07/06/2000**	Deed Type:	**QUIT CLAIM DEED**
Sale Price:		1st Mtg Document #:	
Document #:	**387860**		

Last Market Sale Information

Recording/Sale Date:	**/**	1st Mtg Amount/Type:	**/**
Sale Price:		1st Mtg Int. Rate/Type:	**/**
Sale Type:		1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	**/**
Deed Type:		2nd Mtg Int. Rate/Type:	**/**
Transfer Document #:		Price Per SqFt:	
New Construction:		Multi/Split Sale:	
Title Company:			
Lender:			
Seller Name:			

Prior Sale Information

Prior Rec/Sale Date:	**/**	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:		Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:			

Property Characteristics

Year Built / Eff:	**/**	Total Rooms/Offices		Garage Area:	
Gross Area:		Total Restrooms:		Garage Capacity:	
Building Area:		Roof Type:		Parking Spaces:	
Tot Adj Area:		Roof Material:		Heat Type:	
Above Grade:		Construction:		Air Cond:	
# of Stories:		Foundation:		Pool:	
Other Improvements:	**Building Permit**	Exterior wall:		Quality:	
		Basement Area:		Condition:	

Site Information

Zoning:	**C**	Acres:	**0.15**	County Use:	**RESTAURANT (635)**
Lot Area:	**6,534**	Lot Width/Depth:	**x**	State Use:	
Land Use:	**RESTAURANT BUILDING**	Commercial Units:		Water Type:	
Site Influence:		Sewer Type:		Building Class:	

Tax Information

Total Value:	**$67,327**	Assessed Year:	**2020**	Property Tax:	**$2,470.18**
Land Value:	**$31,445**	Improved %:	**53%**	Tax Area:	**83024**
Improvement Value:	**$35,882**	Tax Year:	**2019**	Tax Exemption:	
Total Taxable Value:	**$67,327**				

Michael Baker
INTERNATIONAL

PHASE I ESA USERS QUESTIONNAIRE

Party Administering Questionnaire:	**Name:**	Danielle Regimbal, Michael Baker International
	Phone/Fax:	Please Return Fax to (949) 837-4122; or
	Email:	danielle.regimbal@mbakerintl.com

Date:

Time:

Project Name: Casa de Oro Branch Library Project

Project Address and/or APN(s): 9610 Camp Road, Spring Valley, California 91977 (APN: 500-170-41-00)

Client (or user of the Phase I Environmental Site Assessment):	**Name/Title:**
County of San Diego	Marc Cass/Project Manager

Client Phone/FAX/Email:

Reason Phase I is required:

Land Acquisition

Type of property:

Previously developed with commercial/office (in-fill)

Type of property transaction (e.g., sale, purchase, exchange):

Land Acquisition (purchase)

Complete and Correct Address of the property and APN(s):

9610 Camp Road (APN: 500-170-41-00)

All Parties that will rely on the Phase I report:

County of San Diego

Name and Contact Information for a Site Contact (to be referenced as the Key Site Manager in the Phase I ESA):

Any special terms or conditions:

No

Any information pertaining to any pending, threatened, or past litigation and/or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.

Any information pertaining to any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

(1). Environmental cleanup liens that are filed or recorded against the property (40 CFR 312.25).

Have you done a search of recorded land title records (or judicial records where appropriate, see Note 1 below) to identify any environmental liens filed or recorded against the property under Federal, tribal, State, or local law? ☐ Yes ☒ No

Note 1 – In certain jurisdictions, Federal, tribal, State, or local statues, or regulations specify that environmental liens and activity and use limitations (AULs) be filed in judicial records rather than in land title records. In such cases judicial records must be searched for environmental liens and AULs.

If Yes, Describe:

(2). Activity and use limitations (AULs) that are in place on the property or that have been filed or recorded against the property (40 CFR 312.26(a)(1)(v) and (iv)).

Have you done a search of recorded land title records (or judicial records where appropriate, see Note 1 above) to identify any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under Federal, tribal, State, or local law? ☐ Yes ☒ No

If Yes, Describe:

(3). Specialized knowledge or experience of the person seeking to qualify for the Landowners Liability Protections (LLP) (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? ☐ Yes ☒ No

If Yes, Describe:

(4). Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? ☒ Yes ☐ No

If no, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? ☐ Yes ☐ No

If Yes, Describe:

County of San Diego Purchase price cannot exceed fair market value, without the Board of Supervisor's approval (which would limit to 10% above appraisal)

(5). Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? ☐ Yes ☒ No
For example, as user:

(a)	Do you know the past uses of the property?	☐ Yes ☒ No
(b)	Do you know of specific chemicals that are present or once were present at the property?	☐ Yes ☒ No
(c)	Do you know of spills or other chemical releases that have taken place at the property?	☐ Yes ☒ No
(d)	Do you know of any environmental cleanups that have taken place at the property?	☐ Yes ☒ No

If Yes, Describe:
Mr. Lively (property owner) submitted Owner Questionnaire identifying known site conditions

(6). The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property? ☐ Yes ☒ No

If Yes, Describe:

(7). Do you have any other pertinent knowledge or experience with the property (e.g., prior reports, documents, correspondence concerning the environmental conditions of the property)? ☐ Yes ☒ No

(a)	Environmental site assessments?	☐ Yes ☒ No
(b)	Environmental compliance audit reports?	☐ Yes ☒ No
(c)	Environmental permits?	☐ Yes ☒ No
(d)	Registrations for underground and aboveground storage tanks?	☐ Yes ☒ No
(e)	Material safety data sheets?	☐ Yes ☒ No
(f)	Community right-to-known plan?	☐ Yes ☒ No
(g)	Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; facility response plans; etc.?	☐ Yes ☒ No
(h)	Reports regarding hydrogeologic conditions on the property or surrounding area?	☐ Yes ☒ No
(i)	Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property?	☐ Yes ☒ No
(b)	Geotechnical studies?	☐ Yes ☒ No
(c)	Risk assessments?	☐ Yes ☒ No
(d)	Recorded AULs?	☐ Yes ☒ No

Michael Baker
INTERNATIONAL

PHASE I ESA USERS QUESTIONNAIRE

Party Administering Questionnaire:	**Name:**	Danielle Regimbal, Michael Baker International
	Phone/Fax:	Please Return Fax to (949) 837-4122; or
	Email:	danielle.regimbal@mbakerintl.com

Date:

Time:

Project Name: Casa de Oro Branch Library Project

Project Address and/or APN(s): 3838 Conrad Drive, Spring Valley, California 91977 (APN: 500-170-10-00 and 500-170-11-00). La Mesa – Spring Valley School District Operations Center

Client (or user of the Phase I Environmental Site Assessment): County of San Diego	**Name/Title:** Marc Cass/Project Manager

Client Phone/FAX/Email:

858-694-2047

Reason Phase I is required:

Ground Lease

Type of property:

School District Property

Type of property transaction (e.g., sale, purchase, exchange):

Lease Agreement. Lessor: La Mesa -Spring Valley School District. Lessee: County of San Diego

Complete and Correct Address of the property and APN(s):

3838 Conrad Drive, Spring Valley, California 91977 (APN: 500-170-10-00 and 500-170-11-00).

All Parties that will rely on the Phase I report:

County of San Diego, La Mesa – Spring Valley School District, and Division of State Architect – California (DSA)

Name and Contact Information for a Site Contact (to be referenced as the Key Site Manager in the Phase I ESA):

Jason Brust; 619-668-5760; Jason.brust@lmsvschools.org

Any special terms or conditions:

Any information pertaining to any pending, threatened, or past litigation and/or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.

Any information pertaining to any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

(1). Environmental cleanup liens that are filed or recorded against the property (40 CFR 312.25).

Have you done a search of recorded land title records (or judicial records where appropriate, see Note 1 below) to identify any environmental liens filed or recorded against the property under Federal, tribal, State, or local law? ☐ Yes ☒ No

Note 1 – In certain jurisdictions, Federal, tribal, State, or local statues, or regulations specify that environmental liens and activity and use limitations (AULs) be filed in judicial records rather than in land title records. In such cases judicial records must be searched for environmental liens and AULs.

If Yes, Describe:

(2). Activity and use limitations (AULs) that are in place on the property or that have been filed or recorded against the property (40 CFR 312.26(a)(1)(v) and (iv)).

Have you done a search of recorded land title records (or judicial records where appropriate, see Note 1 above) to identify any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under Federal, tribal, State, or local law? ☐ Yes ☒ No

If Yes, Describe:

(3). Specialized knowledge or experience of the person seeking to qualify for the Landowners Liability Protections (LLP) (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? ☐ Yes ☒ No

If Yes, Describe:

(4). Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? ☒ Yes ☐ No

If no, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? ☐ Yes ☐ No

If Yes, Describe:

The property would be a ground lease and represents fair market value.

(5). Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? ☐ Yes ☒ No
For example, as user:

(a)	Do you know the past uses of the property?	☐ Yes ☒ No
(b)	Do you know of specific chemicals that are present or once were present at the property?	☐ Yes ☒ No
(c)	Do you know of spills or other chemical releases that have taken place at the property?	☐ Yes ☒ No
(d)	Do you know of any environmental cleanups that have taken place at the property?	☐ Yes ☒ No

If Yes, Describe:
La Mesa – Spring Valley School District submitted a Owner Questionnaire identifying known site conditions

(6). The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property? ☐ Yes ☒ No

If Yes, Describe:

(7). Do you have any other pertinent knowledge or experience with the property (e.g., prior reports, documents, correspondence concerning the environmental conditions of the property)? ☒ Yes ☐ No

(a)	Environmental site assessments?	☐ Yes ☒ No
(b)	Environmental compliance audit reports?	☐ Yes ☒ No
(c)	Environmental permits?	☐ Yes ☒ No
(d)	Registrations for underground and aboveground storage tanks?	☐ Yes ☒ No
(e)	Material safety data sheets?	☐ Yes ☒ No
(f)	Community right-to-known plan?	☐ Yes ☒ No
(g)	Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; facility response plans; etc.?	☐ Yes ☒ No
(h)	Reports regarding hydrogeologic conditions on the property or surrounding area?	☒ Yes ☐ No
(i)	Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property?	☐ Yes ☒ No

(b)	Geotechnical studies?	☒ Yes	☐ No
(c)	Risk assessments?	☐ Yes	☒ No
(d)	Recorded AULs?	☐ Yes	☒ No

Michael Baker
INTERNATIONAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT INTERVIEW QUESTIONNAIRE

Date: 10/6/20 Time: _____ Property Name: Casa de Oro Branch Library Project

Property Address and APN(s): _____

If questions are answered for only a specific area of the property (i.e., APN), specify the area:

_____

Person Answering Questionnaire:
Name: Jason Brust
Phone/Fax: (619) 668-5760
Email: jason.brust@lmsvschools.org

Party Administering Questionnaire:
Name: Danielle Regimbal, Michael Baker International
Phone/Fax: Please Return Fax to (949) 837-4122; or
Email: danielle.regimbal@mbakerintl.com

1. How long have you worked at or been associated with the property?

   3.75 years

2. What is your position?

   Director of Maintenance, Operations & Facilities

3. What are your job responsibilities related to the property?

   Manage maintenance, repairs, and improvements

4. To the best of your knowledge is the **subject property** currently or historically been used for an industrial use? Yes ☐ No ☐ Unk ☒

   If yes, please explain:

   _____

5. To the best of your knowledge is any **adjoining property** currently or historically been used for an industrial use? Yes ☒ No ☐ Unk ☐

   If yes, please explain:

   North:

   East: Vehicle maintenance facility

   South:

   West:

6. To the best of your knowledge is the **subject property** currently used or was historically used as a:

a) gasoline station	Yes ☐	No ☒	Unk ☐
b) motor repair facility	Yes ☐	No ☒	Unk ☐
c) commercial printing facility	Yes ☐	No ☒	Unk ☐
d) dry cleaners	Yes ☐	No ☒	Unk ☐
e) photo developing laboratory	Yes ☐	No ☒	Unk ☐
f) plating shops	Yes ☐	No ☒	Unk ☐
g) junkyard or landfill	Yes ☐	No ☒	Unk ☐
h) solid waste treatment, storage, disposal, processing, or recycling facility	Yes ☐	No ☒	Unk ☐

   If yes, please explain:

7. To the best of your knowledge is any **adjoining property** currently used or was historically used as a:

a) gasoline station	Yes ☒	No ☐	Unk ☐
b) motor repair facility	Yes ☒	No ☐	Unk ☐
c) commercial printing facility	Yes ☐	No ☒	Unk ☐
d) dry cleaners	Yes ☐	No ☒	Unk ☐
e) photo developing laboratory	Yes ☒	No ☐	Unk ☐
f) plating shops	Yes ☐	No ☒	Unk ☐
g) junkyard or landfill	Yes ☐	No ☒	Unk ☐
h) solid waste treatment, storage, disposal, processing, or recycling facility	Yes ☐	No ☒	Unk ☐

   If yes, please explain:
   Property to the east currently or historically housed a vehicle fueling station and repair facility as well as a photo processing office.

8. To the best of your knowledge are there currently stored or used, or have there been previously stored or used, any of the following on the **subject property**:

a)	damaged or discarded automotive or industrial batteries	Yes ☐ No ☒ Unk ☐
b)	pesticides, paints	Yes ☐ No ☒ Unk ☐
c)	petroleum products	Yes ☐ No ☒ Unk ☐
d)	degreasers	Yes ☐ No ☒ Unk ☐
e)	solvents	Yes ☐ No ☒ Unk ☐
f)	paints	Yes ☐ No ☒ Unk ☐
g)	cleaners	Yes ☐ No ☒ Unk ☐
h)	pesticides	Yes ☒ No ☐ Unk ☐
i)	other hazardous materials?	Yes ☐ No ☒ Unk ☐

If yes, please explain:

Herbicides and gopher control pesticides have been used on the subject property.

9. To the best of your knowledge are there currently, or where there historically, any hazardous wastes or used oil generated on the property? Yes ☐ No ☒ Unk ☐

   If yes, where is it stored?

10. To the best of your knowledge has fill dirt been brought onto the property that originated from a contaminated site or that is of an unknown origin? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

11. To the best of your knowledge are there currently, or have there been previously, any pits, pond, or lagoons located on the property in connection with waste treatment or waste disposal? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

12. Are there currently, or to the best of your knowledge has there been previously, any stained soil (other than minor automotive type stains) on the property? Yes ☐ No ☒ Unk ☐

    If yes, what and where?

13. Are there currently, or to the best of your knowledge are there currently or has there been previously, any registered or unregistered storage tanks (above or underground) located on the subject property? Yes ☐ No ☒ Unk ☐

    If yes, where?

    _____

    _____

14. If existing or removed tanks are known, do you have any knowledge of any leaks, spills or releases from these tanks? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

    _____

    _____

15. Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

    _____

    _____

16. If applicable, what are the current procedures for obtaining storing, and handling hazardous materials and/or petroleum products at the subject property? Not Applicable ☒

    _____

    _____

17. If applicable, what are the current procedures for disposing of hazardous waste and/or waste petroleum products at the subject property? Not Applicable ☒

    _____

    _____

18. Do you know of any hazardous material/hazardous waste or petroleum products spills that have occurred on the subject property? Yes ☐ No ☒ Unk ☐

    If yes, when and where did they occur?

    _____

    _____

19. Are there currently, or to the best of your knowledge have there been previously, any drains, dry wells, underground sumps, septic tanks, leach fields at the subject property?
Yes ☐ No ☒ Unk ☐

If yes, where?

_____

_____

20. Are the buildings at the subject site connected to a sewer line? Yes ☒ No ☐ Unk ☐

If a septic tank is present can you specify where the tank and leach field (if applicable) are located?

_____

21. Do you have knowledge of any past or current existence environmental violations with respect to the subject property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

22. Are you aware of any environmental cleanup liens against the property that are filed or recorded under Federal, tribal, State, or local law? Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

23. Are you aware of any activity and land use limitations (AULS), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under Federal, tribal, State, or local law?
Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

24. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?
Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

25. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,

a) Do you know the past uses of the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

b) Do you know of any environmental cleanups that have taken place at the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

c) Do you know of any other commonly known or reasonably ascertainable information about the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

26. Based on your knowledge and experience related to the property are there any *obvious* indicators that point to the presence or likely presence of contamination?
Yes ☐ No ☒ Unk ☐

If yes, please explain:

_____

_____

	Yes	No	Unk	NA
27. To the best of your knowledge, have any historic addresses been utilized for the subject property?	☐	☐	☒	☐

If yes, please explain:

28. To the best of your knowledge, have any hazardous substances or petroleum products or unidentified waste materials been buried at the subject property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

29. To the best of your knowledge, has any solid wastes, including construction materials, concrete, trash been dumped or buried on the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

30. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of Polychlorinated Biphenyls (PCBs)? Yes ☐ No ☒ Unk ☐

If yes, please explain:

31. Are there any areas you would recommend for further environmental investigation based on your knowledge of current and historical uses of the subject property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

32. Is there anyone else you would recommend we interview for the Phase I ESA? Yes ☐ No ☒

If yes, please provide their contact information:

Interviewed Person

Jason Brust / Director of M/O/F
Name/Title

La Mesa-Spring Valley SD
Company/Govt. Agency

3838 Conrad Drive, Spring Valley, CA
Address

(619) 668-5760
Phone Number


Signature

10/6/20
Date

Michael Baker
INTERNATIONAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT INTERVIEW QUESTIONNAIRE

Date: 10/06/2020 Time: 10:00 am Property Name: Casa de Oro Branch Library Project

Property Address and APN(s): 9610 Campo Road, APN 500-170-41

If questions are answered for only a specific area of the property (i.e., APN), specify the area:

Person Answering Questionnaire:	Name:	John S. Lively
	Phone/Fax:	(619) 461-3131 / (619)461-0450
	Email:	jlive@cox.net
Party Administering Questionnaire:	Name:	Danielle Regimbal, Michael Baker International
	Phone/Fax:	Please Return Fax to (949) 837-4122; or
	Email:	danielle.regimbal@mbakerintl.com

1. How long have you worked at or been associated with the property?

   45 years plus or minus

2. What is your position?

   Trustee of Owner – Lively Trust

3. What are your job responsibilities related to the property?

   Management

4. To the best of your knowledge is the **subject property** currently or historically been used for an industrial use? Yes ☐ No ☒ Unk ☐

   If yes, please explain:

5. To the best of your knowledge is any **adjoining property** currently or historically been used for an industrial use? Yes ☐ No ☒ Unk ☐

   If yes, please explain:

   North:

   East:

   South:

   West:

6. To the best of your knowledge is the **subject property** currently used or was historically used as a:

   a) gasoline station Yes ☐ No ☒ Unk ☐
   b) motor repair facility Yes ☐ No ☒ Unk ☐
   c) commercial printing facility Yes ☐ No ☒ Unk ☐
   d) dry cleaners Yes ☐ No ☒ Unk ☐
   e) photo developing laboratory Yes ☐ No ☒ Unk ☐
   f) plating shops Yes ☐ No ☒ Unk ☐
   g) junkyard or landfill Yes ☐ No ☒ Unk ☐
   h) solid waste treatment, storage, disposal, processing, or recycling facility Yes ☐ No ☒ Unk ☐

   If yes, please explain:

7. To the best of your knowledge is any **adjoining property** currently used or was historically used as a:

   a) gasoline station Yes ☐ No ☒ Unk ☐
   b) motor repair facility Yes ☐ No ☒ Unk ☐
   c) commercial printing facility Yes ☐ No ☒ Unk ☐
   d) dry cleaners Yes ☐ No ☒ Unk ☐
   e) photo developing laboratory Yes ☐ No ☒ Unk ☐
   f) plating shops Yes ☐ No ☒ Unk ☐
   g) junkyard or landfill Yes ☐ No ☒ Unk ☐
   h) solid waste treatment, storage, disposal, processing, or recycling facility Yes ☐ No ☒ Unk ☐

   If yes, please explain:

8. To the best of your knowledge are there currently stored or used, or have there been previously stored or used, any of the following on the **subject property**:

a)	damaged or discarded automotive or industrial batteries	Yes ☐ No ☒ Unk ☐
b)	pesticides, paints	Yes ☐ No ☒ Unk ☐
c)	petroleum products	Yes ☐ No ☒ Unk ☐
d)	degreasers	Yes ☐ No ☒ Unk ☐
e)	solvents	Yes ☐ No ☒ Unk ☐
f)	paints	Yes ☐ No ☒ Unk ☐
g)	cleaners	Yes ☐ No ☒ Unk ☐
h)	pesticides	Yes ☐ No ☒ Unk ☐
i)	other hazardous materials?	Yes ☐ No ☒ Unk ☐

If yes, please explain:

9. To the best of your knowledge are there currently, or where there historically, any hazardous wastes or used oil generated on the property? Yes ☐ No ☒ Unk ☐

   If yes, where is it stored?

10. To the best of your knowledge has fill dirt been brought onto the property that originated from a contaminated site or that is of an unknown origin? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

11. To the best of your knowledge are there currently, or have there been previously, any pits, pond, or lagoons located on the property in connection with waste treatment or waste disposal? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

12. Are there currently, or to the best of your knowledge has there been previously, any stained soil (other than minor automotive type stains) on the property? Yes ☐ No ☒ Unk ☐

    If yes, what and where?

13. Are there currently, or to the best of your knowledge are there currently or has there been previously, any registered or unregistered storage tanks (above or underground) located on the subject property? Yes ☐ No ☒ Unk ☐

    If yes, where?

14. If existing or removed tanks are known, do you have any knowledge of any leaks, spills or releases from these tanks? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

15. Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property? Yes ☐ No ☒ Unk ☐

    If yes, please explain:

16. If applicable, what are the current procedures for obtaining storing, and handling hazardous materials and/or petroleum products at the subject property? Not Applicable ☒

17. If applicable, what are the current procedures for disposing of hazardous waste and/or waste petroleum products at the subject property? Not Applicable ☒

18. Do you know of any hazardous material/hazardous waste or petroleum products spills that have occurred on the subject property? Yes ☐ No ☒ Unk ☐

    If yes, when and where did they occur?

19. Are there currently, or to the best of your knowledge have there been previously, any drains, dry wells, underground sumps, septic tanks, leach fields at the subject property?
Yes ☐ No ☒ Unk ☐

If yes, where?

20. Are the buildings at the subject site connected to a sewer line? Yes ☐ No ☒ Unk ☐

If a septic tank is present can you specify where the tank and leach field (if applicable) are located?

21. Do you have knowledge of any past or current existence environmental violations with respect to the subject property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

22. Are you aware of any environmental cleanup liens against the property that are filed or recorded under Federal, tribal, State, or local law? Yes ☐ No ☒ Unk ☐

If yes, please explain:

23. Are you aware of any activity and land use limitations (AULS), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under Federal, tribal, State, or local law?
Yes ☐ No ☒ Unk ☐

If yes, please explain:

24. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?
Yes ☐ No ☒ Unk ☐

If yes, please explain:

25. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,

a) Do you know the past uses of the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

b) Do you know of any environmental cleanups that have taken place at the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

c) Do you know of any other commonly known or reasonably ascertainable information about the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

26. Based on your knowledge and experience related to the property are there any *obvious* indicators that point to the presence or likely presence of contamination?
Yes ☐ No ☒ Unk ☐

If yes, please explain:

	Yes	No	Unk	NA
27. To the best of your knowledge, have any historic addresses been utilized for the subject property?	☐	☒	☐	☐

If yes, please explain:

28. To the best of your knowledge, have any hazardous substances or petroleum products or unidentified waste materials been buried at the subject property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

29. To the best of your knowledge, has any solid wastes, including construction materials, concrete, trash been dumped or buried on the property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

30. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of Polychlorinated Biphenyls (PCBs)? Yes ☐ No ☐ Unk ☒

If yes, please explain:

31. Are there any areas you would recommend for further environmental investigation based on your knowledge of current and historical uses of the subject property? Yes ☐ No ☒ Unk ☐

If yes, please explain:

32. Is there anyone else you would recommend we interview for the Phase I ESA? Yes ☐ No ☒

If yes, please provide their contact information:

Interviewed Person

Name/Title	Company/Govt. Agency
Address	Phone Number
Signature	Date

APPENDIX D:
QUALIFICATIONS OF THE ENVIRONMENTAL PROFESSIONAL

QUALIFICATIONS OF THE ENVIRONMENTAL PROFESSIONAL

QUALIFICATIONS AND EXPERIENCE

Phase I Environmental Site Assessments (ESAs) prepared by Michael Baker Consulting reflect the most current interpretations of industry standards, which are in accordance with the ASTM International (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments.

KEY PERSONNEL

This Phase I ESA was overseen by Ms. Kristen Bogue, who also conducted quality assurance/quality control. Document preparation, research, and records gathering was conducted by Ms. Bogue, Ms. Danielle Regimbal, and Ms. Winnie Woo. Site reconnaissance was conducted by Ms. Danielle Regimbal and Ms. Winnie Woo.

Kristen Bogue
Environmental Professional

Ms. Bogue graduated from the University of California, Irvine, with a degree in Environmental Analysis and Design. Mr. Bogue's professional environmental experience of nine years includes the management, review, and preparation of hazardous material assessments, which include: Phase I Environmental Site Assessments, Initial Site Assessments for the California Department of Transportation (Caltrans), Preliminary Hazardous Material Assessments, Existing Hazardous Material Conditions Assessments, and Environmental Baseline Surveys for the Department of the Navy for sites located throughout California, Arizona, and New Mexico. As an environmental analyst, Ms. Bogue is also involved with preparation of Environmental Documentation compliance with the California Environmental Quality Act (CEQA)/National Environmental Protection Act (NEPA), Visual Impact Assessments (VIAs), field studies, as well as various technical studies in support of CEQA and NEPA. In the past nine years Ms. Bogue has personally evaluated over 250 real properties in California.

Danielle Regimbal
Environmental Analyst

Ms. Regimbal graduated from University of California, Santa Barbara, with a Bachelor of Science in Environmental Studies and is currently pursuing a Master of Science in Environmental Engineering from California State University, Fullerton. Ms. Regimbal assists in the preparation of environmental and planning studies for public and private sector clients. As an Environmental Analyst at Michael Baker, Ms. Regimbal is involved with the preparation of several technical studies associated with CEQA documents. Ms. Regimbal's professional environmental experience of 6 years includes the preparation of hazardous material assessments, which include: Phase I Environmental Site Assessments, Initial Site Assessments for the California Department of Transportation (Caltrans), and Preliminary Hazardous Material Assessments for sites located throughout California.

Winnie Woo
Environmental Analyst

Ms. Woo graduated from the Chapman University with a degree in Environmental Science and Policy. Ms. Woo provides assistance in the preparation of environmental and planning studies for public and private sector clients under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). As an environmental analyst at Michael Baker, Ms. Woo's primary responsibilities include the preparation of environmental documents (Initial Studies, Negative Declarations, Environmental Impact Reports, and Environmental Assessments), and technical studies, including Phase I Environmental Site Assessments, for various environmental planning projects located throughout California.

APPENDIX F
HYDROLOGY / WATER QUALITY TECHNICAL MEMORANDUM

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Michael Baker INTERNATIONAL

We Make a Difference

Technical Memorandum

TO:	County of San Diego
FROM:	Michael Baker International
DATE:	September 28th, 2020
SUBJECT:	CASA DE ORO BRANCH LIBRARY HYDROLOGY & WATER QUALITY

This technical memorandum assesses whether the project as currently designed and planned, could result in hydrology or water quality impacts per the California Environmental Quality Act (CEQA). Final project design will meet performance standards including but not limited to, the Municipal Separate Storm Sewer System (MS4) Permit Requirements, the San Diego County Hydrology Manual, and the County of San Diego BMP Design Manual.

All conceptual sizes and calculations presented in this technical memorandum are subject to change with forthcoming final design. Michael Baker has made conservative development assumptions that are described in the applicable sections of this document.

Project Information

The project is located in the Spring Valley community of unincorporated San Diego County in California. A vicinity map is provided as Attachment A.1 Vicinity Map. Based on conceptual design, the project consists of an approximately 13,000 square-foot (SF) library facility with access off Campo Road, 52 parking spaces, landscaping, and fencing. No improvement drawings are available; however, a conceptual site plan is included as Attachment A.2 Conceptual Site Plan.

This technical memorandum is based on proposed project information and details given under another title, “Casa De Oro Branch Library Project Description” (August 19, 2020. Rev. September 15, 2020), included as Attachment A.3 Project Description.

The project is not located in a FEMA flood zone, a FIRM Panel and FIRMette for the project site can be found as Attachment A.4 FIRM and A.5 FIRMette, respectively.

Soils information has been taken from a National Resource Conservation Service (NRCS) Web Soil Survey, found as Attachment A.6 Soils Survey. The calculations use Hydrologic Soil Group A, which is representative of the study area.

Existing Conditions

The project site consists of 2.24 acres of currently disturbed and/or developed land. The site is relatively flat, gently sloping from north to south. An existing culvert is present in the southwestern portion of the site which presently accommodates stormwater flows from the north/northeast that sheet flow across the subject property. Stormwater runoff from properties located to the north of the site are accommodated by an existing 48-inch RCP storm drain that extends north-south across the property.

This pipe collects school district water runoff as well as off-site runoff waters. The 48-inch storm drain outlets into the culvert at the southwest portion of the site. Well-established vegetation abuts the culvert and generally obscures it from view. Runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that leaves the project Discharge Point 1 and flows to Conrad Drive.

Hardline conveyance at Conrad Drive directs runoff south and then west on Campo Road to existing County of San Diego storm drain inlets. Runoff from the southern portion currently sheet flows to Campo Road and leaves the project at Discharge Point 2. Hardline conveyance along Campo Road intercepts the sheet flow through curb and gutter to existing County of San Diego storm drain inlets southwest of the site on Campo Road. The existing drainage conditions can be found as Attachment B.1 Existing Hydrology Map.

Proposed Conditions

In the proposed conditions, impervious area is expected to increase. A conceptual proposed hydrology map is included as Attachment B.4 Conceptual Proposed Hydrology Map and is based on assumptions made on the potential design of the project. For purposes of this technical memorandum, the proposed impervious area is 44,600 square feet. The proposed impervious area was calculated using the Conceptual Site Plan found in the "Casa De Oro Branch Library Project Description" (August 19, 2020. Rev. September 15, 2020), included as Attachment A.3 Project Description. For conservatism, the proposed impervious area outlines the furthest extents of proposed impervious areas on the conceptual site plan layout outline. The increase in impervious area will cause an increase in runoff from the site.

The project design will include a drainage network designed to control and filter stormwater runoff in conformance with requirements of the San Diego Regional Water Quality Control Board and County of San Diego. The proposed stormwater system may include the use of biofilters, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff to the existing conditions or lesser.

Runoff from the project site will not be permitted to confluence with the existing 48-inch culvert.

It is anticipated that stormwater runoff from the site will connect to the existing public storm drain system through the same discharge points in Conrad Drive and Campo Road, as occurs under existing conditions. The project will not comingle stormwater flows from the project site in its improved condition with flows that are currently accommodated by the existing storm drain system serving the site.

Through drainage design, the project will not result in a change in stormwater volume, rate, or direction of flow from the site following project implementation. No upgrades or other improvements to the existing storm drain system are anticipated or proposed as part of the project.

Hydrology

Methodology

Hydrologic parameters have been developed using the Rational Method procedures according to 2003 San Diego County Hydrology Manual (SDCHM), excerpts are provided in Attachment C SDCHM Excerpts.

Runoff Coefficient (C)

For proposed and existing calculations, runoff coefficient values (C) were determined by composite weighted C values. A summary of these values for existing and proposed can be found as Attachment B.2 Existing Composite C Calculations and Attachment B.5 Proposed Composite C Calculations.

Intensity (I)

The rainfall intensity (I) is calculated using the following formula:

$$I=7.44 \times P_6 \times D^{-0645}$$

Where:

P_6 – adjusted 6-hour storm rainfall

D - duration in minutes (T_c)

P_6 is determined based on Isopluvial Maps from the SDCHM. For this project location, the 100-yr P_6 value was determined to be 2.75 inches.

For existing and proposed project site hydrology, time of concentration (T_c) was determined using the sum of initial travel time and time for shallow concentrated flow. Initial travel time is found per Table 3-2 and shallow concentrated flow using TR-55 Figure 3-1, both included in Attachment C SDCHM Excerpts. For Drainage Area 2, a conservative T_c of 5 minutes was used to account for the small size of the drainage area.

Area (A)

Drainage areas (A) were delineated from a combination of site-specific topographic survey (site survey), regional topography from SanGIS, and aerial photography. Drainage area delineations are included in the hydrology maps.

Conceptual Results

Existing conditions show a 100-year flowrate of 2.88 CFS for Drainage Area 1 at Discharge Point 1 and 1.26 CFS for Drainage Area 2 at Discharge Point 2.

TABLE 1- HYDROLOGY SUMMARY 100 YEAR– EXISTING

				100 Year		
Drainage Areas	**Area (ac)**	**C**	**Tc (min)**	**P_6 (in)**	**I (in/hr)**	**Q_{100} (cfs)**
1	1.93	0.37	8.8	2.75	4.03	2.88
2	0.31	0.56	5	2.75	7.25	1.26

Proposed conditions show a 100-year flowrate of 4.19 CFS for Drainage Area 1 at Discharge Point 1 and 0.90 CFS for Drainage Area 2 at Discharge Point 2.

TABLE 2- HYDROLOGY SUMMARY 100 YEAR– PROPOSED CONCEPT

Drainage Areas	Area (ac)	C	Tc (min)	100 Year		
				P_6 (in)	I (in/hr)	Q_{100} (cfs)
1	1.93	0.54	8.8	2.75	4.03	4.19
2	0.31	0.40	5	2.75	7.25	0.90

Full conceptual proposed hydrology calculations can be found as Attachment B.6 Proposed Hydrology Calculations. All conceptual sizes and calculations presented in this technical memorandum are subject to change with forthcoming design.

Water Quality

Methodology

Water quality parameters will be developed using procedures according to the most current County of San Diego BMP Design Manual (BMP DM) and the San Diego Regional Water Quality Control Board requirements. The project will require a Storm Water Quality Management Plan (SWQMP) that complies with local (San Diego County) and Municipal Separate Storm Sewer System (MS4) Permit Requirements.

Based on the Conceptual Site Plan found in the "Casa De Oro Branch Library Project Description" (August 19, 2020. Rev. September 15, 2020), found as Attachment A.3 Project Description, the project will be a Priority Development Project (PDP). Both Pollutant Control and Hydromodification Management Requirements apply.

The BMP DM proposes many strategies that can be used during project design to fulfill the performance standards. Applicable BMPs include, but not limited to, baseline, source control, site design, design capture reduction, pollutant control, hydromodification management and avoidance and bypass of critical coarse sediment.

The strategy for this project may include biofilters, Significant Site Design BMPs, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff to the existing conditions or lesser. The Appendices of the BMP DM provide guidance on BMP selection to meet performance standards and is included as Attachment D.4 BMP DM Appendices of this memorandum.

The sizing provided in this technical memorandum is based on the project site in its entirety. This is a strategy used in preliminary design at the conceptual phase to aid in finding the minimum required treatment BMP for the whole project. BMP sizing and selection will occur during final design, as informed by this memorandum.

Baseline BMP Implementation – Source Control and Site Design

Baseline BMP requirements include conservation of existing natural site features, minimization of outdoor impervious areas, rooftop dispersion, landscape sustainability, protection of work and storage areas, management of stormwater discharges, and management of non-stormwater discharges.

Per the BMP DM, "Source control BMPs avoid and reduce pollutants in storm water runoff. Everyday activities, such as recycling, trash disposal, and irrigation generate potential storm water pollutants.

Source control BMPs are defined as activities or features that reduce the potential for storm water runoff to come into contact with pollutants."

The project will be designed to implement all source control BMP requirements. Source control BMPs are found in Appendix C of the BMP DM. The BMP DM Appendices are included in this memorandum as Attachment D.4 BMP DM Appendices.

Per the BMP DM, "Site design BMPs (also referred to as low impact design (LID) BMPs) are intended to reduce the rate and volume of storm water runoff and associated pollutant loads by minimizing surface soil compaction, reducing impervious surfaces, or providing flow pathways that are "disconnected" from the storm drain system, such as by routing flow over pervious surfaces. Site design BMPs may incorporate interception, storage, evaporation, evapotranspiration, infiltration, and/or filtration processes to retain and/or treat pollutants in storm water before it is discharged from a site."

The project will be designed to implement all site design BMPs required by performance standards. Site design BMPs are found in Appendix C of the BMP DM. The BMP DM Appendices are included in this memorandum as Attachment D.4 BMP DM Appendices.

The quantity and quality of runoff leaving the site will not be altered adversely through the implementation of site design and source control BMPs.

Storm Water Pollutant BMPs

The project will implement stormwater pollutant control BMPs to maximize retention of stormwater and reduce the quantity of pollutants in storm water discharges. The BMP DM outlines steps for selecting and designing storm water pollutant control BMPs in Appendix B. The BMP DM Appendices are included in this memorandum as Attachment D.4 BMP DM Appendices. Examples of storm water pollutant control BMPs include amended soils, tree wells, and biofilters.

For the purpose of this technical memorandum, the BMP design capture volume, retention requirements and performance are calculated using the 2.24-acre site in entirety. The proposed impervious area presented in the conceptual site plan is 44,600 square feet and used in analysis. Attachment D.1 Water Quality Sizing Spreadsheet is a high-level conceptual BMP sizing spreadsheet that shows a biofiltration basin adequately sized per the conceptual site plan. The sizing worksheets are provided for feasibility only and not for design purposes. Further strategy design will be required.

Hydromodification Management BMPs

Hydromodification management requirements are required to minimize the potential of storm water discharges from the MS4 from causing altered flow regimes and excessive downstream erosion in receiving waters. The current standard for storm water pollutant control is retention of the 24-hour 85th percentile storm volume. Examples of BMPs for hydromodification include retention basins, and Significant Site Design BMPs such as amended soils and self-retaining areas.

Critical Coarse Sediment Yield Areas (CCYSA) do not exist on, nor upstream of the project site and therefore will not be disturbed by the project. See Attachment D.3 CCYSA Exhibit for the CCYSA Exhibit.

The conceptual BMP sized for storm water pollutant control will also be sized for hydromodification purposes. The depth and storage will be designed to implement all requirements and modeling will be required to ensure compliance. The conceptual sizing worksheets are included as Attachment D.2 Hydromodification Sizing Spreadsheet.

Results and Discussion

To summarize, the project will be designed to meet all required County performance standards and MS4 requirements. The performance standards are set to provide assurance that the project will not alter the quality or quantity of runoff leaving the project site in an adverse way.

All conceptual sizes and calculations presented in this technical memorandum are subject to change during final design.

Hydrology

The existing drainage patterns will not be altered with the implementation of the project. The increase in impervious area will increase the runoff at the site. Project design will include BMPs that will reduce the increase in runoff volume and peak flow to existing conditions to comply with MS4 permits.

The project will not comingle stormwater flows from the project site in its improved condition with flows that are currently accommodated by the existing storm drain system serving the site. No runoff from the project will be permitted to confluence with the existing 48-inch culvert. Through drainage design, the project will not result in a change in stormwater volume, rate, or direction of flow from the site following project implementation. No upgrades or other improvements to the existing storm drain system are anticipated or proposed as part of the project.

Water Quality

The project will comply to all requirements in the BMP DM for both Pollutant Control and Hydromodification Management Requirements. Site design, source control, storm water pollutant and hydromodification standards will all be required and met through BMP selection and strategy.

The project design will include a drainage network designed to control and filter stormwater runoff in conformance with requirements of the San Diego Regional Water Quality Control Board and County of San Diego. The proposed stormwater system may include the use of biofilters, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff to the existing conditions or lesser.

Through drainage design, the project will not result in a change in stormwater volume, rate, or direction of flow from the site following project implementation.

CEQA – Threshold of Significance

1. Will the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

   The project will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The project will be designed in accordance to current MS4 requirements, the San Diego County Hydrology Manual and the County of San Diego BMP Design Manual. The project will not decrease the quality or increase the quantity of surface or groundwater since BMPs will be designed and implemented to mitigate for the increase in runoff and peak flow and any adverse impacts on water quality. These may include biofilters, Significant Site Design BMPs, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff to the existing conditions or lesser. The BMP DM appendices provide guidance on BMP selection to meet performance standards and is included as Attachment D.4 BMP DM Appendices.

2. Will the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

   The project will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The project is not located in one of the three Sustainable Groundwater Management Act (SGMA)-mandated basins in San Diego County. The Helix Water District will provide water for the project and the project will not use well water.

3. Will the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
   i. Result in substantial erosion or siltation on- or off-site?
   ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
   iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
   iv. Impede or redirect flood flows?

   The project will not result in a substantial alteration to the existing drainage pattern across the site. The project will be designed in accordance to current MS4 requirements, the San Diego County Hydrology Manual and the County of San Diego BMP Design Manual. The project will not decrease the quality or increase the quantity of runoff discharging from the project site compared to existing conditions. The project will not cause flooding downstream, nor will it hydraulically impact on-site or downstream storm water infrastructure.

i. The project will not result in substantial erosion or siltation on- or off-site. The project will be designed to the most current hydromodification standards. The current standard for storm water pollutant control is retention of the 24-hour 85th percentile storm volume.
ii. The project will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site since BMPs such as bioretention basins, or Significant Site Design BMPs, will be designed and implemented to mitigate for the increase in runoff and peak flow. The project will not increase the quantity or velocity of surface runoff.
iii. The project will not create or contribute runoff water which would exceed the capacity or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The project will not decrease the quality or increase the quantity of runoff discharging from the project site compared to existing conditions.
iv. The project will not impede or redirect flood flows. The project does not lay in a Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM).

4. Will the project in flood hazard, tsunami, seiche zones, risk release of pollutants due to project inundation?

Based on project location it is unlikely that the project is subject to inundation by flood hazard, seiche, tsunami or mudflow. The project does not lay in a Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM).

5. Will the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The project will be designed in accordance to current MS4 requirements, the San Diego County Hydrology Manual and the County of San Diego BMP Design Manual. The project will not decrease the quality or increase the quantity of runoff discharging from the project site compared to existing conditions. The project is not located in one of the three Sustainable Groundwater Management Act (SGMA)-mandated basins in San Diego County.

Attachment A- Project Information

A.1 Vicinity Map

A.2 Conceptual Site Plan

A.3 Project Description

A.4 FEMA FIRM

A.5 FEMA FIRMette

A.6 Soils Survey



9/14/2020 JN C:\Working\CDO\Vicinity Map.mxd

Michael Baker INTERNATIONAL

North

0 125 250 500 Feet

CASA DEL ORO LIBRARY

Attachment A.1 **Vicinity Map**

Hydrology and Water Quality

500-170-11

500-170-10)

20' EASEMENT

EX. 48" SD

EASEMENT FOR
PUBLIC SEWER

40' ROAD EASEMENT

PROJECT AREA

RETAINING WALL

LIBRARY
BUILDING

EX. DRAINAGE DITCH

500-170-41

RETAINING WALL

GATE

ADA ACCESS PATH

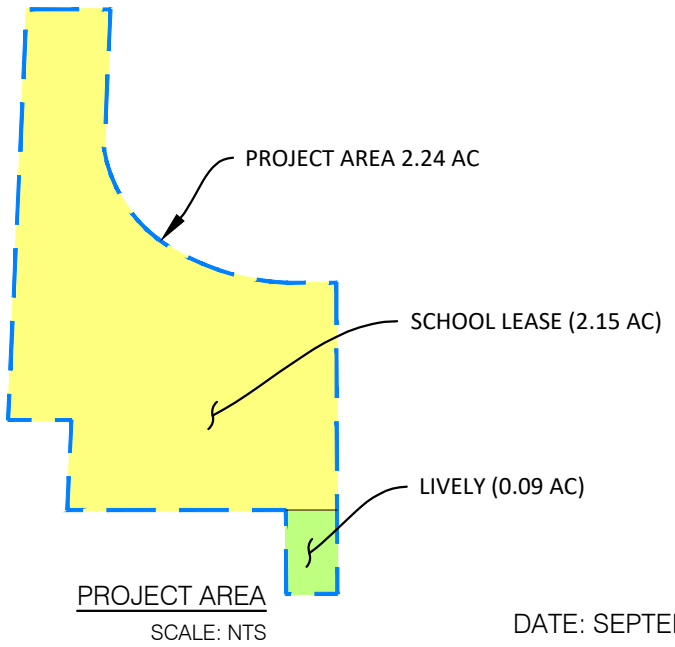
CAMPO ROAD

COMMERCIAL
DRIVEWAY

EX. WATER METER

EX. 8" WATER

EX. 8" SEWER



PROJECT AREA
SCALE: NTS

DATE: SEPTEMBER 4, 2020

60 120

CASA DE ORO LIBRARY
SITE PLAN EXHIBIT

Michael Baker
INTERNATIONAL

9755 Clairemont Mesa Blvd.
San Diego, CA 92124
Phone: (858) 614-5000
MBAKERINTL.COM

Attachment A.2

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Casa De Oro Branch Library
Project Description
Spring Valley, Unincorporated San Diego County, California

August 19, 2020; Revised September 15, 2020

The Casa de Oro Branch Library Project (proposed project) would result in replacement of the existing County of San Diego (County) Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The proposed project consists of an approximately 13,000 square-foot (SF) library facility that aims to achieve "zero net energy," with access off Campo Road, 52 parking spaces, landscaping, and fencing. The existing library is currently located at 9805 Campo Road within an existing retail commercial shopping center, just to the southeast of the proposed project site. The proposed project is intended to enhance the County's regional library system and provide expanded services to its patrons within the Spring Valley community and surrounding areas. The proposed project would be processed through the County's Department of General Services (DGS).

PROJECT LOCATION

The proposed project site is located in the community of Spring Valley in southeastern unincorporated San Diego County, California. The site is within the Valle de Oro Community Plan Area. The affected County Assessor Parcel Numbers (APNs) include portions of APNs 500-170-10, -11, and -41.

Regional access to the project vicinity is provided via State Route (SR) 94 located approximately 480 feet to the south/southwest of the site at its closest point; refer to Figure 1, Regional Map. Direct access to the project site would be provided from Campo Road, between Conrad Drive and Rodgers Road.

PROJECT SETTING AND EXISTING CONDITIONS

The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The area surrounding the project site is highly developed with a variety of land uses including commercial, general office, and multi-family and (limited) single-family residential uses.

Adjacent to the north and west of the site is the Spring Valley Academy, a middle school serving grades 5 to 8, that is overseen by the La Mesa Spring Valley School District. To the east is the La Mesa Spring Valley School District maintenance yard. Sports fields owned and maintained by the

school abut the project site to the north and west. A small-scale restaurant fronting directly onto Campo Road is located in the southern portion of the proposed site; refer to Figure 2, Local Vicinity Map/Project Site. This restaurant would be demolished to provide access to the subject property. Commercial uses are located directly to the south, along with single-family and multi-family uses to the south/southwest of the site. Single-family rural residential uses are present in the distance along the hillsides to the north and south. The Campo Road commercial corridor trends east-west through the community and forms the southern boundary of the proposed site.

The land where the library would be constructed is currently disturbed and/or developed. The majority of the property is currently surfaced with asphaltic pavement. The site would also include a portion of an existing sports field associated with the school and the removal of a modular office structure located on the school site; refer to Figure 2, Local Vicinity Map.

The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet above mean sea level (amsl) in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.

An existing culvert is present in the southwestern portion of the site which presently accommodates stormwater flows from the north/northeast that sheet flow across the subject property. A 48-inch storm drain collects runoff from north of the site and outlets into this culvert. Under current conditions, well-established vegetation abuts the culvert and generally obscures it from view. Runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the restaurant parcel currently sheet flows to Campo Road.

The western portion of the Valle de Oro Community Planning Area is drained by Spring Valley Creek with two of its tributaries in the Valle de Oro Plan Area which include the Casa de Oro and Mt. Helix creeks.

GENERAL LAND USE AND ZONING

Table 1, Existing General Plan Land Use and Zoning, identifies the existing County General Plan land use designations and zoning classifications for the affected properties. No change in the existing General Plan or zoning is required or proposed with project implementation.

TABLE 1: EXISTING GENERAL PLAN LAND USE AND ZONING

Assessor Parcel Number	Regional Category	General Plan Land Use	Zoning
500-170-10 (Portion of)	Not Applicable	Public/Semi-Public Facilities	Rural Residential Single (RS)
500-170-11 (Portion of)	Not Applicable	Public/Semi-Public Facilities	Rural Residential Single (RS)
500-170-41 (Portion of)	Village	General Commercial	General Commercial (C36)

ACTIONS

As mentioned, the project would be processed through the County Department of General Services who would act as the Lead Agency under the California Environmental Quality Act (CEQA) for approval of a Mitigated Negative Declaration, which would be required to satisfy CEQA requirements. The proposed project would not be subject to discretionary review by the County. Improvement plans for the proposed project would be subject to review by the California Division of the State Architect (DSA) to ensure design conformance with current American Disability Acts (ADA) Guidelines, including for such components as parking, stairs, ramps, hazards, restrooms, casework, and signage. County's Department of Planning and Development Services (PDS) would be responsible for inspecting construction of the library facility. All required permits (i.e., building and grading permits) for the proposed project would be issued by the County's Department of Planning and Development Services (PDS); refer to Table 2, Anticipated Permits and Approvals.

Additional approvals would also be required from other agencies. Table 2 identifies the anticipated permits and approvals required for the proposed improvements. For the purposes of CEQA, the term responsible agency includes public agencies other than the lead agency that may have discretionary actions associated with implementation of the proposed project or an aspect of subsequent implementation of the proposed project.

TABLE 2: ANTICIPATED PERMITS AND APPROVALS

Permit/Approval	Affected Agency	Lead/Trustee/ Responsible Agency
Mitigated Negative Declaration (MND)	County of San Diego (County)	Lead Agency
Construction Permit	County [in lieu of Division of the State Architect (DSA)]	Lead Agency
Grading Permit	County in lieu of DSA	Lead Agency
Building Permit	County in lieu of DSA	Lead Agency
Improvement Plans	County in lieu of DSA	Lead Agency
Landscape Plan	County in lieu of DSA	Lead Agency
Stormwater Quality Management Plan/ Drainage Plan	County in lieu of DSA	Lead Agency
General Construction Stormwater Permit	San Diego Regional Water Quality Control Board (RWQCB)	Responsible Agency
National Pollution Elimination System Permit (NPDES)	RWQCB	Responsible Agency

PROJECT CHARACTERISTICS

The library building would total approximately 13,000 SF in size and would house a number of rooms in order to accommodate internal library operations, as well as to provide a variety of services to the public. The proposed library would consist of the components identified in Table 3. Refer also to Figure 3, Conceptual Site Plan; Figure 4A, Conceptual Layout (Alpine Library); and Figure 4B, Adjacency Diagram. In addition, Figures 5A and 5B provide illustrative examples of other existing County libraries upon which the ultimate architectural style for the Casa de Oro library may be based.

TABLE 3: PROJECT COMPONENTS

Proposed Use	
Entry plaza	Entry lobby
Restroom facilities (including staff-only)	Circulation desk
Public multi-media room (computers/copy machines)	Manager's office/work room/ sorter/storage/break room/staff restroom
Adult (study rooms/seating/book stacks)	Great room (reading area and magazine stacks)
Children (story-time area/discovery zone/book stacks/reading room/study area/crafts and children's restrooms)	Teens (study rooms/seating/book stacks)
Community room	Conference room
Audio/visual storage	Marketplace (popular books/ holds and self-checkouts)
Homework center	Friends of Library bookstore
Outdoor patio	

Source: County DGS 2020

Project implementation would require acquisition of Real Property from an adjoining private party to the south. The County would lease the affected property from the La Mesa Spring Valley School District; no lands would be purchased from the school. Refer also to the discussion under Demolition below.

Access

Direct access to the project site would be from Campo Drive. It is anticipated that a minimum 24-foot wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.

Parking

Table 4, County of San Diego Parking Requirements, shows the minimum required parking for the proposed project based on the County's Parking Ordinance. As shown in Table 4, a total of 39 parking spaces are required based upon the County's requirements for a library use. The proposed library would provide a total of 52 surface parking spaces which would exceed the County's minimum parking requirements. This would accommodate daily library parking requirements as well as after-hours use of the community room. All employees would park on-site; off-site parking would not be required to accommodate library staff.

Two dedicated parking spaces would be provided on-site for library delivery vans. These parking spaces would be provided directly adjacent to the library staff service entry for ease of loading/unloading.

On-site bike racks to accommodate 6 bikes (minimum) would also be provided. Additionally, it is anticipated that two electric vehicle (EV) charging stations would be provided on-site within the surface parking lot. The number of EV stations provided would be in conformance with CalGreen standards.

TABLE 4: COUNTY OF SAN DIEGO PARKING REQUIREMENTS

Required Parking per Square Feet (SF)	Proposed Land Use	# Parking Stalls Required	# of Parking Stalls Proposed
3.0 spaces / 1,000 SF (1 space / 333 SF)	Proposed 13,000 SF Library	39	52

Landscaping and Outdoor Seating

All plants and trees would be selected for their appropriateness to the architectural design, local climate tolerance, soil conditions, and level of maintenance intensity. No non-native invasive plant species shall be used. All trees and plant species would be consistent with County landscape guidelines.

Shaded seating for a minimum of 30 people would also be provided. The seating would be provided near the main entry area as well as at the outdoor patio. Built-in seating is preferred in lieu of providing site furniture.

Signage

The project proposes a monument sign located at the primary entrance on Campo Road as a feature of the landscape and architectural design. It is anticipated that such signage would incorporate materials compatible with the proposed landscape design. Accent lighting would be installed to illuminate the sign, while minimizing uplighting to avoid any adverse nighttime lighting effects.

Lighting

Nighttime lighting would be installed in the surface parking lot, at the entry drive, and on the exterior of the building for public safety purposes and to allow for safe pedestrian and vehicular circulation and access. Limited lighting may also be installed at the monument sign (see Signage, above) on Campo Road for identification purposes. All project lighting would be shielded and directed downward to avoid spillover onto adjacent properties and/or adverse effects on nighttime skies (i.e., sky glow). All nighttime lighting would be designed and installed in conformance with the County's Lighting Ordinance.

Fencing and Gates

A 12-foot high perimeter fence would be installed along the project's boundary with the school district property for security purposes. Chain-link fencing is likely to be used, but slats or mesh may be added to the chain-link fence, as appropriate, for screening purposes. In addition, it is anticipated that remote-controlled cameras or other security devices may be installed along the perimeter fence for security purposes.

It is anticipated that the fence would include a manually-operated gate along the northerly boundary that would provide occupants of the Spring Valley Academy with direct access to the library site during operating hours. The gate would otherwise be locked to prevent access during hours when the library was not in operation. Use of the library by students and faculty of the school will be part of the lease agreement between the County and the La Mesa Spring Valley School District. A gate with fire department approved Knox-box entry system would be located at the project entrance off of Campo Road to limit vehicle access to the site after hours.

Pedestrian, Bicycle, and Transit Access

Existing sidewalks are located along both the northern and southern sides of Campo Road, including along the proposed project frontage. These sidewalks would provide pedestrian access to the site. Additionally, bike lanes are present along both sides of Campo Road within the project vicinity. An ADA accessible ramp would be constructed from Campo Road to provide access to the library building.

The San Diego Metropolitan Transit System (MTS) provides bus service within the project area. Route 855 runs along Campo Road. An existing bus stop for westbound travel is located approximately 320 feet to the east of the project site; a bus stop for eastbound travel is located approximately 425 feet to the west of the project site.

Sustainability and Energy-Saving Features

Additionally, the library building would achieve a minimum Leadership in Energy and Environmental Design (LEED) Gold designation, while also reaching a higher level of sustainability

with a zero-net energy performance by surpassing California Green Building Standards 2016 (CCR, Title 24, Part 11 – CalGreen) by 15 percent. Zero net energy means that the project would incorporate energy saving features to offset the energy used during operations. Additionally, the facility would be subject to County of San Diego's Zero Net Waste Guidelines which address solid waste disposal and recycling.

Anticipated energy-savings features may include low-flow fixtures; energy-efficient LED indoor and outdoor lighting; on-site recycling containers; energy-efficient water heaters; water efficient/drought tolerant landscaping, use of reclaimed water, and limiting use of conventional turf; high-efficiency heating, ventilating, and air conditioning (HVAC) systems; and/or other features. Installation of solar photovoltaic panels is not proposed with the project. As stated above, it is anticipated that several EV charging stations would be provided on-site to further offset project-related vehicle trip emissions.

PROJECT CONSTRUCTION

Schedule

It is anticipated that project construction would occur over a period of approximately 12 to 14 months from the onset of demolition through final construction. It is anticipated that the work would be completed in 8- or 10-hour shifts, with a total of five shifts per week (Monday to Friday). Overtime and weekend work would occur as necessary to meet scheduled milestones or accelerate the schedule and would comply with all applicable California labor laws and County regulations.

Demolition

An existing modular building located on the La Mesa Spring Valley School District property would be removed to accommodate the parking lot for the library. Additionally, an existing restaurant fronting onto Campo Road would be demolished to allow for site access. The existing asphaltic surface in the southern portion of the site would also be broken up and removed. Removal of a portion of the existing sports fields abutting the site to the north would also occur with project grading. Refer to Figure 2, Local Vicinity Map/Project Site, which shows the existing on-site and off-site conditions.

All resulting construction debris would be trucked off-site for disposal at an approved landfill and/or diverted consistent with requirements of California Assembly Bill (AB) 939. AB 939 established the California Integrated Waste Management Act of 1989 (Public Resources Code Sections 42900-42927) which requires all California cities and counties to reduce the volume of solid waste deposited in landfills by 50 percent by the year 2000. It also requires that cities and counties continue to remain at 50 percent or higher for each subsequent year. The County of San

Diego requires a minimum of 65 percent of construction waste to be diverted from local landfills, thereby exceeding the state requirement.

Demolition would be accomplished with dozers and other heavy equipment. Waste materials would be uploaded onto large trucks using small cranes, forklifts, and/or other construction equipment as needed. Demolition equipment would be delivered to the site on low-bed trucks.

Grading and Site Preparation

The site would anticipate minor grading, 4,000 cubic yards (import), to accommodate the proposed library pad, surface parking area, and driveway. This includes preparation of and/or back filling of the site's retaining walls and ADA and driveway ramping, plus removal and recompaction (12-inch) of foundation and parking areas. Existing on-site vegetation (i.e., on the sports fields) would be removed. Grading would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment.

PROJECT OPERATIONS

Hours of Operation and Staffing

It is anticipated that the library would be staffed by a maximum of 6 to 8 part- and/or full-time employees on a daily basis. Consistent with current operating hours for other libraries within the County's system, it is anticipated that the Casa de Oro library would operate during the following hours:

- Monday and Wednesday: 9:30 a.m. to 6:00 p.m.
- Tuesday and Thursday: 9:30 a.m. to 8:00 p.m.
- Friday and Saturday: 9:30 a.m. to 5:00 p.m.
- Sunday: Closed

Community room hours of operation are anticipated as follows:

- Monday to Saturday: 8:00 a.m. to 8:00 p.m.
- Sunday: 8:00 a.m. to 8:00 p.m. (minimal to no use anticipated)

All project operations would be required to conform to and certified through the Living Building Challenge Net Zero Energy Guidelines. As part of ensuring project conformance with these guidelines, the following project operational activities (in addition to the operating hours identified above) would also be required and would ensure that conformance with such guidelines is achieved:

- Staff to arrive ½ hour early for daily set-up (3 additional hours/week)
- Two hours janitorial service, 3 times/week (6 additional hours/week)

- Minimum 2 hours per day for use of community room, lobby, conference room, and restrooms (10 additional hours/week = community room, conference room, lobby, and restrooms would be open an additional 2 hours on Monday/Wednesday and 3 additional hours on Friday/Saturday)

UTILITIES

Water

Public water service would be provided by the Helix Water District. The project would connect to an existing 8-inch water main located in Campo Road. No upgrades to the existing public water system are anticipated to accommodate water demands of the proposed library use. The County would obtain a service availability letter from the Helix Water District as part of the construction process to ensure that adequate water supplies are available to serve the proposed use.

Sewer

The project site is located within the boundaries of the Spring Valley Sanitation District. The project would connect to an existing 8-inch sewer line located in Campo Road. No upgrades to the existing public sewer system are anticipated to accommodate wastewater flows generated by the proposed project. The County would obtain a service availability letter from the Spring Valley Sanitation District as part of the construction process to ensure that adequate sewer services are available to serve the proposed use.

Stormwater

Stormwater runoff from properties located to the north of the site are accommodated by an existing 48-inch RCP storm drain that extends north-south across the property. This pipe collects school district water runoff as well as off-site runoff waters. Additionally, runoff from the existing surface parking area and school sheet flows into an on-site brow ditch that flows to Conrad Drive under current conditions. Runoff from the southernmost parcel currently flows to Campo Road.

The project design would include a drainage network designed to control and filter stormwater runoff in conformance with requirements of the San Diego Regional Water Quality Control Board and County of San Diego. The proposed stormwater system may include the use of biofilters, on-site storage of stormwater in basins with outlets to regulate the flow rate and duration of stormwater released, and/or the use of both retention and detention basins to slow and sequester stormwater runoff. It is anticipated that stormwater runoff from the site would connect to the existing public storm drain system in Conrad Drive, as occurs under existing conditions. The project would not comingle stormwater flows from the project site in its improved condition with flows that are currently accommodated by the existing storm drain system serving the site. Further, drainage design for the project would not result in an change in

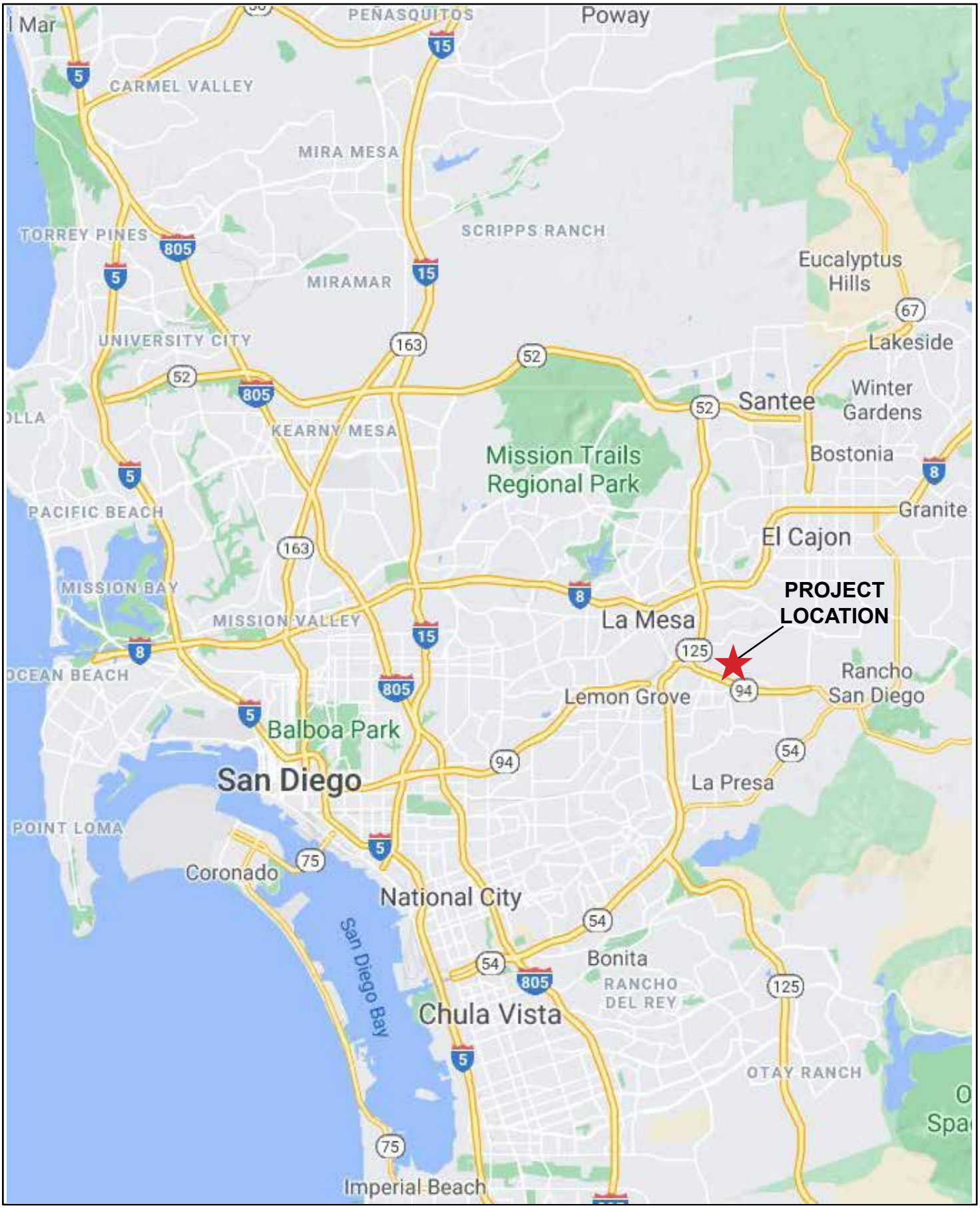
stormwater volume, rate, or direction of flow form the site following project implementation. No upgrades or other improvements to the existing storm drain system are anticipated or proposed as part of the project.

Electricity

Electricity would be provided by San Diego Gas and Electric (SDG&E). Adjoining lands are currently served by SDG&E and the project would connect to the existing system for service.

Fire

The project site is located in the San Miguel Consolidated Fire Protection District. The nearest fire station to the project site is Station No. 14, located at 3255 Helix Street in Spring Valley, approximately 0.6 miles to the southwest of the project site.



COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Regional Map

Figure 1

Michael Baker INTERNATIONAL

Not to Scale

File: 179854Exhibits.indd



Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

200 400

Source: BING, 2020

COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Local Vicinity Map/Project Site

Figure 2

500-170-11

500-170-10

20' EASEMENT

EX. 48" SD

40' ROAD EASEMENT

EASEMENT FOR
PUBLIC SEWER

PROJECT AREA

RETAINING WALL

LIBRARY
BUILDING

EX. DRAINAGE DITCH

500-170-41

RETAINING WALL

GATE

ADA ACCESS PATH

CAMPO ROAD

COMMERCIAL
DRIVEWAY

EX. WATER METER

EX. 8" WATER

EX. 8" SEWER

PROJECT AREA 2.24 AC

SCHOOL LEASE (2.15 AC)

LIVELY (0.09 AC)

PROJECT AREA

SCALE: NTS

60 120

Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

Source: Michael Baker, September 4, 2020

COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Site Plan

Figure 3

FOR SUBTERRANEAN SDG&E ROOM, REFER TO A 2.1.2

PLUMBING FIXTURE COUNT AREA CALCULATION (ACCESSORY AREAS EXCLUDED)

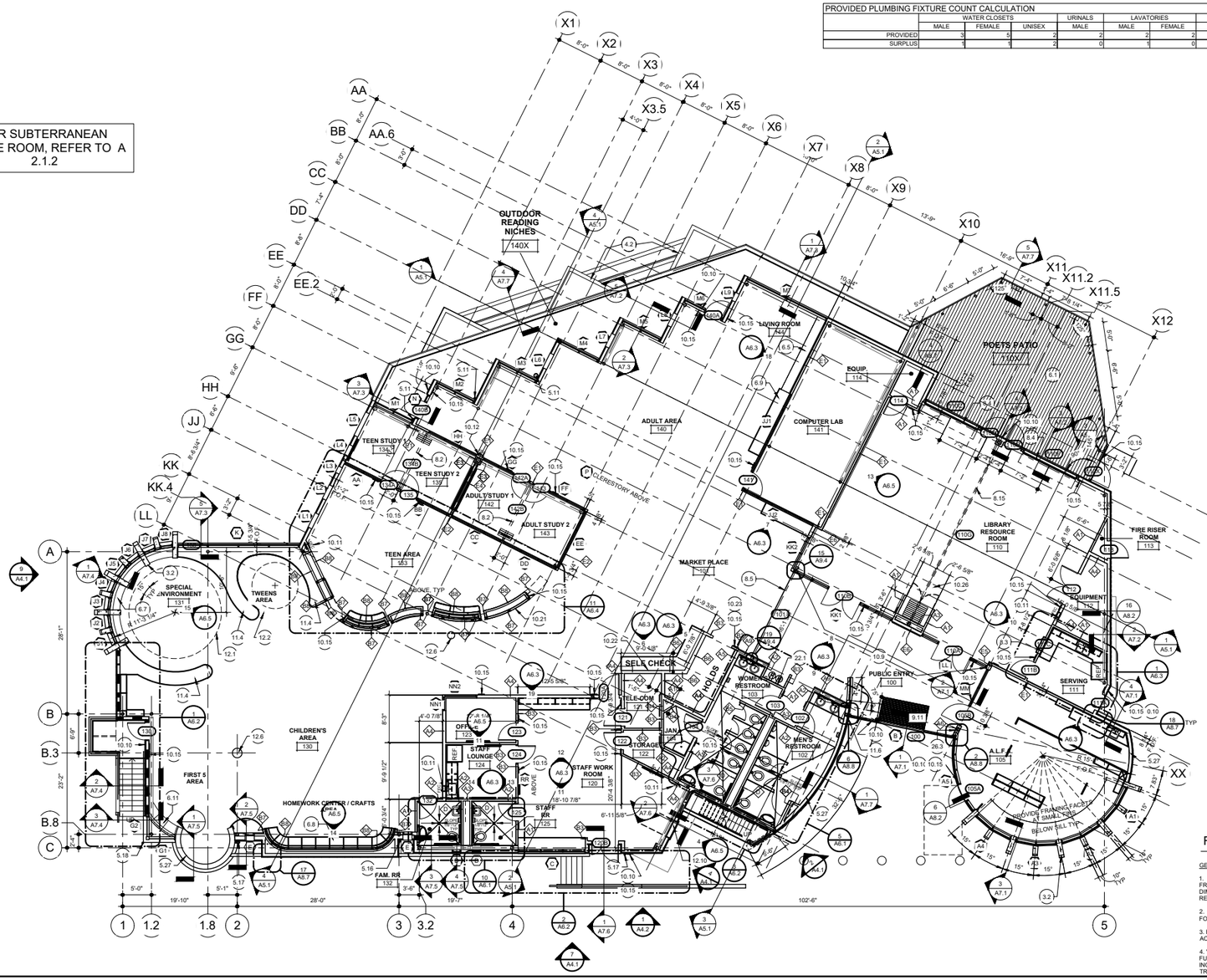
TOTAL AREA PER OCCUPANCY	AREA	OCC. FACTOR	TOTAL OCC.	MALE	FEMALE
A-3 (INC. EXT. READING AREAS)	11, 537 SF	30	384.57	192	192
B	732 SF	200	3.66	2	2
TOTAL				194	194

REQUIRED PLUMBING FIXTURE COUNT CALCULATION

TABLE 422.1 CPC 2013	WATER CLOSETS			URINALS	LAVATORIES		DF
	MALE	FEMALE	UNISEX	MALE	MALE	FEMALE	
A-3	2	4	-	2	1	2	1
B	0	0	-	0	0	0	0
TOTALS	2	4	-	2	1	2	1

PROVIDED PLUMBING FIXTURE COUNT CALCULATION

	WATER CLOSETS			URINALS	LAVATORIES		DF
	MALE	FEMALE	UNISEX	MALE	MALE	FEMALE	
PROVIDED	3	5	2	2	2	2	2
SURPLUS	1	1	2	0	1	0	1



KEYNOTES

3.2	ARCHITECTURAL CONCRETE SHADE FINS PER STRUCTURAL. FINISH PER SPECS.
4.2	SPLIT FACE CONCRETE MASONRY UNIT PLANTER BOXES AND TERRACED SEAT WALL, PER LANDSCAPE.
5.11	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH FIBER CEMENT SIDING, FCS-1.
5.16	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH FIBER CEMENT SIDING, FCS-2.
5.17	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH STUCCO.
5.18	PREFINISHED SHEET METAL DOWNSPOUT PER SPECIFICATIONS. COLOR TO MATCH STOREFRONT MULLIONS.
5.27	CURVED METAL FRAMING TYP U/O/N
6.1	TREX TRANSCEND, COMPLYING WITH WILDLAND URBAN-INTERFACE (WUI) REQUIREMENTS PER COUNTY AMENDMENT TO THE FIRE CODE CHAPTER 7 92.1.704.A.4.1.
6.5	CUSTOM BUILT-IN MAGAZINE AND NEWSPAPER SHELVING, PER DETAIL 5&6/A9.6
6.7	BUILT-IN UPHOLSTERED WINDOW SEAT, PER DETAIL 4/A9.6.
6.8	BUILT-IN SEATING AT HOMEWORK CENTER, CHILDREN'S HEIGHT, PER DETAIL 3/A9.6.
6.9	BUILT-IN LAPTOP COUNTER
6.11	BUILT-IN SEATING AT FIRST 5, CHILDREN'S HEIGHT, PER DETAIL 7/A9.6
8.2	OPERABLE PARTITION AT STUDY ROOMS, PER DETAIL 14/A9.4
8.3	COUNTER HEIGHT PASS THROUGH WINDOW TO LIBRARY RESOURCE ROOM.
8.4	OVERHEAD SECTIONAL DOOR. PER SPECS.
8.5	AFTER HOURS SECURITY GRILLE.
8.15	OPERABLE PARTITION AT LRR, PER DETAIL 11/A9.4
9.11	WALK-OFF GRILLE INSET IN CONCRETE.
10.9	PROVIDE WALL-MOUNTED ENHANCED DIMENSIONAL LIBRARY MISSION STATEMENT SIGNAGE ABOVE STOREFRONTS ON THIS WALL PER LIBRARY STANDARDS.
10.10	PROVIDE 'NO SMOKING' SIGNAGE POSTED AT EVERY EXTERIOR ENTRY DOOR.
10.11	FULLY RECESSED FIRE EXTINGUISHER CABINET, PER DETAIL 6/A9.2. PROVIDE 2-A:10-B:C FIRE EXTINGUISHER.
10.12	SEMI-RECESSED FIRE EXTINGUISHER CABINET, PER DETAIL 6/A9.2. PROVIDE 2-A:10-B:C FIRE EXTINGUISHER.
10.15	PROVIDE TACTILE ROOM SIGNAGE PER DETAILS 1&3/A2.5 AND ROOM SIGNAGE VERBIAGE LISTED IN DOOR SCHEDULE. SIGNS ON STRIKE SIDE OF DOOR U.O.N.: DOOR 104 JANITOR, DOOR 105A ALFA, DOOR 113 FIRE RISER ROOM, LIVING ROOM (ON WALL BEHIND DOOR 140A).
10.21	WALL-MOUNTED ENHANCED TEEN AREA SIGNAGE PER LIBRARY STANDARDS.
10.22	WALL-MOUNTED ENHANCED SELF-CHECKOUT SIGNAGE PER LIBRARY STANDARDS.
10.23	WALL-MOUNTED ENHANCED HOLDS AREA SIGNAGE PER LIBRARY STANDARDS.
10.26	STORAGE POCKET DOOR FOR FOLDABLE PARTITION PANELS PER SPECIFICATIONS.
11.4	STEEL BOOK SHELVING WITH PLASTIC LAMINATE COUNTERTOP AND MDO END PANELS PROVIDED BY LIBRARY SHELVING VENDOR. EXACT WIDTH OF COUNTERTOP TO BE COORDINATED WITH VENDOR.
11.6	FIRE DEPARTMENT KNOX BOX.
12.1	PROFILE OF LARGE "WOW" ABOVE STORYTELLING CIRCLE, CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS.
12.2	PROFILE OF SMALL "WOW" ABOVE TWEEN AREA, CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS.
12.6	OAK TREE THEMING.
12.10	BOOK SORTER LOCATION WITH BOOK DROP.
22.1	HI-LOW DRINKING FOUNTAIN PER 19/A9.5
26.3	SECURITY SYSTEM ANNUNCIATOR, CARD READER AND KEYPAD PER ELECTRICAL.

WALL TYPE SCHEDULE

REFER TO EXPANSION ANCHOR SCHEDULE FOR POWDER DRIVEN FASTENERS AND WEDGE EXPANSION ANCHOR REQUIREMENTS. SEE DETAIL: 19/A9.1

REFER TO FRAMING NOTES AND REQUIREMENTS SHOWN ON DETAIL: 20/A9.1

WALL TYPE SERIES	DESCRIPTION	DETAIL REF.
A	NON-RATED FULL HEIGHT PARTITION WALL - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	2/A9.1
B	NON-RATED PARTIAL HEIGHT PARTITION WALL - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	6/A9.1
D	NON-RATED PLUMBING PARTITION - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	13/A9.1
E	NON-RATED SOUND ATTENUATION PARTITION - FOR WALL REQUIREMENTS & VARIATIONS, REFER TO DETAIL:	3/A9.1

FLOOR PLAN LEGEND

- PARTITION WALL
- 1-HR FIRE RATED WALL PER UL #U419
- INTERIOR STOREFRONT PARTITION WALL
- CMU WALL, SPLITFACE
- CMU WALL, SHOTBLAST
- COMPOSITE WOOD DECK
- DOOR, HARDWARE, AND FRAME
- F.E.C. — FIRE EXTINGUISHER CABINET, REFER TO DETAIL 6/A9.2
- F.D — FLOOR DRAIN PER PLUMBING
- A — GLAZING PER SHEET A2.6-A2.7
- 101 — DOOR PER SCHEDULE ON A2.5

FLOOR PLAN NOTES

GENERAL:

1. LOCATE ALL NEW DOOR FRAMES OR CASED OPENINGS SO HINGED SIDE IS 4-INCHES FROM FACE OF THE DOOR JAMB TO THE FACE OF WALL, EXCEPT WHERE SPECIFICALLY DIMENSIONED OR SHOWN OTHERWISE. FOR LOCATION OF STOREFRONT DOORS, REFER TO WINDOW SCHEDULES.

2. ALL ELECTRONIC SECURITY CARD READER DOOR LOCKS MUST OPERATE MANUALLY FOR EXITING UNDER ANY CIRCUMSTANCES, INCLUDING A POWER OUTAGE.

3. REFER ALSO TO DRAWINGS T1.2 FOR PROJECT REQUIREMENTS, DRAWING T1.3 FOR ACCESSIBILITY REQUIREMENTS AND DRAWING T1.4 FOR EXITING PLAN.

4. "PROVIDE" SHALL MEAN THAT THE CONTRACTOR, AT HIS/HER EXPENSE, SHALL FURNISH AND INSTALL THE WORK, COMPLETE IN PLACE AND READY FOR USE, INCLUDING FURNISHINGS OF NECESSARY LABOR, MATERIALS, TOOLS, EQUIPMENT AND TRANSPORTATION.

Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

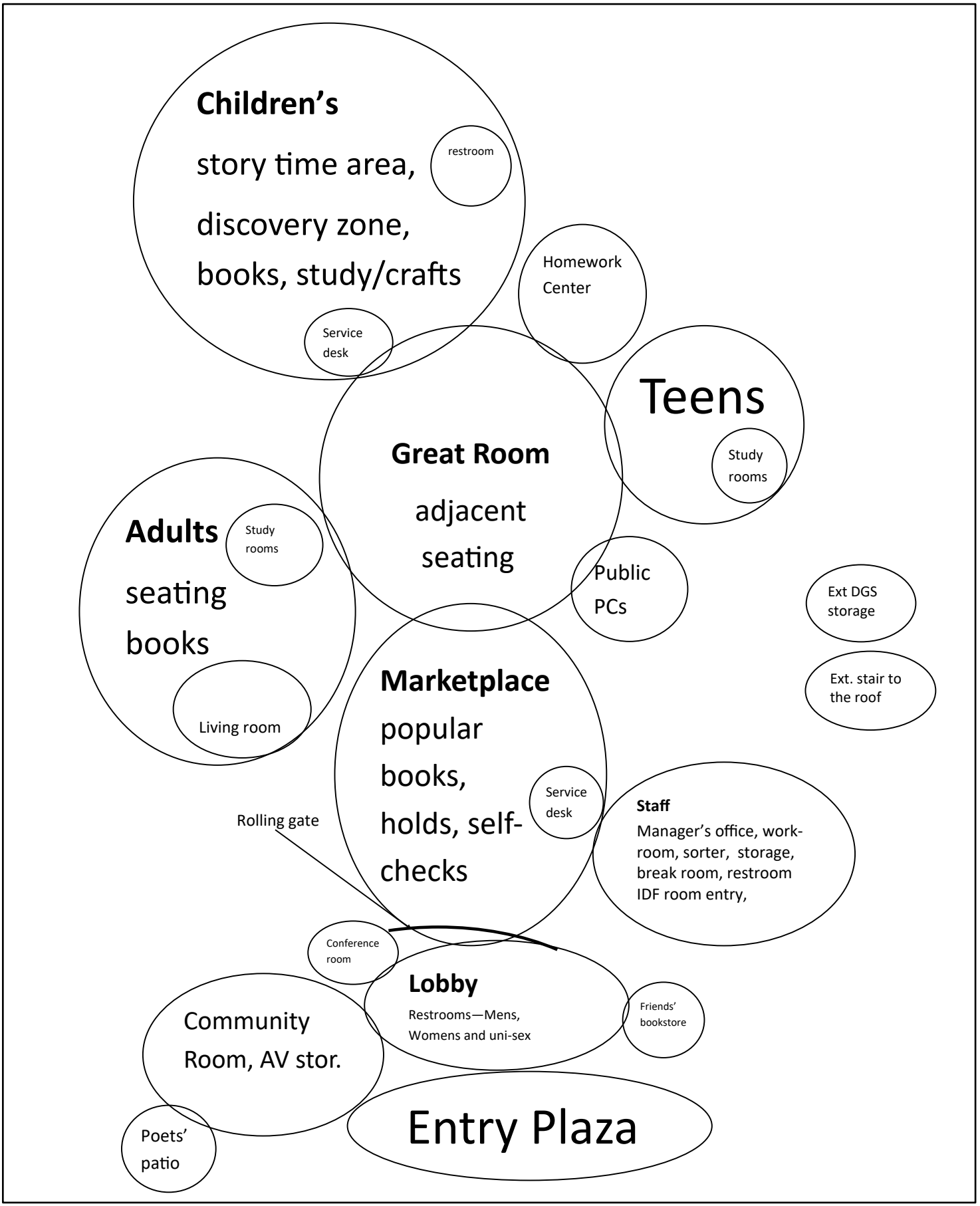
0 8 32 FT

Source: Ferguson Pape Baldwin Architect, 07/15/2016

COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Layout

Figure 4A



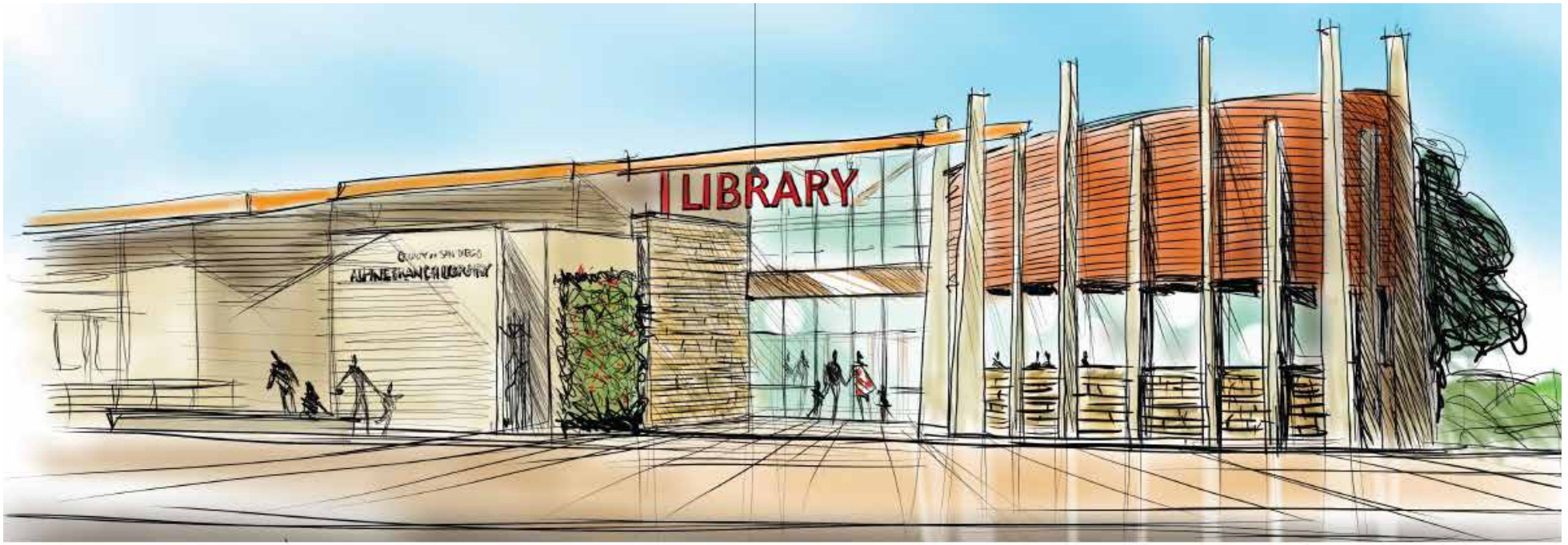
COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Adjacency Diagram

Figure 4B

Michael Baker INTERNATIONAL

File: 179854Exhibits.indd



COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Rendering (Alpine Library)

Figure 5A

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COUNTY OF SAN DIEGO
CASA DE ORO BRANCH LIBRARY

Conceptual Rendering (Imperial Beach Library)

Figure 5B

Michael Baker INTERNATIONAL

File: 179854Exhibits.indd

117°0'57.15"W 32°45'13.19"N



USGS The National Map: Orthoimagery. Data refreshed April 2020

116°57'10.44"W 32°41'1.84"N

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- 8 Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by USDA, Farm Service Agency (FSA). This information was derived from NAIP, dated April 11, 2018.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **9/14/2020 6:28 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: No elevation features on this FIRM
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov

N

1 inch = 1,000 feet 1:12,000

0 500 1,000 2,000 3,000 4,000 Feet

0 105 210 420 630 840 Meters



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1930 OF 2300

Panel Contains:

COMMUNITY	NUMBER	PANEL
SAN DIEGO COUNTY	060284	1930

MAP NUMBER
06073C1930G
EFFECTIVE DATE
May 16, 2012

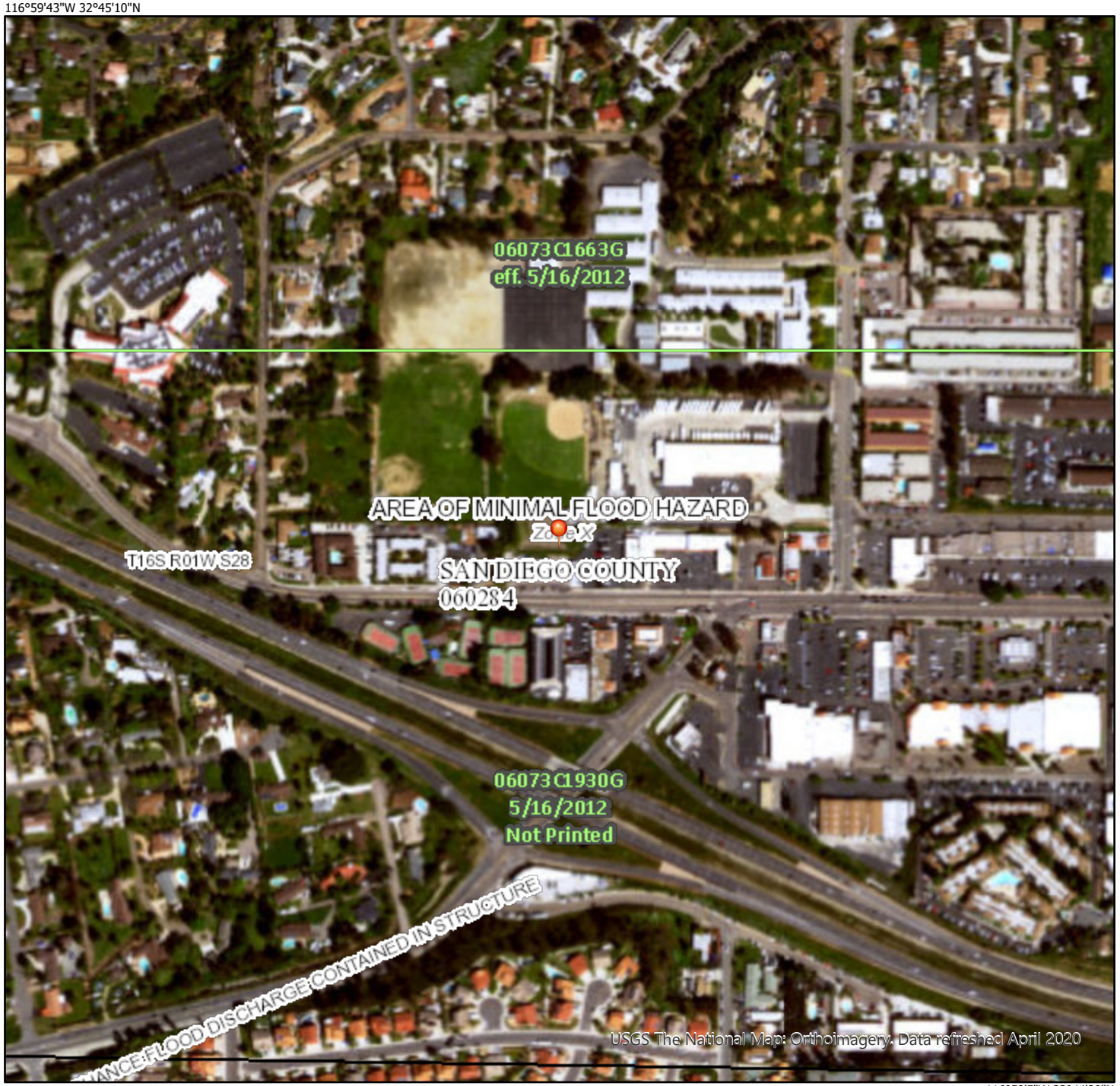
Attachment A.4

116°57'10.44"W 32°41'1.84"N

National Flood Hazard Layer FIRMette

FEMA

116°59'43"W 32°45'10"N



116°59'5"W 32°44'39"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/14/2020 at 6:30 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment A.5

Attachment A.6

Hydrologic Soil Group—San Diego County Area, California



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
Survey Area Data: Version 15, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 18, 2018—Aug 22, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
VaB	Visalia sandy loam, 2 to 5 percent slopes	A	2.2	100.0%
Totals for Area of Interest			**2.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

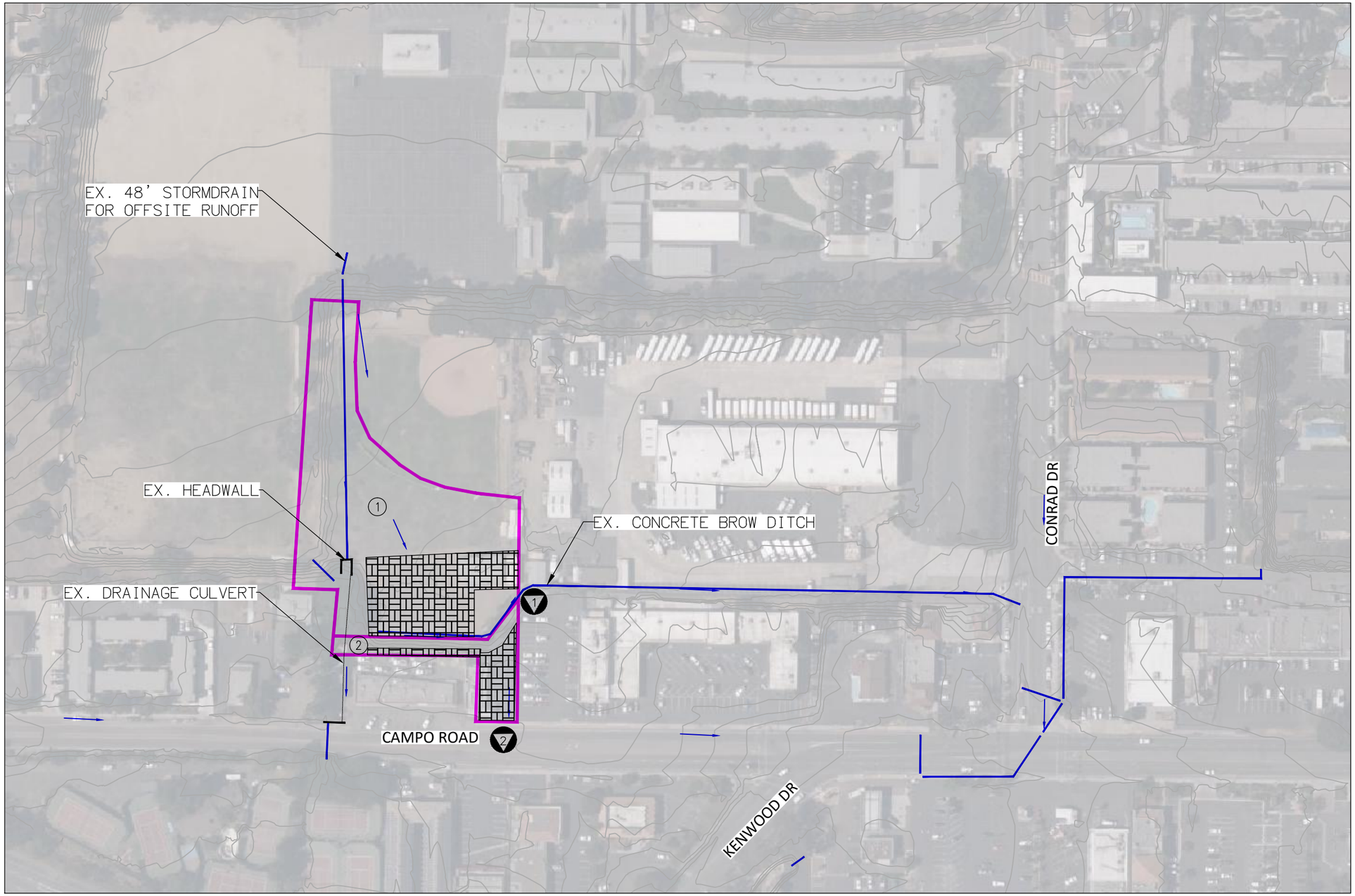
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Attachment B - Hydrology

B.1 Existing Hydrology Map
B.2 Existing Composite C Calculations
B.3 Existing Hydrology Calculations
B.4 Conceptual Proposed Hydrology Map
B.5 Proposed Composite C Calculations
B.6 Proposed Hydrology Calculations



LEGEND

- DRAINAGE AREA ①
- DRAINAGE AREA BOUNDARY
- FLOWLINE
- EXISTING STORMDRAIN
- DISCHARGE POINT
- IMPERVIOUS

150 75 0 150.0001 300.0001 450.0002

SCALE: 1"=150.0001'

SCALE 1"=150.0001'

DRAINAGE AREAS					
DRAINAGE AREA	AREA (AC)	IMPERVIOUS(AC)	DISCHARGE POINT	C VALUE	Q100 (CFS)
1	1.93	0.47	1	0.37	2.88
2	0.31	0.16	2	0.56	1.26

Attachment B.1

CASA DE ORO LIBRARY BRANCH
EXISTING HYDROLOGY

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Phone: (858) 614-5000
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FILE NAME: C:\Working\CDO\Existing Hydro.dwg LAYOUT NAME: 11x17 100scale PLOTTED: Monday, September 21, 2020 - 3:23pm USER: Kristin.Wanner

Attachment B.2

Existing Composite Weighted C

County of San Diego Hydrology Manual (June 2003)
Per Table 3-1, Soil Type A
Impervious C=0.9
Pervious C=0.2

On-Site Drainage	Area (ac)	Area (sf)	Pervious (sf)	Impervious (sf)	% Impervious	Composite C Weighted
1	1.93	84,004	63,504	20500	24%	0.37
2	0.31	13,570	6,540	7030	52%	0.56
Total	2.24			27,530		

Attachment B.3

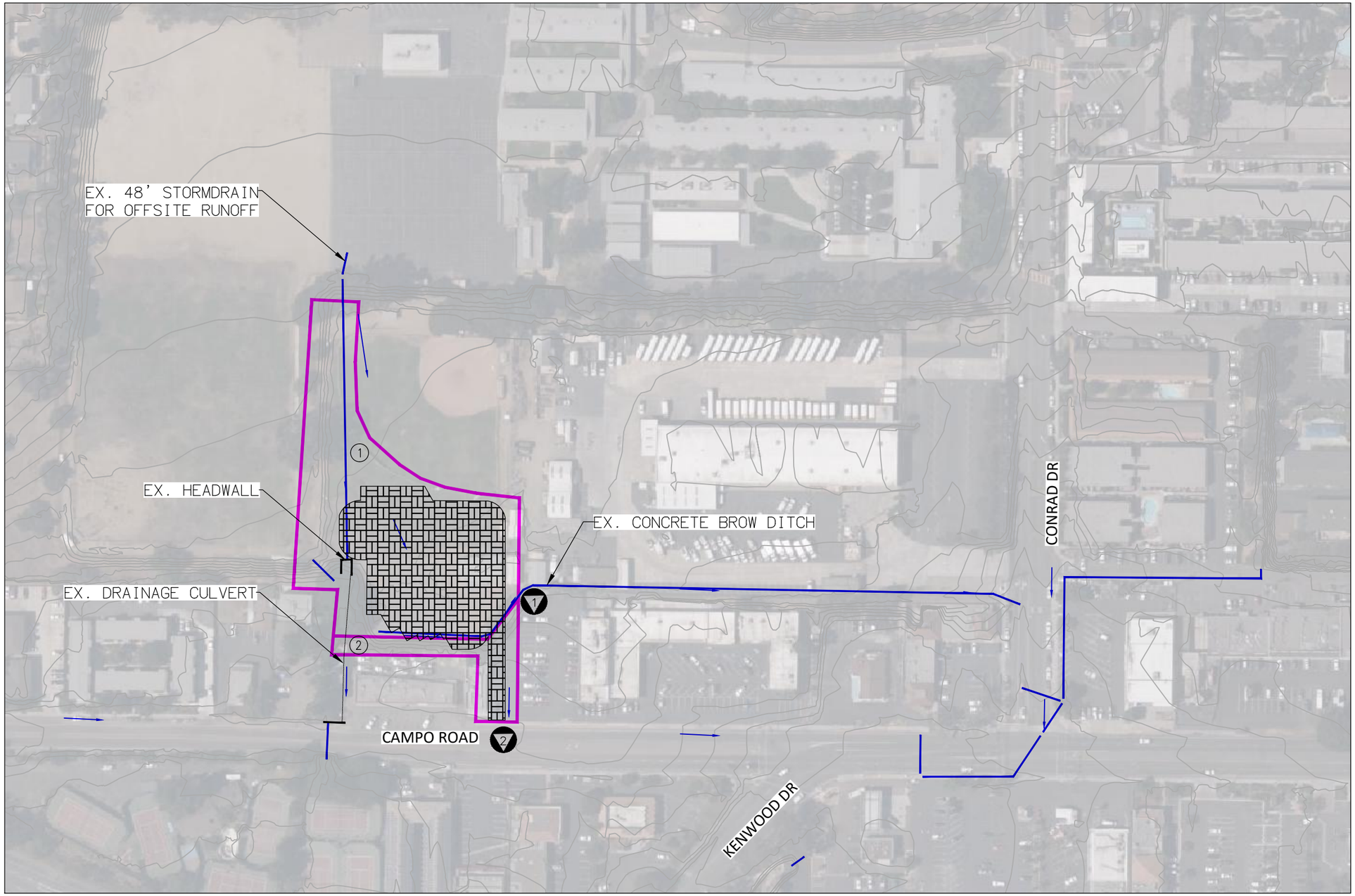
Casa de Oro - Existing Hydrology Summary Table

Drainage Area	Area (ac)	Soil Group	C	Total Flow Length (ft)	Up-St Elevation	Downs-St Elevation	Initial Travel Time (Per Table 3-2)			Travel Time (Shallow Concentrated Flow)				Total Tt (min)	Tc (min)	2 Year			10 Year			100 Year		
							Slope (%)	Lm (ft)	Ti (min)	Slope (%)	L (ft)	V (ft/s)**	Tt (min)			P_6 (in)	I (in/hr)	Q_2 (cfs)	P_6 (in)	I (in/hr)	Q_{10} (cfs)	P_6 (in)	I (in/hr)	Q_{100} (cfs)
1	1.93	A	0.37	575	450	438	2%	85	8.8	2%	490	2.3	3.6	12.4	-	1.3	1.90	1.4	1.85	2.71	1.9	2.75	4.03	2.88
2	0.31	A	0.56	-	-	-	-	-	-	-	-	-	-	-	5.0	1.3	3.43	0.6	1.85	4.87	0.9	2.75	7.25	1.26

*Based on County of San Diego Hydrology Manual (June 2003) Table 3-1
**Based on TR-55 Figure 3-1 for Shallow Concentrated Flow

County of San Diego Hydrology Manual (June 2003)
Q=CIA

Q = Flow Rate (cfs)
C = Runoff Coefficient Weighted Composite - Calculations found in Appendix C
I = Intensity (in/hr)
A = Area (acres)



LEGEND

- DRAINAGE AREA
- DRAINAGE AREA BOUNDARY
- FLOWLINE
- EXISTING STORMDRAIN
- DISCHARGE POINT
- IMPERVIOUS

150 75 0 150.0001 300.0001 450.0002

SCALE: 1"=150.0001'

SCALE 1"=150.0001'

DRAINAGE AREAS

DRAINAGE AREA	AREA (AC)	IMPERVIOUS(AC)	DISCHARGE POINT	C VALUE	Q100 (CFS)
1	1.93	0.93	1	0.54	4.19
2	0.31	0.09	2	0.40	0.90

Attachment B.4

CASA DE ORO LIBRARY BRANCH
PROPOSED HYDROLOGY CONCEPT

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FILE NAME: C:\Working\C00\Pro. Hydro.dwg LAYOUT NAME: 11x17 100scale PLOTTED: Monday, September 21, 2020 - 3:21pm USER: Kristin.Wanner

Attachment B.5

Proposed Composite Weighted C

County of San Diego Hydrology Manual (June 2003)
Per Table 3-1, Soil Type A
Impervious C=0.9
Pervious C=0.2

On-Site Drainage	Area (ac)	Area (sf)	Pervious (sf)	Impervious (sf)	% Impervious	Composite C Weighted
1	1.93	84,004	43,332	40,672	48%	0.54
2	0.31	13,570	9,642	3,928	29%	0.40
Total	2.24			44,600		

Attachment B.6

Casa De Oro- Proposed Hydrology Summary Table

Drainage Area	Area (ac)	Soil Group	C	Total Flow Length (ft)	Up-St Elevation	Downs-St Elevation	Initial Travel Time (Per Table 3-2)			Travel Time (Shallow Concentrated Flow)				Total Tt (min)	Tc (min)	2 Year			10 Year			100 Year		
							Slope (%)	Lm (ft)	Ti (min)	Slope (%)	L (ft)	V (ft/s)**	Tt (min)			P_6 (in)	I (in/hr)	Q_2 (cfs)	P_6 (in)	I (in/hr)	Q_{10} (cfs)	P_6 (in)	I (in/hr)	Q_{100} (cfs)
1	1.93	A	0.54	575	450	438	2%	85	8.8	2%	490	2.3	3.6	12.4	-	1.3	1.90	2.0	1.85	2.71	2.8	2.75	4.03	4.19
2	0.31	A	0.40	-	-	-	-	-	-	-	-	-	-	-	5.0	1.3	3.43	0.4	1.85	4.87	0.6	2.75	7.25	0.90

County of San Diego Hydrology Manual (June 2003)
Q=CIA

Q = Flow Rate (cfs)
C = Runoff Coefficient Weighted Composite - Calculations found in Appendix D
I = Intensity (in/hr)
A = Area (acres)

Attachment C- Hydrology Excerpts

Table 3-1
RUNOFF COEFFICIENTS FOR URBAN AREAS

Land Use		Runoff Coefficient "C"				
			Soil Type			
NRCS Elements	County Elements	% IMPER.	A	B	C	D
Undisturbed Natural Terrain (Natural)	Permanent Open Space	0*	0.20	0.25	0.30	0.35
Low Density Residential (LDR)	Residential, 1.0 DU/A or less	10	0.27	0.32	0.36	0.41
Low Density Residential (LDR)	Residential, 2.0 DU/A or less	20	0.34	0.38	0.42	0.46
Low Density Residential (LDR)	Residential, 2.9 DU/A or less	25	0.38	0.41	0.45	0.49
Medium Density Residential (MDR)	Residential, 4.3 DU/A or less	30	0.41	0.45	0.48	0.52
Medium Density Residential (MDR)	Residential, 7.3 DU/A or less	40	0.48	0.51	0.54	0.57
Medium Density Residential (MDR)	Residential, 10.9 DU/A or less	45	0.52	0.54	0.57	0.60
Medium Density Residential (MDR)	Residential, 14.5 DU/A or less	50	0.55	0.58	0.60	0.63
High Density Residential (HDR)	Residential, 24.0 DU/A or less	65	0.66	0.67	0.69	0.71
High Density Residential (HDR)	Residential, 43.0 DU/A or less	80	0.76	0.77	0.78	0.79
Commercial/Industrial (N. Com)	Neighborhood Commercial	80	0.76	0.77	0.78	0.79
Commercial/Industrial (G. Com)	General Commercial	85	0.80	0.80	0.81	0.82
Commercial/Industrial (O.P. Com)	Office Professional/Commercial	90	0.83	0.84	0.84	0.85
Commercial/Industrial (Limited I.)	Limited Industrial	90	0.83	0.84	0.84	0.85
Commercial/Industrial (General I.)	General Industrial	95	0.87	0.87	0.87	0.87

*The values associated with 0% impervious may be used for direct calculation of the runoff coefficient as described in Section 3.1.2 (representing the pervious runoff coefficient, Cp, for the soil type), or for areas that will remain undisturbed in perpetuity. Justification must be given that the area will remain natural forever (e.g., the area is located in Cleveland National Forest).
DU/A = dwelling units per acre
NRCS = National Resources Conservation Service

Note that the Initial Time of Concentration should be reflective of the general land-use at the upstream end of a drainage basin. A single lot with an area of two or less acres does not have a significant effect where the drainage basin area is 20 to 600 acres.

Table 3-2 provides limits of the length (Maximum Length (L_M)) of sheet flow to be used in hydrology studies. Initial T_i values based on average C values for the Land Use Element are also included. These values can be used in planning and design applications as described below. Exceptions may be approved by the "Regulating Agency" when submitted with a detailed study.

Table 3-2

MAXIMUM OVERLAND FLOW LENGTH (L_M)
& INITIAL TIME OF CONCENTRATION (T_i)

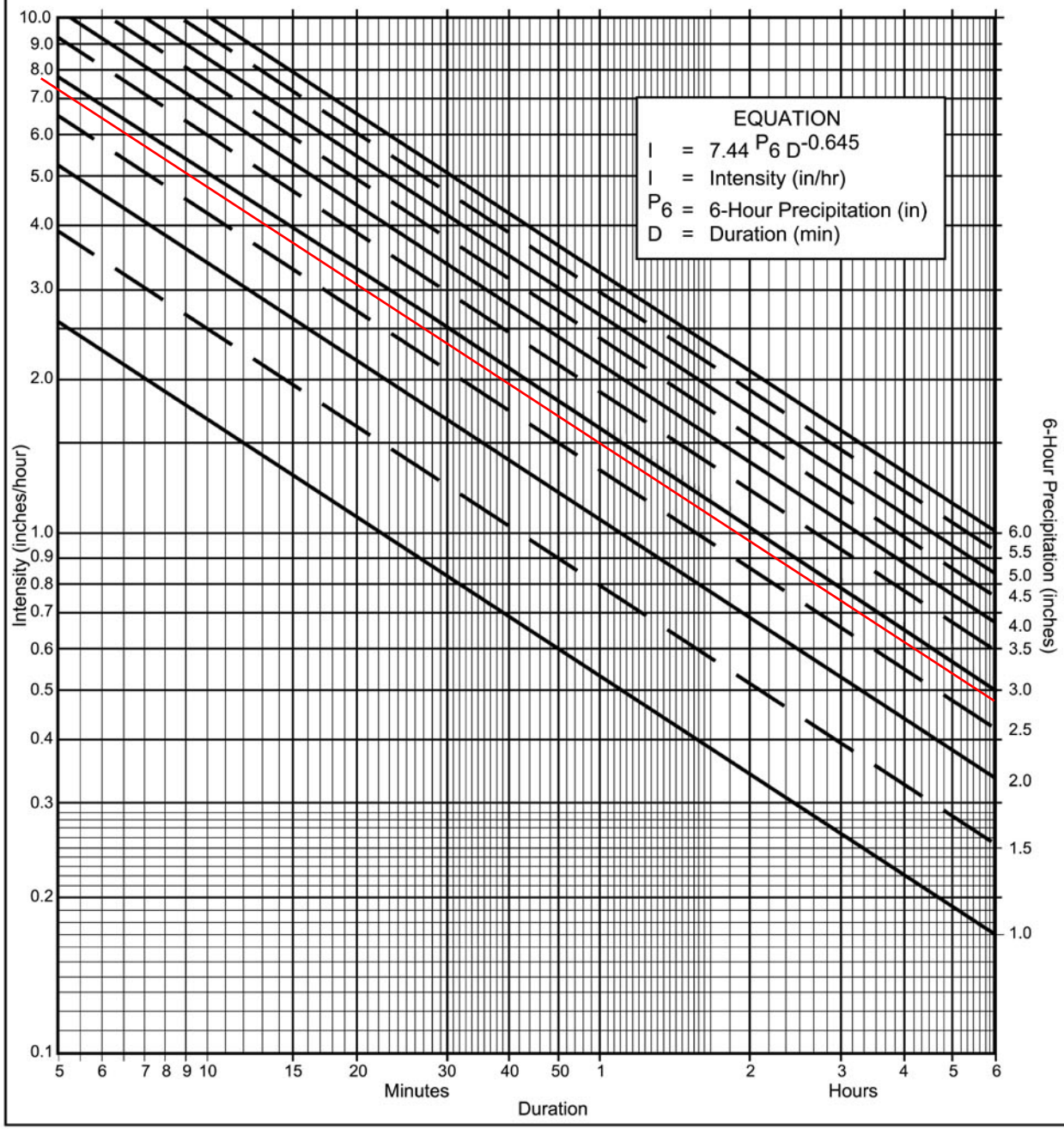
Element*	DU/ Acre	.5%		1%		2%		3%		5%		10%	
		L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i
Natural		50	13.2	70	12.5	85	10.9	100	10.3	100	8.7	100	6.9
LDR	1	50	12.2	70	11.5	85	10.0	100	9.5	100	8.0	100	6.4
LDR	2	50	11.3	70	10.5	85	9.2	100	8.8	100	7.4	100	5.8
LDR	2.9	50	10.7	70	10.0	85	8.8	95	8.1	100	7.0	100	5.6
MDR	4.3	50	10.2	70	9.6	80	8.1	95	7.8	100	6.7	100	5.3
MDR	7.3	50	9.2	65	8.4	80	7.4	95	7.0	100	6.0	100	4.8
MDR	10.9	50	8.7	65	7.9	80	6.9	90	6.4	100	5.7	100	4.5
MDR	14.5	50	8.2	65	7.4	80	6.5	90	6.0	100	5.4	100	4.3
HDR	24	50	6.7	65	6.1	75	5.1	90	4.9	95	4.3	100	3.5
HDR	43	50	5.3	65	4.7	75	4.0	85	3.8	95	3.4	100	2.7
N. Com		50	5.3	60	4.5	75	4.0	85	3.8	95	3.4	100	2.7
G. Com		50	4.7	60	4.1	75	3.6	85	3.4	90	2.9	100	2.4
O.P./Com		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
Limited I.		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
General I.		50	3.7	60	3.2	70	2.7	80	2.6	90	2.3	100	1.9

*See Table 3-1 for more detailed description

Chosen for 25% impervious.

Figure 3-1 Average velocities for estimating travel time for shallow concentrated flow





Directions for Application:

(1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).

(2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicaple to Desert).

(3) Plot 6 hr precipitation on the right side of the chart.

(4) Draw a line through the point parallel to the plotted lines.

(5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

(a) Selected frequency 100 year

(b) P_6 = 2.75 in., P_{24} = 6.0, $\frac{P_6}{P_{24}}$ = 46 %(2)

(c) Adjusted P_6(2) = _____ in.

(d) t_x = _____ min.

(e) I = 7.75 in./hr.

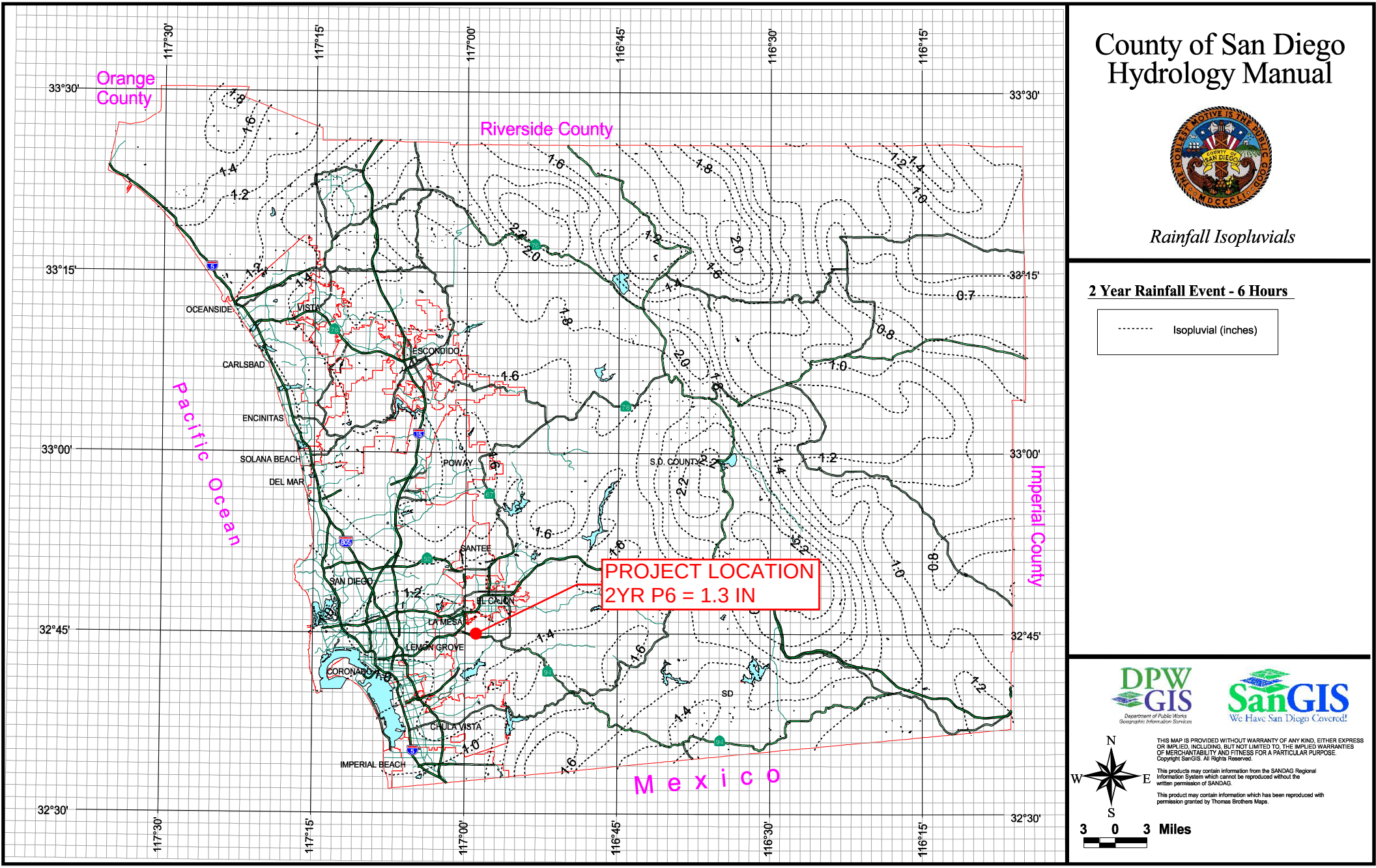
Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	I	I	I	I	I	I	I	I	I	I	I
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE 3-1

Attachment C



County of San Diego Hydrology Manual

Rainfall Isopluvials

2 Year Rainfall Event - 6 Hours

Isopluvial (inches)

DPW GIS
Department of Public Works
Geographic Information Services

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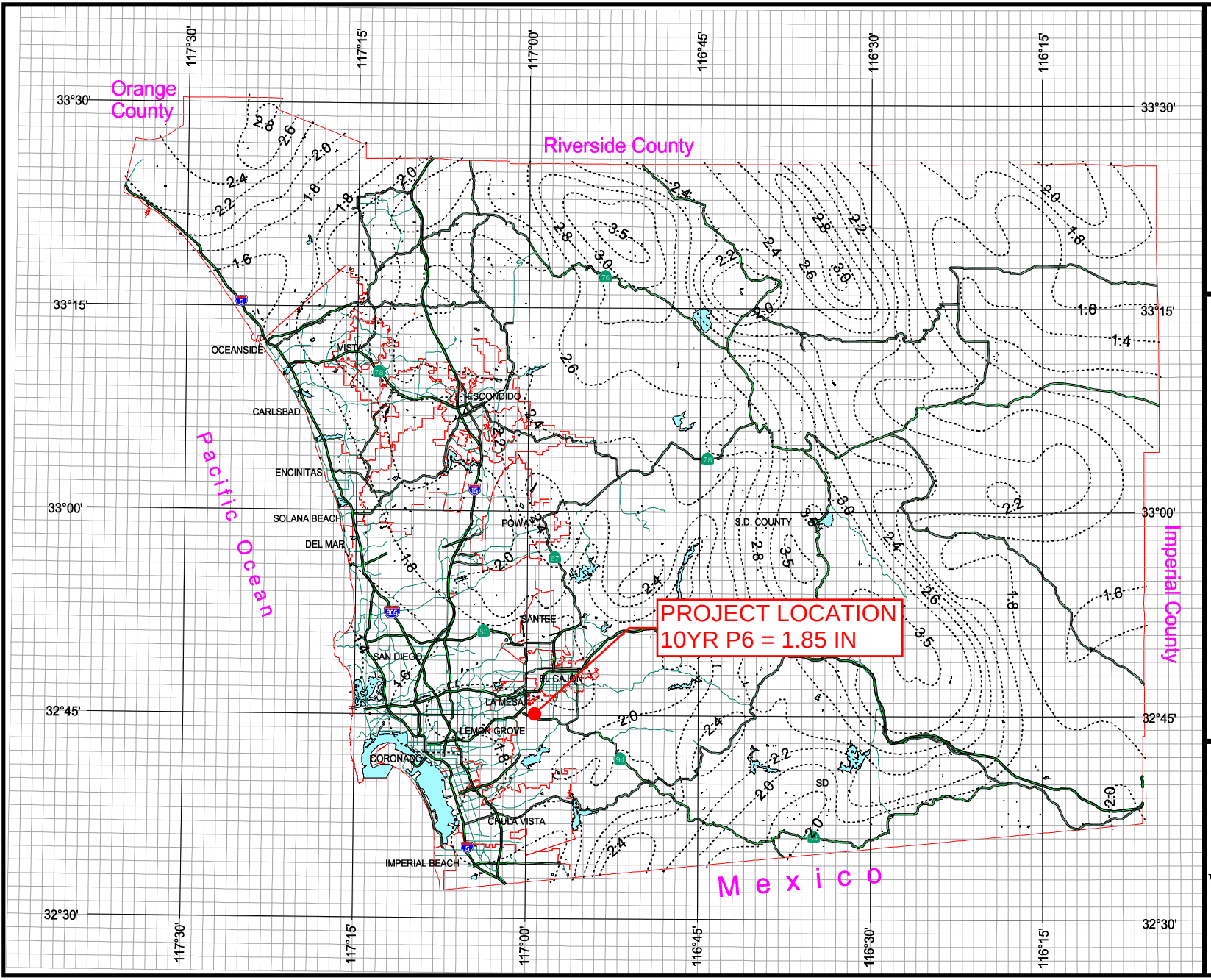
3 0 3 Miles



County of San Diego Hydrology Manual

Rainfall Isopluvials

10 Year Rainfall Event - 6 Hours

Isopluvial (inches)

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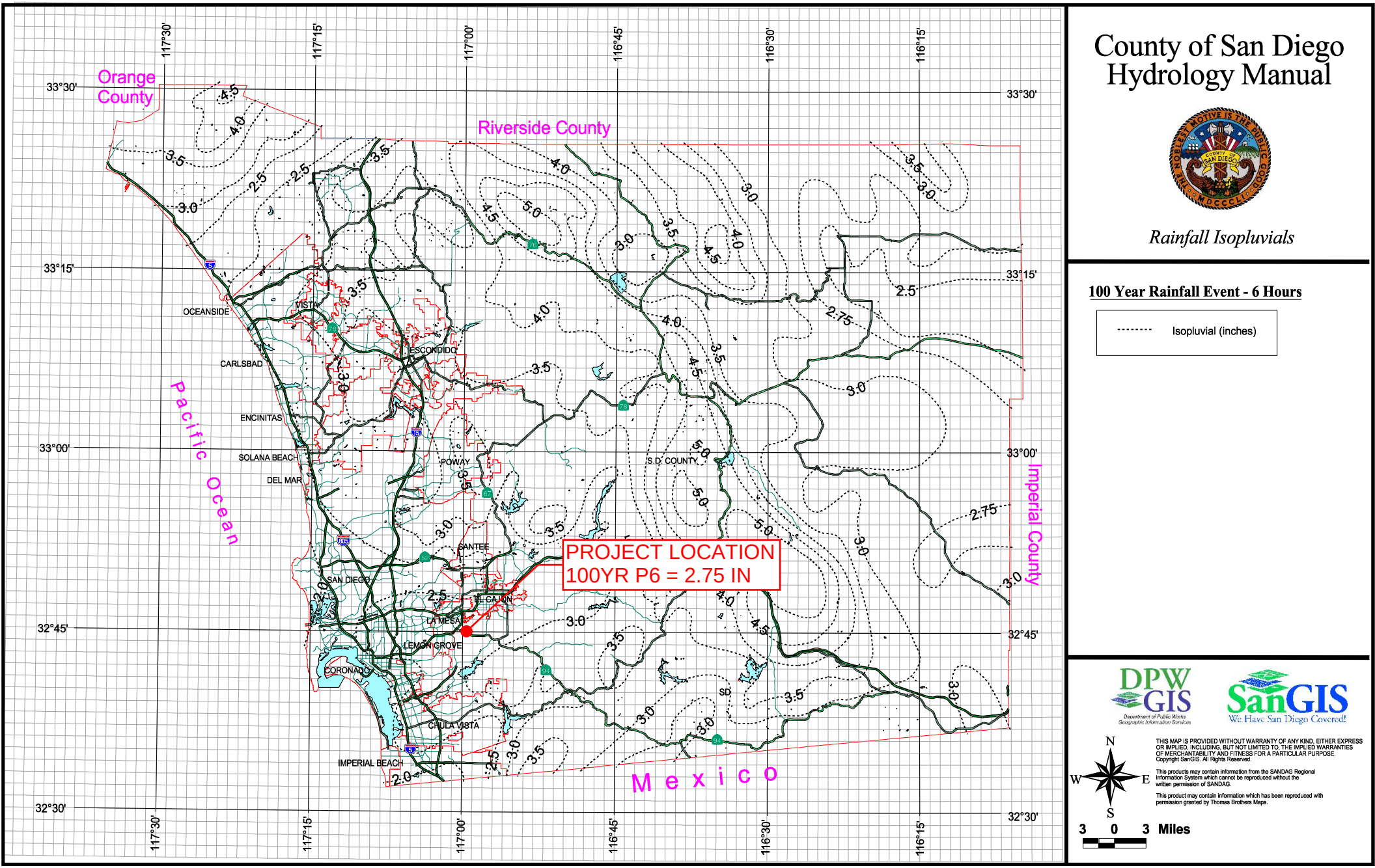
3 0 3 Miles



County of San Diego Hydrology Manual

Rainfall Isopluvials

100 Year Rainfall Event - 6 Hours

Isopluvial (inches)

DPW GIS
Department of Public Works Geographic Information Services

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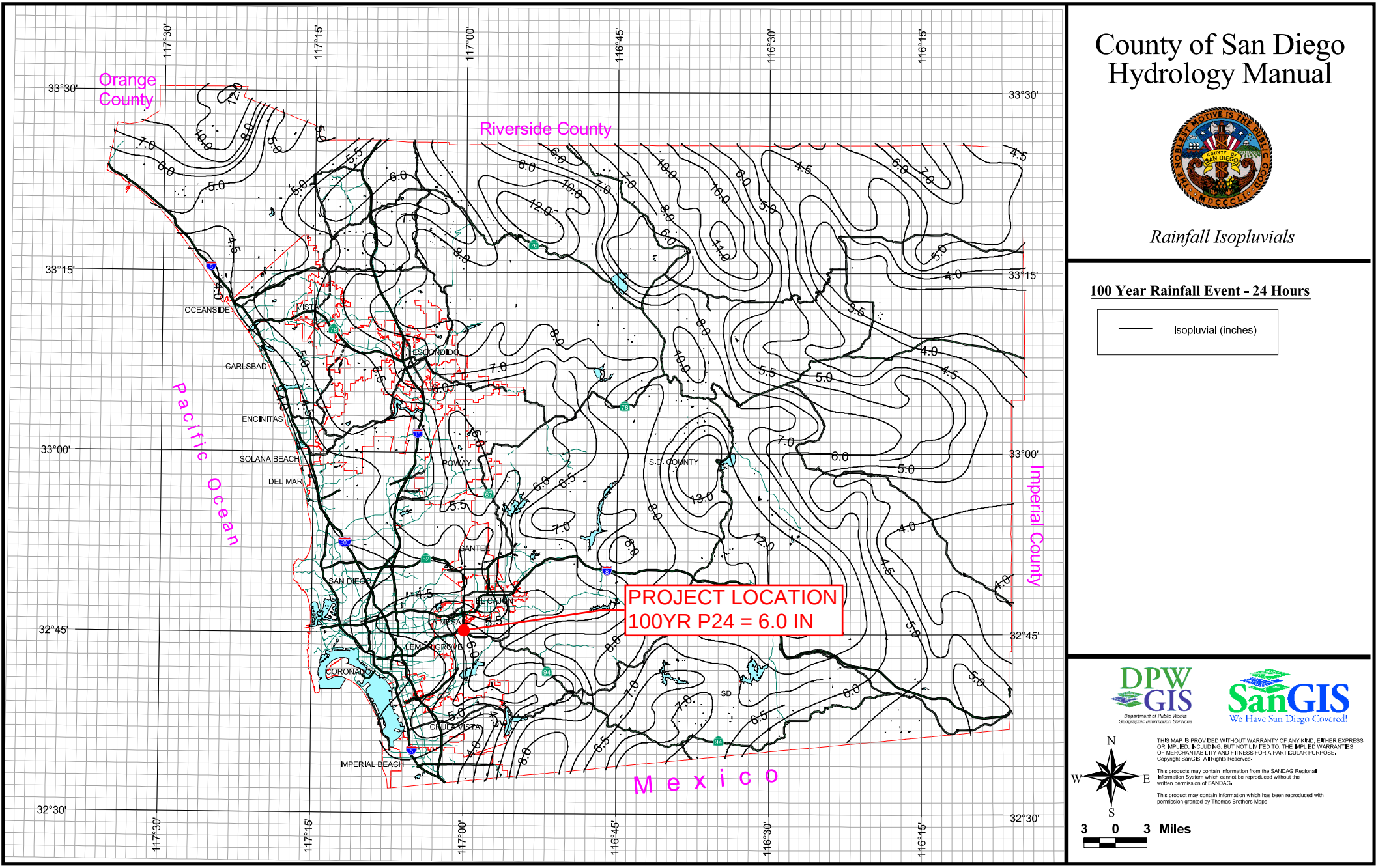
3 0 3 Miles

Attachment C



County of San Diego Hydrology Manual

Rainfall Isopluvials

100 Year Rainfall Event - 24 Hours

Isopluvial (inches)

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Geographic Information Services

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3 0 3 Miles

Attachment C

San Diego County
85th Percentile Isopluvials

- 85th Percentile Rainfall in Inches
- Freeway
- Highway
- Major Road
- Street
- Municipal Boundary
- Water Body

Note:
The 85th percentile is a 24-hour rainfall total. It represents a value such that 85% of the observed 24-hour rainfall totals will be less than that value.

Project Site
0.66

0 1 2 3 4 Miles

LUEG GIS
Land Use & Environment Group
Geographic Information Service

SanGIS
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Projection: State Plane, Zone VI, Datum NAD 83, Units Feet
Path: G:\GIS\Projects\Rainfall\Isopluvials\85th_Percentile_Isopluvials_36x48.mxd
County of San Diego | LUEG GIS | 11/26/11

Attachment D- Water Quality

D. 1 Water Quality Sizing Spreadsheet

D. 2 Hydromodification Sizing Spreadsheet

D. 3 CCYSA Exhibit

D. 4 BMP DM Appendices

Automated Worksheet B.1: Calculation of Design Capture Volume (V2.0)

Category	#	Description	*i*	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	DMA 1	unitless
	2	85th Percentile 24-hr Storm Depth	0.66	inches
	3	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	44,600	sq-ft
	4	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)		sq-ft
	5	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)		sq-ft
	6	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)	52,974	sq-ft
	7	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)		sq-ft
	8	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)		sq-ft
	9	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)		sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	yes/no
	11	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)		sq-ft
	12	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	13	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	14	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	15	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)		sq-ft
	16	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)		sq-ft
	17	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	18	Number of Tree Wells Proposed per SD-A		#
	19	Average Mature Tree Canopy Diameter		ft
	20	Number of Rain Barrels Proposed per SD-E		#
	21	Average Rain Barrel Size		gal
Initial Runoff Factor Calculation	22	Total Tributary Area	97,574	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.47	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	unitless
	25	Initial Weighted Runoff Factor	0.47	unitless
	26	Initial Design Capture Volume	2,522	cubic-feet
Dispersion Area Adjustments	27	Total Impervious Area Dispersed to Pervious Surface	0	sq-ft
	28	Total Pervious Dispersion Area	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	0.47	unitless
	32	Design Capture Volume After Dispersion Techniques	2,522	cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction	0	cubic-feet
	34	Total Rain Barrel Volume Reduction	0	cubic-feet
Results	35	Final Adjusted Runoff Factor	0.47	unitless
	36	Final Effective Tributary Area	45,860	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	0	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	2,522	cubic-feet

No Warning Messages

Attachment D.1

Automated Worksheet B.2: Retention Requirements (V2.0)

Category	#	Description	*i*	Units
Basic Analysis	1	Drainage Basin ID or Name	DMA 1	unitless
	2	85th Percentile Rainfall Depth	0.66	inches
	3	Predominant NRCS Soil Type Within BMP Location	A	unitless
	4	Is proposed BMP location Restricted or Unrestricted for Infiltration Activities?	Unrestricted	unitless
	5	Nature of Restriction	n/a	unitless
	6	Do Minimum Retention Requirements Apply to this Project?	Yes	yes/no
	7	Are Habitable Structures Greater than 9 Stories Proposed?	No	yes/no
Advanced Analysis	8	Has Geotechnical Engineer Performed an Infiltration Analysis?	No	yes/no
	9	Design Infiltration Rate Recommended by Geotechnical Engineer		in/hr
Result	10	Design Infiltration Rate Used To Determine Retention Requirements	0.300	in/hr
	11	Percent of Average Annual Runoff that Must be Retained within DMA	36.0%	percentage
	12	Fraction of DCV Requiring Retention	0.28	ratio
	13	Required Retention Volume	706	cubic-feet

No Warning Messages

Attachment D.1

Automated Worksheet B.3: BMP Performance (V2.0)

Category	#	Description	*i*	Units
BMP Inputs	1	Drainage Basin ID or Name	DMA 1	sq-ft
	2	Design Infiltration Rate Recommended	0.300	in/hr
	3	Design Capture Volume Tributary to BMP	2,522	cubic-feet
	4	Is BMP Vegetated or Unvegetated?	Unvegetated	unitless
	5	Is BMP Impermeably Lined or Unlined?	Lined	unitless
	6	Does BMP Have an Underdrain?	Underdrain	unitless
	7	Does BMP Utilize Standard or Specialized Media?	Standard	unitless
	8	Provided Surface Area	7,485	sq-ft
	9	Provided Surface Ponding Depth	12	inches
	10	Provided Soil Media Thickness	24	inches
	11	Provided Gravel Thickness (Total Thickness)	12	inches
	12	Underdrain Offset	3	inches
	13	Diameter of Underdrain or Hydromod Orifice (Select Smallest)	1.00	inches
	14	Specialized Soil Media Filtration Rate		in/hr
	15	Specialized Soil Media Pore Space for Retention		unitless
	16	Specialized Soil Media Pore Space for Biofiltration		unitless
	17	Specialized Gravel Media Pore Space		unitless
Retention Calculations	18	Volume Infiltrated Over 6 Hour Storm	0	cubic-feet
	19	Ponding Pore Space Available for Retention	0.00	unitless
	20	Soil Media Pore Space Available for Retention	0.05	unitless
	21	Gravel Pore Space Available for Retention (Above Underdrain)	0.00	unitless
	22	Gravel Pore Space Available for Retention (Below Underdrain)	0.40	unitless
	23	Effective Retention Depth	2.40	inches
	24	Fraction of DCV Retained (Independent of Drawdown Time)	0.59	ratio
	25	Calculated Retention Storage Drawdown Time	120	hours
	26	Efficacy of Retention Processes	0.53	ratio
	27	Volume Retained by BMP (Considering Drawdown Time)	1,328	cubic-feet
	28	Design Capture Volume Remaining for Biofiltration	1,194	cubic-feet
Biofiltration Calculations	29	Max Hydromod Flow Rate through Underdrain	0.0506	cfs
	30	Max Soil Filtration Rate Allowed by Underdrain Orifice	0.29	in/hr
	31	Soil Media Filtration Rate per Specifications	5.00	in/hr
	32	Soil Media Filtration Rate to be used for Sizing	0.29	in/hr
	33	Depth Biofiltered Over 6 Hour Storm	1.75	inches
	34	Ponding Pore Space Available for Biofiltration	1.00	unitless
	35	Soil Media Pore Space Available for Biofiltration	0.35	unitless
	36	Gravel Pore Space Available for Biofiltration (Above Underdrain)	0.40	unitless
	37	Effective Depth of Biofiltration Storage	24.00	inches
	38	Drawdown Time for Surface Ponding	41	hours
	39	Drawdown Time for Effective Biofiltration Depth	82	hours
	40	Total Depth Biofiltered	25.75	inches
	41	Option 1 - Biofilter 1.50 DCV: Target Volume	1,790	cubic-feet
	42	Option 1 - Provided Biofiltration Volume	1,790	cubic-feet
	43	Option 2 - Store 0.75 DCV: Target Volume	895	cubic-feet
	44	Option 2 - Provided Storage Volume	895	cubic-feet
	45	Portion of Biofiltration Performance Standard Satisfied	1.00	ratio
Result	46	Do Site Design Elements and BMPs Satisfy Annual Retention Requirements?	Yes	yes/no
	47	Overall Portion of Performance Standard Satisfied (BMP Efficacy Factor)	1.00	ratio
	48	**Deficit of Effectively Treated Stormwater**	**0**	cubic-feet

Attention!

-Vegetated BMPs with surface ponding drawdown times over 24 hours must be certified by a landscape architect or agronomist. All BMPs must

Attachment D.2

BMP Sizing Spreadsheet V3.1

Project Name:	Casa De Oro Library Branch
Project Applicant:	MBI
Jurisdiction:	County of San Diego
Parcel (APN):	500-170-40, -10, -11
Hydrologic Unit:	Sweetwater
Rain Gauge:	Oceanside
Total Project Area (sf):	97,574
Channel Susceptibility:	High

Attachment D.2

BMP Sizing Spreadsheet V3.1			
Project Name:	Casa De Oro Library Branch	Hydrologic Unit:	Sweetwater
Project Applicant:	MBI	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	97,574
Parcel (APN):	500-170-40, -10, -11	Low Flow Threshold:	0.1Q2
BMP Name:	BF-1	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
Impervious	44,600	A	Flat	Roofs	1.00	0.15	6690
Pervious	52,974	A	Flat	Landscape	0.1	0.15	795
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	97,574					Minimum BMP Size	7485
						Proposed BMP Size*	7485

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Attachment D.2

BMP Sizing Spreadsheet V3.1			
Project Name:	Casa De Oro Library Branch	Hydrologic Unit:	Sweetwater
Project Applicant:	MBI	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	97,574
Parcel (APN):	500-170-40, -10, -11	Low Flow Threshold:	0.1Q2
BMP Name	BF-1	BMP Type:	Biofiltration

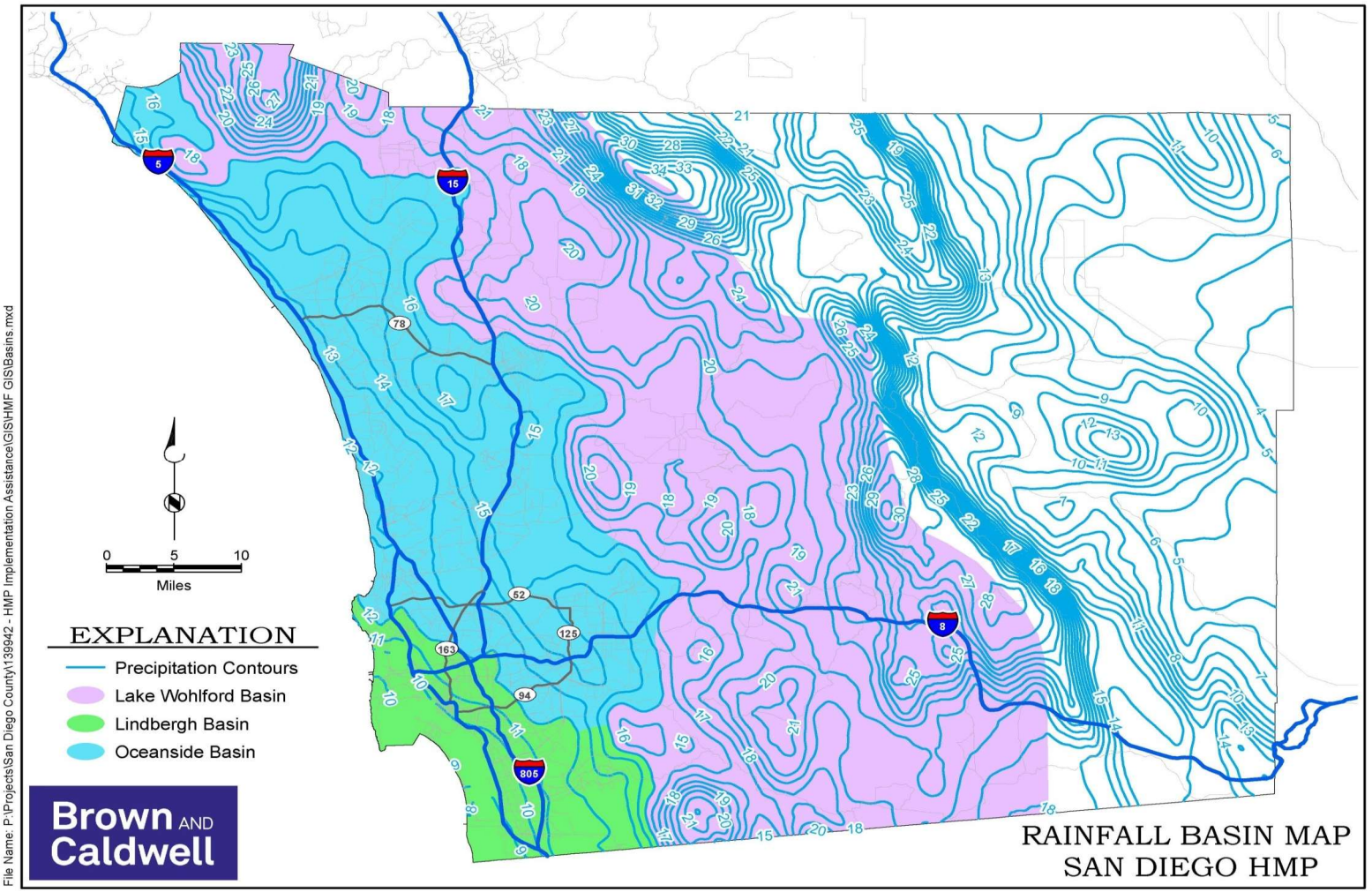
DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio (cfs/ac)	DMA Area (ac)	Orifice Flow - $\%Q_2$ (cfs)	Orifice Area (in^2)
		Soil Type	Slope				
Impervious	Oceanside	A	Flat	0.256	1.024	0.026	**0.37**
Pervious	Oceanside	A	Flat	0.256	1.216	0.031	**0.44**

3.75	**0.057**	**0.82**	**1.02**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.051	**0.055**	**0.79**	**1.000**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	40.5

Attachment D.2





9/28/2020 JN C:\Working\CDO\Vicinity Map.mxd

North

0 125 250 500
Feet

CASA DEL ORO LIBRARY

Attachment D.3 CCYSA Exhibit

Hydrology and Water Quality

Attachment D.4 BMP DM Appendices

County of San Diego BMP Design Manual

Appendices

September 15, 2020



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Appendix

A

Submittal Templates

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Appendix A Submittal Templates

Submittal templates can be found on the County's Watershed Protection Program website under the Development Resources tab:

https://www.sandiegocounty.gov/stormwater

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Appendix

B

Storm Water Pollutant Control Hydrologic Calculations and Sizing Methods for Structural BMPs

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Appendix B Storm Water Pollutant Control Hydrologic Calculations and Sizing Methods for Structural BMPs

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B.1. Step 1: Determine DCV

B.2. Step 2: Determine Retention Requirements

B.3. Step 3: Determine BMP Performance

B.4. Less Common Pollutant Control Calculations

B.5. Backup Information on Pollutant Control Standards

B.1 Step 1 - Determine DCV

The first step in performing storm water pollutant control calculations is to calculate the Design Capture Volume (DCV). The DCV represents the volume of storm water runoff that must be retained and/or biofiltered in order to satisfy pollutant control requirements. The DCV can be calculated through use of automated Worksheet B.1 depicted on the following page, or can be calculated manually by following Steps 1A through 1D presented in this section.

$$DCV = \frac{D}{12} \; x \; A \; x \; C - R$$

Where:
DCV: Design Capture Volume (ft^3)
D: Rainfall Depth (inches), refer to section B.1.1.
A: Tributary Area (ft^2), refer to Section B.1.2.
C: Runoff Factor (unitless), refer to section B.1.3.
R: Site Design Volume Reductions (ft^3), refer to Section B.1.4.

Worksheet B.1 Calculation of Design Capture Volume

Category	#	Description	*i*	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name		unitless
	2	85th Percentile 24-hr Storm Depth		inches
	3	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)		sq-ft
	4	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)		sq-ft
	5	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)		sq-ft
	6	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)		sq-ft
	7	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)		sq-ft
	8	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)		sq-ft
	9	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)		sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?		yes/no
	11	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)		sq-ft
	12	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	13	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	14	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	15	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)		sq-ft
	16	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)		sq-ft
	17	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	18	Number of Tree Wells Proposed per SD-A		#
	19	Average Mature Tree Canopy Diameter		ft
	20	Number of Rain Barrels Proposed per SD-E		#
	21	Average Rain Barrel Size		gal
Initial Runoff Factor Calculation	22	Total Tributary Area		sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas		unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas		unitless
	25	Initial Weighted Runoff Factor		unitless
	26	Initial Design Capture Volume		cubic-feet
Dispersion Area Adjustments	27	Total Impervious Area Dispersed to Pervious Surface		sq-ft
	28	Total Pervious Dispersion Area		sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area		ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas		ratio
	31	Runoff Factor After Dispersion Techniques		unitless
	32	Design Capture Volume After Dispersion Techniques		cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction		cubic-feet
	34	Total Rain Barrel Volume Reduction		cubic-feet
Results	35	Final Adjusted Runoff Factor		unitless
	36	Final Effective Tributary Area		sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements		cubic-feet
	38	Final Design Capture Volume Tributary to BMP		cubic-feet

Worksheet B.1 Line Item Notes
1. User Input from stormwater plans.
2. User input from BMPDM Figure B.1-1.
3. User Input from stormwater plans.
4. User Input from stormwater plans.
5. User Input from stormwater plans.
6. User Input from stormwater plans.
7. User Input from stormwater plans.
8. User Input from stormwater plans.
9. User Input from stormwater plans.
10. User Input. Default is "No". Select Yes if any of the referenced elements are proposed.
11. User Input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
12. User Input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
13. User Input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
14. User Input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
15. User Input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
16. User Input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
17. User Input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
18. User Input. Must satisfy criteria from Fact Sheet SD-A.
19. User Input. Must satisfy criteria from Fact Sheet SD-A. Acceptable range from 0-30 feet.
20. User Input. Must satisfy criteria from Fact Sheet SD-E. Cannot provide more than a 25% reduction to initial DCV.
21. User Input. Must satisfy criteria from Fact Sheet SD-E. Acceptable range 0-100 gallons for generic volume reductions.
22. Sum of Lines 3 through 17.
23. [0.9(Line 3) + 0.3(Line 4 + Line 9) + 0.1(Line 5 + Line 6) + 0.14(Line 7) + 0.23(Line 8)] /(Sum of Lines 3 through Line 9)
24. [0.9(Line 11) + 0.3(Line 12 + Line 17) + 0.1(Line 13 + Line 14) + 0.14(Line 15) + 0.23(Line 16)] /(Sum of Lines 11 through Line 17)
25. [(Line 23 x (Sum of Lines 3 through 9) + Line 24 x (Sum of Lines 11 through 17)) / Line 22]
26. (Line 2/12) x Line 22 x Line 25
27. Line 11
28. Summation of Lines 12-17.
29. [Line 27 / Line 28]. If greater than 4.0 dispersion benefits are not quantified.
30. Lookup values from Table B.1-1 weighted with respect to distribution of dispersion areas specified in Lines 12-17.
31. [Line 23 x (Sum of Lines 3 through Line 9) + Line 24 x Line 30 x (Sum of Lines 11 through Line 17)] / Line 22
32. (Line 2/12) x Line 22 x Line 31
33. [Line 18 x Lookup value from Section B.1.4 of BMP Design Manual]
34. [Line 20 x Line 21/7.48]. If Line 21>100 or Line 10 is "n/a" or "no", then this value must be zero.
35. Line 31 x [1 - ((Line 33 + Line 34)/(Line 32))]. Value must be between zero and one.
36. Line 22 x Line 35
37. [(Line 26 - Line 32) + Line 33 + Line 34]
38. [Line 26 - Line 37]. Minimum result of 0.

B.1.1 Step 1A - Rainfall Depth

The rainfall depth (D) used to calculate the DCV is determined through examination of the 85th percentile, 24-hour isopluvial map provided in Figure B.1-1. The isopluvial map represents rainfall depths as blue line work provided at 0.02" intervals. Appropriate rainfall depths should be determined by plotting the project location on the map, examining adjacent rainfall depths, and interpolating an appropriate depth to the nearest hundredth of an inch (i.e. 0.71 inch). GIS versions of the map are also available for download at the following links.

GIS Shapefile: (Under Ecology category)

http://www.sangis.org/download/index.html

GIS Viewer:
http://sdcounty.maps.arcgis.com/home/webmap/viewer.html?webmap=89523b7ae5db4e44a6569062ad9933e5

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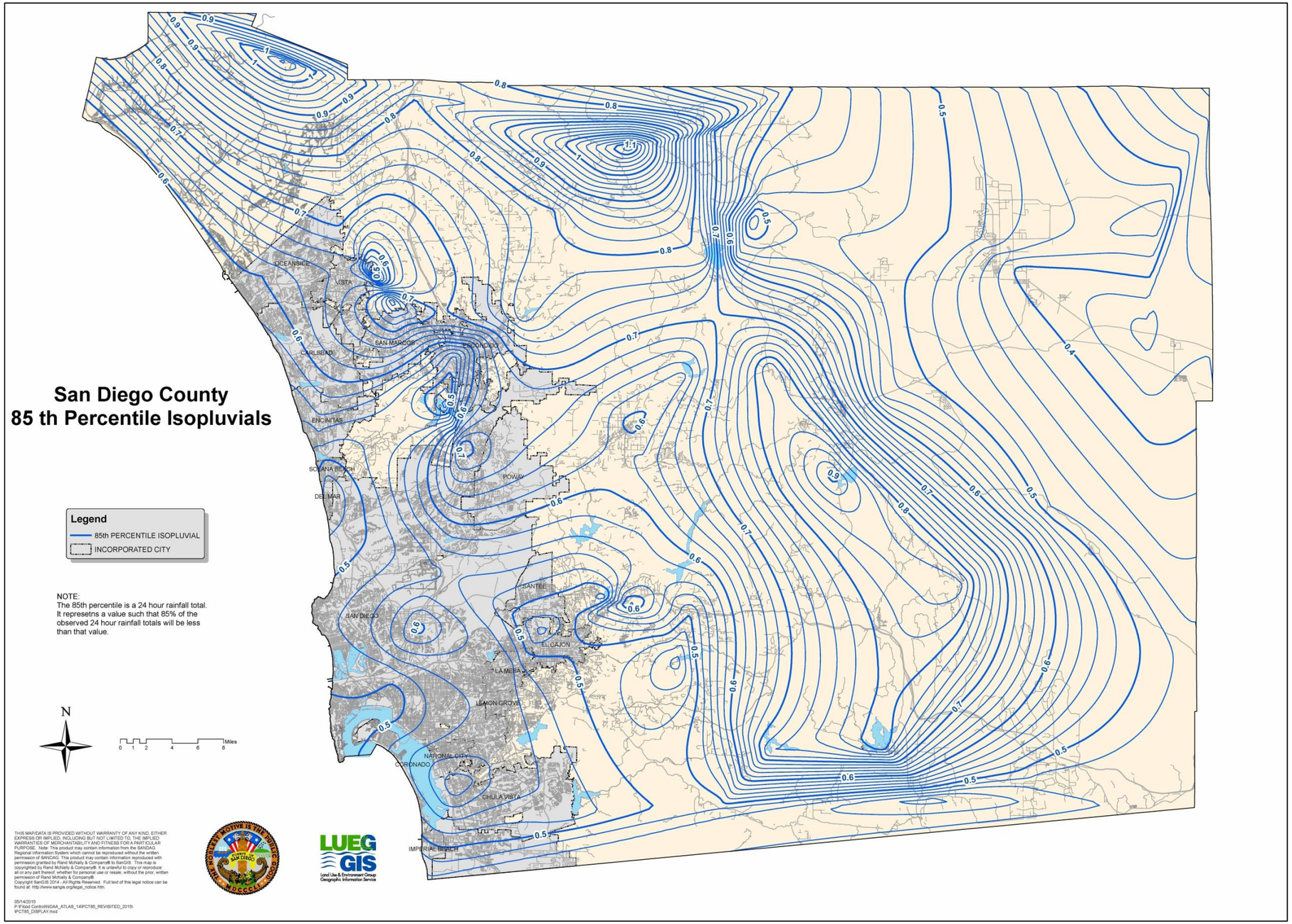

Figure B.1-1: 85th Percentile 24-hour Isopluvial Map

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B.1.2 Step 1B - Tributary Area

Determine the total tributary area through evaluation of the drainage area delineations performed as outlined in Section 3. These areas will be analyzed in additional detail in Step 1C below.

B.1.3 Step 1C - Runoff Factor

Runoff factors (C) represent the ratio of storm water runoff over rainfall that is anticipated for a particular surface type. Impervious surfaces typically have high runoff factors (0.90) as nearly all rainfall is converted into runoff. Pervious surfaces typically have low runoff factors (0.10) as much of the rainfall is retained in natural surface features. Applicants should evaluate all of the surface coverages within a drainage area and assign runoff factors consistent with the values in Table B.1-1.

Table B.1**-1: Runoff factors for surfaces draining to BMPs – Pollutant Control BMPs**

Category	Surface Type	Runoff Factor (C)
Impervious Surfaces	Roofs, Concrete, Asphalt, Unit Pavers (grouted)	0.90
Semi-Pervious Surfaces	Decomposed Granite, Cobbles, Crushed Aggregate, Compacted soil (unpaved parking)	0.30
Engineered Pervious Surfaces	Green Roofs per SD-C Permeable Pavement per SD-D, Amended Soils per SD-F, Landscaped/Mulched Soils, Permeable Pavement per INF-3	0.10
Natural Pervious Surfaces	Type A Soil	0.10
	Type B Soil	0.14
	Type C Soil	0.23
	Type D Soil	0.30
Impoundments	Swimming pools, fountains, ponds, etc.	0.00
Dispersion Areas	Areas routed to or serving as a dispersion area per SD-B	See Dispersion Area Text Below

If a drainage area is comprised of more than one surface type, an area-weighted runoff factor must be calculated per the following equation where C represents the runoff coefficient and A represents the area of each surface.

$$C_{area-weighted} = \frac{\sum C_{surface\,1} A_{surface\,1} + C_{surface\,2} A_{surface\,2} + C_{surface\,x} A_{surface\,x}}{\sum A_{all\ surfaces}}$$

Dispersion Area Runoff Factor Adjustments

Adjustment to runoff factors may be permitted when storm water runoff from impervious surfaces is dispersed through pervious dispersion areas in accordance with the SD-B fact sheet located in Appendix E. Note that pervious dispersion areas may be used to eliminate the DCV requiring treatment and thereby fully satisfy pollutant control requirements when designed as significant site design BMPs (SSD-BMPs). Refer to Appendix I for sizing methods and criteria to use dispersion areas as SSD-BMPs.

Runoff factor adjustments may be applied to drainage areas with a 4:1 maximum ratio of impervious to pervious area. In order to be eligible for runoff factor adjustments, impervious areas must have a runoff factor of 0.90 and must be directed towards a pervious dispersion area with a runoff factor of 0.30 or less.

Table B.1-2 presents runoff factor adjustments as a function of the ratio of impervious to pervious area and the hydrologic soil group of the pervious dispersion area. Applicants applying runoff factor adjustments must identify appropriate factors in the table below and multiply that factor by the original composite runoff factor of the impervious area and the dispersion area.

Table B.1-2: Impervious area adjustment factors that account for dispersion

Characteristics of Pervious Area	Ratio = Impervious area/Pervious area			
	<=1	2	3	4
Type A or Amended Soils	0.00	0.00	0.21	0.32
Type B Soils	0.00	0.24	0.38	0.48
Type C Soils	0.31	0.50	0.60	0.67
Type D Soils	0.77	0.84	0.87	0.90

When using adjustment factors from Table B.1-2:

a) The underlying soil group need not be considered if amended soils implemented per SD-F.

b) Linear interpolation must be performed if the impervious to pervious area ratio of the site is in between one of ratios for which an adjustment factor was developed;

c) Use adjustment factor for a ratio of 1 when the impervious to pervious area ratio is less than 1

B.1.4 Step 1D - Site Design Volume Reductions

Site design volume reductions (R) account for the effects of incorporating non-structural BMPs such as tree wells and rain barrels into the site design. Effective use of these site design elements can significantly reduce the DCV requiring treatment through structural BMP strategies. Note that tree wells may be used to eliminate the DCV requiring treatment and thereby fully satisfy pollutant control requirements when designed as significant site design BMPs (SSD-BMPs). Refer to Appendix I for sizing methods and criteria to use tree wells as SSD-BMPs.

Tree wells designed per the SD-A fact sheet provide the following volume reductions to the DCV. The maximum volume reduction for any individual tree is 420 cubic feet.

Table B.1-3: Tree Well Volume Reductions

Mature Tree Canopy Diameter (ft)	Volume Reduction (cubic feet/tree)
0	0
5	10
10	40
15	100
20	180
25	290
30	420

Rain barrels designed per SD-E fact sheet can also provide limited volume reductions to the DCV. The effects of rain barrels are typically less substantial than tree wells and are subject to the following restrictions: 1) individual rain barrel volumes are no greater than 100 gallons, 2) the total rain barrel volume is no greater than 0.25 DCV, and 3) the site must have landscape areas of at least 30% of the project footprint. If the proposed rain barrels do not meet these criteria, design volume reductions may still be achieved through Cistern criteria presented in fact sheet HU-1.

Table B.1-4: Rain Barrel Volume Reductions

Rain Barrel Size (gallon)	Volume Reduction (cubic feet)
0	0.0
20	2.7
40	5.3
60	8.0
80	10.7
100	13.4

B.2 Step 2 - Determine Retention Requirements

The second step in performing storm water pollutant control calculations is to determine the retention requirements for each drainage area. Retention requirements can be calculated through use of the automated Worksheet B.2 depicted below, or can be calculated manually by following Steps 2A through 2D presented in this section.

Worksheet B.2 Retention Requirements

Category	#	Description	*i*	Units
Basic Analysis	1	Drainage Basin ID or Name		uniless
	2	85th Percentile Rainfall Depth		inches
	3	Predominant NRCS Soil Type Within BMP Location		unitless
	4	Is proposed BMP location Restricted or Unrestricted for Infiltration Activities?		unitless
	5	Nature of Restriction		unitless
	6	Do Minimum Retention Requirements Apply to this Project?		yes/no
	7	Are Habitable Structures Greater than 9 Stories Proposed?		yes/no
Advanced Analysis	8	Has Geotechnical Engineer Performed an Infiltration Analysis?		yes/no
	9	Design Infiltration Rate Recommended by Geotechnical Engineer		in/hr
Result	10	Design Infiltration Rate Used To Determine Retention Requirements		in/hr
	11	Percent of Average Annual Runoff that Must be Retained within DMA		percentage
	12	Fraction of DCV Requiring Retention		ratio
	13	Required Retention Volume		cubic-feet

Worksheet B.2 Line Item Notes

1. User input from stormwater plans.
2. User input from BMPDM Figure B.1-1.
3. User input from stormwater plans.
4. User input from BMPDM Section B.2.2.
5. User input from BMPDM Section B.2.2.
6. Default value of "Yes" for Priority Development Projects.
7. User input from BMPDM Section B.2.1. If "Yes", separate capture and use evaluation must be provided.
8. User input from BMPDM Section B.2.3. If "Yes", geotechnical report excerpts must be provided.
9. User input from BMPDM Section B.2.3.
10. Rates of 0.300, 0.200, 0.100, 0.025, or 0.000 for A, B, C, D, or Restricted soils respectively. Or rate from Geotechnical Engineer.
11. Determined Per BMPDM Section B.2.4.
12. Determined Per BMPDM Section B.2.4.
13. Determined Per BMPDM Section B.2.4.

B.2.1 Step 2A - Capture and Use Analysis

Projects that <u>do not</u> propose habitable structures over 9 stories tall may skip this step (proceed to Step 2B).

Projects that propose habitable structures over 9 stories tall are required to perform a capture and use analysis to identify whether the DCV from the project site can be utilized for onsite toilet flushing and/or irrigation within 36 hours of the storm. If the results indicate capture and use is possible, then

the project is required to implement capture and use. Guidance for performing this analysis is provided in B.3.8.

B.2.2 Step 2B – Infiltration Restrictions

The SWQMP Preparer is responsible for evaluating the infiltration restrictions in Table B.2-1 below and characterizing each drainage area as Restricted or Unrestricted for infiltration.

Restriction elements are divided into Mandatory Considerations and Optional Considerations. Mandatory Considerations include elements that may pose a significant risk to human health and safety. These elements must always be evaluated and discretion regarding the setbacks is not permitted. Optional Considerations include elements that are not necessarily associated with human health and safety, so analysis is not mandated through this guidance document.

Analysis of these elements is outside of the scope of typical geotechnical engineering investigations; therefore, it is the responsibility of the SWQMP Preparer to perform this evaluation. If a geotechnical engineer is consulted to complete this portion of the analysis, additional discretion on the mandatory considerations may be permitted if supported by the geotechnical reporting.

Table B.2-1: Infiltration Restrictions

Restriction Element		Is Element Applicable? (Yes/No)
Mandatory Considerations	BMP is within 100' of Contaminated Soils	
	BMP is within 100' of Industrial Activities Lacking Source Control	
	BMP is within 100' of Well/Groundwater Basin	
	BMP is within 50' of Septic Tanks/Leach Fields	
	BMP is within 10' of Structures/Tanks/Walls	
	BMP is within 10' of Sewer Utilities	
	BMP is within 10' of Groundwater Table	
	BMP is within Hydric Soils	
	BMP is within Highly Liquefiable Soils and has Connectivity to Structures	
	BMP is within 1.5 Times the Height of Adjacent Steep Slopes (≥25%)	
	County Staff has Assigned "Restricted" Infiltration Category	
Optional Considerations	BMP is within Predominantly Type D Soil	
	BMP is within 10' of Property Line	
	BMP is within Fill Depths of ≥5' (Existing or Proposed)	
	BMP is within 10' of Underground Utilities	
	BMP is within 250' of Ephemeral Stream	
	Other (Provide detailed geotechnical support)	
Result	**Unrestricted**. None of the restriction elements above are applicable.	
	Restricted. One or more of the restriction elements above are applicable.	

The following table summarizes public data sources available for the infiltration restriction analysis.

Table B.2-2: Public Data Sources for Infiltration Restriction Analysis

Resources	Description
Geotracker	**Website:** geotracker.waterboards.ca.gov **Reference Layers:** Groundwater Depths, Contaminated Sites/Soils
SANGIS	**Website:** sangis.org **Reference Layers:** Land Use Current, Gas Stations, Wells, Groundwater Basins, Flowlines, Liquefaction, Soils, Steep Slopes, Sewer, Topography, Elevation Grids
Web Soil Survey (NRCS Soil Type)	**Website:** websoilsurvey.sc.egov.usda.gov/App **Reference Layers:** Hydrologic Soil Group, Map Unit Names
Watershed Management Area Analysis	**Website:** projectcleanwater.org/watershed-management-area-analysis-wmaa **Reference Layers:** Electronic Data from Appendix C of WMAA
Survey Records System	**Website:** srs.sandiegocounty.gov **Reference Layers:** Grading Plans, Surveys, Drainage Plans, Topography Maps, Tentative Parcel Maps
Applicant Plans	**Website:** n/a **Reference Layers:** Utility Plans, Grading Plans, Existing Site Conditions, Proposed Site Conditions, Nearby geotechnical reports.
Geotechnical Engineer	**Website:** n/a **Reference Layers:** At discretion of Geotechnical Engineer

B.2.3 Step 2C – Design Infiltration Rate

The design infiltration rate for each drainage area must be determined through either a basic or advanced analysis. The basic analysis allows the SWQMP Preparer to assign a default design infiltration rate based on the predominant NRCS soil type present within the proposed BMP footprint. The advanced analysis allows for a geotechnical engineer to assign a more specific design infiltration rate based on field testing outlined in Appendix D. Table B.2-3 below identifies the design infiltration rates that can be used for each analysis. Please note that the basic analysis is not permitted for BMPs that lack an underdrain.

Table B.2-3: Design Infiltration Rate

Infiltration Restrictions	Design Infiltration Rate (in/hr)	
	Option 1: Basic Analysis	Option 2: Advanced Analysis
Unrestricted	Type A Soil = 0.300	Rate recommended by geotechnical engineer (Reference Appendix D)
Unrestricted	Type B Soil = 0.200	
Unrestricted	Type C Soil = 0.100	
Unrestricted	Type D Soil = 0.025	
Restricted	Any Soil = 0.000	0.000

B.2.4 Step 2D - Retention Requirements

Using information determined in previous steps, the retention requirements for each drainage area can now be determined. Retention requirements can be expressed as a function of the DCV or as a percentage of annual runoff that must be retained within the drainage area.

Part 1) Using Figure B.2-1, locate the applicable Design Infiltration Rate (determined in Step 2A) along the x-axis. Trace vertically from the x-axis result to the intersect with the plot representing the project's 85th Percentile Rainfall Depth (determined in Step 1A).

Note: Data presented in Figure B.2-1 represents ranges of rainfall depth. Users should choose the range that includes their specific rainfall depth rather than interpolating or extrapolating discrete values between the plotted lines.

Part 2) Trace horizontally from the intersect result to the right hand y-axis to identify the fraction of the DCV that must be retained to satisfy retention requirements (F).

Note: Retention requirements can also be expressed as a fraction of annual runoff by tracing horizontally from the intersect result to the left hand y-axis. This method is appropriate if the proposed retention elements have drawdown times significantly different than 36-hours.

Part 3) Determine the total volume required to be retained for the drainage as follows.

$$V_{REQ} = DCV \; x \; F_{DCV}$$

Where:
V_{REQ}: Total volume that must be retained within the drainage area (ft^3)
DCV: Design capture volume (ft^3)
F_{DCV}: Fraction of DCV requiring retention (unitless)
Retention requirements can be satisfied at the project-scale if DMA scale is not achieved.

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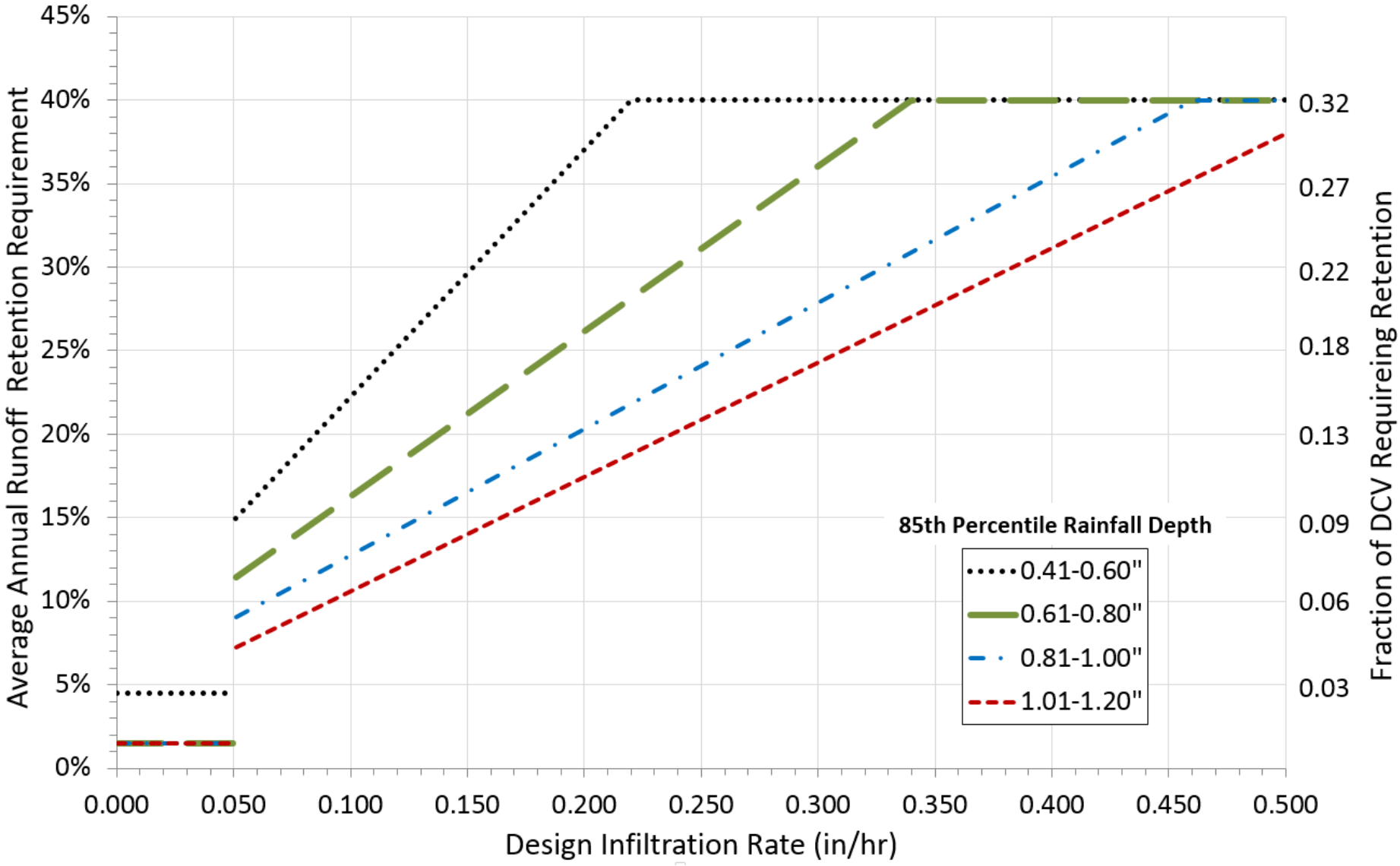
Figure B.2-1: Retention Requirements



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B.3 Step 3 - Determine BMP Performance

The third step in performing stormwater pollutant control calculations is to design a structural BMP with the characteristics that provide stormwater treatment for the DCV and meet the minimum retention requirements for the drainage area. Demonstration of appropriate BMP design can be calculated through use of automated Worksheet B.3 on the next page, or can be calculated manually by following Steps 3A through 3E presented in this section.

Worksheet B.3: BMP Performance

Category	#	Description	*i*	Units
BMP Inputs	1	Drainage Basin ID or Name		sq-ft
	2	Design Infiltration Rate Recommended		in/hr
	3	Design Capture Volume Tributary to BMP		cubic-feet
	4	Is BMP Vegetated or Unvegetated?		unitless
	5	Is BMP Impermeably Lined or Unlined?		unitless
	6	Does BMP Have an Underdrain?		unitless
	7	Does BMP Utilize Standard or Specialized Media?		unitless
	8	Provided Surface Area		sq-ft
	9	Provided Surface Ponding Depth		inches
	10	Provided Soil Media Thickness		inches
	11	Provided Gravel Thickness (Total Thickness)		inches
	12	Underdrain Offset		inches
	13	Diameter of Underdrain or Hydromod Orifice (Select Smallest)		inches
	14	Specialized Soil Media Filtration Rate		in/hr
	15	Specialized Soil Media Pore Space for Retention		unitless
	16	Specialized Soil Media Pore Space for Biofiltration		unitless
	17	Specialized Gravel Media Pore Space		unitless
Retention Calculations	18	Volume Infiltrated Over 6 Hour Storm		cubic-feet
	19	Ponding Pore Space Available for Retention		unitless
	20	Soil Media Pore Space Available for Retention		unitless
	21	Gravel Pore Space Available for Retention (Above Underdrain)		unitless
	22	Gravel Pore Space Available for Retention (Below Underdrain)		unitless
	23	Effective Retention Depth		inches
	24	Fraction of DCV Retained (Independent of Drawdown Time)		ratio
	25	Calculated Retention Storage Drawdown Time		hours
	26	Efficacy of Retention Processes		ratio
	27	Volume Retained by BMP (Considering Drawdown Time)		ratio
	28	Design Capture Volume Remaining for Biofiltration		cubic-feet
Biofiltration Calculations	29	Max Hydromod Flow Rate through Underdrain		CFS
	30	Max Soil Filtration Rate Allowed by Underdrain Orifice		in/hr
	31	Soil Media Filtration Rate per Specifications		in/hr
	32	Soil Media Filtration Rate to be used for Sizing		in/hr
	33	Depth Biofiltered Over 6 Hour Storm		inches
	34	Ponding Pore Space Available for Biofiltration		unitless
	35	Soil Media Pore Space Available for Biofiltration		unitless
	36	Gravel Pore Space Available for Biofiltration (Above Underdrain)		unitless
	37	Effective Depth of Biofiltration Storage		inches
	38	Drawdown Time for Surface Ponding		hours
	39	Drawdown Time for Effective Biofiltration Depth		hours
	40	Total Depth Biofiltered		inches
	41	Option 1 - Biofilter 1.50 DCV: Target Volume		cubic-feet
	42	Option 1 - Provided Biofiltration Volume		cubic-feet
	43	Option 2 - Store 0.75 DCV: Target Volume		cubic-feet
	44	Option 2 - Provided Storage Volume		cubic-feet
	45	Portion of Biofiltration Performance Standard Satisfied		ratio
Result	46	Do Site Design Elements and BMPs Satisfy Annual Retention Requirements?		yes/no
	47	Overall Portion of Performance Standard Satisfied (BMP Efficacy Factor)		ratio
	48	**Deficit of Effectively Treated Stormwater**		cubic-feet

Worksheet B.3 Line Item Notes
1. Populated per user input from Worksheet B.1.
2. Populated per user input from Worksheet B.1.
3. Populated per result of Worksheet B.1.
4. User input. Unvegetated may be permitted in full infiltration conditions and/or Green Infrastructure Projects.
5. User input in reference to the bottom of the BMP.
6. User input.
7. User input. Default is "Standard" If specialized media is proposed, refer to BMPDM Sections F.1 - F.3 for guidance.
8. User input.
9. User input.
10. User input, 18 inches minimum.
11. User input. Value represents the total gravel thickness above and below the underdrain.
12. User input. Offset represents the distance between the bottom of the gravel layer to the invert of the underdrain.
13. User input. Select underdrain diameter or hydromod orifice diameter, whatever is smallest.
14. User input. If specialized media is proposed, refer to BMPDM Sections F.1 - F.3 for guidance.
15. User input. If specialized media is proposed, refer to BMPDM Sections F.1 - F.3 for guidance.
16. User input. If specialized media is proposed, refer to BMPDM Sections F.1 - F.3 for guidance.
17. User input. If specialized media is proposed, refer to BMPDM Sections F.1 - F.3 for guidance.
18. For unlined BMPs: Minimum of Line 3 or [Line 8 x (Line 2/12) x 6.00]. For Lined BMPs use zero.
19. Populated per Table B.3-1 of BMPDM. Values vary with respect to BMP elements such as vegetation, underdrain, liners.
20. Populated per Table B.3-1 of BMPDM. Values vary with respect to BMP elements such as vegetation, underdrain, liners.
21. Populated per Table B.3-1 of BMPDM. Values vary with respect to BMP elements such as vegetation, underdrain, liners.
22. Populated per Table B.3-1 of BMPDM. Values vary with respect to BMP elements such as vegetation, underdrain, liners.
23. (Line 9 x Line 19) + (Line 10 x Line 20) + ((Line 11-Line12) x Line 21) + (Line 12 x Line 22)
24. [(Line 23/12) x Line 8 + Line 18 / Line 3]. Maximum value of 1.
25. [Line 23 / Line 2]. Assume 120 hours for all lined biofiltration BMPs.
26. Look up value from Retention Percent Capture Curves, and divide by 0.80. Maximum of 1.00.
27. Line 26 x Line 3
28. Line 3 - Line 27
29. If flow controls are provided, calculate per orifice equation: $Q=CA\sqrt{2gh}$
30. If flow controls are provided, calculate as [(Line 29 x 12 x 3600)/Line 8]
31. Default = 5.00. If specialized media is proposed, refer to BMPDM Section Sections F.1 - F.3 for guidance.
32. Minimum of Line 30 or Line 31
33. [Line 32 x 6]
34. Populated per Table B.3-2 of BMPDM. Values vary with respect to BMP elements such as vegetation, underdrain, liners.
35. Populated per Table B.3-2 of BMPDM. Values vary with respect to BMP elements such as vegetation, underdrain, liners.
36. Populated per Table B.3-2 of BMPDM. Values vary with respect to BMP elements such as vegetation, underdrain, liners.
37. [(Line 9 x Line 34) + (Line 10 x Line 35) + ((Line 11 - Line 12) x Line 36))]
38. For lined basins use [Line 9/Line 32]. For unlined basins use [Line 9/(Line 32 + Line 2)]
39. For lined basins use [Line 37/Line 32]. For unlined basins use [Line 37/(Line 32 + Line 2)]
40. [Line 33 + Line 37]
41. [1.50 x Line 28]
42. [Minimum of Line 41 or ((Line 40/12) x Line 8))]
43. [0.75 x Line 28]
44. [Minimum of Line 43 or [(Line 37/12) x Line 8]]
45. [Maximum of (Line 42/Line 41) or (Line 44/Line 43)]
46. Yes/No. Determined per BMPDM Section B.3.5.
47. [Line 26 + Line 45]. Maximum of 1.00.
48. [Line 47 x Line 3] - Line 3

B.3.1 Step 3A - BMP Characteristics

The performance of a BMP is a function of its retention and biofiltration processes, which are directly related to the proposed BMP geometry and design components. The SWQMP Preparer should design the BMP characteristics summarized below to satisfy pollutant control performances standards for treatment of the DCV and minimum retention requirements.

- BMP geometries identify the area and depth over which retention and/or biofiltration processes occur. Critical BMP geometries include: BMP surface area, surface ponding depth, biofiltration soil media depth, gravel depth, underdrain depth, and underdrain diameter.
- BMP components dictate how retention and biofiltration processes occur over the BMP footprint. Critical BMP components include: vegetation vs no vegetation, standard biofiltration soil media vs non-standard biofiltration soil media, impermeable liner vs no impermeable liner, underdrain vs no underdrain, and design infiltration rates.

The most common BMPs proposed for storm water compliance are infiltration BMPs, bioretention BMPs, and biofiltration BMPs. By default, these BMPs must be sized to provide a surface area that is equal to at least 3% of the tributary effective impervious area. If a smaller BMP surface area is desired, the applicant must complete Major Maintenance Interval calculations presented in Appendix B.4.1.

B.3.2 Step 3B - Retention Processes

BMP retention processes include infiltration and evapotranspiration occurring within the BMP. This section presents how to calculate the retention processes.

Part 1) Determine the volume of infiltration occurring within the BMP during a 6 hour storm event. This volume is a function of the design infiltration rate, BMP surface area, and duration of the storm event as shown below.

$$V_{R6} = \frac{I}{12} x\ B\ x\ 6\ hours$$

Where:
V_{R6}: Volume infiltrated during a 6 hour storm event (ft^3)
I: Design infiltration rate (in/hr)
B: BMP surface area (ft^2)

Part 2) Determine the static retention capacity of the BMP assuming it is entirely full. This volume is a function of the BMP surface area and the effective retention depth as shown below.

$$V_{RS} = B\ x\ E_D$$

Where:
V_{RS}: Static retention capacity of the BMP (ft^3)
B: BMP surface area (ft^2)
E_D: The effective retention depth within all layers of the BMP (ft). This depth is calculated by multiplying the geometric depth (ft) of each BMP layer by the appropriate retention pore space factor in Table B.3-1 below and summing all of the layers.

Table B.3-1: Retention Pore Space Factors

BMP Characteristics	Unlined BMPs Without Underdrain	All Other Biofiltration/Retention BMPs
Ponding Pore Space	1.00	0.00
Media Pore Space	0.25 vegetated 0.40 non-vegetated	0.05
Gravel Pore Space Above Underdrain	0.40	0.00
Gravel Pore Space Below Underdrain	n/a	0.40*

*BMPs with an impermeable liner, must provide 3" of gravel beneath the underdrain invert (no more or no less is permitted in this case).

Part 3) Determine the fraction of the DCV retained by the BMP. This value is a function of the DCV, volume infiltrated during the 6 hour storm event, and static retention capacity of the BMP as shown below.

$$F_{DCV} = \frac{V_{R6} + V_{RS}}{DCV}$$

Where:
F_{DCV}: Fraction of the DCV retained by the BMP (decimal)
V_{R6}: Volume infiltrated during a 6 hour storm event (ft^3)
V_{RS}: Static retention capacity of the BMP (ft^3)
DCV: Design Capture Volume (ft^3)

Part 4) Determine the drawdown time for the effective retention depth. This value is a function of the effective retention depth and the design infiltration rate of the BMP as shown below.

$$T_R = \frac{E_D}{I/12}$$

Where:
T_R: Drawdown time for effective retention depth (hrs)
E_D: The effective retention depth within all layers of the BMP (ft).
I: Design infiltration rate (in/hr). If this rate is 0.000 (i.e. lined BMP), a 120 hour drawdown time for the effective retention depth may be assumed.

Part 5) Determine the average annual percent capture provided by the BMP using Figure B.3-1 on the next page.

a) Identify the fraction of the DCV retained by the BMP (F_{DCV}) on the x axis.
b) Trace vertically from the x-axis result to the intersect with the plot representing the drawdown time for the effective retention depth (T_R). Interpolation between the plotted drawdown times may be necessary.
c) Trace horizontally from the intersect result to identify the average annual percent capture of the proposed BMP.

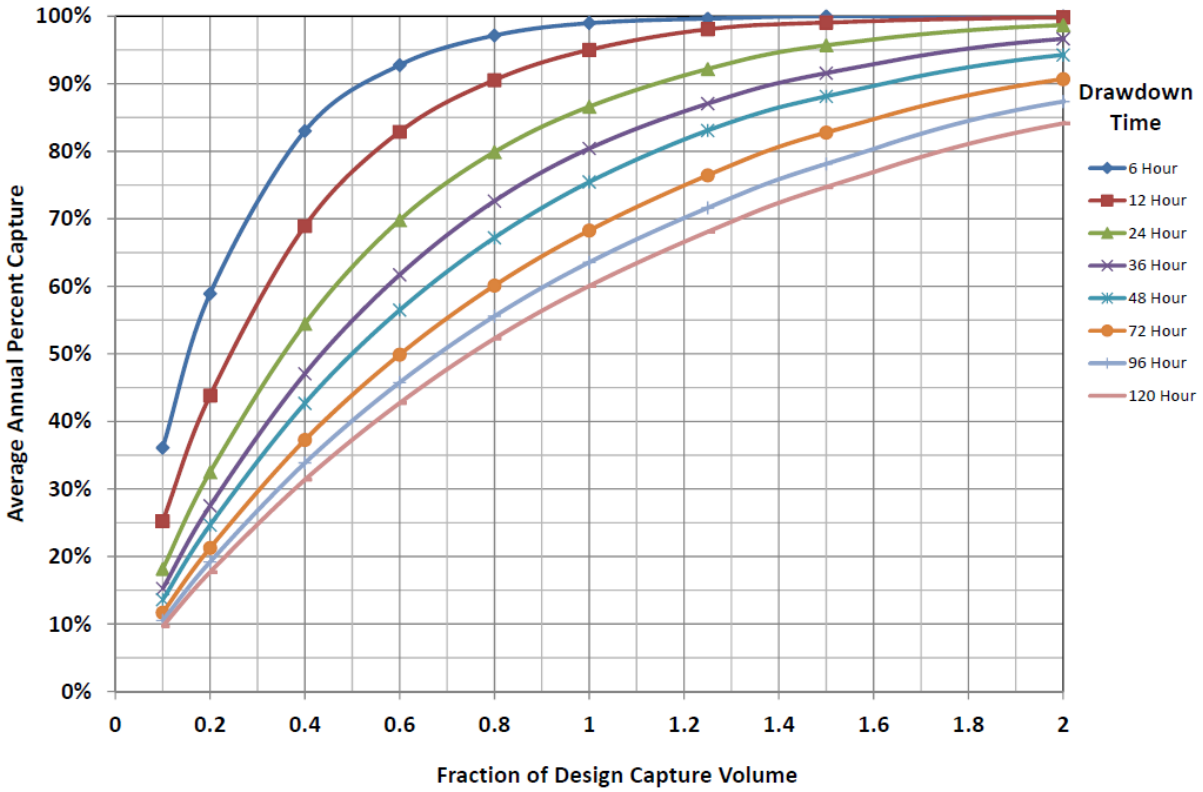

Figure B.3-1: Percent Capture Nomograph

Part 6) Determine the efficacy of the retention processes provided by the BMP. This value represents the portion of the pollutant control performance standard that is satisfied through retention processes of the BMP and is calculated as follows.

$$E_R = \frac{P_C}{80\%}$$

Where:
E_R: Efficacy of retention processes (decimal)
P_C: Average Annual Percent Capture (%)

Part 7) Determine the total volume retained by the proposed BMP.

$$V_{RBMP} = \text{DCV} \times E_R$$

Where:
V_{RBMP}: Total volume retained by BMP (ft^3)
DCV: Design capture volume (ft^3)
E_R: Efficacy of retention processes (decimal)

Part 8) Determine the volume of storm water runoff still available for biofiltration treatment as shown below. If the entire volume is retained, then consideration of biofiltration processes in the next step are not required.

$$V_A = \text{DCV} - V_{RBMP}$$

Where:
V_A: Volume of storm water runoff still available for biofiltration treatment (ft^3)
DCV: Design capture volume (ft^3)
V_{RBMP}: Total volume retained by BMP (ft^3)

B.3.3 Step 3C - Biofiltration Processes

Any portion of the DCV that has not been retained within site design or structural BMP elements must be biofiltered. BMP biofiltration processes include filtration, sedimentation, sorption, biochemical processes and/or vegetative uptake. This section presents how to calculate the biofiltration processes occurring within the proposed BMP.

Part 1) Determine the filtration rate (in/hr) of the proposed BMP. This is the rate in which storm water biofilters through the BMP and exits through the underdrain. Filtration rates can be governed by characteristics of the biofiltration soil media or by flow restrictions experienced due to the design of the BMP underdrain/orifice. Applicants must evaluate the rates associated with each of these components per the equations below and then select the lowest filtration rate for use in determining the BMP performance.

$$F_{underdrain} = \left(43{,}200 C A_0 \sqrt{2GH}\right)/B$$

$$F_{soil} = 5\ in/hr$$

$$F_{BMP} = Minimum\ (F_{underdrain,}\ F_{soil})$$

Where:
$F_{underdrain}$: The filtration rate (in/hr) accommodated by the proposed BMP underdrain/orifice.
C: Orifice Coefficient (default 0.60)
A_o: Area of Underdrain/Orifice (ft^2)
G: Gravitational acceleration (32.2 ft/sec^2)
H: Height of water from underdrain invert to top of surface ponding (ft)
B: BMP Surface Area (ft^2)
F_{soil}: The filtration rate (in/hr) accommodated by the proposed biofiltration soil media in typical conditions. The default soil media filtration rate is 5 in/hr; however, a higher rate may be used if supported per criteria in Section F.2.
F_{BMP}: The filtration rate (in/hr) of the proposed BMP

Part 2) Determine the volume of biofiltration occurring within the BMP during a 6 hour storm event. This volume is a function of the BMP filtration rate, BMP surface area, and the rainfall duration as shown below.

$$V_{B6} = \frac{F_{BMP}}{12} \; x \; B \; x \; 6 \; hours$$

Where:
V_{B6}: Volume of water (ft^3) biofiltered during a 6 hour storm event.
F_{BMP}: Filtration rate (in/hr) of the proposed BMP.
B: BMP surface area (ft^2)

Part 3) Determine the static biofiltration capacity of the BMP assuming it is entirely full. This volume is a function of the BMP surface area and the effective biofiltration depth as shown below.

$$V_{BS} = \; B \; x \; E_{DB}$$

Where:
V_{BS}: Static biofiltration capacity of the BMP (ft^3)
B: BMP surface area (ft^2)
E_{DB}: The effective biofiltration depth within all layers of the BMP (ft). This depth is calculated by multiplying the geometric depth (ft) of each BMP layer by the appropriate biofiltration pore space factor in Table B.3-2 below and summing all of the layers.

Table B.3-2: Biofiltration Pore Space Factors

BMP Characteristics	Unlined BMPs Without Underdrain	All Other Biofiltration/Retention BMPs
Ponding Pore Space	n/a	1.00
Media Pore Space	n/a	0.20 vegetated; 0.35 non-vegetated
Gravel Pore Space Above Underdrain	n/a	0.40
Gravel Pore Space Below Underdrain	n/a	0.00

Part 4) Determine the drawdown time (hours) for surface ponding. This is the ponding depth divided by the sum of the design infiltration rate and BMP filtration rate. Surface ponding depths of 24 hours or less are typically required; however, longer drawdown times up to 96 hours may be proposed if supported by a landscape architect/agronomist and no safety hazards are anticipated due to excessive ponding. Surface ponding drawdown times over 96 hours are not permitted due to vector concerns.

$$T_P = \frac{D_P}{I + F_{BMP}}$$

Where:
T_P: Time (hours) for the BMP surface ponding depth to draw down.
D_P: Surface ponding depth (inches) of the proposed BMP.
I: Design infiltration rate (in/hr)
F_{BMP}: BMP filtration rate (in/hr)

Part 5) Determine the efficacy of the biofiltration processes provided by the BMP. This value represents the portion of the pollutant control standard that is satisfied through the biofiltration processes of the BMP. There are two options available for establishing the biofiltration performance standard. Applicants may select the option of their choice. Option 1 requires that the BMP treat 1.5

times the portion of the DCV not reliably retained onsite (assuming a 6 hour routing period). Option 2 requires that the BMP treat 1.0 times the portion of the DCV not reliably retained onsite; and additionally check that the system has a total static (i.e., non-routed) storage volume, including pore spaces and pre-filter detention volume, equal to at least 0.75 times the portion of the DCV not reliably retained onsite.

$$E_{B1} = \frac{V_{B6} + V_{BS}}{1.50\ DCV - V_{RT}}$$

$$E_{B2} = \frac{V_{BS}}{0.75\ DCV - V_{RT}}$$

$$E_B = Maximum\ (E_{B1}, E_{B2})$$

Where:
E_{B1}: Efficacy of biofiltration processes under option 1 (decimal).
V_{B6}: The volume biofiltered (ft^3) during the 6 hour storm event.
V_{BS}: The static biofiltration capacity (ft^3) of the BMP.
DCV: Design capture volume (ft^3) delivered to BMP.
V_{RT}: The volume retained (ft^3) within the BMP.
E_{B2}: Efficacy of biofiltration processes under option 2 (decimal).
E_B: Efficacy of biofiltration processes provided by the BMP (decimal).

B.3.4 Step 3D - Satisfaction of Pollutant Control Requirements

The performance of a BMP with respect to the pollutant control performance standards is referred to as the BMP efficacy. The total BMP efficacy is a function of the previously calculated retention efficacy and biofiltration efficacy as shown below.

$$E_T = E_R + (1.00 - E_R)\ x\ E_B$$

Where:
E_T: Total BMP Efficacy (decimal)
E_R: Efficacy of retention processes (decimal)
E_B: Efficacy of biofiltration processes (decimal)

To satisfy pollutant control performance standards, the total BMP efficacy must be 100%. If this level of efficacy is not achieved, applicants should consider reconfiguring drainage layout and/or BMP designs as needed. If this level of efficacy still can't be achieved, applicants may elect to implement flow-thru treatment control at the project site and also participate in the County's Offsite Alternative Compliance Program outlined in Appendix J.

B.3.5 Step 3E - Satisfaction of Minimum Retention Requirements

Minimum retention requirements can be satisfied by demonstrating that the all of the retention elements incorporated within a drainage area (rain barrels, tree wells, dispersion areas, and BMPs) retain a volume of water that is greater than or equal to what is required.

Part 1) Determine the total volume retained through site design and structural BMP elements as follows.

$$V_{RT} = V_{RRB} + V_{RTW} + V_{RD} + V_{RBMP}$$

Where:
V_{RT}: Total volume retained within the drainage area (ft^3)
V_{RRB}: Volume retained by rain barrels (ft^3)
V_{RTW}: Volume retained by tree wells (ft^3)
V_{RD}: Volume retained by dispersion areas (ft^3)
V_{RBMP}: Volume retained by the BMP (ft^3)

Part 2) Demonstrate that the total volume retained through site design and structural BMP elements meets retention requirements.

$$V_{RT} \geq V_{REQ}$$

Where:
V_{RT}: Total volume retained within the drainage area (ft^3)
V_{REQ}: Total volume that must be retained within the drainage area (ft^3)

B.4 Less Common Pollutant Control Calculations

This section presents methodologies for performing less common pollutant control calculations including: determination of BMP major maintenance intervals, capture and use evaluation, use of offline BMPs, and BMPs located downstream of a storage unit.

B.4.1 Major Maintenance Intervals for Reduced Size BMPs

BMPs with a surface area sized at less than 3% of the tributary effective impervious area must perform additional calculations to determine the anticipated major maintenance intervals.

Major maintenance activities include items such as rehabilitation and/or replacement of the entire BMP or BMP components, which are independent of regularly scheduled annual maintenance. BMP major maintenance intervals can be calculated through use of automated Worksheet B.4 below, or can be calculated manually by following Steps 4A-4C presented in this section.

Worksheet B.4: Major Maintenance Intervals for Reduced Size BMPs

Category	#	Description	*i*	Units
Drainage Basin Info	1	Drainage Basin ID or Name		unitless
	2	Final Effective Tributary Area		sq-ft
	3	Provided BMP Surface Area		sq-ft
Biofiltration Clogging Inputs	4	Average Annual Precipitation		inches
	5	Load to Clog (default =2.0)		lb/sq-ft
	6	TSS Pretreatment Efficacy		ratio
	7	Percentage "Commercial"		percentage
	8	Percentage "Education"		percentage
	9	Percentage "Industrial"		percentage
	10	Percentage "Low Traffic Areas"		percentage
	11	Percentage "Multi-Family Residential"		percentage
	12	Percentage "Roof Areas"		percentage
	13	Percentage "Single Family Residential"		percentage
	14	Percentage "Transportation"		percentage
	15	Percentage "Vacant/Open Space"		percentage
	16	Percentage "Steep Hillslopes"		percentage
Minimum Footprint Calculations	17	Total Percentage of Above Land Uses	0%	percentage
	18	Average TSS Concentration for Tributary After Pretreatment	0	mg/L
	19	Average Annual Runoff Volume	0	cubic-feet
	20	Average Annual TSS Load	0	lb/yr
	21	Available Sediment Storage within BMP	0	lb
Result	22	Anticipated Major Maintenance Frequency	-	years

Worksheet B.4 Line Item Notes
1. Populated per user input from Worksheet B.1.
2. Populated per result of Worksheet B.1.
3. Populated per user input from Worksheet B.3.
4. User Input
5. User Input, Default=2.0. See BMPDM Table B.4-2 for guidance on revisions.
6. User Input. Default=0.00. See BMPDM Section B.4.1.1 for guidance on revisions.
7. User Input. (Commercial TSS Loading TSS = 128 mg/L, C=0.80)
8. User Input. (Education TSS Loading TSS = 132 mg/L, C=0.50)
9. User Input. (Industrial TSS Loading TSS = 125 mg/L, C=0.90)
10. User Input. (Low Traffic Areas TSS Loading TSS = 50 mg/L, C=0.50)
11. User Input. (Multi-Family Residential TSS Loading TSS = 40 mg/L, C=0.60)
12. User Input. (Roof Areas TSS Loading TSS = 14 mg/L, C=0.90)
13. User Input. (Single Family Residential TSS Loading TSS = 123 mg/L, C=0.40)
14. User Input. (Transportation TSS Loading TSS = 78 mg/L, C=0.90)
15. User Input. (Vacant/Open Space TSS Loading TSS = 216 mg/L, C=0.10)
16. User Input. (Steep Hillslopes TSS Loading TSS = 797 mg/L, C=0.30)
17. $\sum_{\text{Lines 7-16}}$
18. [($\sum_{\text{Lines 7-16}}$ Land Use Percentage x Runoff Coefficient x TSS Concentration) / Line 17] x (1-Line 6)
19. [(Line 4/12) x Line 2
20. Line 18 x 0.000062428 x Line 19
21. Line 3 x Line 5
22. Line 21 / Line 20

B.4.1.1 Annual Sediment Load Delivered to BMP

The annual sediment load delivered to a BMP is a function of the average annual storm water runoff, land use characteristics, and pretreatment elements applicable to the drainage area.

Part 1) Determine the average sediment concentration in storm water runoff from the land uses present within the drainage area by referring to the total suspended solid (TSS) concentrations listed for various land uses in Table B.4-1 below.

Table B.4-1: TSS Concentrations by Land Use

Land Use	TSS Concentration (mg/L)	C	Source
Single Family Residential	123	0.40	San Diego SBPAT EMC Dataset
Commercial	128	0.80	
Industrial	125	0.90	
Education (Municipal)	132	0.50	
Multi-family Residential	40	0.60	
Open Space	216	0.10	
Transportation/Pavement	78	0.90	LA SBPAT EMC Dataset
Roof Runoff	14	0.90	Charters et al. (2015)
Low Traffic Areas/Sidewalk	50	0.50	Davis and McCuen (2005)
Steep Hillslopes	797	0.30	Model BMPDM

If a drainage area is comprised of more than one land use type, a runoff-weighted TSS concentration must be calculated per the following equation.

$$TSS_{AVG} = \frac{\sum TSS_1\ F_1 + TSS_2\ F_2 + TSS_x\ F_x}{\sum F_1 + F_2 + F_x}$$

Where:
TSS_{AVG}: Average sediment concentration in storm water from all tributary land uses (mg/L)
TSS_1: TSS concentration from land use 1 (mg/L)
F_1: Fraction of total DCV from land use 1 (%)
TSS_2: TSS concentration from land use 2 (mg/L)
F_2: Fraction of total DCV from land use 2 (%)
TSS_x: TSS concentration from land use x (mg/L)
F_x: Fraction of total DCV from land use x (%)

Part 2) Determine the average sediment concentration in storm water runoff as it enters the BMP. This is the concentration of TSS determined in part 1 after consideration of any "pretreatment" elements incorporated as shown below.

$$TSS_{BMP} = TSS_{AVG}\ x\ (1 - P)$$

Where:
TSS_{BMP}: Average sediment concentration in runoff entering the BMP (mg/L)
TSS_{AVG}: Average sediment concentration in storm water from all tributary land uses (mg/L)
P: Pretreatment removal efficiency (%).

- P value of 0.00 should be used if there is no pretreatment.
- P value of 0.25 should be used when pretreatment is included.
- P value of 0.50 should be used if pretreatment consistent with Washington TAPE "Pre-treatment" BMP performance criteria are satisfied (>50% TSS removal)
- P value of 0.80 should be used if pretreatment consistent with Washington TAPE "Basic Treatment" performance criteria are satisfied (>80% TSS removal)

Part 3) Determine the average annual runoff volume entering the BMP. This is a function of the average annual precipitation, runoff factor, and drainage area as shown below.

$$V_{annual} = \frac{D_{annual}}{12}\ x\ A\ x\ C$$

Where:
V_{annual}: Average annual runoff volume entering the BMP (ft^3/year)
D_{annual}: Average annual precipitation (inches/year)
A: Tributary Area (ft^2)
C: Runoff factor (unitless)

Part 4) Determine the annual sediment load delivered to the BMP. This is a function of the average annual runoff volume and the average sediment concentration in stormwater from all tributary land uses as shown below.

$$L_{annual} = TSS_{BMP} \, x \, V_{annual} \, x \, 0.0000624$$

Where:
L_{annual}: Annual sediment load delivered to the BMP (lbs/year)
TSS_{BMP}: Average sediment concentration in runoff entering the BMP (mg/L)
V_{annual}: Average annual runoff volume entering the BMP (ft^3)

B.4.1.2 BMP Sediment Capacity

The BMP sediment capacity is the weight of sediment (lbs) that can be stored within the BMP before significant clogging impacts begin to occur. The BMP sediment capacity can be determined as follows.

Part 1) Determine the appropriate load to clog value by referencing Table B.4-2 below and identifying the BMP configuration that best characterizes the proposed BMP design.

Table B.4-2: Guidance for Selecting Load to Clog (Lc)

BMP Configuration	Load to Clog, L_c, lb/sq-ft
Default Load to Clog Value	2
≥75% vegetative cover	3
≥20 in/hr media permeability and outlet flow control	3
≥75% vegetative cover, ≥30 in/hr media permeability, and outlet control	4

Part 2) Determine the BMP Sediment Capacity (lbs) by multiplying the BMP Load to Clog by the BMP surface area.

$$C_{BMP} = B \, x \, L_c$$

Where:
C_{BMP}: BMP sediment capacity (lbs)
B: BMP Surface Area (ft^2)
L_c: BMP load to clog value (lbs/ft^2)

B.4.1.3 Major Maintenance Frequency

The major maintenance frequency can be calculated by dividing the BMP sediment capacity by the annual sediment load delivered to the BMP as shown below.

$$M_{BMP} = \frac{C_{BMP}}{L_{annual}}$$

Where:
M_{BMP}: Major maintenance frequency for BMP (years)
C_{BMP}: BMP sediment capacity (lbs)
L_{annual}: Annual sediment load delivered to the BMP (lbs/yr)

The calculated major maintenance frequency must be 10 years or greater. If the calculated major maintenance frequency is less than 10 years, the applicant must take steps to increase the BMP sediment capacity and/or reduce the annual sediment load delivered to the BMP. In limited circumstances, frequencies of less than 10 years may be acceptable if supported to the satisfaction of the County plan reviewer.

B.4.2 Capture and Use Evaluation

If the proposed project includes habitable structures over 9 stories in height, the applicant must perform a capture and use evaluation as outlined herein.

The capture and use evaluation should be performed at the project-scale, and not be limited to a single DMA. This evaluation must identify the potential demand for using stormwater for indoor toilets and outdoor irrigation use and determine if this demand is sufficient to drawdown the DCV within a 36 hour time period.

B.4.2.1 Toilet and Urinal Flushing Demand Calculations*

The following guidelines should be followed for computing harvested water demand from toilet and urinal flushing:

- If reclaimed water is planned for use for toilet and urinal flushing, then the demand for harvested storm water is equivalent to the total demand minus the reclaimed water supplied, and should be reduced by the amount of reclaimed water that is available during the wet season.
- Demand calculations for toilet and urinal flushing should be based on the average rate of use during the wet season for a typical year.
- Demand calculations should include changes in occupancy over weekends and around holidays and changes in attendance/enrollment over school vacation periods.
- For facilities with generally high demand, but periodic shut downs (e.g., for vacations, maintenance, or other reasons), a project specific analysis should be conducted to determine whether the long term storm water capture performance of the system can be maintained despite shut downs.
- Such an analysis should consider the statistical distributions of precipitation and demand, most importantly the relationship of demand to the wet seasons of the year.

Table B.4-3 provides planning level demand estimates for toilet and urinal flushing per resident, or employee, for a variety of project types. The per capita use per day is based on daily employee or resident usage. For non-residential types of development, the "visitor factor" and "student factor" (for schools) should be multiplied by the employee use to account for toilet and urinal usage for non-employees using facilities.

Note: At the time of publication of this document, there is not a program in place to permit the use of storm water for indoor use. Check with PDS prior to calculating indoor water use.

Table B.4-3: Toilet and Urinal Water Usage per Resident or Employee

Land Use Type	Toilet User Unit of Normalization	Per Capita Use per Day		Visitor Factor[4]	Water Efficiency Factor	Total Use per Resident or Employee
		Toilet Flushing[1, 2]	Urinals[3]			
Residential	Resident	18.5	NA	NA	0.5	9.3
Office	Employee (non-visitor)	9.0	2.27	1.1	0.5	7 (avg)
Retail	Employee (non-visitor)	9.0	2.11	1.4	0.5	
Schools	Employee (non-student)	6.7	3.5	6.4	0.5	33
Various Industrial Uses (excludes process water)	Employee (non-visitor)	9.0	2	1	0.5	5.5

1 - Based on American Waterworks Association Research Foundation, 1999. Residential End Uses of Water. Denver, CO: AWWARF

2 - Based on use of 3.45 gallons per flush and average number of per employee flushes per subsector, Table D-1 for MWD (Pacific Institute, 2003)

3 - Based on use of 1.6 gallons per flush, Table D-4 and average number of per employee flushes per subsector, Appendix D (Pacific Institute, 2003)

4 - Multiplied by the demand for toilet and urinal flushing for the project to account for visitors. Based on proportion of annual use allocated to visitors and others (includes students for schools; about 5 students per employee) for each subsector in Table D-1 and D-4 (Pacific Institute, 2003)

5 - Accounts for requirements to use ultra low flush toilets in new development projects; assumed that requirements will reduce toilet and urinal flushing demand by half on average compared to literature estimates. Ultra low flush toilets are required in all new construction in California as of January 1, 1992. Ultra low flush toilets must use no more than 1.6 gallons per flush and Ultra low flush urinals must use no more than 1 gallon per flush. Note: If zero flush urinals are being used, adjust accordingly.

B.4.2.2 Planning Level Irrigation Demands

To simplify the planning process, the method described above has been used to develop daily average wet season demands for a one-acre irrigated area based on the plant/landscape type. These demand estimates can be used to calculate the drawdown of harvest and use systems for the purpose of LID BMP sizing calculations.

Table B.4-4: Planning Level Irrigation Demand by Plant Factor and Landscape Type

General Landscape Type	36-Hour Planning Level Irrigation Demand (gallons per irrigated acre per 36 hour period)
Hydrozone – Low Plant Water Use	390
Hydrozone – Moderate Plant Water Use	1,470
Hydrozone – High Plant Water Use	2,640
Special Landscape Area	2,640

B.4.3 BMPs Downstream of a Storage Unit

Incorporation of upstream storage units (cisterns, vaults, etc) into a project's design can regulate flows to downstream biofiltration BMPs and potentially optimize the required BMP footprints. Use of this approach is not supported by County automated worksheets, but compliance with stormwater pollutant control requirements can be demonstrated through the following steps.

- Step 1) Determine the flow rate from the upstream storage unit
    - Use the orifice equation to determine outflow from the storage unit when it is filled to the depth associated with the DCV.
- Step 2) Demonstrate that the proposed BMP can accommodate flows from the storage unit
    - Multiply the BMP surface area (ft^2) by the filtration rate of the biofiltration soil media (in/hr) and divide by 43,200 to convert the units into CFS. For proprietary BMPs, this rate should correspond with the rates from certified testing the manufacturer has performed.
- Step 3) Demonstrate that the proposed BMP biofilters 92% of the annual runoff volume
    - If continuous simulation modeling has been performed, provide output reports from SWMM or SDHM modeling.
    - If continuous simulation modeling has not been performed, reference the percent capture nomographs in Figure B.3-1 to determine the percentage of annual runoff that is biofiltered. To use the nomographs, applicants must represent the BMP storage capacity as a fraction of the DCV along the x-axis, trace a line vertically to the colored line representing the drawdown time of the system, and then determine the percentage of annual runoff biofiltered by tracing horizontally to the y-axis.
- Step 4) If the downstream biofiltration BMP is <3% of the effective tributary area, provide information supporting use of compact biofiltration as generally outlined below.
    - Retention Requirements: Demonstrate that minimum retention requirements from Section B.2 are satisfied.
    - Maintenance Requirements: Demonstrate that the BMP design is expected to last 10 years before major maintenance is anticipated per Appendix B.4.1.
    - Proprietary Requirements (if applicable): Provide proprietary information demonstrating that the device meets biofiltration criteria outlined in Appendices F.1-F.2.

B.4.4 Onsite Alternative Compliance

If desired, a PDP applicant may generate stormwater pollutant control and/or hydromodification flow control benefits by managing stormwater flows from "excess areas" that are conveyed to the site. Management of flows from these excess areas may be used to offset flows from "required areas" that lack management.

Required areas are the areas of a project for which the Permit mandates pollutant control and/or HMP flow control requirements. Excess areas are the areas of a project for which the Permit does not mandate pollutant control and/or HMP flow control requirements. Areas of offsite run-on to the PDP site may always be considered excess areas. Additionally, for redevelopment projects falling under the 50% redevelopment threshold, onsite areas that are not being redeveloped may also be considered excess areas.

Compliance with stormwater pollutant control requirements using this onsite alternative compliance approach can be demonstrated as outlined below.

- Step 1) Determine the untreated DCV from the required area
- Step 2) Determine the treated DCV from the excess area
    - If required areas and excess areas contain different land uses, a land use factor must be applied to account for variations in pollutant concentrations. In most cases, this factor results in a lower treatment volume being credited. Refer to the Water Quality Equivalency (WQE) document for guidance on determining a land use factor and note that the WQE terms "ACP tributary" and "reference tributary" correlate with "excess areas" and "required areas" respectively.
- Step 3) Demonstrate compliance
    - Show that the treated DCV from the excess area is greater than or equal to the untreated DCV from the required area (Step 2 ≥ Step 1).
    - Use of this onsite alternative compliance approach does not mandate flow-thru treatment of untreated flows from required areas; however, applicants are encouraged to do so where feasible.

B.4.5 Offline BMPs

Diversion flow rates for offline BMPs must be sized to convey the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of every storm event. The following hydrologic method must be used to calculate the diversion flow rate for off-line BMPs:

$$Q = C \times i \times A$$

Where:
Q = Diversion flow rate in cubic feet per second
C = Runoff factor, area weighted estimate using Table B.1-1
i = Rainfall intensity of 0.2 in/hr
A = Tributary area (acres)

B.5 Backup Information on Pollutant Control Standards

This sections presents backup information describing the rationale for the following elements relating to pollutant control: establishment of the pollutant control performance standard, establishment of retention requirements, establishment of 85th percentile rainfall depths, backup information on tree well retention values, and backup information on BMP major maintenance frequency calculations.

B.5.1 Pollutant Control Performance Standard Backup

Storm water BMPs can be conceptualized as having a storage volume and a treatment rate, in various proportions. Both are important in the long-term performance of the BMP under a range of actual storm patterns, depths, and inter-event times. Long-term performance is measured by the operation of a BMP over the course of multiple years, and provides a more complete metric than the performance of a BMP during a single event, which does not take into account antecedent conditions, including multiple storms arriving in short timeframes. A BMP that draws down more quickly would be expected to capture a greater fraction of overall runoff (i.e., long-term runoff) than an identically sized BMP that draws down more slowly. This is because storage is made available more quickly, so subsequent storms are more likely to be captured by the BMP. In contrast a BMP with a long drawdown time would stay mostly full, after initial filling, during periods of sequential storms. The volume in the BMP that draws down more quickly is more "valuable" in terms of long term performance than the volume in the one that draws down more slowly. The MS4 permit definition of the DCV does not specify a drawdown time, therefore the definition is not a complete indicator of a BMP's level of performance. An accompanying performance-based expression of the BMP sizing standard is essential to ensure uniformity of performance across a broad range of BMPs and helps prevents BMP designs from being used that would not be effective.

An evaluation of the relationships between BMP design parameters and expected long term capture efficiency has been conducted to address the needs identified above. Relationships have been developed through a simplified continuous simulation analysis of precipitation, runoff, and routing, that relate BMP design volume and storage recovery rate (i.e., drawdown time) to an estimated long term level of performance using United States Environmental Protection Agency (USEPA) SWMM and parameters listed in Appendix G for Lake Wohlford, Lindbergh, and Oceanside rain gages. Comparison of the relationships developed using the three gages indicated that the differences in relative capture estimates are within the uncertainties in factors used to develop the relationships. For example, the estimated average annual capture for the BMP sized for the DCV and 36 hour drawdown using Lake Wohlford, Lindbergh, and Oceanside are 80%, 76% and 83% respectively. In an effort to reduce the number of curves that are made available, relationships developed using Lake Wohlford are included in this manual for use in the whole San Diego County region.

Figure B.4-1 demonstrated that a BMP sized for the runoff volume from the 85th percentile, 24-hour storm event (i.e., the DCV), which draws down in 36 hours is capable of managing approximately 80 percent of the average annual. There is long precedent for 80 percent capture of average annual runoff as approximately the point at which larger BMPs provide decreasing capture efficiency benefit (also known as the "knee of the curve") for BMP sizing. The characteristic shape of the plot of capture efficiency versus storage volume in Figure B.3-1 illustrates this concept.

As such, this equivalency (between DCV draw down in 36-hours and 80 percent capture) has been utilized to provide a common currency between volume-based BMPs with a wide range of drawdown rates. This approach allows flexibility in the design of BMPs while ensuring consistent performance.

B.5.2 Retention Requirement Backup

In May 2016, the RWQCB provided clarification on the 2013 MS4 Permit requirement for the BMPDM to "…provide guidance for hydraulic loading rates and other biofiltration design criteria necessary to maximize the storm water retention and pollutant removal of treatment control BMPs." Through coordination with the RWQCB, a quantifiable minimum retention requirement for treatment control BMPs was established based on the assumption that BMPs would be sized at 3% of the effective tributary area and be unlined where feasible.

The retention curves presented in Figure B.2-1 were developed using Version 1.4 automated pollutant control worksheets assuming various rainfall depths (0.60 to 1.20 inches) and design infiltration rates (0.000 to 0.500 in/hr). BMPs were sized at 3% of the effective impervious tributary area, provided 18" soil media depth, 3" of gravel above the underdrain, 6" underdrains with no hydromodification management orifices, 3" of gravel beneath the underdrain, and varied surface ponding depths as needed to fully satisfy pollutant removal standards.

B.5.3 Rainfall Depth Backup

The method of calculating the 85th percentile is to produce a list of values, order them from smallest to largest, and then pick the value that is 85 percent of the way through the list. Only values that are capable of producing run off are of interest for this purpose. Lacking a legislative definition of rainfall values capable of producing runoff, Flood Control staff in San Diego County have observed that the point at which significant runoff begins is rather subjective, and is affected by land use type and soil moisture. In highly-urbanized areas, the soil has a high impermeability and runoff can begin with as little as 0.02" of rainfall. In rural areas, soil impermeability is significantly lower and even 0.30" of rain on dry soil will frequently not produce significant runoff. For this reason, San Diego County has chosen to use the more objective method of including all non-zero 24-hour rainfall totals when calculating the 85th percentile. To produce a statistically significant number, only stations with 30 years or greater of daily rainfall records are used.

A collection of 56 precipitation gage points was developed with 85th percentile precipitation values based on multiple years of gage data. A raster surface (grid of cells with values) was interpolated from that set of points. The surface initially did not cover the County's entire jurisdiction. A total of 13 dummy points were added. Most of those were just outside the County boundary to enable the software to generate a surface that covered the entire County. A handful of points were added to enforce a plausible surface. In particular, one point was added in the desert east of Julian, to enforce a gradient from high precipitation in the mountains to low precipitation in the desert. Three points were added near the northern boundary of the County to adjust the surface to reflect the effect of elevation in areas lacking sufficient operating gages.

Several methods of interpolation were considered. The method chosen is named by Environmental Systems Research Institute as the Natural Neighbor technique. This method produces a surface that is highly empirical, with the value of the surface being a product of the values of the data points nearest

each cell. It does not produce peaks or valleys of surface based on larger area trends, and is free of artifacts that appeared with other methods.

B.5.4 Tree Well Backup

Tree Well credit volume is estimated based on typical characteristics of Tree Wells as follows:

It is assumed that each tree is considered a single BMP, with calculations based on the soil media reservoir volume and/or the individual tree within the tree BMP as appropriate. Tree Well credit volume is calculated as:

$$\boldsymbol{TWCV = TIV + TCIV + TETV}$$

Where:
TWCV = Tree Well credit volume (ft^3)
TIV = Total infiltration volume of all storage layers within tree BMPs (ft^3)
TCIV = Total canopy interception volume of tree BMPs (ft^3)
TETV = Total evapotranspiration volume, sums the media evapotranspiration storage within each tree BMP (ft^3)

Total infiltration volume is calculated as the total volume stored within the tree BMP soil media reservoir. Infiltration volume was assumed to be 20% of the total BMP soil media reservoir volume, the available pore space in the soil media reservoir (porosity – field capacity).

Total canopy interception volume was calculated as the average interception capacity for the entire mature tree canopy projection area. Interception capacity was determined to be 0.04 inches per square foot for all tree sizes, an average from the findings published by Breuer et al (2003) for coniferous and deciduous trees.

Total evapotranspiration volume is the available evapotranspiration storage volume (field capacity – wilting point) within the BMP storage layer media. TEVT is assumed to be 10% of the minimum soil volume. The minimum soil volume as required by SD-A fact sheet of 2 cubic feet per unit canopy projection area was assumed for estimating reduction in DCV.

There may be rain events that generate more runoff than the tree well can handle. Installing an overflow above the design storm water retention level of the reservoir can prevent system failure during extreme weather events. Placement of the overflow should be determined based on the infiltration rate of the subsoil. If infiltration is not adequate to remove water from the rooting zone (the top 18 to 24 inches of soil media reservoir) within 48 hours, the depth of the soil media reservoir may be increased, and the overflow should be placed such that if water rises to the level of the rooting zone it will drain in less than 48 hours.

B.5.5 Sediment Clogging Backup

Under the 2011 Model SUSMP, a sizing factor of 4 percent was used for sizing biofiltration BMPs. This value was derived based on the goal of treating the runoff from a 0.2 inch per hour uniform precipitation intensity at a constant media flow rate of 5 inches per hour. While this method was simple, it was considered to be conservative as it did not account for significant transient storage present in biofiltration BMPs (i.e., volume in surface storage and subsurface storage that would need to fill before overflow occurred). Under this manual, biofiltration BMPs will typically provide

subsurface storage to promote infiltration losses; therefore typical BMP profiles will tend to be somewhat deeper than those provided under the 2011 Model SUSMP. A deeper profile will tend to provide more transient storage and allow smaller footprint sizing factors while still providing similar or better treatment capacity and pollutant removal. Therefore a reduction in the minimum sizing factor from the factor used in the 2011 Model SUSMP is supportable. However, as footprint decreases, issues related to potential performance, operations, and/or maintenance can increase for a number of reasons:

1) As the surface area of the media bed decreases, the sediment loading per unit area increases, increasing the risk of clogging. While vigorous plant growth can help maintain permeability of soil, there is a conceptual limit above which plants may not be able to mitigate for the sediment loading. Scientific knowledge is not conclusive in this area.

2) With smaller surface areas and greater potential for clogging, water may be more likely to bypass the system via overflow before filling up the profile of the BMP.

3) As the footprint of the system decreases, the amount of water that can be infiltrated from subsurface storage layers and evapotranspire from plants and soils tends to decrease.

4) With smaller sizing factors, the hydraulic loading per unit area increases, potentially reducing the average contact time of water in the soil media and diminishing treatment performance.

The MS4 Permit requires that volume and pollutant retention be maximized. Therefore, a minimum sizing factor was determined to be needed. This minimum sizing factor does not replace the need to conduct sizing calculations as described in this manual; rather it establishes a lower limit on required size of biofiltration BMPs as the last step in these calculations. Additionally, it does not apply to alternative biofiltration designs that utilize the checklist in Appendix F (Biofiltration Standard and Checklist). Acceptable alternative designs (such as proprietary systems meeting Appendix F criteria) typically include design features intended to allow acceptable performance with a smaller footprint and have undergone field scale testing to evaluate performance and required O&M frequency.

Sediment Clogging Calculations

As sediment accumulates in a filter, the permeability of the filter tends to decline. The lifespan of the filter bed can be estimated by determining the rate of sediment loading per unit area of the filter bed. To determine the media bed surface area sizing factor needed to provide a target lifespan, simple sediment loading calculations were conducted based on typical urban conditions. The inputs and results of this calculation are summarized in Table B.5-1.

Table B.5-1: Inputs and Results of Clogging Calculation

Parameter	Value	Source
Representative TSS Event Mean Concentration, mg/L	100	Approximate average of San Diego Land Use Event Mean Concentrations from San Diego River and San Luis Rey River WQIP
Runoff Coefficient of Impervious Surface	0.90	Table B.1-1
Runoff Coefficient of Pervious Surface	0.10	Table B.1-1 for landscape areas
Imperviousness	40% to 90%	Planning level assumption, covers typical range of single family to commercial land uses
Average Annual Precipitation, inches	11 to 13	Typical range for much of urbanized San Diego County

Parameter	Value	Source
Load to Initial Maintenance, kg/m^2	10	Pitt, R. and S. Clark, 2010. Evaluation of Biofiltration Media for Engineered Natural Treatment Systems.
Allowable period to initial clogging, yr	10	Planning-level assumption
Estimated BMP Footprint Needed for 10-Year Design Life	2.8 to 3.3%	Calculated

This analysis suggests that a 3 percent sizing factor, coupled with sediment source controls and careful system design, should provide reasonable protection against premature clogging. However, there is substantial uncertainty in sediment loading and the actual load to clog that will be observed under field conditions in the San Diego climate. Additionally this analysis did not account for the effect of plants on maintaining soil permeability. Therefore this line of evidence should be considered provisional, subject to refinement based on field scale experience. As field scale experience is gained about the lifespan of biofiltration BMPs in San Diego and the mitigating effects of plants on long term clogging, it may be possible to justify lower factors of safety and therefore smaller design sizes in some cases. If a longer lifespan is desired and/or greater sediment load is expected, then a larger sizing factor may be justified.

Generally, the purpose of a minimum sizing factor is to help improve the performance and reliability of standard biofiltration systems and limit the use of sizing methods and assumptions that may lead to designs that are less consistent with the intent of the MS4 Permit.

Ultimately, this factor is a surrogate for a variety of design considerations, including clogging and associated hydraulic capacity, volume reduction potential, and treatment contact time. A prudent design approach should consider each of these factors on a project-specific basis and identify whether site conditions warrant a larger or smaller factor. For example a system treating only rooftop runoff in an area without any allowable infiltration may have negligible clogging risk and negligible volume reduction potential – a smaller sizing factor may not substantially reduce performance in either of these areas. Alternatively, for a site with high sediment load and limited pre-treatment potential, a larger sizing factor may be warranted to help mitigate potential clogging risks. County staff has discretion to accept alternative sizing factor(s) based on project-specific or jurisdiction-specific considerations. Additionally, the recommended minimum sizing factor may change over time as more experience with biofiltration is obtained.

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Appendix

C

Baseline BMP Fact Sheets for Site Design and Source Control

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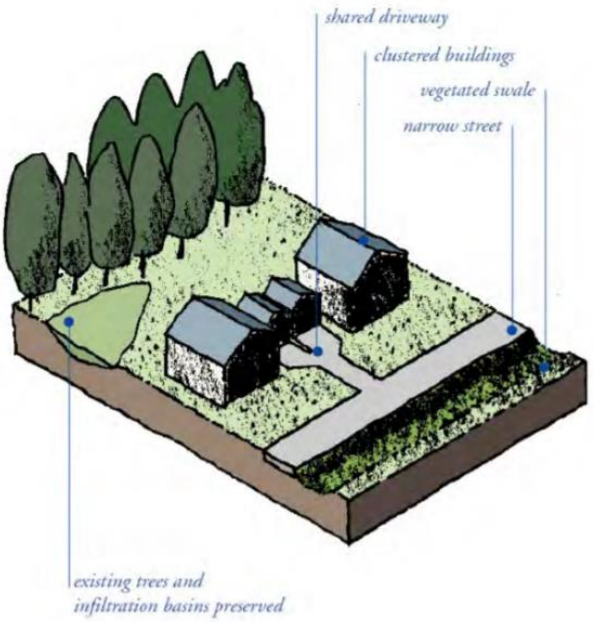
Appendix C Baseline BMP Fact Sheets for Site Design and Source Control

The following fact sheets were developed to assist the project applicants with designing BMPs to meet Site Design and Source Control MS4 Permit requirements.

MS4 Category	Baseline BMP Fact Sheet	BMP ID	Page
Site Design	BL-1: Existing Natural Site Features	**SD-G:** Conserve Natural Features **SD-H:** Buffers	C-2
Site Design	BL-2: Outdoor Impervious Areas	**SD-B**: *Impervious Area Dispersion* **SD-I**: Permeable Surfaces	C-8
Site Design	BL-3: Rooftop Areas	**SD-B**: *Impervious Area Dispersion* **SD-C**: *Green Roofs* **SD-E**: *Rain Barrels*	C-13
Site Design	BL-4: Landscaped Areas	**SD-K:** Sustainable Landscaping	C-16
Source Control	BL-5: Work and Storage Areas	**SC-A:** Overhead Covering **SC-B:** Berms and Grade Breaks **SC-C:** Wind Protection	C-19
Source Control	BL-6: Mgt of Storm Water Discharges	**SC-D:** Sanitary Sewer **SC-E:** Containment Areas	C-28
Source Control	BL-7: Mgt of Non-Storm Water Discharges	**SC-F:** Storm Drain Signage **SC-G:** Educational BMP Signage	C-35

*BMP IDs *in italics* have a standalone fact sheet in Appendix E

BL-1: Existing Natural Site Features



MS4 Permit Category
Site Design
BMP IDs
SD-G: Conserve Natural Features SD-H: Buffers

Applicable Site Features

County Watershed Protection Ordinance (WPO) Section 67.811(a)(5) requires baseline BMPs where feasible and applicable for the following types of natural site features:

- ***Natural waterbodies***[1] can include any significant accumulation of water on a project site. This includes both larger bodies, such as lakes and rivers, and smaller features such as intermittent and ephemeral streams, creeks, swales, springs, ponds, and wetlands. Applicants should account for any feature containing water for any portion of the year -- even if the feature is usually dry.

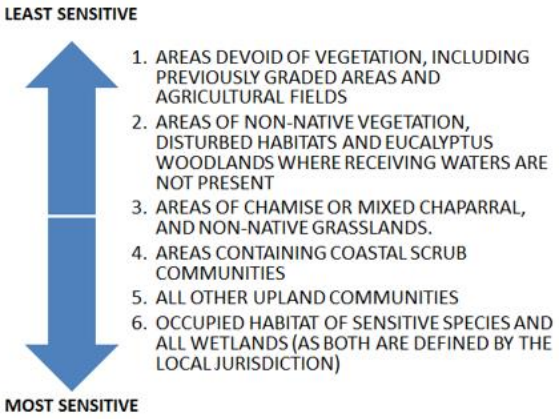
Note: If existing waterbodies can't be avoided, consultations with the US Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife may be required along with their respective permits. Development in or near Waters of the U.S. may be subject to Clean Water Act Section 401 Water Quality Certification requirements. Consult the Army Corps of Engineers regarding any work potentially impacting Waters of the U.S. or for determining if a waterbody is a Water of the U.S.

- ***Natural storage reservoirs and drainage corridors***. *Storage reservoirs* are areas where rainfall and runoff flow downhill and collect in low points such as valleys, basins, and other depressions in the landscape. Storage reservoirs can also include areas of permeable soils in topographic depressions. These features may or may not also be waterbodies. *Drainage corridors*

[1] For PDPs, Structural BMPs may not be located within a waterbody.

are areas where concentrated or channelized runoff flows from higher elevation to lower elevation on the site. Examples include channels, creeks, swales and gullies. Flows can also concentrate around grade breaks (steep changes in elevation) such as banks and hillsides.

- ***Natural areas, soils, and vegetation (including trees)*** include undisturbed areas with beneficial soils and vegetation such as undeveloped hillsides, meadows, other non-agricultural vegetated areas, or riparian habitat. Preserving natural features such as existing trees, other vegetation, and soils will decrease the amount of storm water that leaves the project site and reduce its long-term impacts.



SWQMP Baseline BMP Requirements

The following baseline BMPs are required where applicable and feasible for the features described above:

SD-G: Conserve natural features
SD-H: Buffers

These baseline BMPs are documented in Table 1, Section A of the PDP and Standard SWQMP Templates as shown below.

A. BMPs for Existing Natural Site Features (See Fact Sheet BL-1)

1. Check the boxes below for each existing feature on the site.

2. Select the BMPs to be implemented for each identified feature. Explain why any BMP not selected is infeasible in Table 3.

	Conserve natural features (SD-G)	**Provide buffers around waterbodies (SD-H)**
☐ Natural waterbodies	☐	☐
☐ Natural storage reservoirs & drainage corridors	☐	---
☐ Natural areas, soils, & vegetation (incl. trees)	☐	---

SD-G: CONSERVE NATURAL AREAS

Description

Conservation means preserving, maintaining, or enhancing existing natural areas and features. For example, avoiding the removal of trees, or incorporating an existing stream or other open space area(s) into the project design. Leaving soil, vegetation, and other natural features in place promotes natural processes that help reduce runoff and aid in pollutant uptake. Natural areas are often well suited to retain rainwater through infiltration and evapotranspiration, allowing the project to maintain the predevelopment time of concentration and peak flow rate of runoff. Designs that emphasize natural features are often environmentally preferable and can be more appealing to buyers.

Design Considerations

- ***Identify and avoid natural features***: Identify features as early as possible to allow the development to be designed around them. This limits overall impacts during and after construction and can avoid unnecessary redesign costs.

Natural features have formed over time in response to existing conditions (location, climate, soil type, etc.). Allow them to function naturally by avoiding removal or modification.

  - Locate buildings, driveways, and other impervious features away from natural features. Where possible concentrate development in the least sensitive portions of the site.
  - Avoid areas containing sensitive plant or animal species. Areas such as wetlands, biological open space areas, biological mitigation sites, streams, floodplains, and vegetation communities (coastal sage scrub, intact forest, etc.) may require additional regulatory protections.

Where possible, conserve areas with the highest ecological or water quality value. Avoid development in areas with thick, undisturbed vegetation because these areas tend to foster ecological diversity and protect water quality. Likewise, native trees and shrubs provide aesthetic, recreational, and air quality benefits.

- ***Maintain existing site drainage and hydrology***: Maintain existing drainage patterns and pathways, topographical depressions, and potential storage areas to maximize natural infiltration and preserve the predevelopment hydrologic characteristics of the site. Avoid creating new concentrated discharge points on hillsides or other locations where drainage is not naturally concentrated. Diversion (changing the discharge location of stormwater runoff from a given land area from one concentration point to another, thereby increasing the area draining to an existing feature) can significantly impact drainage, even without the addition of new impervious area. Even small modifications can significantly impact drainage. Pay special attention to changes in the rates, duration, and volume of flows directed to storage reservoirs and drainage corridors. Increased flows can overwhelm existing natural features, potentially causing flooding, oversaturation, or other unintended consequences in downstream areas.
- ***Restore or improve impacted features***: In some cases, existing features are impacted or degraded prior to development of the site. For example, previous use of the site may have caused a loss of vegetation and subsequent erosion of open space areas. Even if these areas

are conserved in the final design, replanting or restoration may be necessary to ensure they function properly.

- ***Prevent construction phase impacts to soils***: Natural site features can be particularly vulnerable during grading and construction. Isolate these features as necessary to prevent access by construction equipment and personnel (e.g., by staking or fencing off areas). Also consider minimizing grading as practicable.

Plan Requirements

For each required construction plan, provide the information indicated below for each applicable feature or BMP.

SD-G: Conserve Natural Areas
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) to be conserved • Label features with BMP ID: SD-G
Detail Sheets
N/A
Typical Construction Notes
• USE A CONSTRUCTION FENCE OR SILT FENCE AROUND THE CONSERVED AREAS TO PREVENT CONSTRUCTION EQUIPMENT FROM ENTERING.

Maintenance Considerations

During construction of the project, fences that have been placed to prevent construction equipment from entering conserved areas must be maintained. After construction of the project is complete, generally conservation and protection of natural features does not require routine maintenance because the features are intended to remain in their natural condition. The following may be required in accordance with applicable maintenance plans or observations:

- Removal of trash and debris;
- Landscaping only when necessary to restore or improve impacted features; and
- Other maintenance activities indicated in applicable maintenance plans or in accordance with observations.

Also consider the following:

- Maintenance of areas with sensitive plants and animals may be subject to restrictions or requirements imposed by federal, state, and local laws

SD-H: BUFFERS

Description

Buffers are measures to limit access or prevent impacts to natural features. They are encouraged for all features but required for conserved waterbodies where feasible. Buffers can be effective in protecting resources from pollutants; increased runoff flows; physical disturbances from pedestrian use; vehicle parking; or equipment storage; or other potential stressors. Depending on site characteristics and the project layout, the following options should be considered.

Design Considerations

- **Buffer zones** provide physical separation between natural features and adjacent land uses or pollutant sources. Buffer zones such as a strip of landscape between a development and protected feature can effectively retain or transform pollutants and flows to produce a more favorable environment for natural systems. Buffer zones must be provided for natural water bodies whenever technically feasible. When buffer zones are not technically feasible, other types of buffers, such as access restrictions must be considered.
- **Setbacks** are buffer zones that establish minimum distances between pollutant sources and resources. For example, Waters of the U.S. typically require from 50 to 200 feet of separation from potential sources. Setbacks can be maintained landscaping or vegetated areas that provide passive treatment of runoff from a development before it reaches the protected feature.
- **Access restrictions** are buffers that protect an area from intrusion or activity (walking, driving, parking, etc.) either through physical barriers such as fences, walls, or vegetation (trees, etc.), or through legal restrictions such as easements or covenants. Physical barriers can be styled to suit the development architecture while providing the desired level of restriction.
- **Hydraulic disconnection** uses curbs, berms, grading, etc. to prevent natural areas from receiving storm water or non-storm water flows from upgradient sources. However, stormwater runoff that has been redirected from a natural area via hydraulic disconnection must ultimately be returned to the system in a safe, non-erosive manner, such as an outfall placed downstream of the protected area in a location that the runoff would have naturally arrived at without redirection. The design of these features should be part of the site drainage plan, with structures appropriately sized for the anticipated runoff.
- **Different buffer types** or combinations of those listed above may be proposed.

Plan Requirements

For each required construction plan, provide the information indicated below for each applicable feature or BMP.

SD-H: Buffers
Plan View Requirements
• Show locations and boundaries of buffers
• Label features with BMP ID: SD-H

Detail Sheets
N/A
Typical Construction Notes
• A SETBACK OF 50 TO 200 FEET IS REQUIRED FOR DEVELOPMENT ADJACENT TO WATERS OF THE U.S.. NO STRUCTRAL BMPS ARE TO BE PLACED IN BUFFER AREAS. • USE A CONSTRUCTION FENCE OR SILT FENCE AROUND THE BUFFER ZONE TO PREVENT CONSTRUCTION EQUIPMENT FROM ENTERING.

Maintenance Considerations

During construction of the project, fences that have been placed to prevent construction equipment from entering buffer zones must be maintained. After construction of the project is complete, the following may be required in accordance with applicable maintenance plans or observations:

- Removal of trash and debris;
- Landscaping; and
- Other maintenance activities indicated in applicable maintenance plans or in accordance with observations.

Also consider the following:

- Maintenance of areas with sensitive plants and animals may be subject to restrictions or requirements imposed by federal, state, and local laws;
- Buffer areas may be maintained as part of normal landscaping practices unless other requirements apply;
- Maintenance of physical structures associated with buffers (fences, walls, curbs, berms, etc.) can be addressed as part of the normal facilities maintenance.

BL-2: Outdoor Impervious Area



Source: County of San Diego's Green Street Guidelines

MS4 Permit Category
Site Design
BMP IDs
SD-B: Impervious Area Dispersion SD-I: Permeable Surfaces

Applicable Site Features

County Watershed Protection Ordinance (WPO) Section 67.811(a)(5) requires baseline BMPs to minimize impervious areas where applicable and feasible for the following common types of outdoor impervious features.

- ***Streets and roads*** include public or private access routes used to transport automobiles, trucks, motorcycles, bicycles, and other vehicles. Surfaces in this category include alleys and street parking, but not driveways. They are traditionally paved with concrete or asphalt.
- ***Sidewalks & walkways*** include surfaces intended for pedestrian uses (walking, wheelchairs, etc.). Sidewalks are often at the side of a street, road, or structure, while walkways (including paved footpaths and trails) may occur throughout a property.
- ***Parking areas & lots*** includes any area, space, or lot designated for the temporary or long-term parking or storage of automobiles or other vehicles. They do not include parking areas within streets or roads.
- ***Driveways*** are surfaces that provide vehicles access from offsite to a building or other portion of the property. Unlike streets and roads, driveways normally serve a single property and are privately owned.
- ***Patios, decks, & courtyards*** are outdoor areas, typically unroofed, associated with a building, and supporting outdoor use (walking, gathering, leisure, etc.). They may be adjacent to or independent of other structures. They are normally exposed to the elements
- ***Hardcourt recreation areas*** are impermeable surfaces intended primarily for sports or recreation. Examples include basketball, tennis, or volleyball courts, and playgrounds.
- ***Other proposed outdoor impervious features not otherwise listed.***

SWQMP Baseline BMP Requirements

The following baseline BMPs are required where applicable and feasible for the features described above:

SD-B: Impervious Area Dispersion
SD-I: Permeable Surfaces

These baseline BMPs are documented in Table 1, Section B of the PDP and Standard SWQMP Templates as shown below.

B. BMPs for Common Impervious Outdoor Site Features (See Fact Sheet BL-2)

1. Check the boxes below for each proposed feature. *2. Select the BMPs to be implemented for each proposed feature. If neither BMP **SD-B** nor **SD-I** is selected for a feature, explain why both BMPs are infeasible in Table 3.*

	Direct runoff to pervious areas (SD-B)	Construct surfaces from permeable materials (SD-I)	Minimize the size of impervious areas
☐ Streets and roads	☐	☐	☐ *Check this box to confirm that all impervious areas on the site will be minimized where feasible.*
☐ Sidewalks & walkways	☐	☐	
☐ Parking areas & lots	☐	☐	
☐ Driveways	☐	☐	*If this box is not checked, identify the surfaces that cannot be minimized in Table 3, and explain why it is infeasible to do so.*
☐ Patios, decks, & courtyards	☐	☐	
☐ Hardcourt recreation areas	☐	☐	
☐ Other:	☐	☐	

a. Direct runoff to pervious areas (SD-B)

For impervious surfaces covered in this Fact Sheet, impervious area dispersion refers to the practice of effectively disconnecting impervious areas from directly draining to the storm drain system by routing runoff from impervious areas such as walkways, and driveways onto the surface of adjacent pervious areas. The intent is to slow runoff discharges and reduce volumes and sources of pollutants. Dispersion with partial or full infiltration results in significant volume reduction by means of infiltration, retention and evapotranspiration. PDPs may claim Design Capture Volume (DCV) reductions if dispersion areas meet specific design criteria described in Fact Sheet SD-B. However, dispersion should still be implemented where applicable and feasible even when the area available for dispersion does not meet the criteria to claim DVC reduction.

Typical dispersion components include:

- An impervious surface from which runoff flows will be routed with minimal piping to limit concentrated inflows;
- Splash blocks, flow spreaders, or other means of dispersing concentrated flows and providing energy dissipation as needed;
- Dedicated pervious area, typically vegetated, with soil infiltration capacity for partial or full infiltration;
- Mulch, compost and/or soil amendments to improve water retention, vegetation support, maintain infiltration rates and enhance treatment of routed flows; and

- Overflow route for excess flows to be conveyed from dispersion area to the storm drain.

Impervious area dispersion primarily functions as a site design BMP for reducing the effective imperviousness of a site by providing partial or full infiltration of the flows that are routed to pervious dispersion areas and otherwise slowing down excess flows that eventually reach the storm drain system. For PDPs, this can significantly reduce the DCV and flow control requirements for the site.

b. Construct surfaces from permeable materials (SD-I)

See BMP ID SD-I Permeable Surfaces below.

c. Minimize the size of impervious areas

Minimizing the overall impervious area created by a development project can reduce the impacts of environmental degradation on receiving waterbodies. Implementing this practice limits the potential for both transportation of pollutants in runoff and increased risk of erosion due to increased flows associated with impervious development.

This BMP applies broadly to any traditionally impervious areas associated with land development including streets and roads, sidewalks and walkways, parking lots, driveways, patios, decks, courtyards, hardcourt recreation areas, and the building footprints.

SD-I: PERMEABLE SURFACES

Description

This BMP consists of substituting permeable (or pervious) materials in the place of traditionally impervious materials in a development. Using permeable materials on a development site helps reduce the overall effective impervious area, thereby decreasing total runoff volume and better mimicking predevelopment hydrologic characteristics when compared to the same development using traditional impervious materials. Limiting the total runoff volume from a site has a significant impact on storm water quality by limiting the total amount of pollutants transported offsite to receiving waterbodies.

Design Considerations

Features constructed of materials like concrete, asphalt, and grouted pavers have higher runoff factors (C) causing a higher percentage of rain falling on them to become runoff. Substituting other more porous materials such as decomposed granite, cobbles, crushed aggregate, and soils (natural, compacted, or amended), which have lower runoff factors than impervious materials, can greatly reduce the amount of runoff from a project. See Appendix B, Section B.1.3 for runoff factors (C) for a variety of different construction materials. For PDPs, use of more porous materials with lower runoff factors where feasible within the project can reduce the total design capture volume (DCV) for the project.

Permeable materials should be used for outdoor hard surfaces wherever it is feasible to do so.

Applicants should consider the feasibility of using permeable materials for all impervious surfaces proposed as part of the project. All permeable surfaces that have potential traffic loading shall be designed by a civil engineer.

Typical non-engineered permeable surfaces that shall be designed and labeled with SD-I are the following:

- Decomposed Granite
- Cobbles
- Crushed Aggregate
- Reinforced Geotextile Features

Typical engineered permeable surfaces that shall be designed and labeled with SD-D (*Existing Fact Sheet in Appendix E*) are the following:

- Modular Paver Units or Paver Blocks
- Pervious Concrete
- Porous Asphalt
- Turf Pavers

Plan Requirements

For each required construction plan, provide the information indicated below for each applicable feature or BMP.

SD-I: Permeable Surfaces
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) constructed of permeable material. • Label non-engineered permeable surfaces with BMP ID: SD-I • Label engineered permeable surfaces with BMP ID: SD-D
Detail Sheets
• Varies depending on permeable surface. • Engineered permeable surfaces must include a cross section showing and clearly labeling all required layers (e.g., paver blocks, bedding, filter course, etc.) from pavement surface to subgrade; and include specifications for each material layer that is required as part of the engineered permeable surface.
Typical Construction Notes
• Varies depending on permeable surface

Maintenance Considerations

Routine maintenance of permeable surfaces includes: removal of materials such as trash and debris accumulated on the surface, inspect tributary area for exposed soil or other sources of sediment and apply stabilization measures to sediment source areas. Apply source control measures as applicable to sources of litter or debris. Engineered permeable pavement surfaces (SD-D) require routine preventive vacuum/regenerative air sweeping.

BL-3: Rooftop Areas



Source: County of San Diego's Climate Action Plan

MS4 Permit Category
Site Design (SD)
BMP IDs
SD-B: Impervious Area Dispersion SD-C: Green Roofs SD-E: Rain Barrels

Applicable Site Features

County Watershed Protection Ordinance (WPO) Section 67.811(a)(5) requires baseline BMPs for common outdoor impervious features. **Rooftop Areas** include all permanent, impervious coverings on buildings or other structures (e.g., patios or decks) within the project footprint. Rooftops normally account for much of the runoff generated on a typical project. Coverings need only be counted as rooftops if rainfall will flow over or across them rather than passing through to the ground (e.g., permeable shade coverings need not be considered as rooftops).

SWQMP Baseline BMP Requirements

The following baseline BMPs are required where applicable and feasible for the features described above:

SD-B: Impervious Area Dispersion
SD-C: Green Roofs
SD-E: Rain Barrels

These baseline BMPs are documented in Table 1, Section C of the PDP and Standard SWQMP template as shown below:

C. ☐ **BMPs for Rooftop Areas:** *Check this box if rooftop areas are proposed and select at least one BMP below. If none of the BMPs is selected, explain why all are infeasible in Table 3.*		**(See Fact Sheet BL-3)**
1. Direct runoff to pervious areas (SD-B) ☐	**2. Install green roofs (SD-C)** ☐	**3. Install rain barrels (SD-E)** ☐

a. Direct Runoff to Pervious Areas (SD-B)

For rooftop areas, impervious area dispersion refers to the practice of effectively disconnecting the rooftop from directly draining to the storm drain system by routing runoff onto the surface of adjacent pervious areas. The intent is to slow runoff discharges and reduce volumes. Dispersion with partial or full infiltration results in significant volume reduction by means of infiltration, retention and evapotranspiration. Priority Development Projects (PDPs) may claim Design Capture Volume (DCV) reductions if dispersion areas meet specific design criteria described in Fact Sheet SD-B. However, dispersion should still be implemented where applicable and feasible even when the area available for dispersion does not meet the criteria to claim DCV reduction.

Typical dispersion components for rooftop areas include:

- A rooftop surface from which runoff flows will be routed using downspout disconnection to limit concentrated inflows;
- Splash blocks, flow spreaders, or other means of dispersing concentrated flows and providing energy dissipation as needed;
- Dedicated pervious area, typically vegetated, with soil infiltration capacity for partial or full infiltration;
- Optional mulch, compost and/or soil amendments to improve water retention, vegetation support, maintain infiltration rates and enhance treatment of routed flows; and
- Overflow route for excess flows to be conveyed from dispersion area to the storm drain.

Impervious area dispersion primarily functions as a site design BMP for reducing the effective imperviousness of a site by providing partial or full infiltration of the flows that are routed to pervious dispersion areas and otherwise slowing down excess flows that eventually reach the storm drain system. For PDPs, this can significantly reduce the DCV and flow control requirements for the site.

b. Install Green Roofs (SD-C)

Green Roofs are rooftops covered with vegetation and a growing medium over a waterproofing membrane. They reduce runoff volumes and rates, treat storm water pollutants through filtration and plant uptake, provide additional landscape amenity, and create wildlife habitat. Additionally, green roofs reduce the heat island effect and provide acoustical control, air filtration and oxygen production. In terms of building design, they can protect against ultraviolet rays and extend the roof lifetime, as well as increase the building insulation, thereby decreasing heating and cooling costs.

Typical green roof components include, from top to bottom:

- Vegetation that is appropriate to the type of green roof system, climate, and watering conditions;
- Media layer (planting mix or engineered media) capable of supporting vegetation growth;
- Filter fabric to prevent migration of fines (soils) into the drainage layer;
- Optional drainage layer to convey excess runoff;
- Optional root barrier;

- Optional insulation layer;
- Waterproof membrane; and
- Structural roof support capable of withstanding the additional weight of a green roof.

See **Fact Sheet SD-C** for additional detailed information on Green Roofs.

c. Install Rain Barrels (SD-E)

Rain barrels are containers that can capture rooftop runoff and store it for future use. With controlled timing and volume release, the captured rainwater can be used for irrigation or alternative grey water between storm events, thereby reducing runoff volumes and associated pollutants to downstream waterbodies. Rain barrels tend to be smaller systems, less than 100 gallons, and have low installation costs. Treatment can be achieved when rain barrels are used as part of a treatment train along with other BMPs that use captured flows in applications that do not result in discharges into the storm drain system. Rooftops are the ideal tributary areas for rain barrels.

Rain barrels can be used as a site design feature to reduce the effective impervious area of the site by removing roof runoff from the site discharge. This can reduce the DCV and flow control requirements for the site.

See **Fact Sheet SD-E** for additional detailed information on Rain Barrels.

BL-4: Landscaped Areas



Source: San Diego Sustainable Landscapes Guidelines

MS4 Permit Category
Site Design (SD)
BMP IDs
SD-K: Sustainable Landscaping

Applicable Site Features

County Watershed Protection Ordinance (WPO) Section 67.811(a)(5) requires baseline BMPs for landscaped areas. A landscape includes all planting areas, turf areas (artificial or natural), and water features in a landscape design. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

Landscaped Areas includes SWQMP Baseline BMP Requirements

The following baseline BMPs are required where applicable and feasible for the features described above:

SD-K: Sustainable Landscaping

These baseline BMPs are documented in Table 1, Section D of the PDP and Standard SWQMP template as shown below:

D.	☐ **BMPs for Landscaped Areas:** *Check this box if landscaping is proposed. Both BMPs are required where applicable. Explain inapplicability or infeasibility for BMPs not selected in Table 3.*	**(See Fact Sheet BL-4)**
	2. Sustainable Landscaping (SD-K) ☐	

SD-K: SUSTAINABLE LANDSCAPING

Description

Sustainable landscaping uses native and drought tolerant plant species to limit the total water demand of landscaped areas and create a living sponge to soak up rainfall. Native and drought tolerant plants are well suited to the long-term climate in San Diego County; able to withstand extended dry periods and typically require less water to remain healthy compared to non-native alternatives. An additional benefit is reduced need for fertilizer and/or pesticides.

Sustainable landscaping must be evaluated for all landscaped areas of a project to meet Storm Water Quality Management Plan (SWQMP) requirements and should also be considered for any plantings associated with natural areas or areas identified for revegetation.

Design Considerations

The San Diego Sustainable Landscape Guidelines provide a detailed watershed friendly approach to landscaping. These guidelines will guide you through important principles such as:

- Selecting drought tolerant and native plants for San Diego County.
- Creating healthy soils to encourage moisture retention.
- Designing water efficient irrigation systems that reduce the likelihood of irrigation runoff.

The County's Landscape Ordinance generally applies to any new construction for which the County issues a building permit or a discretionary review where the aggregate landscaped area is 500 square feet or more to obtain outdoor water use authorization. The Water Efficient Landscape Design Manual explains how people can comply with the County's Landscape Ordinance by detailing water efficient irrigation systems, drought tolerant plant selection, fire-resistant designs, and other considerations.

Plan Requirements

For each required construction plan, provide the information indicated below for each applicable feature or BMP.

SD-K: Sustainable Landscaping
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) designed as Sustainable Landscaping. • Label Sustainable Landscaping with BMP ID: SD-K
Detail Sheets
• Shall be shown on Landscape Plans if applicable.
Typical Construction Notes
• Grading plans need to refer to the approved landscape plan for construction notes.

Maintenance Considerations

Routine maintenance of the landscaped areas is essential to making them sustainable. The following are some maintenance considerations after installation:

- Maintain 2" – 4" of mulch and/or compost add more annually
- Practice Integrated Pest Management
- Check and adjust irrigation to eliminate runoff
- Regularly flush drip irrigation lines.
- Move drip irrigation and add emitters as tree growth occurs in order to maintain the wetting zone at outside edge of tree canopy (Dripline)

BL-5: Work and Storage Areas



MS4 Permit Category
Source Control (SC)
BMP IDs
SC-A: Overhead Covering SC-B: Berms and Grade Breaks SC-C: Wind Protection

Applicable Site Features

County Watershed Protection Ordinance (WPO) Section 67.811(a)(4) requires baseline BMPs for the following common types of outdoor work areas.

- Trash and refuse storage,
- Materials and equipment storage,
- Loading and unloading,
- Fueling,
- Maintenance and repair,
- Vehicle and equipment cleaning, and
- Other areas, not identified above, that have the potential to generate pollutants.

SWQMP Baseline BMP Requirements

The following baseline BMPs are required where applicable and feasible for the features described above. All three of these BMPs should be implemented together in all areas where storage of materials and trash will be located:

SC-A: Overhead Covering
SC-B: Berm and Grade Breaks
SC-C: Wind Protection

These baseline BMPs are documented in Table 2, Section A of the PDP and Standard SWQMP templates as shown below:

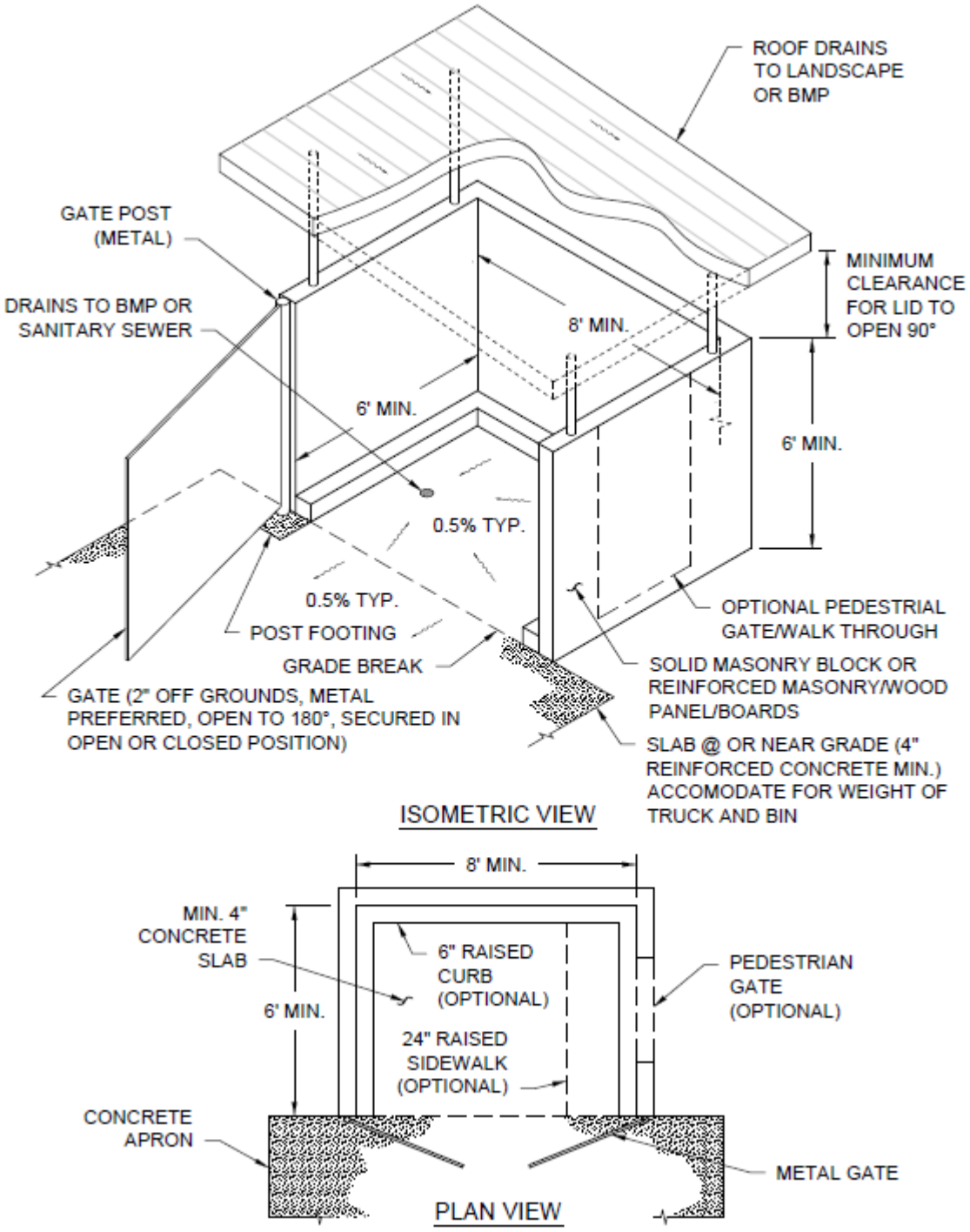
Table 2 – Baseline BMPs for Pollutant-generating Sources

☐ If this is a Small Residential Project, check this box and skip the rest of this table.

A. Management of Stormwater Discharges

1. Identify all proposed outdoor work areas below (☐ *Check here if none are proposed*)	2. Which BMPs will be used to prevent materials from contacting rainfall or runoff? (See Fact Sheet BL-5) *(Select all feasible BMPs for each work area[2])*			3. Where will runoff from the work area be routed? (See Fact Sheet BL-6) *(Select one or more option for each work area)*			
	Overhead covering (rooftops, etc.) (SC-A)	**Berms and grade breaks (SC-B)**	**Wind protection (screens, etc.) (SC-C)**	**Sanitary sewer[3] (SC-D)**	**Containment Areas (SC-E)**	**Stormwater S-BMP or SSD-BMP[4]**	**Other[5]**
☐ Trash & Refuse Storage	☐	☐	☐	☐	☐	☐	☐
☐ Materials & Equipment Storage	☐	☐	☐	☐	☐	☐	☐
☐ Loading & Unloading	☐	☐	---	☐	☐	☐	☐
☐ Fueling	☐	☐	---	☐	☐	☐	☐
☐ Maintenance & Repair	☐	☐	---	☐	☐	☐	☐
☐ Vehicle & Equipment Cleaning	☐	☐	---	☐	☐	☐	☐
☐ Other:	☐	☐	---	☐	☐	☐	☐

A typical isometric and plan view of a trash enclosure is shown on the next page.



Typical Isometric and Plan View of a Trash Enclosure BMP

SC-A: OVERHEAD COVERING

Description

The Roofs or other permanent covers can be constructed over outdoor areas where pollutant-generating materials or activities are concentrated. This helps prevent rainfall from contacting materials and carrying pollutants with it into the storm drain system.

This BMP can be applied to any material or activity that will regularly be located in the same place on a site and contact with rainfall would result in pollutants being transported by storm water.

Temporary covers, such as tarps, are not considered part of this BMP but may also be an effective solution for preventing contact with rainwater when permanent covers are not feasible. For example, for pollutant-generating materials or activities that are not regularly located in the same place on a site.

Note: Permanent overhead structures must comply with the County of San Diego Consolidated Fire Code.

Design Considerations

- When initially planning a site, identify any area on the site where a pollutant-generating activity will regularly be occurring in a specific location or where pollutant-generating materials will be stored in a designated area. Consider constructing permanent overhead coverage for these areas, if feasible.
- Typical structures include roofs, awnings, and permanent canopies. Design covers with sufficient overhang to help prevent rain from contacting materials even when there are moderate winds.
- When designing permanent overhead coverage for these areas, the cover must extend at least to the edge of the berm or grade break and ideally will extend slightly beyond it.
- Projects are required to construct trash enclosures meeting various design requirements, one of which is a roof that fully covers the enclosure and is sufficiently high to allow dumpster lids to open to the full 90-degree position.
- If a downspout is used to drain a rooftop or cover over a designated washing, fueling, or trash area, it should be routed away from the designated area to avoid run-on.

Many food service facilities have storage bins for used cooking oil (i.e. "grease bins"). Storing these bins indoors, when done in accordance with County Health Department regulations, is preferable from a storm water pollution perspective. When grease bins must be stored outdoors, permanent roofs or awnings may be used when compliant with the fire code. Outdoor cooking areas may be designed with fire code compliant roofs or awnings as well.

Plan Requirements

SC-A: Overhead Covering
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) designed with overhead covering • Label with BMP ID: SC-A

Detail Sheets
• Provide details in the applicable plan set where the feature is being designed and constructed.
Typical Construction Notes
• Storage of non-hazardous liquids must be covered by a roof and be contained by berms, dikes, liners, or vaults. • Storage of hazardous materials and wastes must be in compliance with local, state and federal hazardous materials regulations, ordinances and hazardous materials management plan for the site.

Maintenance Considerations

Repair permanent covers as needed should any damage occur.

SC-B: BERMS AND GRADE BREAKS

Description

Berms and grade breaks can be used to physically separate designated storage and activity areas and prevent storm water surface flows from transporting pollutants from these areas to the storm drain system. A berm or grade break can prevent run-on from flowing through a pollutant generating area and becoming contaminated. Additionally, berms and grade breaks can effectively prevent contaminated water or spilled liquids from leaving a designated pollutant-generating area when the area is designed with a sump or sewer connection; reducing the likelihood of an illicit discharge of pollutants.

This BMP can be applied to any material or activity that will regularly be located in the same place on a site and where storm water surface flows would be likely to pick up pollutants from the work or storage area and transport them to the storm drain system.

Areas for activities, such as washing or fueling, must be designed with berms or grade breaks around their perimeters to ensure that runoff from these activities does not drain to the storm drain system or receiving waters.

Design Considerations

When initially planning a site, identify any area on the site where a pollutant generating activity will regularly be occurring in a specific location or where pollutant-generating materials will be stored in a designated area. If storm water run-on flowing through this area would be likely to pick up pollutants and carry them to a storm drain, consider modifying the site grading or construct a berm around the area to route run-on around the area.

Constructing concrete slab and curbing around an area is often an effective way to prevent run-on from contacting materials. Lower, rounded berms can also be constructed and are often better suited for areas where vehicular access is needed. Alternatively, strategic grading of a site may achieve the same benefits without requiring construction of berms. For example, locating an activity or storage area on an elevated pad or other high point can prevent run-on from entering the area. Whether using berming or grading, the feature should be designed with sufficient height to be able to redirect anticipated flows at the site. Strategically designing surface drainage features, such as ribbon gutters, in conjunction with the planned berms and/or grade breaks can help minimize the risk of breaching.

Berms and grade breaks should also be considered for areas where water or other liquids are meant to be contained within a designated space. Designing a berm or grade break around such an area is important not only for keeping run-on out of the area, but also for ensuring that any water within the area flows to the designated sewer drain or sump rather than flowing to a storm drain outside the area. When designing washing areas, ensure that the berm or grade break has sufficient height to contain the anticipated volumes of wash water. Also ensure that the berm or grade break is positioned far enough away from the anticipated wash area so that all incidental sprays fall within the designated area. For drive-thru style car washes, consider that incidental sprays and drips are likely to fall on the areas immediately adjacent to the car wash entrance and exit. Design the car wash entrance and exit areas with grade breaks or berms to ensure that incidental drips and spills are directed back to the car wash clarifier rather than flowing to nearby storm drains. Berms can also be used around designated

liquid storage areas. These berms should be constructed with sufficient height to contain the volume of liquids that could potentially be spilled in the area.

Plan Requirements

SC-B: Berms and Grade Breaks
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) designed with Berm and Grade Breaks • Label with BMP ID: SC-B
Detail Sheets
• Provide details in the applicable plan set where the feature is being designed and constructed.
Typical Construction Notes
• [Related to Berms]: Varies depending on type of berm. • [Related to Grade Breaks]: Where designated on plan, grade breaks shall be provided around activity areas to prevent storm water run-on.

Maintenance Considerations

Minimal maintenance is typically required for berms and grade breaks.

- Periodically clean bermed areas to reduce the chance of contaminated storm water discharges.
- Inspect and repair or reconstruct berms if they are damaged or begin to deteriorate.

SC-C: WIND PROTECTION

Description

Windbreaks are physical barriers that block wind, preventing it from impacting designated areas. They can be used to protect storage or collection areas where materials might be transported by wind. This prevents wind from blowing lightweight materials out of the designated storage area to adjacent areas where they would be more likely to be washed into a storm drain.

This BMP can be implemented wherever there is a designated area for storage of a material that is light enough to be blown away by wind. Trash storage areas are the most common areas for implementation of this BMP, as litter around trash receptacles can easily be transported by wind. Windbreaks should also be considered for protecting material storage areas whenever the stored material is lightweight. Windbreaks can also be used around outdoor work areas where work activities may generate powders or dust or where extremely lightweight materials, such as expanded polystyrene foam may be present.

Design Considerations

Identify whether the materials anticipated to be on the site can be transported by wind. If these materials will be used or stored in a designated outdoor location, consider building windbreaks to protect the area. Windbreaks can be solid walls that completely block wind, or they may be semi-solid barriers such as fences or screens that allow airflow but still trap and prevent transport of materials when used to create an enclosure around the materials. Privacy windscreens can be added to chain link fences to provide wind protection. Solid walls can also serve a dual purpose as both a windbreak and as protection against run-on. All areas shall have secured lids and/or coverings to close when not in use.

Since wind may come from different directions, it is optimal to place wind breaks on all sides of a storage area. This can be accomplished by placing fixed walls on three sides and having a gate on the fourth side. Where it is not feasible to place windbreaks on all sides of a storage area, it is often still possible to place them on three sides, leaving one side open to allow access. For example, designated stockpile storage areas may be designed with walls on three sides and one open side to allow clear access for vehicles or equipment.

At large trash-generating facilities, trash areas should be designed with three solid-sided walls and a solid gate on the fourth side.

Plan Requirements

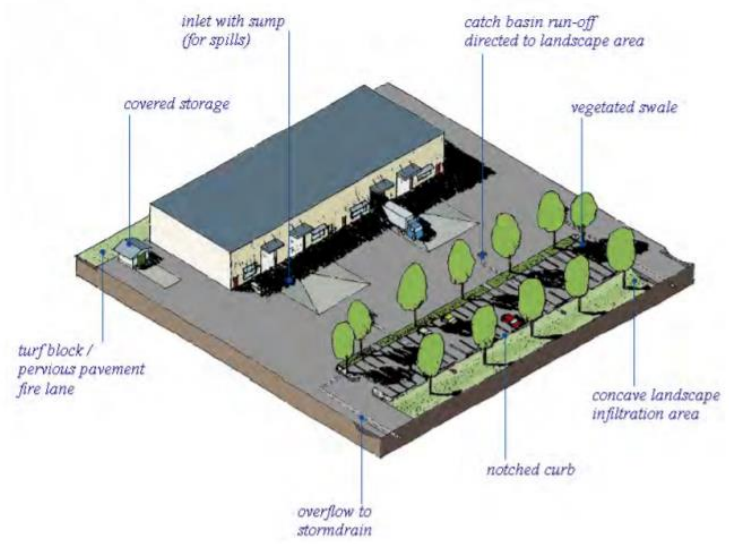
SC-C: Wind Protection
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) designed with Wind Protection • Label Wind Protection with BMP ID: SC-C
Detail Sheets
• Provide details in the applicable plan set where the feature is being designed and constructed.

Typical Construction Notes
• Varies depending on type of enclosure.

Maintenance Considerations

Windbreaks should be repaired or reconstructed if they are damaged or begin to deteriorate.

BL-6: Management of Storm Water Discharges



MS4 Permit Category
Source Control (SC)
BMP IDs
SC-D: Sanitary Sewer SC-E: Containment Areas

Applicable Site Features

County Watershed Protection Ordinance (WPO) Section 67.811(a)(4) requires baseline BMPs to prevent illicit discharge into the storm drain system. This Fact Sheet describes baseline Best Management Practices (BMPs) for managing storm water discharges originating from outdoor work areas. While the baseline BMPs described in Fact Sheet BL-5, Work and Storage Areas (Baseline BMPs for Outdoor Work Areas) are intended to effectively minimize pollutant generation from work areas, projects must also be designed to ensure that storm water runoff generated from these areas is properly managed.

The discharge options described below apply to the following types of outdoor work areas:

- Trash and refuse storage,
- Materials and equipment storage,
- Loading and unloading,
- Fueling,
- Maintenance and repair,
- Vehicle and equipment cleaning, and
- Other areas, not identified above, that have the potential to generate pollutants.

SWQMP Baseline BMP Requirements

The following baseline BMPs are required where applicable and feasible for the features described above:

SC-D: Sanitary Sewers
SC-E: Containment Areas
Storm Water S-BMP or SSD-BMP

These baseline BMPs are documented in Table 2, Section A.3 of the PDP and Standard SWQMP template:

Table 2 – Baseline BMPs for Pollutant-generating Sources

☐ If this is a Small Residential Project, check this box and skip the rest of this table.

A. Management of Stormwater Discharges

1. Identify all proposed outdoor work areas below (☐ *Check here if none are proposed*)	**2. Which BMPs will be used to prevent materials from contacting rainfall or runoff?** (See Fact Sheet BL-5) *(Select all feasible BMPs for each work area[2])*			**3. Where will runoff from the work area be routed?** (See Fact Sheet BL-6) *(Select one or more option for each work area)*			
	Overhead covering (rooftops, etc.) (SC-A)	**Berms and grade breaks (SC-B)**	**Wind protection (screens, etc.) (SC-C)**	**Sanitary sewer[3] (SC-D)**	**Containment Areas (SC-E)**	**Stormwater S-BMP or SSD-BMP[4]**	**Other[5]**
☐ Trash & Refuse Storage	☐	☐	☐	☐	☐	☐	☐
☐ Materials & Equipment Storage	☐	☐	☐	☐	☐	☐	☐
☐ Loading & Unloading	☐	☐	---	☐	☐	☐	☐
☐ Fueling	☐	☐	---	☐	☐	☐	☐
☐ Maintenance & Repair	☐	☐	---	☐	☐	☐	☐
☐ Vehicle & Equipment Cleaning	☐	☐	---	☐	☐	☐	☐
☐ Other:	☐	☐	---	☐	☐	☐	☐

SC-D: SANITARY SEWER

Description

One option for eliminating pollutant discharges to the MS4 or receiving waters is to route storm water flows from the work area to the sanitary sewer. Discharges to the sanitary sewer are treated at a publicly owned treatment facility.

This option should be considered for any pollutant source (e.g., material storage area or activity) that has the potential to routinely generate liquid waste with a high concentration of storm water pollutants.

Connections to sanitary sewer may only be allowed with approval by Sanitary Sewer Agency with authority over the proposed receiving sanitary sewer. See additional information below.

Design Considerations

Unless otherwise noted, the following guidelines assume that discharges to the sanitary sewer are approved.

- Pollutant sources with piping and/or collection systems designed to convey waste, waste byproducts, or wash water, or with a defined discharge point, should be connected to sanitary sewer through a direct connection to the facility sanitary plumbing.
- Pollutant sources that are permanent with passive discharge systems, such as interior floor drains and sumps, drain lines, and water feature overflows should be connected to sanitary sewer through a direct connection to the facility sanitary plumbing.
- Pollutant sources occupying a defined area, such as trash and refuse areas, material and equipment storage, loading and unloading areas, fueling, maintenance and repair, vehicle and equipment cleaning, and outdoor food preparation areas may drain to a sump within the area that is connected to sanitary sewer through a direct connection to the facility sanitary plumbing. Every effort should be made to prevent discharges of storm water to the sanitary sewer. Therefore, outdoor areas connected to sewer should be protected from direct rainfall and from storm water run-on.

Note: Work areas should not be discharged to an onsite wastewater treatment system (e.g. septic) unless the system is specifically designed to accommodate them. This includes being designed to handle the increased flow volumes and rates as well as being designed to process the particular type of pollutant in its anticipated concentrations. These systems are typically designed specifically for household waste. Introduction of additional flows or pollutant types outside the originally intended design can result in failure of the onsite wastewater treatments system and lead to significant public health issues.

All approved connections are subject to the design and pretreatment requirements (e.g. clarifiers or oil-water separators for wash racks and interior floor drains) of the applicable approving agency. A list of agencies is provided below for reference.

County of San Diego Sanitary Sewer Agencies

Water District and Address	Telephone and Website
Borrego Water District 806 Palm Canyon Dr. Borrego Springs, CA 92004	(760)-767-5806 www.borregowd.org
City of Vista (Including Buena Sanitation District and Shadowridge) 200 Civic Center Dr. Vista, CA 92084	(760)-643-2804 www.cityofvista.com
Fallbrook Public Utility District 990 East Mission Rd. Fallbrook, CA 92028	(760)-728-1125 www.fpud.com
Leucadia Wastewater District 1960 La Costa Ave. Carlsbad, CA 92009	(760)-728-1125 www.lwwd.org
Olivenhain Municipal Water District (Including 4S Ranch and Rancho Cielo) 1966 Olivenhain Rd. Encinitas, CA 92024	(760)-753-6466 www.olivenhain.com
Otay Water District 2554 Sweetwater Springs Blvd. Spring Valley, CA 91978	(619)-670-2222 www.otaywater.gov
Padre Dam Municipal Water District 9300 Fanita Pkwy. Santee, CA 92072	(619)-258-4635 www.padredam.org
Pauma Valley Community Services District 33129 Cole Grade Rd. Pauma Valley, CA 92061	(760)-742-1909 www.yuimamwd.com
Rainbow Municipal Water District 3707 Old Highway 395 Fallbrook, CA 92028	(760)-728-1178 www.rainbowmwd.com
Ramona Municipal Water District 105 Earlham St. Ramona, CA 92065	(760)-789-1330 www.rmwd.org
Vallecitos Water District 201 Vallecitos de Oro San Marcos, CA 92069	(760)-744-0460 www.vwd.org
Valley Center Municipal Water District 29300 Valley Center Valley Center, CA 92082	(760)-749-1600 www.vcmwd.org
County Sanitation Districts Alpine/Julian/Lakeside/Pine Valley Spring Valley/Winter Gardens	(858)-514-4990 https://www.sandiegocounty.gov/dpw
Private Sewer Districts (Dudek & Associates) Fairbanks Ranch Rancho/Santa Fe CSD Whispering Palms	(760)-942-5147 www.dudek.com

Plan Requirements

SC-D: Sanitary Sewer
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) discharging to Sanitary Sewer • Label with BMP ID: SC-D
Detail Sheets
• Provide details in the applicable plan set where the feature is being designed and construction. Typically shown on utility sheet on building plan
Typical Construction Notes
• "FEATURE (E.G. FUELING AREA, ETC)" SHALL BE PLUMBED TO SANITARY SEWER WITH APPROVAL FROM LOCAL SANITARY SEWER AGENCY [INSERT NAME OF LOCAL SANITARY SEWER AGENCY].

Maintenance Considerations

All approved connections are subject to the design, pretreatment and maintenance requirements (e.g. clarifiers or oil-water separators for wash racks and interior floor drains) of the applicable approving agency.

SC-E: CONTAINMENT AREAS

Description

Containment areas are specifically designed storage or activity areas that prevent spills, leaks, and other discharges, that would otherwise pollute storm water, from leaving the designated area. Spills leaks and other discharges from storage and activity areas can have high concentrations of pollutants that will contaminate storm water and impact receiving waterbodies if allowed to discharge from the site.

This BMP can be applied to any material or activity that will regularly be located in the same place on a site that could reasonably experience or result in spills, leaks, or other discharges.

Design Considerations

When initially planning a site, identify any area on the site where a pollutant generating activity will regularly be occurring in a specific location or where pollutant-generating materials will be stored in a designated area. If these pollutant-generating activities or materials could result in spills, leaks, or other discharges consider constructing or providing containment for the area.

Containment areas should be designed to hold the entire volume of spilled, leaked, or discharged material without overflowing.

Containment of a pollutant-generating activity can be accomplished by berming the area with a concrete curb, or other sealed linear barrier that prevents all material from flowing out of the area. Individual liquid storage containers can be effectively contained using manufactured containment pallets or sheds.

Containment areas should be completely isolated from storm drains. Do not construct storm drain inlets within containment areas, and do not allow site drainage to be directed through a containment area. If approved by the permitting sanitary sewer agency (refer to SC-D: Discharge to Sanitary Sewer), a containment area may be drained to the facility sanitary sewer plumbing. Designing containment around a pollutant-generating area is important for ensuring that any water within the area flows to the designated sewer drain rather than flowing to a storm drain outside the area.

Design of washing areas should ensure that containment has sufficient height to accommodate the anticipated volumes of wash water. Also ensure that the containment barrier is positioned far enough away from the anticipated wash area so that all incidental sprays fall within the designated area. For drive-thru style car washes, consider that incidental sprays and drips are likely to fall on the areas immediately adjacent to the car wash entrance and exit. Design the car wash entrance and exit with grade breaks or berms to ensure that incidental drips and spills are directed back to the car wash clarifier rather than flowing to nearby storm drains.

Plan Requirements

SC-E: Containment Areas
Plan View Requirements
• Show locations and boundaries of the features (or portions of features) that discharge to containment areas. • Label with BMP ID: SC-E

Detail Sheets
• Provide details in the applicable plan set where the feature is being designed and constructed.
Typical Construction Notes
• VARIES DEPENDING ON TYPE OF CONTAINMENT.

Maintenance Considerations

Containment areas should be kept clean of spills, leaks and debris as they occur and repaired or reconstructed if they are damaged or begin to deteriorate.

BL-7: Management of Non-Storm Water Discharges



TYPICAL STORM DRAIN SIGNAGE

MS4 Permit Category
Source Control (SC)
BMP IDs
SC-F: Storm Drain Signage SC-G: Educational BMP Signage

Applicable Site Features

County Watershed Protection Ordinance (WPO) Section 67.811(a)(4) requires baseline BMPs for the management of non-storm water discharges to prevent illicit discharges from entering the storm drain system. This Fact Sheet describes baseline BMPs for the labeling of all storm drain inlets and catch basins; educational signage; and practices for interior work surfaces, floor drains and sumps, drain lines, and fire sprinkler test water.

SWQMP Baseline BMP Requirements

The following baseline BMPs are required where applicable and feasible for the features described above:

a. Storm Drain Inlets and Catch Basins (SC-F)

See BMP ID SC-F: Storm Drain Signage (SC-F) below.

b. Educational BMP signage (SC-G)

See BMP ID SC-G: Educational BMP Signage (SC-G) below.

c. Interior work surfaces, floor drains & sumps

All interior work surfaces, floor drains and sumps shall not be directly connected to the MS4 or receiving waters. All discharges should be directed to sanitary sewer, if feasible, and with approvals by the Sanitary Sewer Agency with authority over the proposed receiving sanitary sewer.

d. Drain lines (e.g., air conditioning, boiler, etc.)



All drain lines shall not be directly connected to the MS4 or receiving waters. All discharges should be directed to sanitary sewer, if feasible, and with approvals by the Sanitary Sewer Agency with authority over the proposed receiving sanitary sewer, or discharge to landscaped areas on site.

e. Fire sprinkler test water

Fire sprinkler test water shall not be directly connected to the MS4 or receiving waters. Please click on the following fact sheet for additional information:

https://www.sandiegocounty.gov/content/dam/sdc/dpw/WATERSHED_PROTECTION_PROGRAM/watershedpdf/IndustComm/English/Fire_Sprinkler_Maintenance.pdf

These baseline BMPs are documented in Table 2, Section B of the PDP and Standard SWQMP template as shown below:

B. Prevention of Non-stormwater Discharges (See Fact Sheet BL-7)

Select one option for each feature below:

• **Storm drain inlets and catch basins ...**	☐ are not proposed	☐ will be labeled with stenciling or signage to discourage dumping **(SC-F)**
• **Educational BMP Signage...**	☐ are not proposed	☐ will be labeled with educational signage for BMP **(SC-G)**
• **Interior work surfaces, floor drains, & sumps ...**	☐ are not proposed	☐ will not discharge directly or indirectly to the MS4 or receiving waters
• **Drain lines (e.g., air conditioning, boiler, etc.) ...**	☐ are not proposed	☐ will not discharge directly or indirectly to the MS4 or receiving waters
• **Fire sprinkler test water ...**	☐ are not proposed	☐ will not discharge directly or indirectly to the MS4 or receiving waters

SC-F: STORM DRAIN SIGNAGE

Description

Storm drain signs and stencils are visible source controls typically placed adjacent to inlets. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signage must be provided for all storm water conveyance system inlets and catch basins within the project area. Storm drain signage may include concrete stamping, concrete painting, placards, or other methods approved by the County. These may be modified and used as educational pieces promoting improved water quality. In addition to storm drain signage at storm water conveyance system inlets and catch basins, applicants are encouraged to post signs and prohibitive language (with graphical icons) which prohibit illegal dumping at trailheads, parks, building entrances, and public access points along channels and creeks within the project area.

Design Considerations

Storm drain stenciling and signage may be implemented using a painted stencil or a sign or placard affixed to the structure. Signage should be located in plain sight of someone observing a storm drain inlet. The signage may include a combination of graphics and prohibitive language that identifies the inlet as a storm drain, prohibits dumping, and explains that storm drains discharge directly to receiving waterbodies.

Stencils and placards can be purchased from a number of suppliers. In the San Diego area, the non-profit organization, I Love A Clean San Diego, loans out stencil sets for labeling storm drains. They can be contacted at (619) 291-0103 or found online at https://ilacsd.org.

Plan Requirements

SC-F: STORM DRAIN SIGNAGE
Plan View Requirements
• Label each storm drain with BMP ID: SC-F
Detail Sheets
• Provide details on grading or improvement plans associated with the construction of applicable inlet or drainage feature.
Typical Construction Notes
• MARK ALL INLETS WITH THE WORDS "NO DUMPING DRAINS TO WATERWAYS" OR SIMILAR. SEE STENCIL TEMPLATE PROVIDED ON THE SHEET.

Maintenance Considerations

Signage should be repainted or replaced if it is damaged or begins to deteriorate.

SC-G: EDUCATIONAL BMP SIGNAGE

Description

Educational BMP Signage are visible source controls typically placed adjacent to a source control, site design, or structural BMP. Signage educates workers, homeowners and/or the public to raise awareness of storm water issues and educate about the benefits of these watershed protection measures.

Educational BMP Signage is an effective source control BMP to alert the public of the function and maintenance requirements of the BMPs. Below are some typical types of Educational BMP Signage:

1. **Temporary BMP Signage:** The purpose of temporary BMP signage is to alert contractors during construction that this permanent BMP has been completed and to ensure this BMP does not get disturbed during subsequent grading and building construction activities. It is good practice to divert sediment-laden water to temporary construction BMPs (e.g., sediment traps, etc.) around the permanent structural BMP until all drainage areas have been stabilized. If sediment and/or construction activities infringe on the permanent BMP, the facility will most likely need to be rehabilitated prior to project close-out. Figure 1 below provides a typical temporary BMP signage for use during the construction process that reads "Boundary of Structural Best Management Practice: Bioretention Basin. DO NOT DISTURB"

2. **Model Home BMP Signage:** Educational BMP Signage for model homes provides future homeowners a description of the benefits and responsibilities of the BMPs constructed on their property. It also provides the maintenance requirements to ensure long-term function of the BMP. Educational BMP Signage for permanent BMPs should include the following; vegetation type, maintenance requirements, design components and link to the County website with resources on maintenance for permanent BMPs. For additional guidance please refer to the County's Landscape Ordinance Section 86.718(b).

3. **Interpretive BMP Signage:** This type of signage provides permanent Educational BMP Signage for the public to detail how BMPs benefit the local waterways. Figure 2 below provides an example of this type of interpretative BMP signage for a permanent BMP. This type of signage would be typically beneficial in public areas and applicable to municipal facilities (such as parks and public buildings), as well as commercial and industrial facilities to educate the public.

Figure 1: Temporary Structural BMP Signage





Figure 2: Permanent Interpretive BMP Signage

Design Considerations

Temporary BMP Signage should be designed to be highly visible to construction crews. Materials should ensure the sign is effective through planned construction activities within the drainage area to the permanent BMP.

Model Home Signage would typically be designed by the homebuilder to incorporate the characteristics of the development project. Signs should clearly provide the function of the permanent BMP and maintenance requirements of the prospective buyers of the property.

Interpretive BMP Signage should be constructed of materials that can withstand long-term placement for the lifecycle of the permanent BMP. Language should emphasize the positive impacts these facilities have to local receiving waters along with design renderings of the facility. Local partnerships and owner information are also important design considerations for this type of signage.

Signage should alert the private owner or public of the function of the permanent BMP, indicate prohibited activities that cause premature clogging, and provide typical maintenance requirements.

Plan Requirements

SC-G: PERMANENT BMP SIGNAGE
Plan View Requirements
• Label with BMP ID: SC-G
Detail Sheets
• Provide details in the applicable plan set of signage design and language.

Typical Construction Notes
• TEMPORARY BMP SIGNAGE SHALL BE INSTALLED WITH THE WORDS " BOUNDARY OF STRUCTURAL BEST MANAGEMENT PRACTICE. DO NOT DISTURB" OR SIMILAR. SEE SIGNAGE TEMPLATE PROVIDED ON SHEET [INSERT SHEET NUMBER]
• MODEL HOME BMP SIGNAGE SHALL BE INSTALLED WITH THE WORDS "A STRUCTURAL BMP IS A PERMANENT STORM WATER QUALITY FEATURE OF THIS PROPERTY THAT REQUIRES MAINTENANCE AND ANNUAL REPORTING REQUIREMENTS WITH THE COUNTY OF SAN DIEGO" OR SIMILAR. SEE SIGNAGE TEMPLATE PROVIDED ON SHEET [INSERT SHEET NUMBER]
• INTERPRETIVE BMP SIGNAGE REQUIRES APPROVAL BY OWNER PRIOR TO INSTALLATION.

Maintenance Considerations

Signage should be repainted or replaced if it is damaged or begins to deteriorate.

Temporary BMP Signage may be removed once all contributing drainage areas have been completed and stabilized and all permits within the drainage area have been closed out. Signage should only be removed with the approval of County staff.

Model Home BMP Signage may be removed once occupancy of model homes have been granted by PDS Building. Signage shall only be removed with the approval of County staff.

Appendix

D

Geotechnical Engineer Analysis

D.1 Analysis of Infiltration Restrictions

D.2 Determination of Design Infiltration Rates

D.3 Geotechnical Reporting Requirements

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Appendix D Geotechnical Engineer Analysis

D.1 Analysis of Infiltration Restrictions

This section is only applicable if the analysis of infiltration restrictions is performed by a licensed engineer practicing in geotechnical engineering. The SWQMP Preparer and Geotechnical Engineer must work collaboratively to identify any infiltration restrictions identified in Table D.1-1 below. Upon completion of this section, the Geotechnical Engineer must characterize each DMA as Restricted or Unrestricted for infiltration and provide adequate support/discussion in the geotechnical report. A DMA is considered restricted when one or more restrictions exist which cannot be reasonably resolved through site design changes.

Table D.1-1: Considerations for Geotechnical Analysis of Infiltration Restrictions

Restriction Element		Is Element Applicable? (Yes/No)
Mandatory Considerations	BMP is within 100' of Contaminated Soils	
	BMP is within 100' of Industrial Activities Lacking Source Control	
	BMP is within 100' of Well/Groundwater Basin	
	BMP is within 50' of Septic Tanks/Leach Fields	
	BMP is within 10' of Structures/Tanks/Walls	
	BMP is within 10' of Sewer Utilities	
	BMP is within 10' of Groundwater Table	
	BMP is within Hydric Soils	
	BMP is within Highly Liquefiable Soils and has Connectivity to Structures	
	BMP is within 1.5 Times the Height of Adjacent Steep Slopes (≥25%)	
	County Staff has Assigned "Restricted" Infiltration Category	
Optional Considerations	BMP is within Predominantly Type D Soil	
	BMP is within 10' of Property Line	
	BMP is within Fill Depths of ≥5' (Existing or Proposed)	
	BMP is within 10' of Underground Utilities	
	BMP is within 250' of Ephemeral Stream	
	Other (Provide detailed geotechnical support)	
Result	Based on examination of the best available information, I have **not identified any restrictions** above.	☐ **Unrestricted**
	Based on examination of the best available information, I have **identified one or more restrictions** above.	☐ **Restricted**

Table D.1-1 is divided into Mandatory Considerations and Optional Considerations. Mandatory Considerations include elements that may pose a significant risk to human health and safety and must always be evaluated. Optional Considerations include elements that are not necessarily associated with human health and safety, so analysis is not mandated through this guidance document. All elements presented in this table are subject to the discretion of the Geotechnical Engineer if adequate supporting information is provided.

Applicants must evaluate infiltration restrictions through use of the best available data. A list of resources available for evaluation is provided in Section B.2

D.2 Determination of Design Infiltration Rates

This section is only applicable if the determination of design infiltration rates is performed by a licensed engineer practicing in geotechnical engineering. The guidance in this section identifies methods for identifying observed infiltration rates, corrected infiltration rates, safety factors, and design infiltration rates for use in structural BMP design. Upon completion of this section, the Geotechnical Engineer must recommend a design infiltration rate for each DMA and provide adequate support/discussion in the geotechnical report.

Table D.2-1: Elements for Determination of Design Infiltration Rates

Item	Value	Unit
Initial Infiltration Rate: Identify per Section D.2.1		in/hr
Corrected Infiltration Rate: Identify per Section D.2.2		in/hr
Safety Factor: Identify per Section D.2.3		unitless
Design Infiltration Rate: Corrected Infiltration Rate ÷ Safety Factor		in/hr

D.2.1 Initial Infiltration Rate

For purposes of this manual, the initial infiltration rate is the infiltration rate that has been identified based on the initial testing methods. Some of the acceptable methods for determining initial infiltration rates are presented in Table D.2-2 below, though other testing methods may be acceptable as evaluated by the geotechnical engineer. This table identifies what methods require application of correction factors, safety factors, and what BMPs types are ultimately acceptable for each testing method. The geotechnical engineer should use professional discretion when selecting a testing method as it may ultimately impact the types of BMPs that are permitted.

Table D.2-2: Acceptable Initial Infiltration Rate Methods

Category	Test	Correction Factor	Safety Factor	Suitable for Following BMPs
Desktop Methods*	NRCS Soil Survey Maps	Not Applicable	Not Applicable	BMPs with Underdrains
Correlation Methods	Grain Size Analysis	Not Applicable	**Required (See Section D.2.3)**	BMPs with Underdrains
	Cone Penetrometer Testing			
	Laboratory Permeability Tests			
Percolation Tests	Simple Open Pit Test	**Required (See Section D.2.2)**	**Required (See Section D.2.3)**	Any BMP Type
	Open Pit Falling Head Test			
	Well Permeameter Method			
	Borehole Percolation Tests			
Infiltration Tests	Double Ring Infiltrometer Test	Not Applicable	**Required (See Section D.2.3)**	Any BMP Type
	Single Ring Infiltrometer Test			
	Large-scale Pilot Infiltration Test			
	Smaller-scale Pilot Infiltration Test			

*Desktop methods may be performed without a geotechnical engineer. Refer to Basic Infiltration Analysis guidance in Section B.2.3 for more information.

NRCS Soil Survey Maps: NRCS Soil Survey maps can be used to establish approximate infiltration rates for use in BMP design. Under this method, default design infiltration rates may be applied based on the predominant NRCS soil type present within a proposed BMP location. Default design infiltration rates (in/hr) for each NRCS soil type are: A=0.300, B=0.200, C=0.100, D=0.025, Restricted=0.000. Use of these default design infiltration rates does not require application of any correction factors or safety factors.

Grain Size Analysis Testing: Hydraulic conductivity can be estimated indirectly from correlations with soil grain-size distributions. While this method is approximate, correlations have been relatively well established for some soil conditions. One of the most commonly used correlations between grain size parameters and hydraulic conductivity is the Hazen (1892, 1911) empirical formula (Philips and Kitch, 2011), but a variety of others have been developed. Correlations must be developed based on testing of site-specific soils. For purposes of this manual, saturated hydraulic conductivity and infiltration rate can be assumed to be equal.

Cone Penetrometer Testing: Hydraulic conductivity can be estimated indirectly from cone penetrometer testing (CPT). A cone penetrometer test involves advancing a small probe into the soil and measuring the relative resistance encountered by the probe as it is advanced. The signal returned from this test can be interpreted to yield estimated soil types and the location of key transitions between soil layers. If this method is used, correlations must be developed based on testing of site-specific soils. For purposes of this manual, saturated hydraulic conductivity and infiltration rate can be assumed to be equal.

Laboratory Permeability Testing: Laboratory testing can be performed to help evaluate the infiltration rates. The laboratory tests should be in accordance with ASTM or other approved procedures (e.g. ASTM D 5084 or D 5856). Several tests may be required from samples at different elevations to help evaluate the permeability characteristics of the soil strata.

Simple Open Pit Test: The Simple Open Pit Test is a falling head test in which a hole at least two feet in diameter is filled with water to a level of 6" above the bottom. Water level is checked and recorded regularly until either an hour has passed or the entire volume has infiltrated. The test is repeated two more times in succession and the rate at which the water level falls in the third test is used as the infiltration rate. This test identifies a percolation rate that should be converted to an infiltration rate using the Porchet method.

Open Pit Falling Head Test: This test is similar to the Simple Open Pit Test, but covers a larger footprint, includes more specific instructions, returns more precise measurements, and generally should be overseen by a geotechnical professional. Nonetheless, it remains a relatively simple test.

To perform this test, a hole is excavated at least 2 feet wide by 4 feet long (larger is preferred) and to a depth of at least 12 inches. The bottom of the hole should be approximately at the depth of the proposed infiltrating surface of the BMP. The hole is pre-soaked by filling it with water at least a foot above the soil to be tested and leaving it at least 4 hours (or overnight if clays are present). After pre-soaking, the hole is refilled to a depth of 12 inches and allow it to drain for one hour (2 hours for slower soils), measuring the rate at which the water level drops. The test is then repeated until successive trials yield a result with less than 10 percent change.

Well Permeameter Method (USBR 7300-89): Well permeameter methods were originally developed for purposes of assessing aquifer permeability and associated yield of drinking water wells.

This family of tests is most applicable in situations in which infiltration facilities will be placed substantially below existing grade, which limits the use of surface testing methods.

In general, this test involves drilling a 6 inch to 8 inch test well to the depth of interest and maintaining a constant head until a constant flow rate has been achieved. Water level is maintained with down-hole floats. A smaller diameter boring may be adequate, however this then requires a different correction factor to account for the increased variability expected. The Porchet method or the nomographs provided in the USBR Drainage Manual (United States Department of the Interior, Bureau of Reclamation, 1993) are used to convert the measured rate of percolation to an estimate of vertical hydraulic conductivity.

While these tests have applicability in screening level analysis, considerable uncertainty is introduced in the step of converting direct percolation measurements to estimates of vertical infiltration. Additionally, this testing method is prone to yielding erroneous results cases where the vertical horizon of the test intersects with minor lenses of sandy soils that allow water to dissipate laterally at a much greater rate than would be expected in a full-scale facility. To improve the interpretation of this test method, a continuous bore log should be inspected to determine whether thin lenses of material may be biasing results at the strata where testing is conducted. Consult USBR procedure 7300-89 for more details.

Source: (United States Department of the Interior, Bureau of Reclamation, 1990, 1993)

Borehole Percolation Tests: Borehole percolation tests were originally developed as empirical tests to estimate the capacity of onsite sewage disposal systems (septic system leach fields), but have more recently been adopted into use for evaluating storm water infiltration. Similar to the well permeameter method, borehole percolation methods primarily measure lateral infiltration into the walls of the boring and are designed for situations in which infiltration facilities will be placed well below current grade. The percolation rate obtained in this test should be converted to an infiltration rate using a technique such as the Porchet method.

This test is generally implemented similarly to the USBR Well Permeameter Method. Per the Riverside County Borehole Percolation method, a hole is bored to a depth at least 5 times the borehole radius. The hole is presoaked for 24 hours (or at least 2 hours if sandy soils with no clay). The hole is filled to approximately the anticipated top of the proposed infiltration basin. Rates of fall are measured for six hours, refilling each half hour (or 10 minutes for sand). Tests are generally repeated until consistent results are obtained.

The same limitations described for the well permeameter method apply to borehole percolation tests, and their applicability is generally limited to initial screening. To improve the interpretation of this test method, a continuous soil core can be extracted from the hole and below the test depth, following testing, to determine whether thin lenses of material may be biasing results at the strata where testing is conducted.

Sources: Riverside County Percolation Test (2011), California Test 750 (Caltrans, 1986), San Bernardino County Percolation Test (1992); USEPA Falling Head Test (USEPA, 1980).

In comparison to a double-ring infiltrometer, this test has the advantage of measuring infiltration over a larger area and better resembles the dimensionality of a typical small scale BMP. This test identifies a percolation rate that should be converted to an infiltration rate using the Porchet method. However, if this method is used to identify rates for a drywell BMP, the correction factor can be omitted at the discretion of the geotechnical engineer.

Double Ring Infiltrometer Test (ASTM 3385): The Double Ring Infiltrometer was originally developed to estimate the saturated hydraulic conductivity of low permeability materials, such as clay liners for ponds, but has seen significant use in storm water applications. The most recent revision of this method from 2009 is known as ASTM 3385-09. The testing apparatus is designed with concentric rings that form an inner ring and an annulus between the inner and outer rings. Infiltration from the annulus between the two rings is intended to saturate the soil outside of the inner ring such that infiltration from the inner ring is restricted primarily to the vertical direction.

To conduct this test, both the center ring and annulus between the rings are filled with water. There is no pre-wetting of the soil in this test. However, a constant head of 1 to 6 inches is maintained for 6 hours, or until a constant flow rate is established. Both the inner flow rate and annular flow rate are recorded, but if they are different, the inner flow rate should be used. There are a variety of approaches that are used to maintain a constant head on the system, including use of a Mariotte tube, constant level float valves, or manual observation and filling. This test must be conducted at the elevation of the proposed infiltrating surface; therefore application of this test is limited in cases where the infiltration surface is a significant distance below existing grade at the time of testing.

This test is generally considered to provide a direct estimate of vertical infiltration rate for the specific point tested and is highly replicable. However, given the small diameter of the inner ring (standard diameter is 12 inches, but it can be larger), this test only measures infiltration rate in a small area. Additionally, given the small quantity of water used in this test compared to larger scale tests, this test may be biased high in cases where the long term infiltration rate is governed by groundwater mounding and the rate at which mounding dissipates (i.e., the capacity of the infiltration receptor). Finally, the added effort and cost of isolating vertical infiltration rate may not necessarily be warranted considering that BMPs typically have a lateral component of infiltration as well. Therefore, while this method has the advantages of being technical rigorous and well standardized, it should not necessarily be assumed to be the most representative test for estimating full-scale infiltration rates. Source: American Society for Testing and Materials (ASTM) International (2009).

Single Ring Infiltrometer Test: The single ring infiltrometer test is not a standardized ASTM test, however it is a relatively well-controlled test and shares many similarities with the ASTM standard double ring infiltrometer test (ASTM 3385-09). This test is a constant head test using a large ring (preferably greater than 40 inches in diameter) usually driven 12 inches into the soil. Water is ponded above the surface. The rate of water addition is recorded and infiltration rate is determined after the flow rate has stabilized. Water can be added either manually or automatically.

The single ring used in this test tends to be larger than the inner ring used in the double ring test. Driving the ring into the ground limits lateral infiltration; however some lateral infiltration is generally considered to occur. Experience in Riverside County (CA) has shown that this test gives results that are close to full-scale infiltration facilities. The primary advantages of this test are that it is relatively simple to conduct and has a larger footprint (compared to the double-ring method) and restricts horizontal infiltration and is more standardized (compared to open pit methods). However, it is still a relatively small scale test and can only be reasonably conducted near the existing ground surface.

Large Scale Pilot Infiltration Test: As its name implies, this test is closer in scale to a full-scale infiltration facility. This test was developed by Washington State Department of Ecology specifically for storm water applications.

To perform this test, a test pit is excavated with a horizontal surface area of roughly 100 square feet to a depth that allows 3 to 4 feet of ponding above the expected bottom of the infiltration facility.

Water is continually pumped into the system to maintain a constant water level (between 3 and 4 feet about the bottom of the pit, but not more than the estimated water depth in the proposed facility) and the flow rate is recorded. The test is continued until the flow rate stabilizes. Infiltration rate is calculated by dividing the flow rate by the surface area of the pit.

This test has the advantage of being more resistant to bias from localized soil variability and being more similar to the dimensionality and scale of full scale BMPs. It is also more likely to detect long term decline in infiltration rates associated with groundwater mounding. As such, it remains the preferred test for establishing design infiltration rates in Western Washington (Washington State Department of Ecology, 2012). In a comparative evaluation of test methods, this method was found to provide a more reliable estimate of full-scale infiltration rate than double ring infiltrometer and borehole percolation tests (Philips and Kitch 2011).

The difficulty encountered in this method is that it requires a larger area be excavated than the other methods, and this in turn requires larger equipment for excavation and a greater supply of water. However, this method should be strongly considered when less information is known about spatial variability of soils and/or a higher degree of certainty in estimated infiltration rates is desired.

Smaller-Scale Pilot Infiltration Test: The smaller-scale PIT is conducted similarly to the large-scale PIT but involves a smaller excavation, ranging from 20 to 32 square feet instead of 100 square feet for the large-scale PIT, with similar depths. The primary advantage of this test compared to the full-scale PIT is that it requires less excavation volume and less water. It may be more suitable for small-scale distributed infiltration controls where the need to conduct a greater number of tests outweighs the accuracy that must be obtained in each test, and where groundwater mounding is not as likely to be an issue.

D.2.2 Corrected Infiltration Rate

For purposes of this manual, the corrected infiltration rate is the initial infiltration rate as modified by appropriate correction factors needed to convert from percolation to infiltration or to correct for effects of water temperature. The sections below present discussion on correction factors that should be considered by the Geotechnical Engineer.

D.2.2.1 Percolation Rate Correction Factor

A common misunderstanding is that the "percolation rate" obtained from a percolation test is equivalent to the "infiltration rate" obtained from tests such as a single or double ring infiltrometer test which is equivalent to the "saturated hydraulic conductivity". In fact, these terms have different meanings. Saturated hydraulic conductivity is an intrinsic property of a specific soil sample under a given density. It is a coefficient in Darcy's equation (Darcy 1856) that characterizes the flux of water that will occur under a given gradient. The measurement of saturated hydraulic conductivity in a laboratory test is typically referred to as "permeability", which is a function of the density, structure, stratification, fines, and discontinuities of a given sample under given controlled conditions. In contrast, infiltration is the downward entry of water into the soil. The velocity at which water enters the soil is infiltration rate. Infiltration rate is typically expressed in inches per hour. For the purposes of this manual, saturated hydraulic conductivity and infiltration rate can be assumed to be equal. Similarly, to permeability, infiltration rate can be limited by a number of factors including the layering of soil, density, discontinuities, and initial moisture content. These factors control how quickly water can move through a soil. However, infiltration rate can also be influenced by mounding of

groundwater, and the rate at which water dissipates horizontally below a BMP – both of which describe the "capacity" of the "infiltration receptor" to accept this water over an extended period. For this reason, an infiltration test should ideally be conducted for a relatively long duration resembling a series of storm events so that the capacity of the infiltration receptor is evaluated as well as the rate at which water can enter the system. Infiltration rates are generally tested with larger diameter holes, pits, or apparatuses intended to enforce a primarily vertical direction of flux.

In contrast, percolation is tested with small diameter holes, and it is mostly a lateral phenomenon. The direct measurement yielded by a percolation test tends to overestimate the infiltration rate, except perhaps in cases in which a BMP has similar dimensionality to the borehole, such as a dry well. Adjustment of percolation rates may be made to an infiltration rate using a technique such as the Porchet Method. For drywell BMPs this adjustment may be determined per other methods, (i.e. USBR 7300-89), or may be omitted entirely at the discretion of the geotechnical engineer.

Percolation Rate Conversion Example

Problem:

Apply the Porchet Method (Inverse Borehole Method) to determine the corrected infiltration rate from the following inputs:

- Total depth of test hole, D_T = 60 inches
- Initial depth to water, D_O = 12.25 inches
- Final depth to water, D_f = 13.75 inches
- Test hole radius, r = 4 inches
- Time interval, Δt = 10 minutes

Solution:

1. Solve for the height of water at the beginning of the selected time interval, H_O:

   $H_O = D_T - D_O = 60 - 12.25 = 47.75$ inches

2. Solve for the height of water at the end of the selected time interval, Hf:

   Hf = DT - Df = 60 -13.75 = 46.25 inches

3. Solve for the change in height of water over the selected time interval, ΔH:

   ΔH = HO - Hf = 47.75 - 46.25 = 1.50 inches

4. Calculate the average head over the selected time interval, Havg:

   Havg = (Ho + Hf)/2 = (47.75 + 46.25)/2 = 47.00 inches

5. Calculate the tested infiltration rate, It, using the following equation:

   It= (ΔH*60*r) /(Δt*(r+2Havg))

   It = (1.50 in * 60 min/hr * 4 in) / (10 min * (4 inch + (2 * 47 in))) = 0.37 in/hr

D.2.2.2 Temperature Correction Factor

The rate of infiltration through soil is affected by the viscosity of water, which in turn is affected by the temperature of water. As such, infiltration rate is strongly dependent on the temperature of the infiltrating water (Cedergren, 1997). For example, Emerson (2008) found that wintertime infiltration rates below a BMP in Pennsylvania were approximately half their peak summertime rates. As such, it is important to consider the effects of temperature when planning tests and interpreting results.

If possible, testing should be conducted at a temperature that approximates the typical runoff temperatures for the site during the times when rainfall occurs. If this is not possible, then the results of infiltration tests should be adjusted to account for the difference between the temperature at the time of testing and the typical temperature of runoff when rainfall occurs. The measured infiltration can be adjusted by the ratio of the viscosity at the test temperature versus the typical temperature when rainfall occurs (Cedergren, 1997), per the following formula:

$$K_{Typical} = K_{Test} \times \left(\frac{\mu_{Test}}{\mu_{Typical}} \right)$$

Where:
$K_{Typical}$ = the typical infiltration rate expected at typical temperatures when rainfall occurs
K_{Test} = the infiltration rate measured or estimated under the conditions of the test
$\mu_{Typical}$ = the viscosity of water at the typical temperature expected when rainfall occurs
μ_{Test} = the viscosity of water at the temperature at which the test was conducted

D.2.3 Safety Factors

A safety factor between 2.0 and 9.0 must be applied to the infiltration rates determined above[2]. Application of a safety factor reduces initial or corrected infiltration rates in order to account for various considerations that can impact infiltration rates measured rates over time. In order to minimize safety factor impacts, applicants should consider performing rigorous site investigation, incorporating pretreatment and resiliency into the site design, and taking steps to reduce incidental compaction within BMP footprints.

If the proposed BMP utilizes an underdrain, a default safety factor of 2.0 may be applied or a more detailed safety factor may be determined per Table D.2-3. If the proposed BMP does not utilize an underdrain, then the safety factor must be determined through completion of Table D.2-3.

[2] Use of default design infiltration rates based on NRCS soil type does not require application of safety factor.

Table D.2-3: Determination of Safety Factor

Consideration		Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
Suitability Assessment (A)	Infiltration Testing Method	0.25	Refer to Table D.2-4	
	Soil Texture Class	0.25		
	Soil Variability	0.25		
	Depth to Groundwater/Obstruction	0.25		
	Suitability Assessment Safety Factor, $S_A = \Sigma p$			
Design (B)	Pretreatment	0.50	Refer to Table D.2-4	
	Resiliency	0.25		
	Compaction	0.25		
	Design Safety Factor, $S_B = \Sigma p$			
Safety Factor, $S = S_A \times S_B$ (Must be always greater than or equal to 2)				

The geotechnical engineer should reference Table D.2-4 below in order to determine appropriate factor values for use in the table above. The values in the table below are subjective in nature and the geotechnical engineer may use professional discretion in how the points are assigned.

Table D.2-4: Guidance for Determining Individual Factor Values

Consideration	High Concern (3 points)	Medium Concern (2 points)	Low Concern (1 point)
Infiltration Testing Method	Any	At least 2 tests of any kind within 50' of BMP.	At least 4 tests within BMP footprint, OR Large/Small Scale Pilot Infiltration Testing over at least 5% of BMP footprint.
Soil Texture Class	Unknown, Silty, or Clayey	Loamy	Granular/Slightly Loamy
Soil Variability	Unknown or High	Moderately Homogeneous	Significantly Homogeneous
Depth to Groundwater/ Obstruction	<5' below BMP	5-15' below BMP	>15' below BMP
Pretreatment	None/Minimal	Provides good pretreatment OR does not receive significant runoff from unpaved areas	Provides excellent pretreatment OR only receives runoff from rooftops and road surfaces.
Resiliency	None/Minimal	Includes underdrain/backup drainage that ensures ponding draws down in <96 hours	Includes underdrain/backup drainage AND supports easy restoration of impacted infiltration rates.
Compaction	Moderate Likelihood	Low Likelihood	Very Low Likelihood

D.3 Geotechnical Reporting Requirements

This section is only applicable if a licensed engineer practicing in geotechnical engineering has performed the determination of infiltration restrictions and/or design infiltration rates. The geotechnical report must document the following items in the geotechnical report.

- **Date of site analysis**
- **Scope and results of testing**
- **Public health and safety requirements that affect infiltration locations**
    - Must address Mandatory Considerations presented in Appendix D.1
- **Conclusions**
    - Characterize DMAs as Restricted or Unrestricted for Infiltration
    - Identify Design Infiltration Rates for DMAs
- **Correspondence between County Staff and Geotechnical Engineer (if applicable)**
    - Development status of site prior to the project application (i.e. new development with raw ungraded land, or redevelopment with existing graded conditions)
    - The history of design discussions for the site proposed project
    - Site design alternatives considered to achieve infiltration or partial infiltration on site
    - Physical impairments and public safety concerns (i.e. fire road egress, sewer lines, etc)
    - The extent low impact development BMP requirements were included in the project design

It is ultimately the responsibility of the SWQMP Preparer (not the geotechnical engineer) to interpret the conclusions made in the geotechnical report and ensure they are appropriately supported/reflected in associated SWQMP submittal materials such as checklists, narratives, calculations, exhibits, and supplemental reports.

Appendix

E

Fact Sheets for Enhanced Site Design, Structural and Flow-thru BMPs

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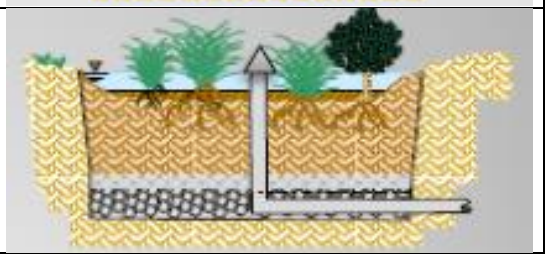
Appendix E Fact Sheets for Enhanced Site Design, Structural and Flow-thru BMPs

The following fact sheets were developed to assist the project applicants with designing BMPs to meet the storm water obligations. The Fact Sheet Quick Guide on the next page summarizes the layout and type of information contained in each fact sheet.

	MS4 Category	Manual Category	Design Fact Sheet	Page
Enhanced Site Design BMPs	Site Design	Site Design	SD-A Tree Wells* SD-B: Impervious Area Dispersion* SD-C: Green Roofs SD-D: Permeable Pavement (Site Design BMP) SD-E: Rain Barrels SD-F: Amended Soil	E-28 E-42 E-50 E-58 E-68 E-74
Structural BMPs	Retention	Harvest and Use	HU-1: Cistern	E-78
		Infiltration	INF-1: Infiltration Basins INF-2: Bioretention INF-3: Permeable Pavement (Pollutant Control) INF-4: Dry Wells	E-88 E-100 E-114 E-132
		Partial Retention	PR-1: Biofiltration with Partial Retention	E-136
	Biofiltration	Biofiltration	BF-1: Biofiltration BF-2: Nutrient Sensitive Media Design BF-3: Proprietary Biofiltration	E-150 E-164 E-168
	Flow-thru Treatment Control	Flow-thru Treatment Control with Alternative Compliance	FT-1: Vegetated Swales FT-2: Media Filters FT-3: Sand Filters FT-4: Dry Extended Detention Basin FT-5: Proprietary Flow-thru Treatment Control	E-170 E-182 E-190 E-200 E-210

*SD-A Tree Wells and SD-B Impervious Area Dispersion can function as Significant Site Design BMPs when sized according to Section 5.2.3.

BMP Comparison Table

BMP Type	Soil Media	Underdrain present?	Bottom Liner Present ?	Typical Design
Infiltration (INF-1)	Optional	No	No	
Bioretention (INF-2)	BSM	No	No	
Biofiltration with Partial Retention (PR-1)	BSM	Yes- Optional	No	
Biofiltration (BF-1)	BSM	Yes	Yes	

E.1 Fact Sheet Quick Guide

BF-1 Biofiltration **1**



Location: 43rd Street and Logan Avenue, San Diego, California **3**

2

MS4 Permit Category
Biofiltration

Manual Category
Biofiltration

Applicable Performance Standard
Pollutant Control
Flow Control

Primary Benefits
Treatment

Description **4**

Biofiltration (Bioretention with underdrain) facilities are vegetated surface water systems that filter water through vegetation, and soil or engineered media prior to discharge via underdrain or overflow to the downstream conveyance system.

Fact Sheet Key	
1	Best Management Practice (BMP) Title
2	Categories, Standards, and Benefits
3	BMP Image
4	Main Content; Categories Include: •Description •Design Adaptations for Project Goals •Recommended Siting Criteria •Recommended BMP Component Dimensions •Design Criteria and Considerations •Conceptual Design and Sizing Approach for o Site Design o Storm Water Pollutant Control Only o Integrated Storm Water Pollutant Control and Flow Control •Maintenance Overview •Summary of Standard Inspection and Maintenance

E.2 SD-A Tree Wells



Tree Wells (Source: County of San Diego LID Manual – EOA, Inc.)

MS4 Permit Category
Site Design Retention

Manual Category
Site Design Infiltration

Applicable Performance Standard
Site Design Pollutant Control Flow Control

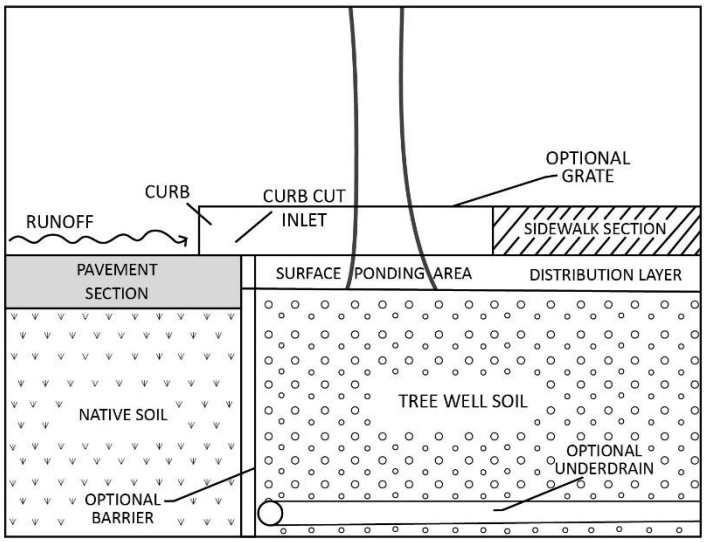
Primary Benefits
Volume Reduction

Description

Trees planted to intercept rainfall and runoff as described in this fact sheet may be used as storm water management measures to provide runoff reduction of the DCV per Appendix B.1.4. Additional benefits associated with tree wells, include energy conservation, air quality improvement, and aesthetic enhancement. In addition to the requirements provided in this fact sheet, tree wells located in the County Right-of-Way shall follow requirements in Appendix K of this manual. Deviations from the outlined criteria may be approved at the discretion of County staff. Typical storm water management benefits associated with trees include:

- **Interception of rainfall** – tree surfaces (roots, foliage, bark, and branches) intercept, evaporate, store, or convey precipitation to the soil before it reaches surrounding impervious surfaces
- **Reduced erosion** – trees protect denuded area by intercepting or reducing the velocity of rain drops as they fall through the tree canopy
- **Increased infiltration** – soil conditions created by roots and fallen leaves promote infiltration
- **Treatment of storm water** – trees provide treatment through uptake of nutrients and other storm water pollutants (phytoremediation) and support of other biological processes that break down pollutants

Typical tree well system components include:



Schematic of Tree Well

- Trees of the appropriate species for site conditions and constraints. Refer to the Plant List in this fact sheet.
- Available soil media reservoir volume based on mature tree size, soil type, water availability, surrounding land uses, and project goals
- Optional suspended pavement design to provide structural support for adjacent pavement without requiring compaction of underlying layers
- Optional root barrier devices as needed; a root barrier is a device installed in the ground, between a tree and the sidewalk, intended to guide roots down and away from the sidewalk in order to prevent sidewalk lifting from tree roots.
- Optional tree grates; to be considered to maximize available space for pedestrian circulation and to protect tree roots from compaction related to pedestrian circulation; tree grates are typically made up of porous material that will allow the runoff to soak through.
- Optional shallow surface depression for ponding of excess runoff
- Optional planter box drain

Design Adaptations for Project Goals

Site design BMP to provide incidental treatment. Tree wells primarily function as site design BMPs for incidental treatment.

Pollutant Control BMP to provide treatment. Project proponents are allowed to design trees to reduce the volume of stormwater runoff that requires treatment, (the Design Capture Volume [DCV]), or completely fulfill the pollutant control BMP requirements by retaining the entire DCV. Benefits from tree wells are accounted for by using the volume reduction values in Table B.1-3 presented in Appendix B. This credit can apply to other trees that are used for landscaping purposes that meet the same criteria. Project proponents are required to provide calculations supporting the amount of credit claimed from implementing trees within the project footprint.

Flow Control BMP to meet hydromodification requirements. Project proponents are also allowed to design tree wells as a flow control BMP. Benefits from tree wells are accounted for by using the DCV multipliers listed below. Project proponents are required to provide calculations showing that the entire DCV including the DCV multiplier is retained.

Design Criteria and Considerations

Tree Wells, whether designed as Site Design BMPs, as Stormwater Pollutant Control BMP, or as a Flow Control BMP must meet the following design criteria and considerations, and if placed in the right-of-way must be consistent with the County of San Diego Green Streets Design Criteria and Green Streets Standard Drawings in Appendix K. Deviations from the below criteria may be approved at the discretion of the County staff if it is determined to be appropriate:

<table>
<tr><th colspan="2">Siting and Design</th><th>Intent/Rationale</th></tr>
<tr><td>☐</td><td>Tree species is appropriately chosen for the development (private or public). For public rights-of-ways, local planning guidelines and zoning provisions for the permissible species and placement of trees are consulted. A list of trees appropriate for site design that can be used by all county municipalities are provided in this fact sheet.</td><td>Proper tree placement and species selection minimizes problems such as pavement damage by surface roots and poor growth.</td></tr>
<tr><td>☐</td><td>Tree well placement: ensure area is graded; and the well is located so that full amount of DCV reduction drains to the well.</td><td>Minimizes short-circuiting of run off and assures DCV reductions are retained onsite.</td></tr>
<tr><td>☐</td><td>Location of trees planted along public streets follows guidance on green infrastructure (Appendix K). Vehicle and pedestrian line of sight and clear recovery zones are considered in tree selection and placement.
Unless exemption is granted by County staff the following minimum tree separation distance is followed
<table>
<tr><th>Improvement</th><th>Minimum distance to tree well</th></tr>
<tr><td>Traffic Signal, Stop sign</td><td>20 feet</td></tr>
<tr><td>Underground Utility lines (except sewer)</td><td>5 feet</td></tr>
<tr><td>Sewer Lines</td><td>10 feet</td></tr>
<tr><td>Above ground utility structures (Transformers, Hydrants, Utility poles, etc.)</td><td>10 feet</td></tr>
<tr><td>Driveways</td><td>10 feet</td></tr>
<tr><td>Intersections (intersecting curb lines of two streets)</td><td>25 feet</td></tr>
</table></td><td>Roadway safety for both vehicular and pedestrian traffic is a key consideration for placement along public streets.</td></tr>
</table>

Siting and Design		*Intent/Rationale*
☐	**Underground utilities and overhead wires** are considered in the design and avoided or circumvented. Underground utilities are routed around or through the planter in suspended pavement applications. All underground utilities are protected from water and root penetration.	Tree growth can damage utilities and overhead wires resulting in service interruptions. Protecting utilities routed through the planter prevents damage and service interruptions. Refer to Section 6.6 of the Green Streets Design Criteria in Appendix K for guidelines regarding utility placement and potential conflict with BMP facilities.
☐	Suspended pavement was used for confined Tree Well soil volume. Suspended pavement design was developed where appropriate to minimize soil compaction and improve infiltration and filtration capabilities. Suspended pavement was constructed with an approved structural cell.	Suspended pavement designs as shown in Page 7 of the Green Streets Guidelines in Appendix K provide structural support without compaction of the underlying layers, thereby promoting tree growth. Recommended structural cells include poured in place concrete columns, Silva Cells manufactured by Deeproot Green Infrastructures and Stratacell and Stratavault systems manufactured by Citygreen Systems.
☐	A minimum soil volume of 2 cubic feet per square foot of mature tree canopy projection area is provided for each tree. Canopy projection area is the ground area beneath the mature tree, measured at the drip line. Soil volume must be within 1.5 times the mature tree canopy radius. Soil depth shall be a minimum of 30 inches deep, preferably 36 inches deep. When placing tree well next to curb use Structural Soil as outlined in the section below titled "Confined Tree Well Soil Volume" and use Specifications in Appendix K Use Amended Soil per Fact Sheet SD-F in all other cases.	The minimum soil volume ensures that there is adequate storage volume to allow for unrestricted evapotranspiration and infiltration.

Siting and Design		*Intent/Rationale*
	To claim credit for existing trees, the root structure of existing tree shall be protected and additional soil volumes provided to meet the above requirements.	
☐	A berm or well must be constructed around the perimeter of the soil volume to be credited and an inlet structure must be of the appropriate size to allow runoff to enter the well. Considerations should be made to prevent root and water intrusion damage to surrounding infrastructure.	The minimum soil volume ensures that there is adequate storage volume to allow for unrestricted storage, evapotranspiration, and infiltration.
☐	DCV from the tributary area draining to the tree is equal to or greater than the tree credit volume	The minimum tributary area ensures that the tree receives enough runoff to fully utilize the infiltration and evapotranspiration potential provided. In cases where the minimum tributary area is not provided, the tree credit volume must be reduced proportionately to the actual tributary area.
☐	Inlet opening to the tree that is at least 18 inches wide. A minimum 2 inch drop in grade from the inlet to the finish grade of the tree. Grated inlets are allowed for pedestrian circulation. Grates need to be ADA compliant and have sufficient slip resistance.	Design requirement to ensure that the runoff from the tributary area does not bypass the BMP. Different inlet openings and drops in grade may be allowed at the discretion of County staff if calculations are shown that the diversion flow rate (Appendix B.) from the tributary area can be conveyed to the tree. In cases where the inlet capacity is limiting the amount of runoff draining to the tree, the tree credit volume must be reduced proportionately.

Conceptual Design and Sizing Approach for Site Design

Determine the areas where tree wells can be used in the site design to achieve incidental treatment. Tree wells reduce runoff volumes from the site. Refer to Appendix B.2. Document the proposed tree locations in the SWQMP.

Conceptual Design and Sizing Approach for Pollutant Control

When trees are proposed as a storm water pollutant control BMP, the project proponent must submit detailed calculations for the DCV treated by trees. Document the proposed tree locations on the BMP Plan & DMA Map, and provide sizing calculations in the SWQMP Attachment following the steps in Appendix B.

Conceptual Design and Sizing Approach for Flow Control

When trees are proposed as a flow control BMP, the project proponent must submit detailed calculations for the Required Retention Volume (RRV) treated by trees. Document the proposed tree locations on the BMP Plan & DMA Map, and provide sizing calculations in the SWQMP Attachment. Tree Wells that are designed to meet flow control requirements are designated as SSD BMPs.

1. **Determine how much volume you need**. The Required Retention Volume (RRV) is the volume of rainfall that must be retained by the tree wells in the DMA to meet flow control requirements. It is calculated by multiplying the DCV by a DCV multiplier.

   a. Determine the DCV. See Appendix B.

   b. Determine the DCV Multiplier. The DCV Multiplier is based on two factors: (1) The tree well soil depth and, (2) The Hydrologic Soil Group. Once you know both values, determine the DCV Multiplier using this table:

   c. Calculate the Required Retention Volume (DCV x DCV Multiplier). Calculate the RRV by multiplying the DCV by the DCV Multiplier. This is the volume of runoff that must be offset by the Tree Well Credit Volume. Repeat this process for each DMA.

Minimum Tree Well Soil Depth (inches)	Hydrologic Soil Group				
	A	B	C	D (Default)	
30"	1.60	2.20	2.50	2.90	DCV Multiplier
36"	1.80	2.47	2.83	3.17	
42"	2.00	2.73	3.17	3.43	
48"	2.20	3.00	3.50	3.70	

DCV Multiplier Table

Tree Well Soil Depth is the vertical distance from the top to the bottom of the soil layer in the tree well. **Hydrologic Soil Group** describes the native soil surrounding the tree well. Soil type affects how well water can infiltrate into the area surrounding the tree well. Group A soils provide the most infiltration and Group D the least. If your soil type is unknown, you can assume Group D. But this will result in larger DCV Multipliers, and in turn increase the size or number of tree wells needed.

Alternative Proposals: You can also propose RRV values or use methods and assumptions different than those described here. Proposals must be based on SWMM modeling or other methods acceptable to the County.

2. **Determine how much volume you have**. The Tree Well Credit Volume is the volume of runoff retention in cubic feet per tree (ft^3/tree) to be provided by each tree well (or group) in the DMA. Together retain a volume that is equal to or greater than the RRV for the DMA.

   The volume credited for each tree well is based on the mature canopy diameter of the tree species selected. Any species listed below can be used in a tree well so long as it meets all other applicable restrictions and requirements for the project area. Native and drought tolerant species are required where feasible.

	Botanical Name	Common Name	Mature Height (ft)	Mature Canopy Diameter (ft)	Credit Volume per Tree (ft3)
1	*Ceanothus 'Ray Hartman"*	California Mountain Lillac	30	**10**	**40**
2	*Pittosporum Phillyraeoides*	Willow Pittosporum	25	**15**	**100**
3	*Salix Lasiolepsis*	Arroyo Willow	25		
4	*Arbutus Unedo*	Strawberry Tree	30	**20**	**180**
5	*Prunus Ilicifolia*	Hollyleaf Cherry	30		
6	*Prunus Lynoii*	Catalina Cherry	40		
7	*Cercis Occidentalis*	Western Redbud	25	**25**	**290**
8	*Heteromeles Arbutifolia*	Toyon, Christmas Berry	25		
9	*Alnus Rhombifolia*	White Elder	75	**30**	**420**
10	*Arbutus 'Marina'*	Hybrid Strawberry Tree	35		
11	*Chilopsis Linearis*	Desert Willow	30		
12	*Lyonothamnus Floribundus*	Catalina Ironwood	50		
13	*Magnolia Grandiflora*	Southern Magnolia	40		
14	*Pinus Torreyana*	Torrey Pines	80		
15	*Platanus Racemosa*	California sycamore	60		
16	*Quercus Agrifolia*	Coast Live Oak	70		
17	*Quercus Engelmannii*	Engelmann Oak	50		
18	*Quercus Suber*	Cork Oak	40		
19	*Sambucus Mexicana*	Blue Elderberry	30		

Tree Palette Table

Below are sources for Tree Palette Mature Height and Mature Canopy Diameter:

A. Water Efficient Landscape Design Manual, County of San Diego, 2016
B. Sustainable Landscapes Guidelines, San Diego County Water Authority, 2015
C. Low Impact Development Handbook, County of San Diego, 2014
D. Low Impact Development Design Manual, City of San Diego, 2011
E. Street Tree Selection Guide, City of San Diego, 2013
F. Environmentally Friendly Garden Plant List, City of San Diego, 2004
G. BMP Design Manual, County of San Diego, 2016
H. California Native Plant Society. 2017

Alternative Species. Tree species other than those listed are allowable, but must be approved by the County. If you know the mature canopy diameter of the species you want to propose, use the values in the table to determine its credit volume. Note that even if you select a species with a canopy diameter greater than **30 feet**, the maximum credit any tree can generate is **420 ft^3**.

3. **Determine if you have enough volume**. Compare your total Tree Well Credit Volume from Step 2 to the RRV you calculated in Step 1. Once your Credit Volume is equal to or greater than

your RRV, this requirement is satisfied. If your Credit Volume is initially too low, adjust your design either to (1) increase it with more or bigger trees, or (2) decrease the RRV through DCV reductions.

Tree wells will normally be placed at the **discharge point** of the DMA, either individually or in groups. If some of them will retain runoff from different areas in the DMA, RRV and DCV calculations must be specific to each subarea.

If an **underdrain** is proposed for the Tree Well, the sizing factors shown in the DCV Multiplier Table cannot be used, and instead continuous simulation modeling should be performed. This would allow to obtain credit for soil volume underneath the underdrain.

Tree Planting Design in New or Reconstructed Streetscapes

1. Maximized open soil area for tree planting is the most cost effective method of achieving the required soil volume.
2. Tree wells within sidewalks shall have a minimum open area of four feet wide by six feet long. Larger areas may be required to accommodate large root balls.
3. Tree well soil characteristics shall meet the requirements of SD-F Amended Soil.

Structural Requirements for Confined Tree Well Soil Volume

In order to provide adequate soil volume for tree wells, soils may be placed confined beneath adjacent paved surfaces. Acceptable soil systems capable of carrying D-50 loading include structural soils, structural slabs, and structural cells:

1. Structural soil systems include CU-StructuralSoil™, Stalite Structural Soil, or equivalent.
2. Suspended pavements that allow uncompacted growing soil beneath the sidewalk include; structural slabs that span between structural supports, structural cells, and other commercially available structural systems. See Page 7 of the Green Streets Guidelines in Appendix K for illustrations. Manufacturer details and certification must be provided for commercial systems. Structural calculations and details must be provided for structural slab installations. Structural cells are commercially-available structural systems placed subsurface that support the sidewalk and are filled with amended soil (SD-F). Manufacturer details and certification must be provided for commercial systems.

Stormwater Retention and Treatment Volume

Tree wells with expanded soil volume will serve as a method of capturing and retaining the required volume of stormwater in accordance with County requirements in Appendix B of this manual. These facilities can be designed to meet the County requirements when surface ponding volume is provided, whether designed as an enclosed plant bed with covered soil volume, or a continuous open area (either mulched or with turf) with soil volume under the adjacent sidewalk.

Maintenance Overview

Normal Expected Maintenance. Tree health shall be maintained as part of normal landscape maintenance. Additionally, ensure that storm water runoff can be conveyed into the tree well as

designed. That is, the opening that allows storm water runoff to flow into the tree well (e.g., a curb opening, tree grate, or surface depression) shall not be blocked, filled, re-graded, or otherwise changed in a manner that prevents storm water from draining into the tree well. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. Trees wells are site design BMPs that normally do not require maintenance actions beyond routine landscape maintenance. The normal expected maintenance described above ensures the BMP functionality. If changes have been made to the tree well entrance / opening such that runoff is prevented from draining into the tree well (e.g., a curb inlet opening is blocked by debris or a grate is clogged causing runoff to flow around instead of into the tree well, or a surface depression has been filled so runoff flows away from the tree well), the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance will be required to restore drainage into the tree well as designed.

Surface ponding of runoff directed into tree wells is expected to infiltrate/evapotranspirate within 24-96 hours following a storm event. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging or compaction of the soils surrounding the tree. Loosen or replace the soils to restore drainage.

Other Special Considerations. Site design BMPs, such as tree wells, installed within a new development or redevelopment project are components of an overall storm water management strategy for the project. The presence of site design BMPs within a project is usually a factor in the determination of the amount of runoff to be managed with structural BMPs (i.e., the amount of runoff expected to reach downstream retention or biofiltration basins that process storm water runoff from the project as a whole). When site design BMPs are not maintained or are removed, this can lead to clogging or failure of downstream structural BMPs due to greater delivery of runoff and pollutants than intended for the structural BMP. Therefore, the County Engineer may require confirmation of maintenance of site design BMPs as part of their structural BMP maintenance documentation requirements. Site design BMPs that have been installed as part of the project should not be removed, nor should they be bypassed by re-routing roof drains or re-grading surfaces within the project. If changes are necessary, consult the County Engineer to determine requirements.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Tree health	Routine actions as necessary to maintain tree health.	• Inspect monthly. • Maintain when needed.
Dead or diseased tree	Remove dead or diseased tree. Replace per original plans.	• Inspect monthly. • Maintain when needed.
Standing water in tree well for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to tree health	Loosen or replace soils surrounding the tree to restore drainage.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	Disperse any standing water from the tree well to nearby landscaping. Loosen or replace soils surrounding the tree to restore drainage (and prevent standing water).	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Entrance / opening to the tree well is blocked such that storm water will not drain into the tree well (e.g., a curb inlet opening is blocked by debris or a grate is clogged causing runoff to flow around instead of into the tree well; or a surface depression is filled such that runoff drains away from the tree well)	Make repairs as appropriate to restore drainage into the tree well.	• Inspect monthly. • Maintain when needed.

E.3 SD-B Impervious Area Dispersion (Dispersion Areas)



Photo Credit: Orange County Technical Guidance Document

MS4 Permit Category

Site Design

Retention

Manual Category

Site Design
Infiltration

Applicable Performance Criteria

Site Design
Pollutant Control
Flow Control

Primary Benefits

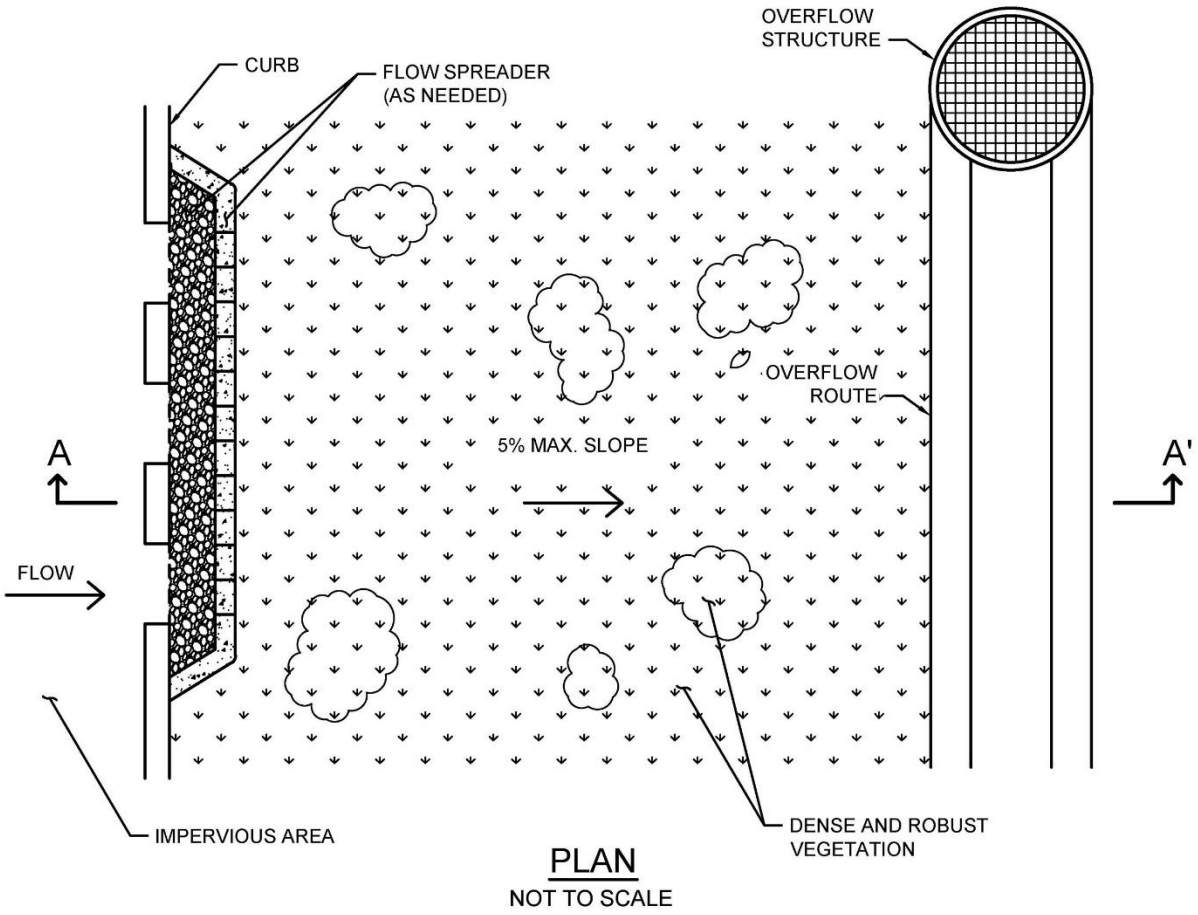
Volume Reduction
Peak Flow Attenuation

Description

Impervious area dispersion (dispersion) refers to the practice of effectively disconnecting impervious areas from directly draining to the storm drain system by routing runoff from impervious areas such as rooftops (through downspout disconnection), walkways, and driveways onto the surface of adjacent pervious areas. The intent is to slow runoff discharges, and reduce volumes. Dispersion with partial or full infiltration results in significant volume reduction by means of infiltration and evapotranspiration.

Typical dispersion components include:

- An impervious surface from which runoff flows will be routed with minimal piping to limit concentrated inflows
- Splash blocks, flow spreaders, or other means of dispersing concentrated flows and providing energy dissipation as needed
- Dedicated pervious area, typically vegetated, with in-situ soil infiltration capacity for partial or full infiltration
- Optional soil amendments to improve vegetation support, maintain infiltration rates and enhance treatment of routed flows
- Overflow route for excess flows to be conveyed from dispersion area to the storm drain system or discharge point



Typical plan and section view of an Impervious Area Dispersion BMP

Design Adaptations for Project Goals

Site design BMP to reduce impervious area and DCV. Impervious area dispersion primarily functions as a site design BMP for reducing the effective imperviousness of a site by providing partial or full infiltration of the flows that are routed to pervious dispersion areas and otherwise slowing down excess flows that eventually reach the storm drain system. This can significantly reduce the DCV for the site.

Design Criteria and Considerations

Dispersion must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County Staff if it is determined to be appropriate:

Siting and Design		*Intent/Rationale*
☐	**Impervious area dispersion Placement:** ensure area is graded; and located so that full DCV water drains to the area of dispersion	Minimizes short-circuiting of run off
☐	Dispersion is over areas with soil types capable of supporting or being amended (e.g., with sand or compost) to support vegetation. Media amendments must be tested to verify that they are not a source of pollutants.	Soil must have long-term infiltration capacity for partial or full infiltration and be able to support vegetation to provide runoff treatment. Amendments to improve plant growth must not have negative impact on water quality.
☐	Dispersion has vegetated sheet flow over a relatively large distance (minimum 10 feet) from inflow to overflow route.	Full or partial infiltration requires relatively large areas to be effective depending on the permeability of the underlying soils.
☐	Pervious areas should be flat (with less than 5% slopes) and vegetated.	Flat slopes facilitate sheet flows and minimize velocities, thereby improving treatment and reducing the likelihood of erosion.
Inflow velocities		
☐	Inflow velocities are limited to 3 ft/s or less or use energy dissipation methods (e.g., riprap, level spreader) for concentrated inflows.	High inflow velocities can cause erosion, scour and/or channeling.
Dedication		
☐	Dispersion areas must be owned by the project owner and be dedicated for the purposes of dispersion to the exclusion of other future uses that might reduce the effectiveness of the dispersion area.	Dedicated dispersion areas prevent future conversion to alternate uses and facilitate continued full and partial infiltration benefits.

Siting and Design		*Intent/Rationale*
Vegetation		
☐	Dispersion typically requires dense and robust vegetation for proper function. Drought tolerant species should be selected to minimize irrigation needs. A plant list to aid in selection can be found in Appendix F.	Vegetation improves resistance to erosion and aids in runoff treatment.

Conceptual Design and Sizing Approach for Site Design

1. Determine the areas where dispersion can be used in the site design to reduce the DCV for pollutant control sizing.
2. Calculate the DCV for storm water pollutant control per Appendix B.2, taking into account reduced runoff from dispersion.
3. Determine if a DMA is considered "Self-retaining" if the impervious to pervious ratio is:
    a. 2:1 when the pervious area is composed of Hydrologic Soil Group A
    b. 1:1 when the pervious area is composed of Hydrologic Soil Group B

Conceptual Design and Sizing Approach for Storm Water Pollutant Treatment and Flow Control

DMAs using impervious area dispersion are considered to meet both pollutant control and hydromodification flow control requirements if ALL of the following criteria are met:

1. All impervious area within the DMA discharges to the pervious area before the runoff discharges from the DMA.
2. As a minimum, the top 11 inches of the pervious area uses amended soils in accordance with the SD-F fact sheet and the pervious area also meets the requirements for dispersion (e.g. slope, inflow velocities, etc.) in the SD-B fact sheet.
3. The impervious to pervious area ratio is 1:1 or less.

Impervious Area Dispersion designed to meet both pollutant control and flow control requirements are designated as SSD BMPs.

Maintenance Overview

Normal Expected Maintenance. Vegetated area shall be maintained as part of normal landscape maintenance. Additionally, ensure that storm water runoff can be conveyed into the vegetated area as designed. That is, the mechanism that allows storm water runoff from impervious area to flow into the pervious area (e.g., a curb cut allows runoff from a parking lot to drain onto adjacent landscaping area, or a roof drain outlet is directed to a lawn) shall not be removed, blocked, filled, or otherwise changed in a manner that prevents storm water from draining into the pervious area. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. Impervious area dispersion is a site design BMP that normally does not require maintenance actions beyond routine landscape maintenance. If changes have been made to the area, such as the vegetated area has been replaced with impervious area, or the mechanism that allows storm water runoff from impervious area to flow into the pervious area has been removed (e.g., roof drains previously directed to vegetated area have been directly connected to the street or storm drain system), the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance will be required to restore drainage into the pervious area as designed. If the pervious area has been removed, contact the County reviewer to determine a solution.

Runoff directed into vegetated areas is expected to be drained within 24-96 hours following a storm event. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging or compaction of the soils. Loosen or replace the soils to restore drainage.

Other Special Considerations. Site design BMPs, such as impervious area dispersion, installed within a new development or redevelopment project are components of an overall storm water management strategy for the project. The presence of site design BMPs within a project is usually a factor in the determination of the amount of runoff to be managed with structural BMPs (i.e., the amount of runoff expected to reach downstream retention or biofiltration basins that process storm water runoff from the project as a whole). When site design BMPs are not maintained or are removed, this can lead to clogging or failure of downstream structural BMPs due to greater delivery of runoff and pollutants than intended for the structural BMP. Therefore, the County reviewer may require confirmation of maintenance of site design BMPs as part of their structural BMP maintenance documentation requirements. Site design BMPs that have been installed as part of the project should not be removed, nor should they be bypassed by re-routing roof drains or re-grading surfaces within the project. If changes are necessary, consult the County reviewer to determine requirements.

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Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
Standing water in vegetated pervious area for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the pervious area so it drains into the soil). Make appropriate corrective measures such as adjusting irrigation system, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the pervious area so it drains into the soil). Loosen or replace soils to restore drainage (and prevent standing water)	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed
Entrance / opening to the vegetated pervious area is blocked such that storm water from impervious area will not drain into the pervious area (e.g., a curb cut opening is blocked by debris or a roof drain outlet has been directly connected to the storm drain system)	Make repairs as appropriate to restore drainage into the vegetated pervious area.	• Inspect monthly. • Maintain when needed.

E.4 SD-C: Green Roofs



MS4 Permit Category
Site Design

Manual Category
Site Design

Applicable Performance Standard
Site Design

Primary Benefits
Volume Reduction
Peak Flow Attenuation

Location: County of San Diego Operations Center, San Diego, California

Description

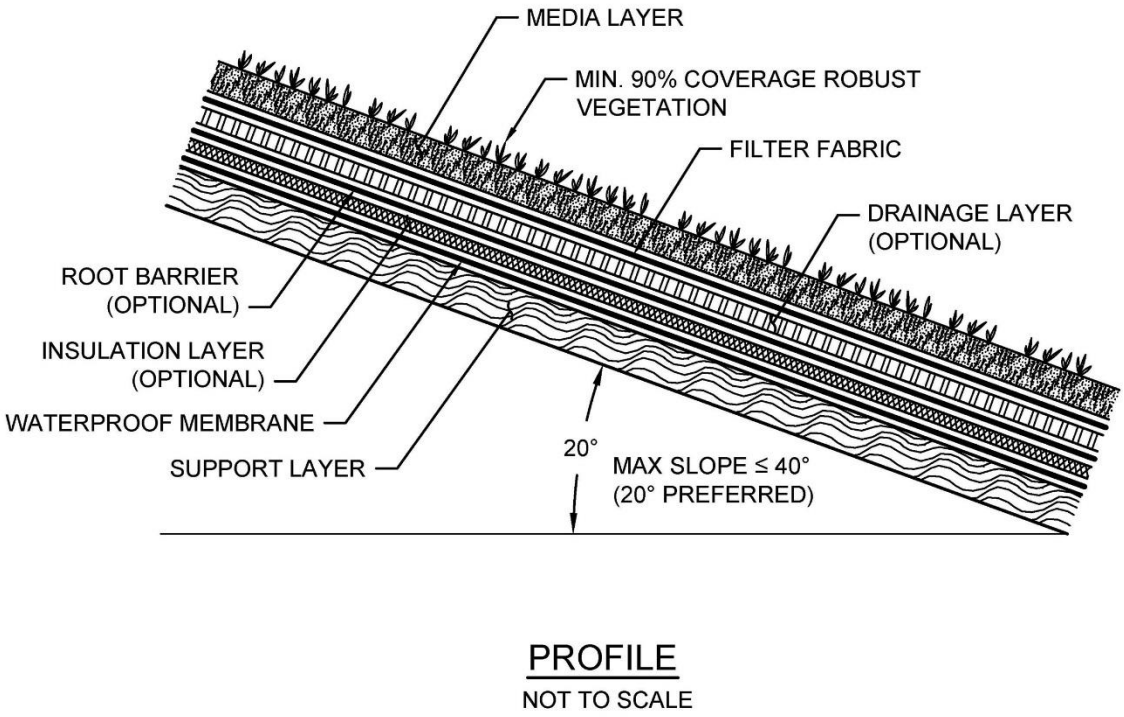
Green roofs are vegetated rooftop systems that reduce runoff volumes and rates, treat storm water pollutants through filtration and plant uptake, provide additional landscape amenity, and create wildlife habitat. Additionally, green roofs reduce the heat island effect and provide acoustical control, air filtration and oxygen production. In terms of building design, they can protect against ultraviolet rays and extend the roof lifetime, as well as increase the building insulation, thereby decreasing heating and cooling costs. There are two primary types of green roofs:

- **Extensive** – lightweight, low maintenance system with low-profile, drought tolerant type groundcover in shallow growing medium (6 inches or less)
- **Intensive** – heavyweight, high maintenance system with a more garden-like configuration and diverse plantings that may include shrubs or trees in a thicker growing medium (greater than 6 inches)

Typical green roof components include, from top to bottom:

- Vegetation that is appropriate to the type of green roof system, climate, and watering conditions
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter fabric to prevent migration of fines (soils) into the drainage layer
- Optional drainage layer to convey excess runoff

- Optional root barrier
- Optional insulation layer
- Waterproof membrane
- Structural roof support capable of withstanding the additional weight of a green roof



Typical profile of a Green Roof BMP

Design Adaptations for Project Goals

Site design BMP to provide incidental treatment. Green roofs can be used as a site design feature to reduce the runoff generated from the site through replacing conventional roofing. This can reduce the DCV and flow control requirements for the site.

Design Criteria and Considerations

Green roofs must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

	Siting and Design	*Intent/Rationale*
☐	Roof slope is ≤ 40% (Roofs that are ≤ 20% are preferred).	Steep roof slopes increase project complexity and requires supplemental anchoring.

	Siting and Design	***Intent/Rationale***
☐	Structural roof capacity design supports the calculated additional load (lbs/sq. ft) of the vegetation growing medium and additional drainage and barrier layers.	Inadequate structural capacity increases the risk for roof failure and harm to the building and occupants.
☐	Design and construction is planned to be completed by an experienced green roof specialist.	A green roof specialist will minimize complications in implementation and potential structural issues that are critical to green roof success.
☐	Green roof location and extent must meet fire safety provisions.	Green roof design must not negatively impact fire safety.
☐	Maintenance access is included in the green roof design.	Maintenance will facilitate proper functioning of drainage and irrigation components and allow for removal of undesirable vegetation and soil testing, as needed.
	Vegetation	
☐	Vegetation is suitable for the green roof type, climate and expected watering conditions. Perennial, self-sowing plants that are drought-tolerant (e.g., sedums, succulents) and require little to no fertilizer, pesticides or herbicides are recommended. Vegetation pre-grown at grade may allow plants to establish prior to facing harsh roof conditions.	Plants suited to the design and expected growing environment are more likely to survive.
☐	Vegetation is capable of covering ≥ 90% the roof surface.	Benefits of green roofs are greater with more surface vegetation.
☐	Vegetation is robust and erosion-resistant in order to withstand the anticipated rooftop environment (e.g., heat, cold, high winds).	Weak plants will not survive in extreme rooftop environments.
☐	Vegetation is fire resistant.	Vegetation that will not burn easily decreases the chance for fire and harm to the building and occupants.
☐	Vegetation considers roof sun exposure and shaded areas based on roof slope and location.	The amount of sunlight the vegetation receives can inhibit growth therefore the beneficial effects of a vegetated roof.
☐	An irrigation system (e.g., drip irrigation system) is included as necessary to maintain vegetation.	Proper watering will increase plant survival, especially for new plantings.

Siting and Design		*Intent/Rationale*
☐	Media is well-drained and is the appropriate depth required for the green roof type and vegetation supported.	Unnecessary water retention increases structural loading. An adequate media depth increases plant survival.
☐	A filter fabric is used to prevent migration of media fines through the system.	Migration of media can cause clogging of the drainage layer.
☐	A drainage layer is provided if needed to convey runoff safely from the roof. The drainage layer can be comprised of gravel, perforated sheeting, or other drainage materials.	Inadequate drainage increases structural loading and the risk of harm to the building and occupants.
☐	A root barrier comprised of dense material to inhibit root penetration is used if the waterproof membrane will not provide root penetration protection.	Root penetration can decrease the integrity of the underlying structural roof components and increase the risk of harm to the building and occupants.
☐	An insulation layer is included as needed to protect against the water in the drainage layer from extracting building heat in the winter and cool air in the summer.	Regulating thermal impacts of green roofs will aid in controlling building heating and cooling costs.
☐	A waterproof membrane is used to prevent the roof runoff from vertically migrating and damaging the roofing material. A root barrier may be required to prevent roots from compromising the integrity of the membrane.	Water-damaged roof materials increase the risk of harm to the building and occupants.

Conceptual Design and Sizing Approach for Site Design

1. Determine the areas where green roofs can be used in the site design to replace conventional roofing to reduce the DCV. These green roof areas can be credited toward reducing runoff generated through representation in storm water calculations as pervious, not impervious, areas but are not credited for storm water pollutant control.
2. Calculate the DCV per Appendix B.

Maintenance Overview

Normal Expected Maintenance. A green roof requires routine maintenance to: maintain vegetation health; and maintain integrity of the roof drainage system. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. Green roofs are site design BMPs that normally do not require maintenance actions beyond the normal maintenance described above. If a roof leak is discovered, it may be an indicator that the waterproof membrane has failed. The waterproof membrane (roof liner) shall be inspected and repaired or replaced as necessary.

Green roof systems normally receive only direct rainfall (not runoff from additional tributary area directed into the system). It is expected to be drained within 24-96 hours following a storm event. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding, as well as risk of damage to the roof. Poor drainage can result from clogging or compaction of the media, optional drainage layer, or drainage system. The specific cause of the drainage issue must be determined and corrected.

Other Special Considerations. Site design BMPs, such as green roofs, installed within a new development or redevelopment project are components of an overall storm water management strategy for the project. The presence of site design BMPs within a project is usually a factor in the determination of the amount of runoff to be managed with structural BMPs (i.e., the amount of runoff expected to reach downstream retention or biofiltration basins that process storm water runoff from the project as a whole). When site design BMPs are not maintained or are removed, this can lead to clogging or failure of downstream structural BMPs due to greater delivery of runoff and pollutants than intended for the structural BMP. Therefore, the County reviewer may require confirmation of maintenance of site design BMPs as part of their structural BMP maintenance documentation requirements. Site design BMPs that have been installed as part of the project should not be removed, nor should they be bypassed by re-routing roof drains or re-grading surfaces within the project. If changes are necessary, consult the County reviewer to determine requirements.

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Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the green roof so it drains into the soil). Make appropriate corrective measures such as adjusting irrigation system, clearing underdrains, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the green roof so it drains into the soil). Loosen or replace soils to restore drainage (and prevent standing water).	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed
Leaks or other damage to waterproof membrane	Repair or replace as applicable.	• Inspect membrane if leak is observed. • Maintain when needed.

E.5 SD-D Permeable Pavement (Site Design BMP)



Photo Credit: San Diego Low Impact Development Design Manual

MS4 Permit Category

Site Design

Manual Category

Site Design

Applicable Performance Standard

Site Design

Primary Benefits

Description

Permeable pavement is pavement that allows for percolation through void spaces in the pavement surface into subsurface layers. Permeable pavements reduce runoff volumes and rates and can provide pollutant control via infiltration, filtration, sorption, sedimentation, and biodegradation processes. When used as a site design BMP, the subsurface layers are designed to provide storage of storm water runoff so that outflow rates can be controlled via infiltration into subgrade soils. Varying levels of storm water treatment and flow control can be provided depending on the size of the permeable pavement system relative to its drainage area and the underlying infiltration rates. As a site design BMP permeable pavement areas are designed to be self-retaining and are designed primarily for direct rainfall. Self-retaining permeable pavement areas have a ratio of total drainage area (including permeable pavement) to area of permeable pavement of 1.5:1 or less. Permeable pavement surfaces can be constructed from modular paver units or paver blocks, pervious concrete, porous asphalt, and turf pavers. Sites designed with permeable pavements can significantly reduce the impervious area of the project. Reduction in impervious surfaces decreases the DCV and can reduce the footprint of treatment control and flow control BMPs.

Typical Permeable Pavement Components (Top to Bottom)
Permeable surface layer
Bedding layer for permeable surface
Aggregate storage layer with optional underdrain(s)
Optional final filter course layer over uncompacted existing subgrade

Design Adaptations for Project Goals

Site design BMP to reduce impervious area. Permeable pavement without an underdrain can be used as a site design feature to reduce the impervious area of the site by replacing traditional pavements, including roadways, parking lots, emergency access lanes, sidewalks, trails and driveways.

Design Criteria and Considerations

Permeable Pavement (Site Design BMP) must meet the following design criteria and be consistent with the County of San Diego Green Streets Design Criteria and Green Street Standard Drawings in Appendix K. Deviations from the below criteria may be approved at the discretion of County Staff if it is determined to be appropriate:

	Siting and Design	*Intent/Rationale*
☐	For site design permeable pavement, the ratio of the total drainage area (including the permeable pavement) to the permeable pavement should not exceed 1.5:1.	Higher ratios increase the potential for clogging.
☐	The structural section is in accordance with the manufacturer's guidance and project soils engineering's recommendations. Overflows and storm drain lines may still be required.	Ensures that the permeable pavement facility can be designed to provide adequate drainage system.
☐	Use appropriate thickness for permeable surface layer for vehicular loading.	Permeable concrete requires a 6-inch minimum surface layer of permeable concrete. Permeable asphalt requires a 1 ½ -inch minimum surface layer of permeable asphalt. Permeable pavers require a 2 3/8-inch minimum surface layer of permeable pavers or the manufacturer's reommendations.
☐	Use appropriate thickness and material for bedding layer for vehicular loading.	Permeable concrete requires 4 inches of crushed rock as a choker layer. Permeable asphalt requires a 3-inch minimum layer of crushed rock as a base course, and 4 inches of crushed rock as a choker layer Permeable pavers require a 2-inch layer of crushed rock as a base course, and 4 inches of crushed rock as a choker layer.
☐	No erodible areas drain on to permeable pavement. In addition, permeable pavement shall not be placed in an area with significant overhanging trees or other vegetation.	Minimizes clogging. Sediment, leaves and organic debris can clog the pavement surface.

	Siting and Design	*Intent/Rationale*
☐	Show system slope and direction of slope on plans.	Ensures the system functions properly. Typically, the system is only suitable on flat slope.
☐	Show cross-section of system assembly with complete dimensions and detailing on plans.	Ensures that the system gets constructed and functions properly.
☐	Specific maintenance program on plans – e.g., debris removal, vacuum sweeping twice per year, resetting pavers as needed.	Ensures system remains permeable.
☐	Note on plans: "No sealant shall be applied to constructed Permeable surfaces."	The purpose is to allow stormwater to percolate through the permeable surfaces.
☐	When finish grade of the permeable pavement has a slope of 10% or less, bench subgrade to have a slope of 0% per Standard Drawing for Permeable Pavements Elevation (Terraced Slope) in Appendix K. Distance between steps is determined by the slope of the pavement to achieve a step no more than 12" tall. The manufacturer's recommendations for permeable pavers may supersede the benching described above.	Avoids concentrated flows downstream.
☐	When Finish grade of the permeable pavement has a slope of 10% or more, bench subgrade to have a slope of 0% per Standard Drawing for Permeable Pavements Elevation (Terraced Slope) in Appendix K. Distance between steps is determined by the slope of the pavement to achieve a step no more than 12" tall. The manufacturer's recommendations for permeable pavers may supersede the benching described above. Consult with the appropriate fire jurisdiction for surfacing requirements.	Avoids concentrated flows downstream.
☐	Geotextile or filter course layer may be provided along perimeter.	Geotextile or filter course layer can prevent natural soil from clogging aggregate voids.

Siting and Design		*Intent/Rationale*
☐	No impervious liners or moisture barriers.	Infiltration of stormwater into native soils, if allowable, can aid in pollutant removal and groundwater recharge, mimicking natural drainage characteristics as similar to pervious surface.
☐	Natural soil beneath shall be well-draining with minimal compaction; no underdrains allowed.	Infiltration of stormwater into native soils, if allowable, can aid in pollutant removal and groundwater recharge, mimicking natural drainage characteristics as similar to pervious surface.
☐	Concrete divider strip shall be provided between system and adjacent impervious materials and as edge restraints.	Provides structural stability.
☐	Fire district must verify system is acceptable to support fire apparatus.	Allows for a safe access in case of an emergency
☐	System may not disturb underground utilities.	Underground utilities have specific requirements and guidelines for clearances.
☐	Paver gaps, changes in elevation, and slopes must meet accessibility requirements if applicable.	Provides accessibility and complies with ADA requirements if applicable.
☐	Permeable pavers are not to be used in areas of high traffic volume.	Pavers are not intended to be used in areas of high traffic volume and areas where vehicular speed is excessive. Parking areas and low-speed access roads are examples of ideal applications.

Conceptual Design and Sizing Approach for Site Design

1. Determine the areas where permeable pavements can be used in the site design to replace conventional pavements.
2. Stormwater runoff from pervious areas often contribute sediment and lead to clogging and increased maintenance requirements for pervious pavement, and should be avoided to the extent possible. Ideally, at least 90-percent of the area draining to pervious pavement shall be impervious, not including the permeable pavement area itself. Pretreatment, drainage area stabilization, and specific maintenance program are options that County staff will consider for implementation where contributing drainage area is less than 90-percent impervious.

3. The wearing surface shall meet the latest ADA requirements. The wearing surface is the pavement material plus any required bedding layers under the surface and inside of the joints, in accordance with all applicable standard details, specifications and manufacturer recommendations as applicable.
4. Stormwater conveyance from all impervious areas including standard pavement shall, to the extent feasible, drain to permeable pavement as sheet flow. Otherwise pre-treatment for energy dissipation and sediment control may be required where any concentrated flow is directed onto pervious pavement. Level spreaders may be designed to convert concentrated flow to sheet flow into the pervious pavement facility.
5. When the ratio of total drainage area (including permeable pavement) to area of permeable pavement is 1.5:1 or less and all other design requirements of this Fact Sheet are satisfied, a DMA is considered self-retaining for pollutant control only. A DMA cannot satisfy hydromodification management performance standards using permeable pavement as a Site Design BMP.

Maintenance Overview

Normal Expected Maintenance. Routine maintenance of permeable pavement includes: removal of materials such as trash and debris accumulated on the paving surface; vacuuming of the paving surface to prevent clogging; and flushing paving and subsurface gravel to remove fine sediment. If the BMP includes underdrains, check and clear underdrains. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. If the permeable pavement area is not drained between storm events, or if runoff sheet flows across the permeable pavement area and flows off the permeable pavement area during storm events, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. During storm events up to the 85th percentile storm event (approximately 0.5 to 1 inch of rainfall in San Diego County), runoff should not flow off the permeable pavement area. The permeable pavement area is expected to have adequate hydraulic conductivity and storage such that rainfall landing on the permeable pavement and runoff from the surrounding drainage area will go directly into the pavement without ponding or overflow (in properly designed systems, the surrounding drainage area is not more than half as large as the permeable pavement area). Following the storm event, there should be no standing water (puddles) on the permeable pavement area.

If storm water is flowing off the permeable pavement during a storm event, or if there is standing water on the permeable pavement surface following a storm event, this is an indicator of clogging somewhere within the system. Poor drainage can result from clogging of the permeable surface layer, any of the subsurface components, or the subgrade soils. The specific cause of the drainage issue must be determined and corrected. Surface or subsurface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required. If poor drainage persists after flushing of the paving, subsurface gravel, and/or underdrain(s) when applicable, or if it is determined that the underlying soils do not have the infiltration capacity expected, County staff shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations. Site design BMPs, such as permeable pavement, installed within a new development or redevelopment project are components of an overall storm water management strategy for the project. The presence of site design BMPs within a project is usually a factor in the determination of the amount of runoff to be managed with structural BMPs (i.e., the amount of runoff expected to reach downstream retention or biofiltration basins that process storm water runoff from the project as a whole). When site design BMPs are not maintained or are removed, this can lead to clogging or failure of downstream structural BMPs due to greater delivery of runoff and pollutants than intended for the structural BMP. Therefore, County staff may require confirmation of maintenance of site design BMPs as part of their structural BMP maintenance documentation requirements. Site design BMPs that have been installed as part of the project should not be removed, nor should they be bypassed by re-routing roof drains or re-grading surfaces within the project. If changes are necessary, consult County staff to determine requirements.

The runoff storage and infiltration surface area in this BMP are not readily accessible because they are subsurface. This means that clogging and poor drainage are not easily corrected. If the tributary area draining to the BMP includes unpaved areas, the sediment load from the tributary drainage area can be too high, reducing BMP function or clogging the BMP. All unpaved areas within the tributary drainage area should be stabilized with vegetation. Other pretreatment components to prevent transport of sediment to the paving surface, such as grass buffer strips, will extend the life of the subsurface components and infiltration surface. Along with proper stabilization measures and pretreatment within the tributary area, routine maintenance including preventive vacuum/regenerative air street sweeping, is key to preventing clogging.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Preventive vacuum/regenerative air street sweeping	Pavement should be swept with a vacuum power or regenerative air street sweeper to maintain infiltration through paving surface	• Schedule/perform this preventive action at least twice per year.
Accumulation of sediment, litter, or debris on permeable pavement surface	Remove and properly dispose of accumulated materials. Inspect tributary area for exposed soil or other sources of sediment and apply stabilization measures to sediment source areas. Apply source control measures as applicable to sources of litter or debris.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Weeds growing on/through the permeable pavement surface	Remove weeds and add features as necessary to prevent weed intrusion. Use non-chemical methods (e.g., instead of pesticides, control weeds using mechanical removal, physical barriers, and/or physical changes in the surrounding area adjacent to pavement that will preclude weed intrusion into the pavement).	• Inspect monthly. • Remove any weeds found at each inspection.
Standing water in permeable paving area following a storm event, or runoff is observed overflowing off the permeable paving surface during a storm event	This condition requires investigation of why infiltration is not occurring. If feasible, corrective action shall be taken to restore infiltration (e.g., pavement should be swept with a vacuum power or regenerative air street sweeper to restore infiltration rates, clear underdrains if underdrains are present). BMP may require retrofit if infiltration cannot be restored. The County reviewer shall be contacted prior to any repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying soils do not have the infiltration capacity expected, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Damage to permeable paving surface (e.g., cracks, settlement, misaligned paver blocks, void spaces between paver blocks need fill materials replenished)	Repair or replace damaged surface as appropriate.	• Inspect annually. • Maintain when needed.

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E.6 SD-E Rain Barrels



Photo Credit: San Diego Low Impact Development Design Manual

MS4 Permit Category

Site Design

Manual Category

Site Design

Applicable Performance Standard

Site Design

Primary Benefits

Description

Rain barrels are containers that can capture rooftop runoff and store it for future use. With controlled timing and volume release, the captured rainwater can be used for irrigation or alternative grey water between storm events, thereby reducing runoff volumes and associated pollutants to downstream waterbodies. Rain barrels tend to be smaller systems, less than 100 gallons, and have low installation costs. Treatment can be achieved when rain barrels are used as part of a treatment train along with other BMPs that use captured flows in applications that do not result in discharges into the storm drain system. Rooftops are the ideal tributary areas for rain barrels. Due to San Diego's arid climate, some rain barrels may fill only a few times each year.

Typical Rain Barrel Components
Storage container, barrel or tank for holding captured flows
Inlet and associated valves and piping
Outlet and associated valves and piping
Overflow outlet
Optional pump
Optional first flush diverters
Optional roof, supports, foundation, level indicator, and other accessories

Design Adaptations for Project Goals

Site design BMP to reduce effective impervious area and DCV. Barrels can be used as a site design feature to reduce the effective impervious area of the site by removing roof runoff from the site discharge. This can reduce the DCV and flow control requirements for the site.

Conceptual Design and Sizing Approach for Site Design

1. Determine the areas where rain barrels can be used in the site design to capture roof runoff to reduce the DCV. Rain barrels reduce the effective impervious area of the site by removing roof runoff from the site discharge.

2. Calculate the DCV per Appendix B.2, taking into account reduced runoff from permeable pavement areas. Credit can be taken for the full rain barrel volume when each barrel volume is smaller than 100 gallons, and meet the following criteria: total rain barrel volume is less than 0.25 DCV and landscape areas are greater than 30 percent of the project footprint. Credit for harvest and use systems that do not meet the above criteria must be based on the criteria in Appendix B.3 and HU-1 fact sheet.

Maintenance Overview

Normal Expected Maintenance. Rain barrels can be expected to accumulate some debris that is small enough to pass through the inlet into the storage container. Leaves may accumulate at the inlet. Ancillary parts including valves, piping, screens, level indicators, and other accessories will wear and require occasional replacement. Maintenance of a rain barrel generally involves: removing accumulated debris from the inlet and storage container on a routine basis; and replacement of ancillary parts on an as-needed basis. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet. If the system includes a pump, maintenance of the pump shall be based on the manufacturer's recommended maintenance plan.

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The inlet is found to be obstructed at every inspection such that storm water bypasses the rain barrel. The rain barrel is not functioning properly if it is not capturing storm water. This would require addition of ancillary features to protect the inlet, such as screens on roof gutters.
- The rain barrel is not drained between storm events. If the rain barrel is not drained between storm events, the storage volume will be diminished and the rain barrel will not capture the required volume of storm water from subsequent storms. This would require implementation of practices onsite to drain and use the stored water, or a different BMP if onsite use cannot be reliably sustained.

Other Special Considerations. Site design BMPs, such as rain barrels, installed within a new development or redevelopment project are components of an overall storm water management strategy for the project. The presence of site design BMPs within a project is usually a factor in the determination of the amount of runoff to be managed with structural BMPs (i.e., the amount of runoff expected to reach downstream retention or biofiltration basins that process storm water runoff from the project as a whole). When site design BMPs are not maintained or are removed, this can lead to clogging or failure of downstream structural BMPs due to greater delivery of runoff and pollutants than intended for the structural BMP. Therefore, the County reviewer may require confirmation of maintenance of site design BMPs as part of their structural BMP maintenance documentation requirements. Site design BMPs that have been installed as part of the project should not be removed, nor should they be bypassed by re-routing roof drains or re-grading surfaces within the project. If changes are necessary, consult the County reviewer to determine requirements.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

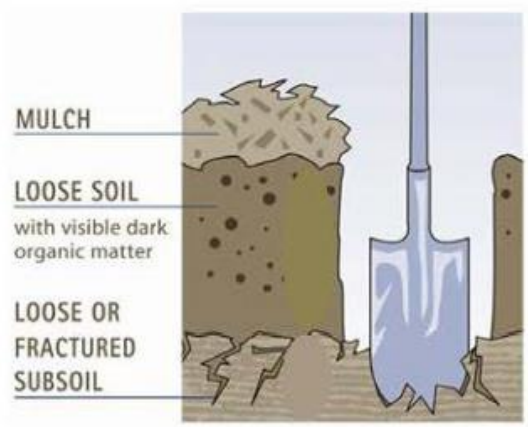
Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of debris at the inlet	Remove and properly dispose of accumulated materials.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Outlet blocked	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Accumulation of debris in the storage container	Remove and properly dispose of accumulated materials.	• Inspect twice per year. • Maintain when needed.
Leaks or other damage to storage container	Repair or replace as applicable.	• Inspect twice per year. • Maintain when needed.
Standing water in storage container between storm events outside of normal use timeframe for the stored water. Normal use timeframe is 36 to 96 hours following a storm event.	Use the water as intended, or disperse to landscaping.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by using the water as intended for irrigation or alternative grey water, or by or dispersing to landscaping; second, check outlet for blockage and clear blockage if applicable to restore drainage; third, install barriers such as screens that prevent mosquito access to the storage container.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Leaks or other damage to ancillary parts including valves, piping, screens, level indicators, and other accessories	Repair or replace as applicable.	• Inspect twice per year. • Maintain when needed.
Rain barrel leaning or unstable, damage to roof, supports, anchors, or foundation	Make repairs as appropriate to correct the problem and stabilize the system.	• Inspect twice per year. • Maintain when needed.

E.7 SD-F Amended Soil

Image Credit: WDOE Guidelines and Resources for Implementing Amended Soil BMP T5.13



MS4 Permit Category
Site Design
Manual Category
Site Design
Applicable Performance Standard
Site Design
Primary Benefits
Volume Reduction Peak Flow Attenuation

Description

Amended soils are soils whose physical, chemical, and biological characteristics have been altered from the natural condition to promote beneficial storm water characteristics. Amended soils shall be used as part of SD-B Impervious Area Dispersion, where applicable. Typical storm water management benefits associated with amended soils include:

- **Improved hydrologic characteristics**—amended soils can promote infiltration, decrease runoff rates and volumes, and more effectively filter pollutants from storm water runoff
- **Improved vegetation health**—amended soils provide greater moisture retention, and altered chemical and biological characteristics that can result in healthier plant growth, reduced irrigation demands, and reduced need for fertilization and maintenance
- **Reduced erosion**—amended soils produce healthier plant growth and reduced runoff which results in reduced soil erosion

Not all amended soils have the same storm water benefits, the soil amendment used should be suited for the design purpose and design period of the amended area.

Design Adaptations for Project Goals

Amended soil primarily functions as a site design BMP for reducing the effective imperviousness of a site by providing partial or full infiltration of the flows that are routed to amended soil areas and otherwise slowing down excess flows that eventually reach the storm drain system. Amended soil is used in conjunction with SD-B Impervious Area Dispersion.

Varying categories of soil amendments have different benefits and applications. Mulch is a soil amendment that is added at grade, rather than mixed into the soil. Mulch reduces evaporation and improves retention. Shavings and compost are common soil amendments that improve biological and chemical properties of the soil. Sand can be used as an amendment to improve the drainage rates of amended soils. Native soil samples may need to be analyzed by a lab to determine the specific soil amendments needed to achieve the desired infiltration, retention, and/or filtration rates.

Amending soil per these guidelines is not the same as preservation of naturally occurring topsoil and vegetation. However, amending soil will improve on-site management of storm water flow and water quality.

Design Criteria and Considerations

Soil amendments must meet the following design criteria and considerations. Deviations from the below criteria may be approved at the discretion of the County reviewer if appropriate:

	Siting and Design	***Intent/Rationale***
□	Mulch is applied at grade over all planting areas to a depth of 3".	Mulch should be applied on top and not mixed into underlying soils
□	Shavings or compost are rototilled into the native soil to a minimum depth of 6" (12 inches preferred).	If soil is not completely mixed the overall benefit will be reduced.
□	Compost meets the criteria in Appendix F.2 Section 803-5.1	If poor quality compost is used, it will have negative impact to water quality.
□	Soil amendments are free of stones, stumps, roots, glass, plastic, metal, and other deleterious materials.	Large debris in amended soils can cause localized erosion. Trash/harmful materials can result in personal injury or contamination.
□	Mixing of soils are done prior to planting	Soil mixing before planting results in a more homogeneous mixing and will reduce the stress on plants.
□	Care is taken around existing trees and shrubs to prevent root damage during construction and soil amendment application.	Preservation of existing established vegetation is an important part of site design and erosion control.
□	Soil amendments are applied at the end of construction	Soil amendments applied too soon in the construction process may become over compacted reducing effectiveness.
□	Soil amendments are compatible with planned vegetation	The soil amendments impact the pH and salinity of the soil. Some plants have sensitive pH and/or salinity tolerance ranges.

Conceptual Design and Sizing Approach for Site Design

- When soil amendments are used a runoff factor of 0.1 can be used for DCV calculation for the amended area.
- Amended soils should be used as part of SD-B Impervious Area Dispersion, and to increase the retention volume in other BMPs.

Maintenance

Annual maintenance may be required to determine reapplication requirements of amended soils. Amended soils should be regularly inspected for signs of compaction, waterlogging, and unhealthy vegetation.

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E.8 HU-1 Cistern



Photo Credit: Water Environment Research Foundation: WERF.org

MS4 Permit Category

Retention

Manual Category

Harvest and Use

Applicable Performance Standards

Pollutant Control
Flow Control

Primary Benefits

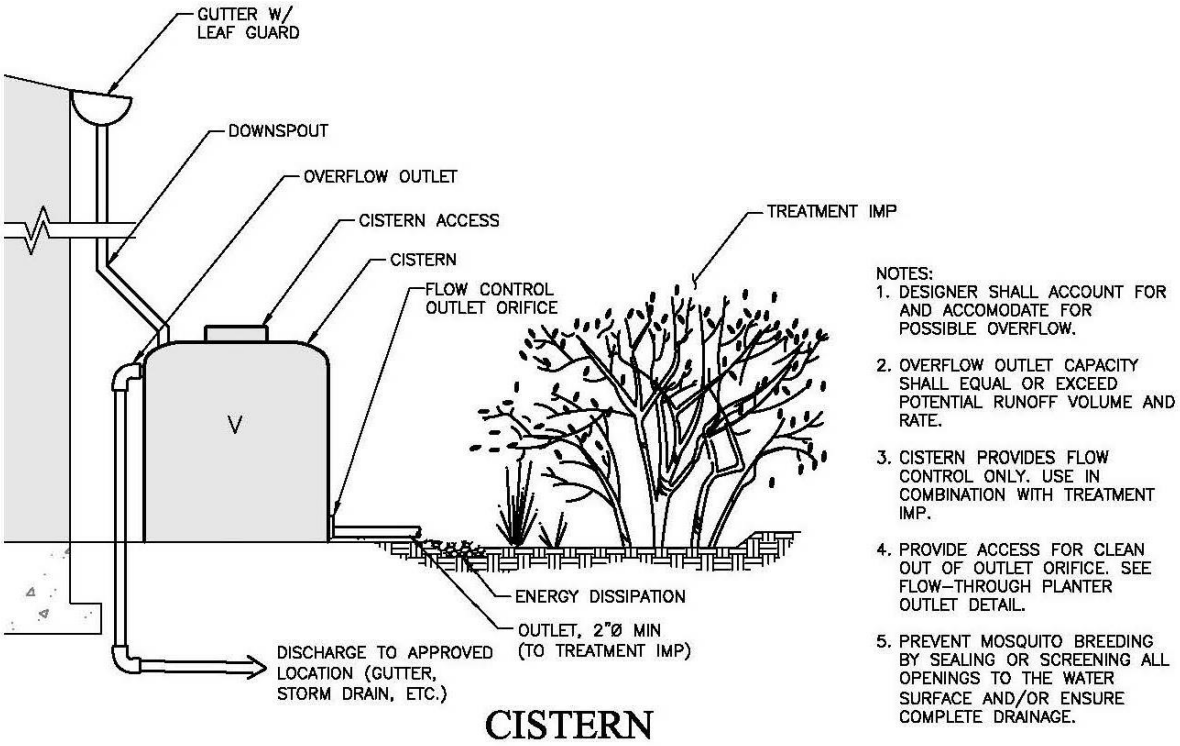
Volume Reduction
Peak Flow Attenuation

Description

Cisterns are containers that can capture rooftop runoff and store it for future use. With controlled timing and volume release, the captured rainwater can be used for irrigation or alternative grey water between storm events, thereby reducing runoff volumes and associated pollutants to downstream water bodies. Cisterns are larger systems (generally>100 gallons) that can be self-contained aboveground or below ground systems. Treatment can be achieved when cisterns are used as part of a treatment train along with other BMPs that use captured flows in applications that do not result in discharges into the storm drain system. Rooftops are the ideal tributary areas for cisterns.

Typical cistern components include:

- Storage container, barrel or tank for holding captured flows
- Inlet and associated valves and piping
- Outlet and associated valves and piping
- Overflow outlet
- Optional pump
- Optional first flush diverters
- Optional roof, supports, foundation, level indicator, and other accessories



Source: City of San Diego Storm Water Standards

Design Adaptations for Project Goals

Site design BMP to reduce effective impervious area and DCV. Cisterns can be used as a site design feature to reduce the effective impervious area of the site by removing roof runoff from the site discharge. This can reduce the DCV and flow control requirements for the site.

Harvest and use for storm water pollutant control. Typical uses for captured flows include irrigation, toilet flushing, cooling system makeup, and vehicle and equipment washing.

Integrated storm water flow control and pollutant control configuration. Cisterns provide flow control in the form of volume reduction and/or peak flow attenuation and storm water treatment through elimination of discharges of pollutants. Additional flow control can be achieved by sizing the cistern to include additional detention storage and/or real-time automated flow release controls.

Design Criteria and Considerations

Cisterns must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

Siting and Design		*Intent/Rationale*
☐	Cisterns are sized to detain the full DCV of contributing area and empty within 36 hours.	Draining the cistern makes the storage volume available to capture the next storm. The applicant has an option to use a different drawdown time up to 120 hours if the volume of the facility is adjusted using the percent capture method in Appendix B.4.1.
☐	Cisterns are fitted with a flow control device such as an orifice or a valve to limit outflow in accordance with drawdown time requirements.	Flow control provides flow attenuation benefits and limits cistern discharge to downstream facilities during storm events.
☐	Cisterns are designed to drain completely, leaving no standing water, and all entry points are fitted with traps or screens, or sealed.	Complete drainage and restricted entry prevents mosquito habitat.
☐	Leaf guards and/or screens are provided to prevent debris from accumulating in the cistern.	Leaves and organic debris can clog the outlet of the cistern.
☐	Access is provided for maintenance and the cistern outlets are accessible and designed to allow easy cleaning.	Properly functioning outlets are needed to maintain proper flow control in accordance with drawdown time requirements.
☐	Cisterns must be designed and sited such that overflow will be conveyed safely overland to the storm drain system or discharge point.	Safe overflow conveyance prevents flooding and damage of property.

Conceptual Design and Sizing Approach for Site Design and Storm Water Pollutant Control

1. Calculate the DCV for site design per Appendix B.
2. Determine the locations on the site where cisterns can be located to capture and detain the DCV from roof areas without subsequent discharge to the storm drain system. Cisterns are best located in close proximity to building and other roofed structures to minimize piping. Cisterns can also be used as part of a treatment train upstream by increasing pollutant control through delayed runoff to infiltration BMPs such as bioretention without underdrain facilities.
3. Use the sizing worksheet in Appendix B.3 to determine if full or partial capture of the DCV is achievable.
4. The remaining DCV to be treated should be calculated for use in sizing downstream BMP(s).

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or duration will typically require significant cistern volumes, and therefore the following steps should be taken prior to determination of site design and storm water pollutant control. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that cistern siting and design criteria have been met. Design for flow control can be achieved using various design configurations, shapes, and quantities of cisterns.
2. Iteratively determine the cistern storage volume required to provide detention storage to reduce flow rates and durations to allowable limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control valve operation.
3. Verify that the cistern is drawdown within 36 hours. The drawdown time can be estimated by dividing the storage volume by the rate of use of harvested water.
4. If the cistern cannot fully provide the flow rate and duration control required by this manual, a downstream structure with additional storage volume or infiltration capacity such as a biofiltration can be used to provide remaining flow control.

Maintenance Overview

Normal Expected Maintenance. Cisterns can be expected to accumulate sediment and debris that is small enough to pass through the inlet into the storage container. Larger debris such as leaves or trash may accumulate at the inlet. While the storage container is generally a permanent structure, ancillary parts including valves, piping, screens, level indicators, and other accessories will wear and require occasional replacement. Maintenance of a cistern generally involves: removing accumulated sediment and debris from the inlet and storage container on a routine basis; and replacement of ancillary parts on an as-needed basis. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet. If the system as a whole includes a pump or other electrical equipment, maintenance of the equipment shall be based on the manufacturer's recommended maintenance plan.

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The inlet is found to be obstructed at every inspection such that storm water bypasses the cistern. The cistern is not functioning properly if it is not capturing storm water. This would require addition of ancillary features to protect the inlet, or pretreatment measures within the watershed draining to the cistern to intercept larger debris, such as screens on roof gutters, or drainage inserts within catch basins. Increase the frequency of inspection until the issue is resolved.

- Accumulation of sediment within one year is greater than 25% of the volume of the cistern. This means the sediment load from the tributary drainage area has diminished the storage volume of the cistern and the cistern will not capture the required volume of storm water. This would require pretreatment measures within the tributary area draining to the cistern to intercept sediment.
- The cistern is not drained between storm events. If the cistern is not drained between storm events, the storage volume will be diminished and the cistern will not capture the required volume of storm water from subsequent storms. This would require implementation of practices onsite to drain and use the stored water, or a different BMP if onsite use cannot be reliably sustained.

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Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris at the inlet	Remove and properly dispose of accumulated materials.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Outlet blocked	Clear blockage. Remove any accumulated materials	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris in the storage container	Remove and properly dispose of accumulated materials.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove materials annually (minimum), or more frequently when BMP is 25% full* (or at manufacturer threshold if manufacturer threshold is less than 25% full*) in less than one year, or if accumulation blocks outlet
Standing water in storage container between storm events outside of normal use timeframe for the stored water. Normal use timeframe is 36 to 96 hours following a storm event depending on the purpose and design of the cistern.	Use the water as intended, or disperse to landscaping. Implement practices onsite to drain and use the stored water. Contact the County reviewer to determine a solution if onsite use cannot be reliably sustained.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by using the water as intended for irrigation or alternative grey water, or by dispersing to landscaping; second, check cistern outlet for blockage and clear blockage if applicable to restore drainage; third, install barriers such as screens that prevent mosquito access to the storage container.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Leaks or other damage to ancillary parts including valves, piping, screens, level indicators, and other accessories	Repair or replace as applicable.	• Inspect twice per year. • Maintain when needed.
Leaks or other damage to storage container	Repair or replace as applicable.	• Inspect twice per year. • Maintain when needed.
Cistern leaning or unstable, damage to roof, supports, anchors, or foundation	Make repairs as appropriate to correct the problem and stabilize the system.	• Inspect twice per year. • Maintain when needed.

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E.9 INF-1 Infiltration Basin



MS4 Permit Category
Retention

Manual Category
Infiltration

Applicable Performance Standard
Pollutant Control
Flow Control

Primary Benefits
Volume Reduction
Peak Flow Attenuation

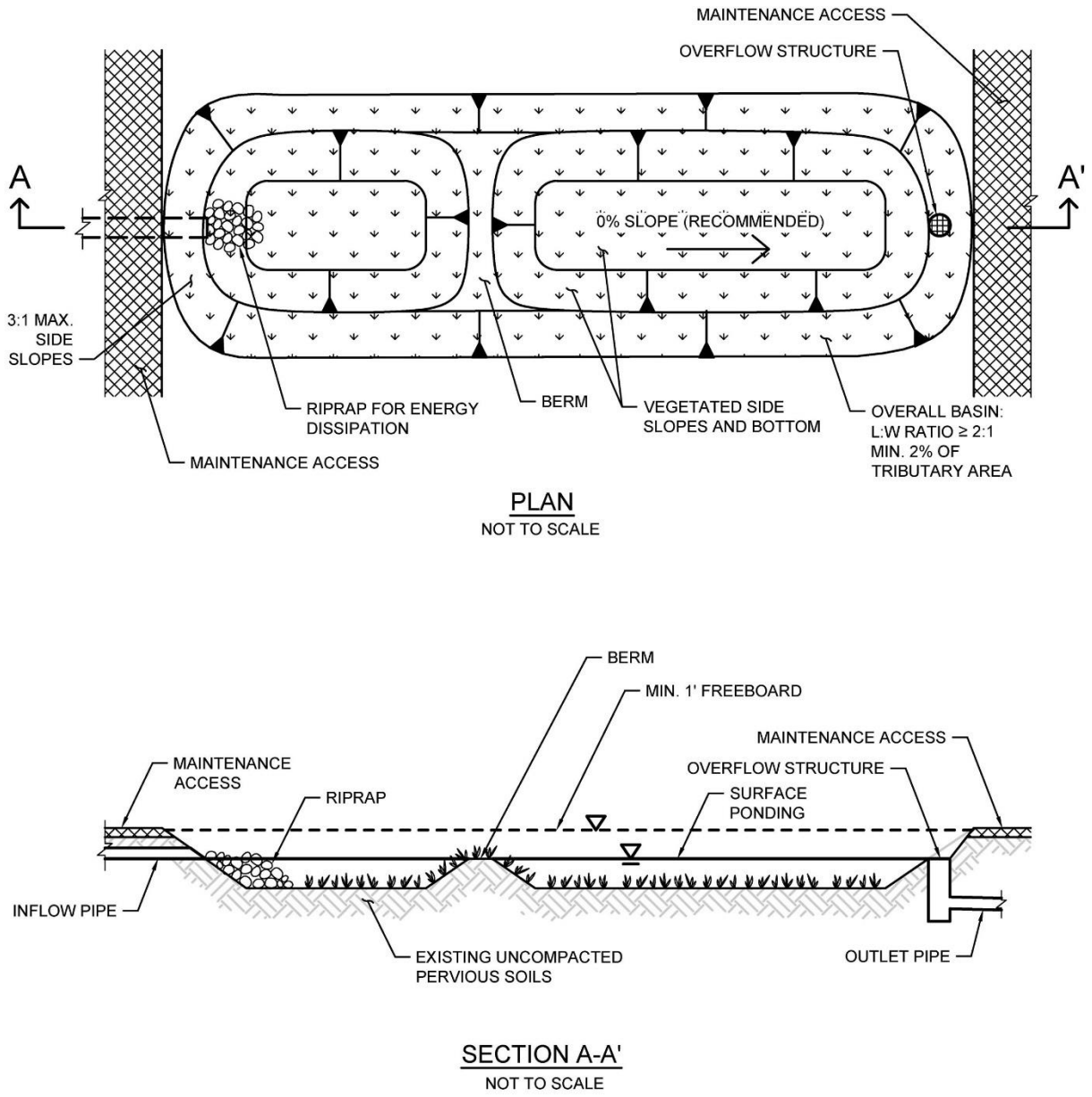
Photo Credit: http://www.storm waterpartners.com/facilities/basin.html

Description

An infiltration basin typically consists of an earthen basin with a flat bottom constructed in naturally pervious soils. An infiltration basin retains storm water and allows it to evaporate and/or percolate into the underlying soils. The bottom of an infiltration basin is typically vegetated with native grasses or turf grass; however other types of vegetation can be used if they can survive periodic inundation and long inter-event dry periods. Treatment is achieved primarily through infiltration, filtration, sedimentation, biochemical processes and plant uptake. Infiltration basins can be constructed as linear **trenches** or as **underground infiltration galleries**.

Typical infiltration basin components include:

- Inflow distribution mechanisms (e.g., perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Forebay to provide pretreatment surface ponding for captured flows, other pretreatment mechanisms may be used if they meet the requirements included in Appendix J.5.
- Vegetation selected based on basin use, climate, and ponding depth
- Uncompacted native soils at the bottom of the facility
- Overflow structure



Typical plan and section view of an Infiltration BMP

Design Adaptations for Project Goals

Full infiltration BMP for storm water pollutant control. Infiltration basins can be used as a pollutant control BMP, designed to infiltrate runoff from direct rainfall as well as runoff from adjacent areas that are tributary to the BMP. Infiltration basins must be designed with an infiltration storage volume (a function of the surface ponding volume) equal to the full DCV and able to meet drawdown time limitations.

Integrated storm water flow control and pollutant control configuration. Infiltration basins can also be designed for flow rate and duration control by providing additional infiltration storage through increasing the surface ponding volume.

Design Criteria and Considerations

Infiltration basins must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

	Siting and Design	***Intent/Rationale***
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	Selection and design of basin is based on infiltration feasibility criteria and appropriate design infiltration rate (See Appendix B and D).	Must operate as a full infiltration design and must be supported by drainage area and in-situ infiltration rate feasibility findings.
☐	Finish grade of the facility is ≤ 2% (0% recommended).	Flatter surfaces reduce erosion and channelization with the facility.
☐	Settling forebay has a volume ≥ 25% of facility volume below the forebay overflow.	A forebay to trap sediment can decrease frequency of required maintenance.
☐	Infiltration of surface ponding is limited to a 36-hour drawdown time.	Prolonged surface ponding reduces volume available to capture subsequent storms. The applicant has an option to use a surface drawdown time of up to 96 hours if the volume of the facility is adjusted using the percent capture method in Appendix B.4.1.
☐	Minimum freeboard provided is ≥1 foot.	Freeboard minimizes risk of uncontrolled surface discharge.
☐	Side slopes are = 3H:1V or shallower.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.

Inflow and Overflow Structures

☐	Inflow and outflow structures are accessible by required equipment (e.g., vactor truck) for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.

Siting and Design		*Intent/Rationale*
☐	Inflow velocities are limited to 3 ft/s or less or use energy dissipation methods (e.g., riprap, level spreader) for concentrated inflows.	High inflow velocities can cause erosion, scour and/or channeling.
☐	Overflow is safely conveyed to a downstream storm drain system or discharge point. Size overflow structure to pass 100-year peak flow for on-line basins and water quality peak flow for off-line basins.	Planning for overflow lessens the risk of property damage due to flooding.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control

To design infiltration basins for storm water pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and design criteria have been met, including placement and basin area requirements, forebay volume (not included in infiltration footprint for sizing), and maximum slopes for basin sides and bottom.
2. Calculate the DCV per Appendix B based on expected site design runoff for tributary areas.
3. Use the sizing worksheet (Appendix B.4) to determine if full infiltration of the DCV is achievable based on the infiltration storage volume calculated from the surface ponding area and depth for a maximum 36-hour drawdown time. The drawdown time can be estimated by dividing the average depth of the basin by the design infiltration rate. Appendix D provides guidance on evaluating a site's infiltration rate.

Conceptual Design and Sizing Approach for Storm Water Pollutant Treatment and Flow Control

Control of flow rates and/or durations will typically require significant surface ponding volume, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that siting and design criteria have been met, including placement and basin area requirements, forebay volume (not included in infiltration footprint for sizing), and maximum slopes for basin sides and bottom.
2. Iteratively determine the surface ponding required to provide infiltration storage to reduce flow rates and durations to allowable limits while adhering to the maximum 36-hour drawdown time. Flow rates and durations can be controlled using flow splitters that route the appropriate inflow amounts to the infiltration basin and bypass excess flows to the

downstream storm drain system or discharge point.

3. If an infiltration basin cannot fully provide the flow rate and duration control required by this manual, an upstream or downstream structure with appropriate storage volume such as an underground vault can be used to provide additional control.
4. After the infiltration basin has been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.

Maintenance Overview

Normal Expected Maintenance. Infiltration basins require routine maintenance to: remove accumulated materials such as sediment, trash or debris from the forebay and the basin; maintain vegetation health if the BMP includes vegetation; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface or subsurface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the underlying native soils, or clogging of covers applied at the basin surface such as topsoil, mulch, or rock layer. The specific cause of the drainage issue must be determined and corrected. For surface-level basins (i.e., not underground infiltration galleries), surface cover materials can be removed and replaced, and/or native soils can be scarified or tilled to help reestablish infiltration. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, or if the infiltration surface area is not accessible (e.g., an underground infiltration gallery) the County reviewer shall be contacted prior to any additional repairs or reconstruction.

- Sediment, trash, or debris accumulation has filled the forebay or other pretreatment device within one month, or if no forebay or other pretreatment device is present, has filled greater than 25% of the surface ponding volume within one maintenance cycle. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require adding a forebay or other pretreatment measures within the tributary area draining to the BMP to intercept the materials if no pretreatment component is present, or increased maintenance frequency for an existing forebay or other pretreatment device. Pretreatment components, especially for sediment, will extend the life of the infiltration basin.

- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding

erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations. If the infiltration basin is vegetated: Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, routine maintenance is key to preventing this scenario

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Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris in forebay and/or basin	Remove and properly dispose of accumulated materials, (without damage to vegetation when applicable).	• Inspect monthly. If the forebay is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found within the infiltration area at each inspection. • When the BMP includes a forebay, materials must be removed from the forebay when the forebay is 25% full*, or if accumulation within the forebay blocks flow to the infiltration area.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Poor vegetation establishment (when the BMP includes vegetated surface by design)	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Dead or diseased vegetation (when the BMP includes vegetated surface by design)	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation (when the BMP includes vegetated surface by design)	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Standing water in infiltration basin without subsurface infiltration gallery for longer than 24-96 hours following a storm event	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or removing/replacing clogged or compacted surface treatments and/or scarifying or tilling native soils. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Standing water in subsurface infiltration gallery for longer than 24-96 hours following a storm event	This condition requires investigation of why infiltration is not occurring. If feasible, corrective action shall be taken to restore infiltration (e.g., flush fine sediment or remove and replace clogged soils). BMP may require retrofit if infiltration cannot be restored. The County reviewer shall be contacted prior to any repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. For subsurface infiltration galleries, ensure access covers are tight fitting, with gaps or holes no greater than 1/16 inch, and/or install barriers such as inserts or screens that prevent mosquito access to the subsurface storage. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.

"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

E.10 INF-2 Bioretention



Photo Credit: Ventura County Technical Guidance Document

MS4 Permit Category
Retention

Manual Category
Infiltration

Applicable Performance Standard
Pollutant Control
Flow Control

Primary Benefits
Volume Reduction
Treatment
Peak Flow Attenuation

Description

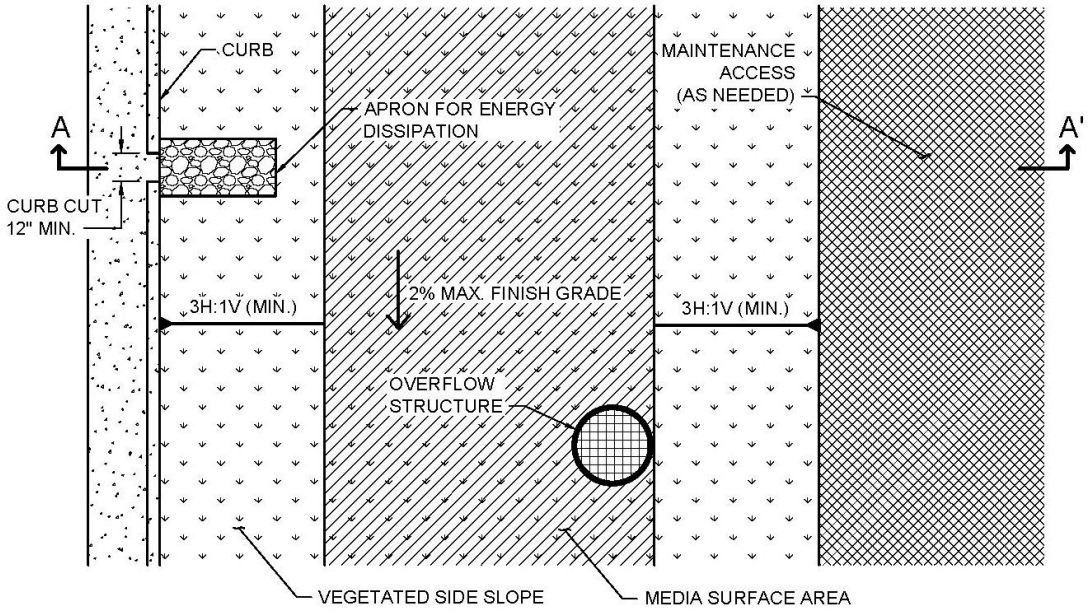
Bioretention (bioretention without underdrain) facilities are vegetated surface water systems that filter water through vegetation and soil, or engineered media prior to infiltrating into native soils. These facilities are designed to infiltrate the full DCV. Bioretention facilities are commonly incorporated into the site within parking lot landscaping, along roadsides, and in open spaces. They can be constructed inground or partially aboveground, such as planter boxes with open bottoms (no impermeable liner at the bottom) to allow infiltration. Treatment is achieved through filtration, sedimentation, sorption, infiltration, biochemical processes and plant uptake.

Typical bioretention without underdrain components include:

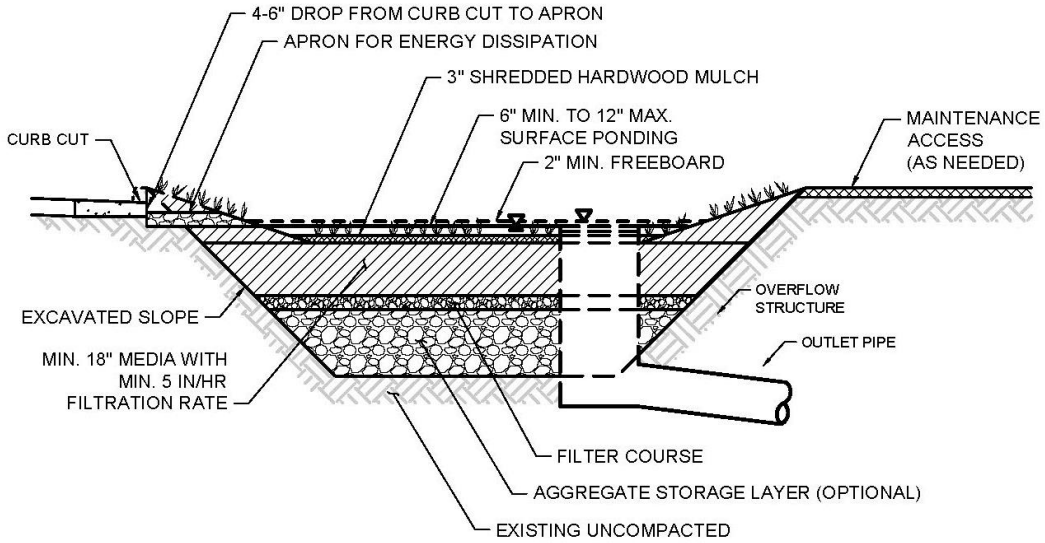
- Inflow distribution mechanisms (e.g, perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side slope and basin bottom vegetation selected based on expected climate and ponding depth
- Non-floating mulch layer
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the optional aggregate storage layer
- Optional aggregate storage layer for additional infiltration storage
- Uncompacted native soils at the bottom of the facility
- Overflow structure

Design Adaptations for Project Goals

- **Full infiltration BMP for storm water pollutant control.** Bioretention can be used as a pollutant control BMP designed to infiltrate runoff from direct rainfall as well as runoff from adjacent tributary areas. Bioretention facilities must be designed with an infiltration storage volume (a function of the ponding, media and aggregate storage volumes) equal to the full DCV and able to meet drawdown time limitations.
- **Integrated storm water flow control and pollutant control configuration.** Bioretention facilities can be designed to provide flow rate and duration control. This may be accomplished by providing greater infiltration storage with increased surface ponding and/or aggregate storage volume for storm water flow control.



PLAN
NOT TO SCALE



SECTION A-A'
NOT TO SCALE

Typical plan and section view of a Bioretention BMP

Recommended Siting Criteria

Bioretention must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

Siting Criteria		*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	Selection and design of BMP is based on infiltration feasibility criteria and appropriate design infiltration rate presented in Appendix B and D.	Must operate as a full infiltration design and must be supported by drainage area and in-situ infiltration rate feasibility findings.
☐	Contributing tributary area is ≤ 5 acres (≤ 1 acre preferred).	Bigger BMPs require additional design features for proper performance. Contributing tributary area greater than 5 acres may be allowed at the discretion of County staff if the following conditions are met: 1) incorporate design features (e.g. flow spreaders) to minimize short circuiting of flows in the BMP and 2) incorporate additional design features requested by County staff for proper performance of the regional BMP.
☐	Finish grade of the facility is ≤ 2%. In long bioretention facilities where the potential for internal erosion and channelization exists, the use of check dams is required.	Flatter surfaces reduce erosion and channelization within the facility. Internal check dams reduce velocity and dissipate energy.

Design Criteria and Considerations

Bioretention must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

Siting and Design		*Intent/Rationale*
Surface Ponding		
☐	Surface ponding is limited to a 24-hour drawdown time.	24-hour drawdown time is recommended for plant health. Surface ponding drawdown time greater than 24-hours but less than 96 hours may be allowed at the discretion of County staff if certified by a landscape architect or agronomist.

	Siting and Design	***Intent/Rationale***
☐	Surface ponding depth is ≥ 6 and ≤ 12 inches.	Surface ponding capacity lowers subsurface storage requirements. Deep surface ponding raises safety concerns. Surface ponding depth greater than 12 inches (for additional pollutant control or surface outlet structures or flow-control orifices) may be allowed at the discretion of County staff if the following conditions are met: 1) surface ponding depth drawdown time is less than 24 hours; and 2) safety issues and fencing requirements are considered (typically ponding greater than 18" will require a fence and/or flatter side slopes) and 3) potential for elevated clogging risk is considered.
☐	A minimum of 2 inches of freeboard is provided.	Freeboard provides room for head over overflow structures and minimizes risk of uncontrolled surface discharge.
☐	Side slopes are stabilized with vegetation and are ≥ 3H: 1V.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.
Vegetation		
☐	Plantings are suitable for the climate and expected ponding depth. A plant list to aid in selection can be found in Appendix F.	Plants suited to the climate and ponding depth are more likely to survive.
☐	An irrigation system with a connection to water supply is provided as needed.	Seasonal irrigation might be needed to keep plants healthy.
Mulch (Mandatory)		
☐	3 inches of shredded hardwood mulch. Mulch must be non-floating to avoid clogging of overflow structure.	Mulch will suppress weeds and maintain moisture for plant growth.

Siting and Design		*Intent/Rationale*
Media Layer		
☐	Media maintains a minimum filtration rate of 5 in/hr over lifetime of facility. A minimum initial filtration rate of 10 in/hr is recommended.	A high filtration rate through the soil mix minimizes clogging potential and allows flows to quickly enter the aggregate storage layer, thereby minimizing bypass.
☐	Media is a minimum 18 inches deep, meeting either of these two media specifications: Media Specifications listed in Appendix F-3 Biofiltration Soil Media (BSM) **or** County of San Diego Low Impact Development Handbook: Appendix G - Bioretention Soil Specification (June 2014, unless superseded by more recent edition).	A deep media layer provides additional filtration and supports plants with deeper roots. Standard specifications must be followed.
☐	Alternatively, for proprietary designs and custom media mixes not meeting the media specifications contained in the County LID Handbook, the media meets the pollutant treatment performance criteria in Section F.1.1.	For non-standard or proprietary designs, compliance with F.1.1 ensures that adequate treatment performance will be provided.
☐	Media surface area is 3% of contributing area times adjusted runoff factor or greater.	Greater surface area to tributary area ratios decrease loading rates per square foot and therefore increase longevity. Adjusted runoff factor is to account for site design BMPs implemented upstream of the BMP (such as rain barrels, impervious area dispersion, etc.). Refer to Appendix B guidance. If media surface area is under 3% of contributing area, refer to Sediment Loading calculations in Appendix B.
Filter Course Layer (Optional)		
☐	A filter course is used to prevent migration of fines through layers of the facility. Filter fabric is not used.	Migration of media can cause clogging of the aggregate storage layer void spaces or subgrade. Filter fabric is more likely to clog.

	Siting and Design	***Intent/Rationale***
☐	Filter course is a minimum of 6 inches thick provided in two separate 3 inch layers. The top layer shall be made of ASTM C33 choker sand and the bottom layer shall be of ASTM No. 8 aggregate. Marker stakes shall be used to ensure uniform lift thickness.	To prevent reduction of the available storage volume that would lead to clogging of the underdrain and native soil beneath the BMP.
☐	Filter course is washed and free of fines.	Washing aggregate will help eliminate fines that could clog the facility and impede infiltration.
☐	Filter course calculations assessing suitability for particle migration prevention have been completed.	Gradation relationship between layers can evaluate factors (e.g., bridging, permeability, and uniformity) to determine if particle sizing is appropriate or if an intermediate layer is needed.
	Aggregate Storage Layer (Optional)	
☐	Class 2 Permeable per Caltrans specification 68-1.025 is recommended for the storage layer. Washed, open-graded crushed rock may be used, however a 4-6 inch washed pea gravel filter course layer at the top of the crushed rock is required.	Washing aggregate will help eliminate fines that could clog the aggregate storage layer void spaces or subgrade.
☐	Maximum aggregate storage layer depth is determined based on the infiltration storage volume that will infiltrate within a 36-hour drawdown time.	A maximum drawdown time to facilitate provision of adequate storm water storage for the next storm event. The applicant has an option to use a different drawdown time of up to 120 hours if the volume of the facility is adjusted using the percent capture method in Appendix B.4.1.
	Inflow and Overflow Structures	
☐	Inflow and overflow structures are accessible for inspection and maintenance. Overflow structures must be connected to downstream storm drain system or appropriate discharge point.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.

Siting and Design		*Intent/Rationale*
☐	Inflow velocities are limited to 3 ft/s or less or use energy dissipation methods (e.g., riprap, level spreader) for concentrated inflows.	High inflow velocities can cause erosion, scour and/or channeling.
☐	Curb cut inlets are at least 12 inches wide, have a 4-6 inch reveal (drop) and an apron and energy dissipation as needed.	Inlets must not restrict flow and apron prevents blockage from vegetation as it grows in. Energy dissipation prevents erosion.
☐	Overflow is safely conveyed to a downstream storm drain system or discharge point. Size overflow structure to pass 100-year peak flow for on-line basins and water quality peak flow for off-line basins.	Planning for overflow lessens the risk of property damage due to flooding.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design bioretention for storm water pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and design criteria have been met, including placement and basin area requirements, maximum side and finish grade slope, and the recommended media surface area tributary ratio.
2. Calculate the DCV per Appendix B based on expected site design runoff for tributary areas.
3. Use the sizing worksheet to determine if full infiltration of the DCV is achievable based on the available infiltration storage volume calculated from the bioretention without underdrain footprint area, effective depths for surface ponding, media and aggregate storage layers, and in-situ soil design infiltration rate for a maximum 36-hour drawdown time for the aggregate storage layer (unless percent capture method is used), with surface ponding no greater than a maximum 24-hour drawdown. The drawdown time can be estimated by dividing the average depth of the basin by the design infiltration rate of the underlying soil. Appendix D provides guidance on evaluating a site's infiltration rate. A generic sizing worksheet is provided in Appendix B.4.
4. Where the DCV cannot be fully infiltrated based on the site or bioretention constraints, an underdrain can be added to the design (use biofiltration with partial retention factsheet).

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or durations will typically require significant surface ponding and/or aggregate storage volumes, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations must be determined as discussed in Chapter 6 of the manual.

1. Verify that siting and design criteria have been met, including placement requirements, maximum side and finish grade slopes, and the recommended media surface area tributary area ratio. Design for flow control can be achieved using various design configurations.
2. Iteratively determine the facility footprint area, surface ponding and/or aggregate storage layer depth required to provide infiltration storage to reduce flow rates and durations to allowable limits while adhering to the maximum drawdown times for surface ponding and aggregate storage. Flow rates and durations can be controlled using flow splitters that route the appropriate inflow amounts to the bioretention facility and bypass excess flows to the downstream storm drain system or discharge point.
3. If bioretention without underdrain facility cannot fully provide the flow rate and duration control required by the MS4 permit, an upstream or downstream structure with appropriate storage volume such as an underground vault can be used to provide additional control.
4. After bioretention without underdrain BMPs have been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.

Maintenance Overview

Normal Expected Maintenance. Bioretention requires routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; maintain infiltration capacity of the media layer; replenish mulch; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underlying native soils, or outlet structure. The specific cause of the drainage issue must be determined and corrected. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials. Pretreatment components, especially for sediment, will extend the life of components that are more expensive to replace

such as media, filter course, and aggregate layers.

- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations. Bioretention is a vegetated structural BMP. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the **potential** to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, routine maintenance is key to preventing this scenario.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation or compaction of the media layer.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
2/3 of mulch has decomposed, or mulch has been removed	Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches.	• Inspect monthly. • Replenish mulch annually, or more frequently when needed based on inspection.
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or repairing/replacing clogged or compacted soils. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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E.11 INF-3 Permeable Pavement (Pollutant Control)



Location: Kellogg Park, San Diego, California

MS4 Permit Category

Retention
Flow-thru Treatment Control

Manual Category

Infiltration
Flow-thru Treatment Control

Applicable Performance Standard

Pollutant Control
Flow Control

Primary Benefits

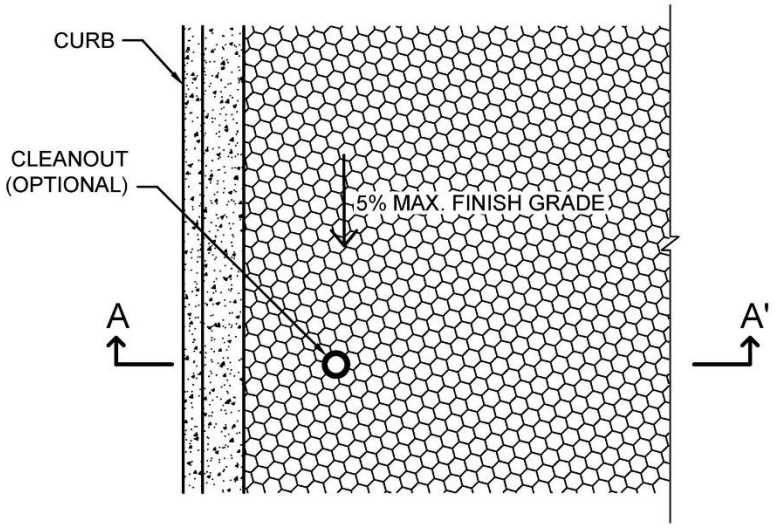
Volume Reduction
Peak Flow Attenuation

Description

Permeable pavement is pavement that allows for percolation through void spaces in the pavement surface into subsurface layers. The subsurface layers are designed to provide storage of storm water runoff so that outflows, primarily via infiltration into subgrade soils or release to the downstream conveyance system, can be at controlled rates. Varying levels of storm water treatment and flow control can be provided depending on the size of the permeable pavement system relative to its drainage area, the underlying infiltration rates, and the configuration of outflow controls. Pollutant control permeable pavement is designed to receive runoff from a larger tributary area than site design permeable pavement (see SD-D). Pollutant control is provided via infiltration, filtration, sorption, sedimentation, and biodegradation processes. Permeable pavements proposed as a retention or partial retention BMP should not have an impermeable liner.

Typical permeable pavement components include, from top to bottom:

- Permeable surface layer
- Bedding layer for permeable surface
- Aggregate storage layer with optional underdrain(s)
- Optional final filter course layer over uncompacted existing subgrade



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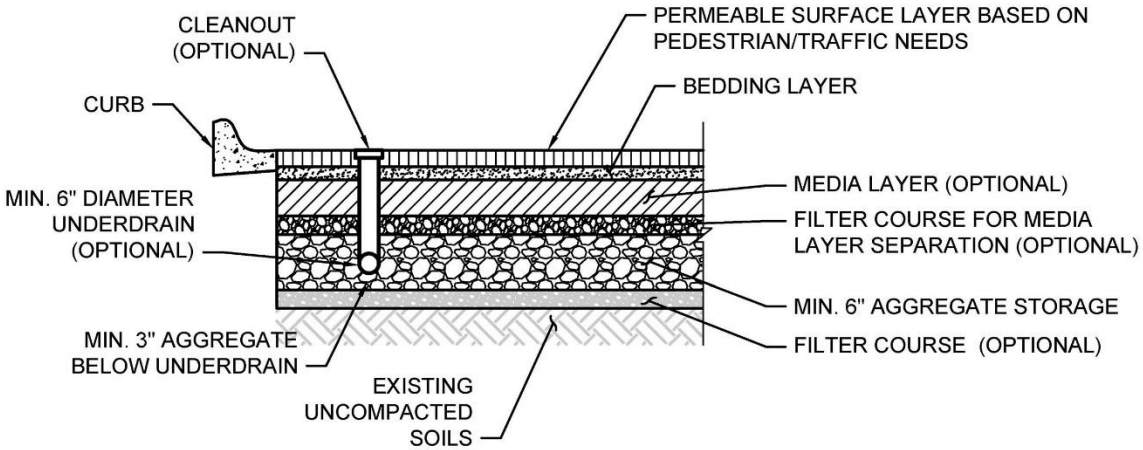

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Typical plan and Section view of a Permeable Pavement BMP

Subcategories of permeable pavement include modular paver units or paver blocks, pervious concrete, porous asphalt, and turf pavers. These subcategory variations differ in the material used for the permeable surface layer but have similar functions and characteristics below this layer.

Design Adaptations for Project Goals

Site design BMP to reduce impervious area and DCV. See site design option SD-D.

Full infiltration BMP for storm water pollutant control. Permeable pavement without an underdrain and without impermeable liners can be used as a pollutant control BMP, designed to infiltrate runoff from direct rainfall as well as runoff from adjacent areas that are tributary to the pavement. The system must be designed with an infiltration storage volume (a function of the aggregate storage volume) equal to the full DCV and able to meet drawdown time limitations.

Partial infiltration BMP with flow-thru treatment for storm water pollutant control. Permeable pavement can be designed so that a portion of the DCV is infiltrated by providing an underdrain with infiltration storage below the underdrain invert. The infiltration storage depth should be determined by the volume that can be reliably infiltrated within drawdown time limitations. Water discharged through the underdrain is considered flow-thru treatment and is not considered biofiltration treatment. Storage provided above the underdrain invert is included in the flow-thru treatment volume.

Flow-thru treatment BMP for storm water pollutant control. The system may be lined and/or installed over impermeable native soils with an underdrain provided at the bottom to carry away filtered runoff. Water quality treatment is provided via unit treatment processes other than infiltration. This configuration is considered to provide flow-thru treatment, not biofiltration treatment. Significant aggregate storage provided above the underdrain invert can provide detention storage, which can be controlled via inclusion of an orifice in an outlet structure at the downstream end of the underdrain. **PDPs have the option to add saturated storage to the flow-thru configuration in order to reduce the DCV that the BMP is required to treat.** Saturated storage can be added to this design by including an upturned elbow installed at the downstream end of the underdrain or via an internal weir structure designed to maintain a specific water level elevation. The DCV can be reduced by the amount of saturated storage provided.

Integrated storm water flow control and pollutant control configuration. With any of the above configurations, the system can be designed to provide flow rate and duration control. This may include having a deeper aggregate storage layer that allows for significant detention storage above the underdrain, which can be further controlled via inclusion of an outlet structure at the downstream end of the underdrain.

Design Criteria and Considerations

Permeable Pavement (Pollutant Control BMP) must meet the following design criteria and be consistent with the County of San Diego Green Streets Design Criteria and Green Streets Standard Drawings in Appendix K. Deviations. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

Siting and Design		*Intent/Rationale*
☐	The structural section is in accordance with the manufacturer's guidance and project soils engineering's recommendations. Overflow and storm drain lines may still be required.	Ensures that the permeable pavement facility can be designed to provide adequate drainage system.
☐	No erodible areas drain on to permeable pavement. In addition, permeable pavement shall not be placed in an area with significant overhanging trees or other vegetation.	Minimizes clogging. Sediment, leaves and organic debris can clog the pavement surface.
☐	Show system slope and direction of slope on plans.	Ensures the system functions properly. Typically, the system is only suitable on flat slope.
☐	Show cross section of system assembly with complete dimensions and detailing on plans.	Ensures that the system gets constructed and functions properly.
☐	Specify maintenance programs on plans ~ e.g., debris removal, vacuum sweeping twice per year, resetting pavers as needed.	Ensures system remains permeable.
☐	Note on plans: "No sealant shall be applied to constructed Permeable surfaces".	The purpose is to allow stormwater to percolate through the permeable surfaces.
☐	Geotextile or filter course layer may be provided along perimeter	Geotextile or filter course layer can prevent natural soil from clogging aggregate voids.
☐	Concrete divider strip shall be provided between system and adjacent impervious materials and as edge restraints.	Provides structural stability.
☐	Fire district must verify system is acceptable to support fire apparatus	Allows for a safe access in case of an emergency.
☐	System may not disturb underground utilities.	Underground utilities have specific requirements and guidelines for clearance.
☐	Paver gaps, changes in elevation, and slopes, must meet accessibility requirements if applicable.	Provides accessibility and complies with ADA requirements if applicable.

Siting and Design		*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	Selection must be based on infiltration feasibility criteria.	Full or partial infiltration designs must be supported by drainage area feasibility findings.
☐	For pollutant control permeable pavement, the ratio of the total drainage area (including the permeable pavement) to the permeable pavement should not exceed 4:1.	Higher ratios increase the potential for clogging but may be acceptable for relatively clean tributary areas.
☐	Finish grade of the permeable pavement has a slope ≤ 2%.	Flatter surfaces facilitate increased runoff capture.
☐	Contributing tributary area includes effective sediment source control and/or pretreatment measures such as raised curbed or grass filter strips	Sediment can clog the pavement surface.
☐	Observation wells are required for facilities without an underdrain and shall be shown on design plans. Observation wells shall be installed at the downstream end and spaced at 100 foot maximum intervals. An observation well consists of a well-anchored, perforated 6 inch (diameter) PVC pipe that extends vertically to the bottom of the reservoir layer. The observation well should be fitted with a lockable cap installed flush with the ground surface (or under the pavers) to facilitate periodic inspection and maintenance.	The observation well is used to observe the rate of drawdown within the reservoir layer following a storm event
☐	Overflow conveyance shall be designed to convey larger storms to existing or new storm drain systems adjacent to the permeable pavement.	Flood prevention.
☐	Direct discharges to permeable pavement are only from downspouts carrying "clean" roof runoff that are equipped with filters to remove gross solids.	Roof runoff typically carries less sediment than runoff from other impervious surfaces and is less likely to clog the pavement surface.

	Siting and Design	***Intent/Rationale***
	Permeable Surface Layer	
☐	Permeable surface layer type is appropriately chosen based on pavement use and expected vehicular loading.	Pavement may wear more quickly if not durable for expected loads or frequencies.
☐	Permeable pavers are not to be used in areas of high traffic volume.	Pavers are not intended to be used in areas of high traffic volume and areas where vehicular speed is excessive. Parking areas and low-speed access roads are examples of ideal applications.
☐	Use appropriate thickness for permeable surface layer for vehicular loading.	Permeable concrete requires a 6-inch minimum surface layer of permeable concrete. Permeable asphalt requires a 1 ½ - inch minimum surface layer of permeable asphalt Permeable pavers require a 2 3/8-inch minimum surface layer of permeable pavers.
☐	Permeable surface layer type is appropriate for expected pedestrian traffic.	Expected demographic and accessibility needs (e.g., adults, children, seniors, runners, high-heeled shoes, wheelchairs, strollers, bikes) requires selection of appropriate surface layer type that will not impede pedestrian needs.
☐	When finish grade of the permeable pavement has a slope of 2% or less, bench subgrade to have a slope of 0% per Standard Drawing for Permeable Pavements Elevation (Terraced Slope) in Appendix K. Distance between steps is determined by the slope of the pavement to achieve a step no more than 12" tall.	Avoids concentrated flows downstream while helping achieve DCV requirements.
☐	When finish grade of the permeable pavement has a slope of more than 2% but less than 10%, add check dams within the reservoir/aggregate layer per Standard Drawing for Permeable Pavements Elevation (Terraced slope with Check Dams) in Appendix K.	Avoids concentrated flows downstream while helping achieve DCV requirements.

Siting and Design		***Intent/Rationale***
☐	When Finish grade of the permeable pavement has a slope of 10% or more, add check dams within the reservoir/aggregate layer per Standard Drawing for Permeable Pavements Elevation (Terraced Slope with Check Dams) in Appendix K. Consult with the appropriate fire jurisdiction for surfacing requirements.	Avoids concentrated flows downstream while helping achieve DCV requirements.
☐	Minimum depth to groundwater and bedrock ≥ 10 ft.	A minimum separation facilitates infiltration and lessens the risk of negative groundwater impacts.
Bedding Layer for Permeable Surface		
☐	Use appropriate thickness and material for bedding layer for vehicular loading.	Permeable concrete requires 4 inches of crushed rock as a choker layer. Permeable asphalt requires a 3-inch minimum layer of crushed rock as a base course, and 4 inches of crushed rock as a choker layer Permeable pavers require a 2-inch layer of crushed rock as a base course, and 4 inches of crushed rock as a choker layer or the manufacturer's recommendations.
☐	Aggregate used for bedding layer is washed prior to placement.	Washing aggregate will help eliminate fines that could clog the permeable pavement system aggregate storage layer void spaces or underdrain.
Media Layer (Optional) –used between bedding layer and aggregate storage layer to provide pollutant treatment control		
☐	The pollutant removal performance of the media layer is documented by the project proponent.	Media used for BMP design should be shown via research or testing to be appropriate for expected pollutants of concern and flow rates.
☐	A filter course is provided to separate the media layer from the aggregate storage layer.	Migration of media can cause clogging of the aggregate storage layer void spaces or underdrain.

	Siting and Design	***Intent/Rationale***
☐	If a filter course is used, calculations assessing suitability for particle migration prevention have been completed.	Gradation relationship between layers can evaluate factors (e.g., bridging, permeability, and uniformity) to determine if particle sizing is appropriate or if an intermediate layer is needed.
☐	Consult permeable pavement manufacturer to verify that media layer provides required structural support.	Media must not compromise the structural integrity or intended uses of the permeable pavement surface.
	Aggregate Storage Layer	
☐	Minimum layer depth is 6 inches and for infiltration designs, the maximum depth is determined based on the infiltration storage volume that will infiltrate within a 36-hour drawdown time.	A minimum depth of aggregate provides structural stability for expected pavement loads. The applicant has an option to use a different drawdown time of up to 120 hours if the volume of the facility is adjusted using the percent capture method in Appendix B.4.1
☐	When finish grade is less than 2%, bench subgrade to have a slope of 0%. Distance between steps is determined by the slope of the pavement to achieve a step no more than 12" tall.	Avoids concentrated flows downstream.
☐	When finish grade is more than 2%, use check dams within the aggregate/storage layer. Check dam material options include waterproof membrane, PVC sheeting, and concrete. A transverse underdrain may be needed due to the width of the permeable pavement facility.	Use of membranes and sheeting are the most cost effective and generally preferred options
☐	Aggregate used for the aggregate storage layer is washed and free of fines.	Washing aggregate will help eliminate fines that could clog aggregate storage layer void spaces or underdrain
	Underdrain and Outflow Structures	
☐	Underdrains and outflow structures, if used, are accessible for inspection and maintenance.	Maintenance will improve the performance and extend the life of the permeable pavement system.

Siting and Design		*Intent/Rationale*
☐	Underdrain outlet elevation should be a minimum of 3 inches above the bottom elevation of the aggregate storage layer.	A minimal separation from subgrade or the liner lessens the risk of fines entering the underdrain and can improve hydraulic performance by allowing perforations to remain unblocked.
☐	Minimum underdrain diameter is 6 inches.	Smaller diameter underdrains are prone to clogging. Subsurface drainage is recommended beneath all vehicular use permeable pavement installations unless elimination of the underdrain is expressly approved by County staff. Permeable pavement may be installed without underdrain in areas with no traffic volume if infiltration results are good and underdrain connections are not feasible.
☐	Underdrains are made of slotted, PVC pipe conforming to ASTM D 3034 or equivalent or corrugated, HDPE pipe conforming to AASHTO 252M or equivalent.	Slotted underdrains provide greater intake capacity, clog resistant drainage, and reduced entrance velocity into the pipe, thereby reducing the chances of solids migration.
☐	For sites where the native soil design infiltration rate is sufficient to drain the DCV within 36 hours, elevate the underdrain to be above the DCV.	Use of a raised underdrain is encouraged and provides enhanced retention. An alternative approach to a raised underdrain is an underdrain with an up-turned elbow outlet.
☐	Clean-outs are required for all permeable pavement facilities with underdrains. Clean-outs shall be spaced at 100 foot maximum intervals. Where a storm drain structure such as a catch basin, manhole, or overflow structure is within 100 feet of a clean-out, it will serve the same function as a clean-out.	Clean-outs provide ease of maintenance thus prolonging the life of the facility and reducing the frequency of more intensive maintenance procedures.
Filter Course (Optional)		
☐	Filter course is washed and free of fines.	Washing aggregate will help eliminate fines that could clog subgrade and impede infiltration.

Conceptual Design and Sizing Approach for Site Design

1. Determine the areas where permeable pavement can be used in the site design to replace traditional pavement to reduce the impervious area and DCV. These permeable pavement areas can be credited toward reducing runoff generated through representation in storm water calculations as pervious, not impervious, areas but are not credited for storm water pollutant control. These permeable pavement areas should be designed as self-retaining with the appropriate tributary area ratio identified in the design criteria.
2. Calculate the DCV per Appendix B, taking into account reduced runoff from self-retaining permeable pavement areas.
3. Stormwater runoff from pervious areas often contribute sediment and lead to clogging and increased maintenance requirements for pervious pavement, and should be avoided to the extent possible. Ideally, at least 90-percent of the area draining to pervious pavement shall be impervious, not including the permeable pavement area itself. Pretreatment, drainage area stabilization, and specific maintenance program are options that County staff will consider for implementation where contributing drainage area is less than 90-percent impervious.
4. The wearing surface shall meet the latest ADA requirements. The wearing surface is the pavement material plus any required bedding layers under the surface and inside of the joints, in accordance with all applicable standard details, specifications and manufacturer recommendations as applicable.
5. Stormwater conveyance from all impervious areas including standard pavement shall, to the extent feasible, drain to permeable pavement as sheet flow. Otherwise pre-treatment for energy dissipation and sediment control may be required where any concentrated flow is directed onto pervious pavement. Level spreaders may be designed to convert concentrated flow to sheet flow into the pervious pavement facility.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design permeable pavement for storm water pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and design criteria have been met, including placement requirements, maximum finish grade slope, and the recommended tributary area ratio for non-self-retaining permeable pavement. If infiltration is infeasible, the permeable pavement can be designed as flow-thru treatment per the sizing worksheet. If infiltration is feasible, calculations should follow the remaining design steps.
2. Calculate the DCV per Appendix B based on expected site design runoff for tributary areas.
3. Use the sizing worksheet to determine if full or partial infiltration of the DCV is achievable based on the available infiltration storage volume calculated from the permeable pavement footprint, aggregate storage layer depth, and in-situ soil design infiltration rate for a maximum 36-hour drawdown time. The applicant has an option to use a different drawdown time up to

120 hours if the volume of the facility is adjusted using the percent capture method in Appendix B.4.1.

4. Where the DCV cannot be fully infiltrated based on the site or permeable pavement constraints, an underdrain must be incorporated above the infiltration storage to carry away runoff that exceeds the infiltration storage capacity.
5. The remaining DCV to be treated should be calculated for use in sizing downstream BMP(s).

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or durations will typically require significant aggregate storage volumes, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that siting and design criteria have been met, including placement requirements, maximum finish grade slope, and the recommended tributary area ratio for non-self-retaining permeable pavement. Design for flow control can be achieving using various design configurations, but a flow-thru treatment design will typically require a greater aggregate storage layer volume than designs which allow for full or partial infiltration of the DCV.
2. Iteratively determine the area and aggregate storage layer depth required to provide infiltration and/or detention storage to reduce flow rates and durations to allowable limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control levels. Multi-level orifices can be used within an outlet structure to control the full range of flows.
3. If the permeable pavement system cannot fully provide the flow rate and duration control required by this manual, a downstream structure with sufficient storage volume such as an underground vault can be used to provide remaining controls.
4. Designs with a liner on the bottom as required by the Geotechnical Engineer, the minimum slope of the underdrain shall be 0.5 percent.After permeable pavement has been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.

Maintenance Overview

Normal Expected Maintenance. Routine maintenance of permeable pavement includes: removal of materials such as trash and debris accumulated on the paving surface; vacuuming of the paving surface to prevent clogging; and flushing paving and subsurface gravel to remove fine sediment. If the BMP includes underdrains and/or an outflow control structure, check and clear these features.

Non-Standard Maintenance or BMP Failure. If the permeable pavement area is not drained between storm events, or if runoff sheet flows across the permeable pavement area and flows off the permeable pavement area during storm events, the BMP is not performing as intended to protect

downstream waterways from pollution and/or erosion. During storm events up to the 85th percentile storm event (approximately 0.5 to 1 inch of rainfall in San Diego County), runoff should not flow off the permeable pavement area. The permeable pavement area is expected to have adequate hydraulic conductivity and storage such that rainfall landing on the permeable pavement and runoff from the surrounding drainage area will go directly into the pavement without ponding or overflow (in properly designed systems, the surrounding drainage area is not more than half as large as the permeable pavement area). Following the storm event, there should be no standing water (puddles) on the permeable pavement area.

If storm water is flowing off the permeable pavement during a storm event, or if there is standing water on the permeable pavement surface following a storm event, this is an indicator of clogging somewhere within the system. Poor drainage can result from clogging of the permeable surface layer, any of the subsurface components, or the subgrade soils. The specific cause of the drainage issue must be determined and corrected. Surface or subsurface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required. If poor drainage persists after flushing of the paving, subsurface gravel, and/or underdrain(s) when applicable, or if it is determined that the underlying soils do not have the infiltration capacity expected, County staff shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations. The runoff storage and infiltration surface area in this BMP are not readily accessible because they are subsurface. This means that clogging and poor drainage are not easily corrected. If the tributary area draining to the BMP includes unpaved areas, the sediment load from the tributary drainage area can be too high, reducing BMP function or clogging the BMP. All unpaved areas within the tributary drainage area should be stabilized with vegetation. Other pretreatment components to prevent transport of sediment to the paving surface, such as grass buffer strips, will extend the life of the subsurface components and infiltration surface. Along with proper stabilization measures and pretreatment within the tributary area, routine maintenance, including preventive vacuum/regenerative air street sweeping, is key to preventing clogging.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Preventive vacuum/regenerative air street sweeping	Pavement should be swept with a vacuum power or regenerative air street sweeper to maintain infiltration through paving surface	• Schedule/perform this preventive action at least twice per year.
Accumulation of sediment, litter, or debris on permeable pavement surface	Remove and properly dispose of accumulated materials. Inspect tributary area for exposed soil or other sources of sediment and apply stabilization measures to sediment source areas. Apply source control measures as applicable to sources of litter or debris.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Weeds growing on/through the permeable pavement surface	Remove weeds and add features as necessary to prevent weed intrusion. Use non-chemical methods (e.g., instead of pesticides, control weeds using mechanical removal, physical barriers, and/or physical changes in the surrounding area adjacent to pavement that will preclude weed intrusion into the pavement).	• Inspect monthly. • Remove any weeds found at each inspection.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Standing water in permeable paving area or subsurface infiltration gallery for longer than 24-96 hours following a storm event	This condition requires investigation of why infiltration is not occurring. If feasible, corrective action shall be taken to restore infiltration (e.g., pavement should be swept with a vacuum power or regenerative air street sweeper to restore infiltration rates, clear underdrains if underdrains are present). BMP may require retrofit if infiltration cannot be restored. The County reviewer shall be contacted prior to any repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Obstructed underdrain or outlet structure (when the BMP includes outflow control structure for runoff released from subsurface storage via underdrain(s))	Clear blockage.	• Inspect if standing water is observed for longer than 24-96 hours following a storm event. • Maintain when needed.
Damage to structural components of subsurface infiltration gallery such as weirs or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.
Damage to permeable paving surface (e.g., cracks, settlement, misaligned paver blocks, void spaces between paver blocks need fill materials replenished)	Repair or replace damaged surface as appropriate.	• Inspect annually. • Maintain when needed.

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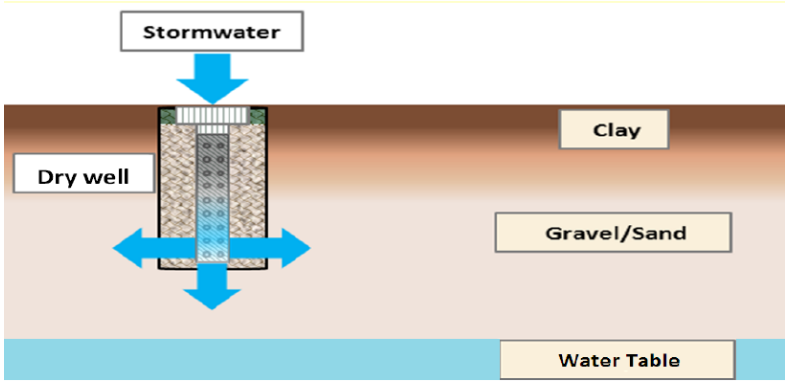
E.12 INF-4 Dry Wells



Source: Cal/EPA Fact Sheet on Dry Wells

MS4 Permit Category
Retention

Manual Category
Infiltration

Applicable Performance Standard
Pollutant Control
Flow Control

Primary Benefits
Volume Reduction

Description

Dry wells are typically designed as gravity-fed pits lined with perforated casing and often backfilled with gravel or stone. Dry wells are intended to penetrate layers of poorly infiltrating soils, such as clays, allowing infiltration into deeper permeable layers. Dry wells can reduce storm water runoff while increasing groundwater recharge. It is recommended that dry wells be used in conjunction with low impact development (LID) practices (or pretreatment) to help reduce potential contaminants to groundwater and aquatic ecosystem. Pretreatment effectiveness is contingent upon proper maintenance. With proper design and maintenance, dry wells not only aid in stormwater runoff reduction, but they can also increase groundwater recharge.

Design Adaptations for Project Goals

Full infiltration BMP for storm water pollutant control. Dry wells can be used as a pollutant control BMP, designed to infiltrate runoff from direct rainfall as well as runoff from adjacent areas that are tributary to the pavement. Dry wells must be designed with an infiltration storage volume equal to the full DCV and able to meet drawdown time limitations.

Integrated storm water flow control and pollutant control configuration. Dry wells can be designed to provide flow rate and duration control. This may be accomplished by providing greater infiltration storage

Criteria and Considerations for Use of a Dry Well as Infiltration BMP

In general, a careful site evaluation conducted by a registered civil engineer and a geologist/geotechnical engineer should be made to determine if the use of a dry well is suitable at any particular location

A dry well may be acceptable as an "infiltration BMP" if it meets **ALL** the following criteria:

- The BMP meets the minimum geotechnical and groundwater investigation requirements listed in Appendix B; and
- The BMP is evaluated by approved infiltration rate assessment methods presented in Appendix D; and
- Implements an appropriate Low Impact Development (LID) practice / pretreatment BMP (refer to Appendix J.5.2 for selection); and
- Dry wells serving lots other than single-family homes are registered with the US EPA. (additional information and registration forms can be found at: https://www.epa.gov/uic).

In designing a dry well, the following items should be considered:

- Depth of dry well – The EPA currently encourages that the well "should not be constructed deeper than the seasonal high water table". As water begins to percolate into an aquifer, it requires a certain holding time in order to filter out contaminants before reaching the water table. This would need to be addressed by a professional geologist/geotechnical engineer.
- Geology – Theoretically the well would be dug through an area of low permeability and into an area that would allow the movement of water into the aquifer. Also, the type of geology and its ability to act as a conduit to the aquifer system would need to be addressed. This assessment would need to be made by a professional geologist/geotechnical engineer (Note: While some areas are conducive to this, vast areas of the County of San Diego have geological conditions not conducive for dry wells).
- Grading – The use of a dry well without the proper grading and back up storm drain system might pose a problem with the ponding of runoff due to the dry well's limited storage capacity and the time it would take to discharge water into the aquifer system. This assessment would need to be made by a professional civil engineer.
- Routine maintenance – Pretreatment effectiveness is contingent upon proper maintenance. Routine maintenance should be provided in order to keep a dry well free of trash/debris, sediments, oil and grease, etc.
- Potential contamination – It is recommended that dry wells be used in conjunction with low impact development (LID) practices (or pretreatment BMPs) to help reduce potential contaminants to groundwater and aquatic ecosystem. Note: The County of San Diego Department of Environmental Health may be able to provide further input.

Note: As indicated on the Cal/EPA Fact Sheet on Dry Wells, there are currently no uniform state regulations or guidelines on dry wells in California. The purpose of this fact sheet is to help explain the role of dry wells in meeting infiltration requirements. Therefore, this fact sheet does not describe specific design criteria like the other fact sheets in this manual. The County of San Diego may develop specific design criteria and include in this fact sheet at a future time.

E.13 PR-1 Biofiltration with Partial Retention



Location: 805 and Bonita Road, Chula vista, CA.

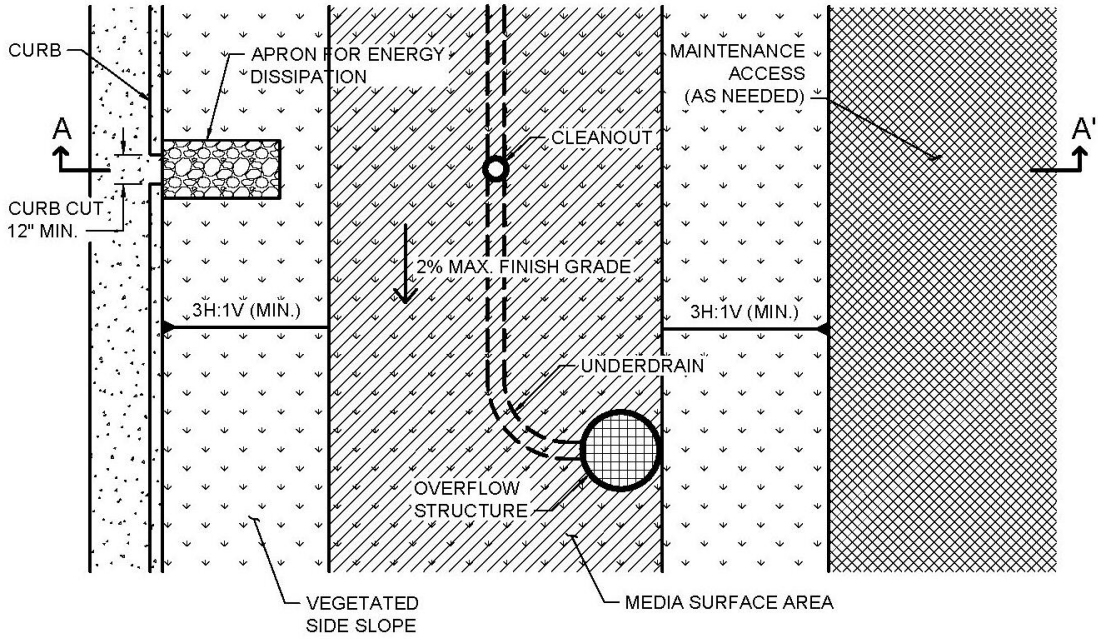
MS4 Permit Category
NA
Manual Category
Partial Retention
Applicable Performance Standard
Pollutant Control
Flow Control
Primary Benefits
Volume Reduction
Treatment
Peak Flow Attenuation

Description

Biofiltration with partial retention (partial infiltration and biofiltration) facilities are vegetated surface water systems that filter water through vegetation, and soil or engineered media prior to infiltrating into native soils, discharge via underdrain, or overflow to the downstream conveyance system. Where feasible, these BMPs have an elevated underdrain discharge point that creates storage capacity in the aggregate storage layer. Biofiltration with partial retention facilities are commonly incorporated into the site within parking lot landscaping, along roadsides, and in open spaces. They can be constructed in ground or partially aboveground, such as planter boxes with open bottoms to allow infiltration. Treatment is achieved through filtration, sedimentation, sorption, infiltration, biochemical processes and plant uptake.

Typical biofiltration with partial retention components include:

- Inflow distribution mechanisms (e.g, perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side Slope and basin bottom vegetation selected based on climate and ponding depth
- Non-floating mulch layer
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the optional aggregate storage layer
- Aggregate storage layer with underdrain(s)
- Uncompacted native soils at the bottom of the facility
- Overflow structure



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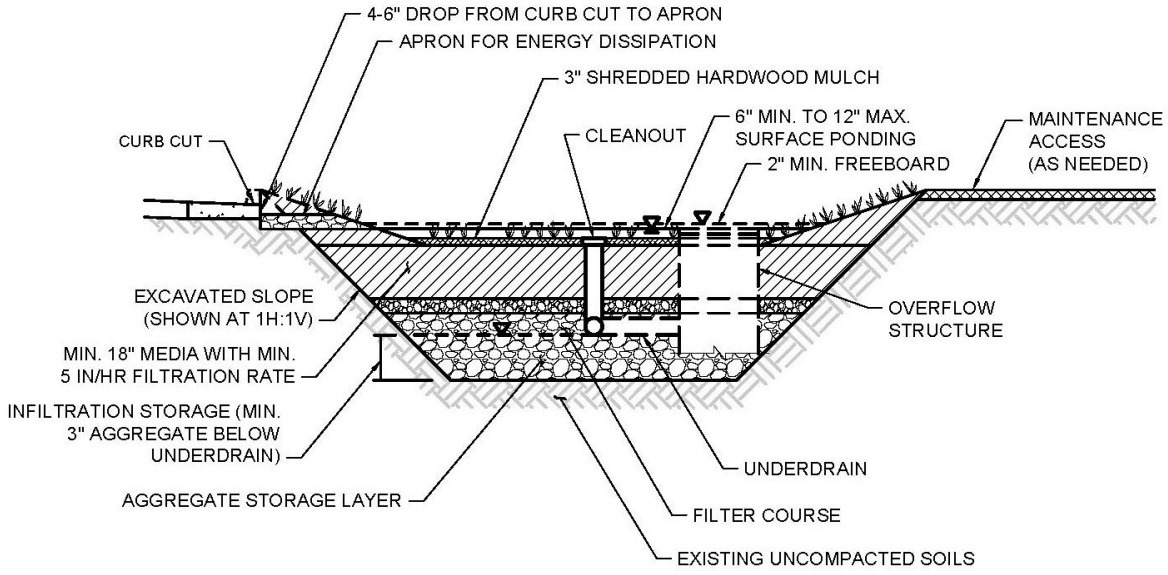

SECTION A-A'
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Typical plan and Section view of a Biofiltration with Partial Retention BMP

Design Adaptations for Project Goals

Partial infiltration BMP with biofiltration treatment for storm water pollutant control. Biofiltration with partial retention can be designed so that a portion of the DCV is infiltrated by providing infiltration storage below the underdrain invert. The infiltration storage depth should be determined by the volume that can be reliably infiltrated within drawdown time limitations. Water discharged through the underdrain is considered biofiltration treatment. Storage provided above the underdrain within surface ponding, media, and aggregate storage is included in the biofiltration treatment volume.

Integrated storm water flow control and pollutant control configuration. The system can be designed to provide flow rate and duration control by primarily providing increased surface ponding and/or having a deeper aggregate storage layer. This will allow for significant detention storage, which can be controlled via inclusion of an orifice in an outlet structure at the downstream end of the underdrain.

Recommended Siting Criteria

	Siting Criteria	*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	Selection and design of basin is based on infiltration feasibility criteria and appropriate design infiltration rate (See Appendix B and D).	Must operate as a partial infiltration design and must be supported by drainage area and in-situ infiltration rate feasibility findings.
☐	Contributing tributary area must be ≤ 5 acres (≤ 1 acre preferred).	Bigger BMPs require additional design features for proper performance. Contributing tributary area greater than 5 acres may be allowed at the discretion of County staff if the following conditions are met: 1) incorporate design features (e.g. flow spreaders) to minimize short circuiting of flows in the BMP and 2) incorporate additional design features requested by County staff for proper performance of the regional BMP.
☐	Finish grade of the facility is ≤ 2%.	Flatter surfaces reduce erosion and channelization within the facility.

Design Criteria and Considerations

Biofiltration with partial retention must meet the following design criteria and considerations. Deviations from the below criteria may be approved at the discretion of the County reviewer if it is determined to be appropriate:

	Design Criteria	***Intent/Rationale***
	Surface Ponding	
☐	Surface ponding is limited to a 24-hour drawdown time.	Surface ponding limited to 24 hours for plant health. Surface ponding drawdown time greater than 24-hours but less than 96 hours may be allowed at the discretion of County staff if certified by a landscape architect or agronomist.
☐	Surface ponding depth is ≥ 6 and ≤ 12 inches.	Surface ponding capacity lowers subsurface storage requirements. Deep surface ponding raises safety concerns. Surface ponding depth greater than 12 inches (for additional pollutant control or surface outlet structures or flow-control orifices) may be allowed at the discretion of County staff if the following conditions are met: 1) surface ponding depth drawdown time is less than 24 hours; and 2) safety issues and fencing requirements are considered (typically ponding greater than 18" will require a fence and/or flatter side slopes) and 3) potential for elevated clogging risk is considered.
☐	A minimum of 2 inches of freeboard is provided.	Freeboard provides room for head over overflow structures and minimizes risk of uncontrolled surface discharge.
☐	Side slopes are stabilized with vegetation and are = 3H:1V or shallower.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.

Design Criteria		*Intent/Rationale*
Vegetation		
☐	Plantings are suitable for the climate and expected ponding depth. A plant list to aid in selection can be found in Appendix F.	Plants suited to the climate and ponding depth are more likely to survive.
☐	An irrigation system with a connection to water supply should be provided as needed.	Seasonal irrigation might be needed to keep plants healthy.
Mulch (Mandatory)		
☐	3 inches of shredded hardwood mulch. Mulch must be non-floating to avoid clogging of overflow structure.	Mulch will suppress weeds and maintain moisture for plant growth.
Media Layer		
☐	Media maintains a minimum filtration rate of 5 in/hr over lifetime of facility. An initial filtration rate of 8 to 12 in/hr is recommended to allow for clogging over time; the initial filtration rate should not exceed 12 inches per hour.	A filtration rate of at least 5 inches per hour allows soil to drain between events, and allows flows to relatively quickly enter the aggregate storage layer, thereby minimizing bypass. The initial rate should be higher than long term target rate to account for clogging over time. However an excessively high initial rate can have a negative impact on treatment performance, therefore an upper limit is needed.
☐	Media is a minimum 18 inches deep, meeting either of these two media specifications: Appendix F.2 Biofiltration Soil Media (BSM) **or** County of San Diego Low Impact Development Handbook: Appendix G - Bioretention Soil Specification (June 2014, unless superseded by more recent edition). Alternatively, for proprietary designs and custom media mixes not meeting the media specifications, the media meets the pollutant treatment performance criteria in Section F.1.1.	A deep media layer provides additional filtration and supports plants with deeper roots. Standard specifications must be followed. For non-standard or proprietary designs, compliance with Appendix F.1.1 ensures that adequate treatment performance will be provided.

Design Criteria		*Intent/Rationale*
☐	Media surface area is 3% of contributing area times adjusted runoff factor or greater. Unless demonstrated that the BMP surface area can be smaller than 3%.	Greater surface area to tributary area ratios: a) maximizes volume retention as required by the MS4 Permit and b) decrease loading rates per square foot and therefore increase longevity. Adjusted runoff factor is to account for site design BMPs implemented upstream of the BMP (such as rain barrels, impervious area dispersion, etc.). Refer to Appendix B guidance. If media surface area is under 3% of contributing area, refer to Sediment Loading calculations in Appendix B.
☐	Where receiving waters are impaired or have a TMDL for nutrients, the system is designed with nutrient sensitive media design (see fact sheet BF-2).	Potential for pollutant export is partly a function of media composition; media design must minimize potential for export of nutrients, particularly where receiving waters are impaired for nutrients.
Filter Course Layer		
☐	A filter course is used to prevent migration of fines through layers of the facility. Filter fabric is not used.	Migration of media can cause clogging of the aggregate storage layer void spaces or subgrade. Filter fabric is more likely to clog.
☐	Filter course is a minimum of 6 inches thick provided in two separate 3 inch layers. The top layer shall be made of ASTM C33 choker sand and the bottom layer shall be of ASTM No. 8 aggregate. Marker stakes shall be used to ensure uniform lift thickness.	To prevent reduction of the available storage volume that would lead to clogging of the underdrain and native soil beneath the BMP.
☐	Filter course is washed and free of fines.	Washing aggregate will help eliminate fines that could clog the facility
☐	Filter course calculations assessing suitability for particle migration prevention have been completed.	Gradation relationship between layers can evaluate factors (e.g., bridging, permeability, and uniformity) to determine if particle sizing is appropriate or if an intermediate layer is needed.

	Design Criteria	*Intent/Rationale*
Aggregate Storage Layer		
☐	Class 2 Permeable per Caltrans specification 68-1.025 is recommended for the storage layer. Washed, open-graded crushed rock may be used, however a 4-6 inch washed pea gravel filter course layer at the top of the crushed rock is required.	Washing aggregate will help eliminate fines that could clog the aggregate storage layer void spaces or subgrade.
☐	Maximum aggregate storage layer depth below the underdrain invert is determined based on the infiltration storage volume that will infiltrate within a 48-hour drawdown time.	A maximum drawdown time is needed for vector control and to facilitate providing storm water storage for the next storm event.
Inflow, Underdrain, and Outflow Structures		
☐	Inflow, underdrains and outflow structures are accessible for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.
☐	Inflow velocities are limited to 3 ft/s or less or use energy dissipation methods. (e.g., riprap, level spreader) for concentrated inflows.	High inflow velocities can cause erosion, scour and/or channeling.
☐	Curb cut inlets are at least 12 inches wide, have a 4-6 inch reveal (drop) and an apron and energy dissipation as needed.	Inlets must not restrict flow and apron prevents blockage from vegetation as it grows in. Energy dissipation prevents erosion.
Inflow, Underdrain, and Outflow Structures		
☐	Underdrain outlet elevation should be a minimum of 3 inches above the bottom elevation of the aggregate storage layer.	A minimal separation from subgrade or the liner lessens the risk of fines entering the underdrain and can improve hydraulic performance by allowing perforations to remain unblocked.
☐	Minimum underdrain diameter is 6 inches.	Smaller diameter underdrains are prone to clogging.
☐	Underdrains are made of slotted, PVC pipe conforming to ASTM D 3034 or equivalent or corrugated, HDPE pipe conforming to AASHTO 252M or equivalent.	Slotted underdrains provide greater intake capacity, clog resistant drainage, and reduced entrance velocity into the pipe, thereby reducing the chances of solids migration.
☐	An underdrain cleanout with a minimum 6-inch diameter and lockable cap is placed every 250 to 300 feet as required based on underdrain length.	Properly spaced cleanouts will facilitate underdrain maintenance.

Design Criteria		*Intent/Rationale*
☐	Overflow is safely conveyed to a downstream storm drain system or discharge point. Size overflow structure to pass 100-year peak flow for on-line infiltration basins and water quality peak flow for off-line basins.	Planning for overflow lessens the risk of property damage due to flooding.

Nutrient Sensitive Media Design

To design biofiltration with partial retention with underdrain for storm water pollutant control only (no flow control required), the following steps should be taken:

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design biofiltration with partial retention and an underdrain for storm water pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, maximum side and finish grade slopes, and the recommended media surface area tributary ratio.
2. Calculate the DCV per Appendix B based on expected site design runoff for tributary areas.
3. Generalized sizing procedure is presented in Appendix B.5. The surface ponding should be verified to have a maximum 24-hour drawdown time.

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or durations will typically require significant surface ponding and/or aggregate storage volumes, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, maximum side and finish grade slopes, and the recommended media surface area tributary ratio.
2. Iteratively determine the facility footprint area, surface ponding and/or aggregate storage layer depth required to provide detention and/or infiltration storage to reduce flow rates and durations to allowable limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control levels. Multi-level orifices can be used within an outlet structure to control the full range of flows.
3. If biofiltration with partial retention cannot fully provide the flow rate and duration control required by this manual, an upstream or downstream structure with significant storage volume such as an underground vault can be used to provide remaining controls.

4. After biofiltration with partial retention has been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.

Maintenance Overview

Normal Expected Maintenance. Biofiltration with partial retention requires routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; maintain infiltration capacity of the media layer; replenish mulch; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.

- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials. Pretreatment components, especially for sediment, will extend the life of components that are more expensive to replace such as media, filter course, and aggregate layers.

- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations. Biofiltration with partial retention is a vegetated structural BMP. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency

permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, routine maintenance is key to preventing this scenario.

Sediment Loading. Consider the effects of BMP design and tributary area land uses on the clogging potential of the BMP. Complete the sediment loading analysis included in Appendix F.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation or compaction of the media layer.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
2/3 of mulch has decomposed, or mulch has been removed	Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches.	• Inspect monthly. • Replenish mulch annually, or more frequently when needed based on inspection.
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Underdrain clogged	Clear blockage.	Inspect if standing water is observed for longer than 24-96 hours following a storm event. Maintain when needed.

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E.14 BF-1 Biofiltration



Location: 43rd Street and Logan Avenue, San Diego, California

MS4 Permit Category
Biofiltration

Manual Category
Biofiltration

Applicable Performance Standard
Pollutant Control
Flow Control

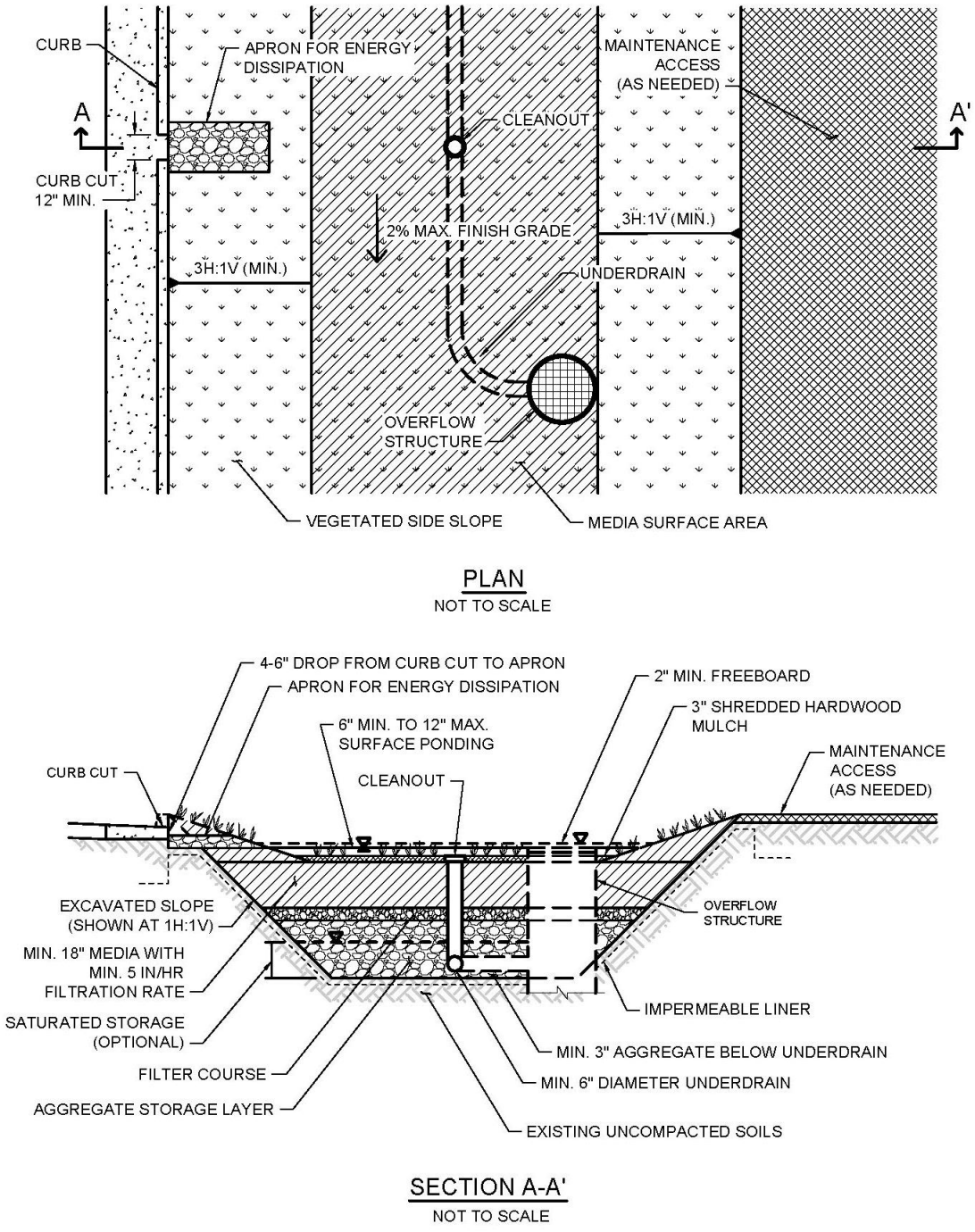
Primary Benefits
Treatment
Volume Reduction (Incidental)
Peak Flow Attenuation (Optional)

Description

Biofiltration (Bioretention with underdrain) facilities are vegetated surface water systems that filter water through vegetation, and soil or engineered media prior to discharge via underdrain or overflow to the downstream conveyance system. Bioretention with underdrain facilities are commonly incorporated into the site within parking lot landscaping, along roadsides, and in open spaces. Because these types of facilities have limited or no infiltration, they are typically designed to provide enough hydraulic head to move flows through the underdrain connection to the storm drain system. Treatment is achieved through filtration, sedimentation, sorption, biochemical processes and plant uptake.

Typical biofiltration components include:

- Inflow distribution mechanisms (e.g, perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side slope and basin bottom vegetation selected based on expected climate and ponding depth
- Non-floating mulch layer
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the aggregate storage layer
- Aggregate storage layer with underdrain(s)
- Impermeable liner or uncompacted native soils at the bottom of the facility
- Overflow structure



Typical plan and Section view of a Biofiltration BMP

Design Adaptations for Project Goals

Biofiltration Treatment BMP for storm water pollutant control. The system is lined or un-lined to provide incidental infiltration, and an underdrain is provided at the bottom to carry away filtered runoff. This configuration is considered to provide biofiltration treatment via flow through the media

layer. Storage provided above the underdrain within surface ponding, media, and aggregate storage is considered included in the biofiltration treatment volume. Saturated storage within the aggregate storage layer can be added to this design by raising the underdrain above the bottom of the aggregate storage layer or via an internal weir structure designed to maintain a specific water level elevation.

Integrated storm water flow control and pollutant control configuration. The system can be designed to provide flow rate and duration control by primarily providing increased surface ponding and/or having a deeper aggregate storage layer above the underdrain. This will allow for significant detention storage, which can be controlled via inclusion of an outlet structure at the downstream end of the underdrain.

Recommended Siting Criteria

	Siting Criteria	*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	An impermeable liner or other hydraulic restriction layer is included if site constraints indicate that infiltration or lateral flows should not be allowed.	Lining prevents storm water from impacting groundwater and/or sensitive environmental or geotechnical features. Incidental infiltration, when allowable, can aid in pollutant removal and groundwater recharge.
☐	The thickness of the Impermeable Liner shall be 30 MIL per County Green Streets Design Standard Drawing GS-3.00 and County Green Streets Supplement to Caltrans Specifications 20-11.08B.	Considerations when choosing an Impermeable Liner may include placement methods, media and underlying soil characteristics, and intended design life among others.
☐	Contributing tributary area must be ≤ 5 acres (≤ 1 acre preferred).	Bigger BMPs require additional design features for proper performance. Contributing tributary area greater than 5 acres may be allowed at the discretion of County staff if the following conditions are met: 1) incorporate design features (e.g. flow spreaders) to minimize short circuiting of flows in the BMP and 2) incorporate additional design features requested by County staff for proper performance of the regional BMP.

Siting Criteria		*Intent/Rationale*
☐	Finish grade of the facility is ≤ 2%.	Flatter surfaces reduce erosion and channelization within the facility.

Design Criteria and Considerations

Biofiltration must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

Siting and Design		*Intent/Rationale*
Surface Ponding		
☐	Surface ponding is limited to a 24-hour drawdown time.	Surface ponding limited to 24 hour for plant health. Surface ponding drawdown time greater than 24-hours but less than 96 hours may be allowed at the discretion of County staff if certified by a landscape architect or agronomist.
☐	Surface ponding depth is ≥ 6 and ≤ 12 inches.	Surface ponding capacity lowers subsurface storage requirements. Deep surface ponding raises safety concerns. Surface ponding depth greater than 12 inches (for additional pollutant control or surface outlet structures or flow-control orifices) may be allowed at the discretion of County staff if the following conditions are met: 1) surface ponding depth drawdown time is less than 24 hours; and 2) safety issues and fencing requirements are considered (typically ponding greater than 18" will require a fence and/or flatter side slopes) and 3) potential for elevated clogging risk is considered.
☐	A minimum of 2 inches of freeboard is provided.	Freeboard provides room for head over overflow structures and minimizes risk of uncontrolled surface discharge.
☐	Side slopes are stabilized with vegetation and are = 3H:1V or shallower.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.

	Siting and Design	*Intent/Rationale*
Vegetation		
☐	Plantings are suitable for the climate and expected ponding depth. A plant list to aid in selection can be found in Appendix F.	Plants suited to the climate and ponding depth are more likely to survive.
☐	An irrigation system with a connection to water supply should be provided as needed.	Seasonal irrigation might be needed to keep plants healthy.
Mulch (Mandatory)		
☐	3 inches of well-aged, shredded hardwood mulch.	Mulch will suppress weeds and maintain moisture for plant growth.
Media Layer		
☐	Media maintains a minimum filtration rate of 5 in/hr over lifetime of facility. An initial filtration rate of 8 to 12 in/hr is recommended to allow for clogging over time; the initial filtration rate should not exceed 12 inches per hour.	A filtration rate of at least 5 inches per hour allows soil to drain between events. The initial rate should be higher than long term target rate to account for clogging over time. However an excessively high initial rate can have a negative impact on treatment performance, therefore an upper limit is needed.
☐	Media is a minimum 18 inches deep, meeting either of these two media specifications: Appendix F.2 Biofiltration Soil Media (BSM) **or** County of San Diego Low Impact Development Handbook: Appendix G -Bioretention Soil Specification (June 2014, unless superseded by more recent edition). Alternatively, for proprietary designs and custom media mixes not meeting the media specifications, the media meets the pollutant treatment performance criteria in Section F.1.1.	A deep media layer provides additional filtration and supports plants with deeper roots. Standard specifications must be followed. For non-standard or proprietary designs, compliance with F.1.1 ensures that adequate treatment performance will be provided.

Siting and Design		*Intent/Rationale*
☐	Media surface area is 3% of contributing area times adjusted runoff factor or greater. Unless demonstrated that the BMP surface area can be smaller than 3%.	Greater surface area to tributary area ratios: a) maximizes volume retention as required by the MS4 Permit and b) decrease loading rates per square foot and therefore increase longevity. Adjusted runoff factor is to account for site design BMPs implemented upstream of the BMP (such as rain barrels, impervious area dispersion, etc.). Refer to Appendix B guidance. If media surface area is under 3% of contributing area, refer to Sediment Loading calculations in Appendix B.
☐	Where receiving waters are impaired or have a TMDL for nutrients, the system is designed with nutrient sensitive media design (see fact sheet BF-2).	Potential for pollutant export is partly a function of media composition; media design must minimize potential for export of nutrients, particularly where receiving waters are impaired for nutrients.
Filter Course Layer		
☐	A filter course is used to prevent migration of fines through layers of the facility. Filter fabric is not used.	Migration of media can cause clogging of the aggregate storage layer void spaces or subgrade. Filter fabric is more likely to clog.
☐	Filter course is a minimum of 6 inches thick provided in two separate 3 inch layers. The top layer shall be made of ASTM C33 choker sand and the bottom layer shall be of ASTM No. 8 aggregate. Marker stakes shall be used to ensure uniform lift thickness.	To prevent reduction of the available storage volume that would lead to clogging of the underdrain and native soil beneath the BMP.
☐	Filter course is washed and free of fines.	Washing aggregate will help eliminate fines that could clog the facility and impede infiltration.
☐	Filter course calculations assessing suitability for particle migration prevention have been completed.	Gradation relationship between layers can evaluate factors (e.g., bridging, permeability, and uniformity) to determine if particle sizing is appropriate or if an intermediate layer is needed.

	Siting and Design	***Intent/Rationale***
Aggregate Storage Layer		
☐	Class 2 Permeable per Caltrans specification 68-1.025 is recommended for the storage layer. Washed, open-graded crushed rock may be used, however a 4-6 inch washed pea gravel filter course layer at the top of the crushed rock is required.	Washing aggregate will help eliminate fines that could clog the aggregate storage layer void spaces or subgrade.
☐	The depth of aggregate provided (12-inch typical) and storage layer configuration is adequate for providing conveyance for underdrain flows to the outlet structure.	Proper storage layer configuration and underdrain placement will minimize facility drawdown time.
Inflow, Underdrain, and Outflow Structures		
☐	Inflow, underdrains and outflow structures are accessible for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.
☐	Inflow velocities are limited to 3 ft/s or less or use energy dissipation methods. (e.g., riprap, level spreader) for concentrated inflows.	High inflow velocities can cause erosion, scour and/or channeling.
☐	Curb cut inlets are at least 12 inches wide, have a 4-6 inch reveal (drop) and an apron and energy dissipation as needed.	Inlets must not restrict flow and apron prevents blockage from vegetation as it grows in. Energy dissipation prevents erosion.
☐	Underdrain outlet elevation should be a minimum of 3 inches above the bottom elevation of the aggregate storage layer.	A minimal separation from subgrade or the liner lessens the risk of fines entering the underdrain and can improve hydraulic performance by allowing perforations to remain unblocked.
☐	Minimum underdrain diameter is 6 inches.	Smaller diameter underdrains are prone to clogging.
Inflow, Underdrain, and Outflow Structures		
☐	Underdrains are made of slotted, PVC pipe conforming to ASTM D 3034 or equivalent or corrugated, HDPE pipe conforming to AASHTO 252M or equivalent.	Slotted underdrains provide greater intake capacity, clog resistant drainage, and reduced entrance velocity into the pipe, thereby reducing the chances of solids migration.

Siting and Design		*Intent/Rationale*
☐	An underdrain cleanout with a minimum 6-inch diameter and lockable cap is placed every 250 to 300 feet as required based on underdrain length.	Properly spaced cleanouts will facilitate underdrain maintenance.
☐	Overflow is safely conveyed to a downstream storm drain system or discharge point Size overflow structure to pass 100-year peak flow for on-line infiltration basins and water quality peak flow for off-line basins.	Planning for overflow lessens the risk of property damage due to flooding.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design biofiltration for storm water pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, maximum side and finish grade slopes, and the recommended media surface area tributary ratio.
2. Calculate the DCV per Appendix B based on expected site design runoff for tributary areas.
3. Use the sizing worksheet presented in Appendix B.5 to size biofiltration BMPs.

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or durations will typically require significant surface ponding and/or aggregate storage volumes, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, maximum side and finish grade slopes, and the recommended media surface area tributary ratio.
2. Iteratively determine the facility footprint area, surface ponding and/or aggregate storage layer depth required to provide detention storage to reduce flow rates and durations to allowable limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control levels. Multi-level orifices can be used within an outlet structure to control the full range of flows.
3. If bioretention with underdrain cannot fully provide the flow rate and duration control required by this manual, an upstream or downstream structure with significant storage volume such as an underground vault can be used to provide remaining controls.

4. After bioretention with underdrain has been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.

Maintenance Overview

Normal Expected Maintenance. Biofiltration requires routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; maintain infiltration capacity of the media layer; replenish mulch; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.
- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials. Pretreatment components, especially for sediment, will extend the life of components that are more expensive to replace such as media, filter course, and aggregate layers.
- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations. Biofiltration is a vegetated structural BMP. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural

BMP, routine maintenance is key to preventing this scenario.

Sediment Loading. Consider the effects of BMP design and tributary area land uses on the clogging potential of the BMP. Complete the sediment loading analysis included in Appendix F.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation or compaction of the media layer.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable	• Inspect annually. • Maintain when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
2/3 of mulch has decomposed, or mulch has been removed	Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches.	• Inspect monthly. • Replenish mulch annually, or more frequently when needed based on inspection.
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Underdrain clogged	Clear blockage.	Inspect if standing water is observed for longer than 24-96 hours following a storm event. Maintain when needed.

"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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E.15 BF-2 Nutrient Sensitive Media Design

Some studies of bioretention with underdrains have observed export of nutrients, particularly inorganic nitrogen (nitrate and nitrite) and dissolved phosphorus. This has been observed to be a short-lived phenomenon in some studies or a long term issue in some studies. The composition of the soil media, including the chemistry of individual elements is believed to be an important factor in the potential for nutrient export. Organic amendments, often compost, have been identified as the most likely source of nutrient export. The quality and stability of organic amendments can vary widely.

The biofiltration media specifications contained in Appendix F.2 of this Manual and also contained in the County of San Diego Low Impact Development Handbook: Appendix G -Bioretention Soil Specification (June 2014, unless superseded by more recent edition) were developed with consideration of the potential for nutrient export. These specifications include criteria for individual component characteristics and quality in order to control the overall quality of the blended mixes. As of the publication of this manual, the specifications contained in Appendix F.2 of the County of San Diego BMP Design Manual provide more detail regarding mix design and quality control.

The specifications noted above were developed for general purposes to meet permeability and treatment goals. In cases where the BMP discharges to receiving waters with nutrient impairments or nutrient TMDLs, the biofiltration media should be designed with the specific goal of minimizing the potential for export of nutrients from the media. Therefore, in addition to adhering to the County media specifications, the following guidelines should be followed:

1. Select plant palette to minimize plant nutrient needs

A landscape architect or agronomist should be consulted to select a plant palette that minimizes nutrient needs. Utilizing plants with low nutrient needs results in less need to enrich the biofiltration soil mix. If nutrient quantity is then tailored to plants with lower nutrient needs, these plants will generally have less competition from weeds, which typically need higher nutrient content. The following practices are recommended to minimize nutrient needs of the plant palette:

- **Utilize native, drought-tolerant plants and grasses where possible**. Native plants generally have a broader tolerance for nutrient content, and can be longer lived in leaner/lower nutrient soils.

- **Start plants from smaller starts or seed.** Younger plants are generally more tolerant of lower nutrient levels and tend to help develop soil structure as they grow. Given the lower cost of smaller plants, the project should be able to accept a plant mortality rate that is somewhat higher than starting from larger plants and providing high organic content.

2. Minimize excess nutrients in media mix

Once the low-nutrient plant palette is established (item 1), the landscape architect and/or agronomist should be consulted to assist in the design of a biofiltration media to balance the interests of plant establishment, water retention capacity (irrigation demand), and the potential for nutrient export.

Specifications for Biofiltration Soil Media outlined in Appendix F, particularly sections 803-2.5.4 and 803-5.5.5 shall be followed along with the following guidelines: **The mix should not exceed the nutrient needs of plants.** In conventional landscape design, the nutrient needs of plants are often exceeded intentionally in order to provide a factor of safety for plant survival. This practice must be avoided in biofiltration media as excess nutrients will increase the chance of export. The mix designer should keep in mind that nutrients can be added later (through mulching, tilling of amendments into the surface), but it is not possible to remove nutrients, once added.

- **The actual nutrient content and organic content of the selected organic amendment source should be determined when specifying mix proportions.** Nutrient content (i.e., C:N ratio; plant extractable nutrients) and organic content (i.e, % organic material) are relatively inexpensive to measure via standard agronomic methods and can provide important information about mix design. If mix design relies on approximate assumption about nutrient/organic content and this is not confirmed with testing (or the results of prior representative testing), it is possible that the mix could contain much more nutrient than intended.

- **Nutrients are better retained in soils with higher cation exchange capacity.** Cation exchange capacity can be increased through selection of organic material with naturally high cation exchange capacity, such as peat or coconut coir pith, and/or selection of inorganic material with high cation exchange capacity such as some sands or engineered minerals (e.g., low P-index sands, zeolites, rhyolites, etc). Including higher cation exchange capacity materials would tend to reduce the net export of nutrients. Natural silty materials also provide cation exchange capacity; however potential impacts to permeability need to be considered.

- **Focus on soil structure as well as nutrient content.** Soil structure is loosely defined as the ability of the soil to conduct and store water and nutrients as well as the degree of aeration of the soil. Soil structure can be more important than nutrient content in plant survival and biologic health of the system. If a good soil structure can be created with very low amounts of organic amendment, plants survivability should still be provided. While soil structure generally develops with time, biofiltration media can be designed to promote earlier development of soil structure. Soil structure is enhanced by the use of amendments with high humus content (as found in well-aged organic material). In addition, soil structure can be enhanced through the use of organic material with a distribution of particle sizes (i.e., a more heterogeneous mix).

- **Consider alternatives to compost.** Compost, by nature, is a material that is continually evolving and decaying. It can be challenging to determine whether tests previously done on a given compost stock are still representative. It can also be challenging to determine how the properties of the compost will change once placed in the media bed. More stable materials such as aged coco coir pith, peat, biochar, shredded bark, and/or other amendments should be considered.

With these considerations, it is anticipated that less than 10 percent organic amendment by volume could be used, while still balancing plant survivability and water retention. If compost is used, designers should strongly consider utilizing less than 10 percent by volume.

3. Design with partial retention and/or internal water storage

An internal water storage zone, as described in Fact Sheet PR-1 is believed to improve retention of nutrients. For lined systems, an internal water storage zone worked by providing a zone that fluctuates between aerobic and anaerobic conditions, resulting in nitrification/denitrification. In soils that will allow infiltration, a partial retention design (PR-1) allows significant volume reduction and can also promote nitrification/denitrification.

Acknowledgment: This fact sheet has been adapted from the Orange County Technical Guidance Document (May 2011). It was originally developed based on input from: Deborah Deets, City of Los Angeles Bureau of Sanitation, Drew Ready, Center for Watershed Health, Rick Fisher, ASLA, City of Los Angeles Bureau of Engineering, Dr. Garn Wallace, Wallace Laboratories, Glen Dake, GDML, and Jason Schmidt, Tree People. The guidance provided herein does not reflect the individual opinions of any individual listed above and should not be cited or otherwise attributed to those listed.

Maintenance Overview

Refer to maintenance information provided in the Biofiltration (BF-1) Fact Sheet. Adjust maintenance actions and reporting if required based on the specific media design.

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E.16 BF-3 Proprietary Biofiltration Systems

The purpose of this fact sheet is to help explain the potential role of proprietary BMPs in meeting biofiltration requirements, when full retention of the DCV is not feasible. The fact sheet does not describe design criteria like the other fact sheets in this appendix because this information varies by BMP product model.

Criteria for Use of a Proprietary BMP as a Biofiltration BMP

A proprietary BMP may be acceptable as a "biofiltration BMP" under the following conditions:

(1) The BMP meets the minimum design criteria listed in Appendix F, including the selection criteria (i.e. only allowed in No Infiltration Condition and where site-specific documentation demonstrates that the use of larger footprint biofiltration BMPs (i.e. 3 %) would be infeasible) and the pollutant treatment performance standard in Appendix F.1.1;

(2) The BMP is designed and maintained in a manner consistent with its performance certifications (See explanation in Appendix F.1.2); and

(3) The BMP is acceptable at the discretion of County staff. While the County has no obligation to accept the use of any proposed proprietary BMP, applicants will be provided a written explanation describing the rationale for the rejection of any proposed devices.

Guidance for Sizing a Proprietary BMP as a Biofiltration BMP

Proprietary biofiltration BMPs must meet the same sizing guidance as non-proprietary BMPs. Sizing is typically based on capturing and treating 1.50 times the DCV not reliably retained. Guidance for sizing biofiltration BMPs to comply with requirements of this manual is provided in Appendix F.1.2.

Maintenance Overview

Refer to manufacturer for maintenance information.

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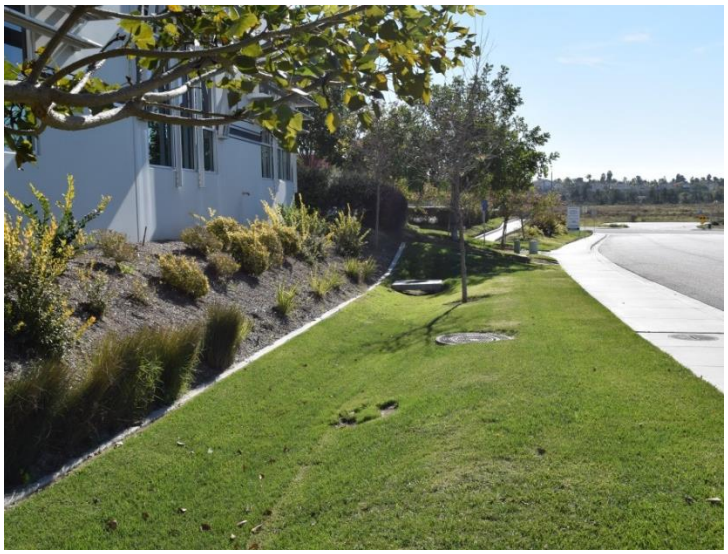
E.17 FT-1 Vegetated Swales



MS4 Permit Category
Flow-thru Treatment Control

Manual Category
Flow-thru Treatment Control

Applicable Performance Standard
Pollutant Control

Primary Benefits
Treatment
Volume Reduction (Incidental)
Peak Flow Attenuation

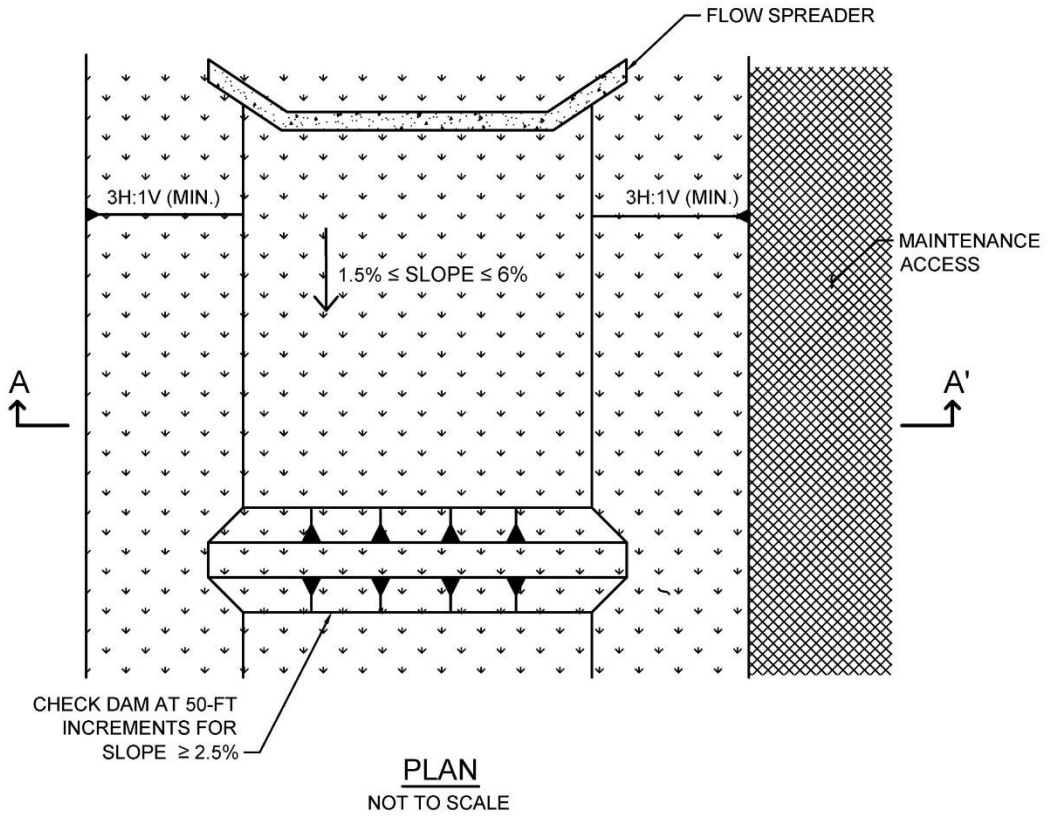
Location: Eastlake Business Center, Chula Vista, California; Photo Credit: Eric Mosolgo

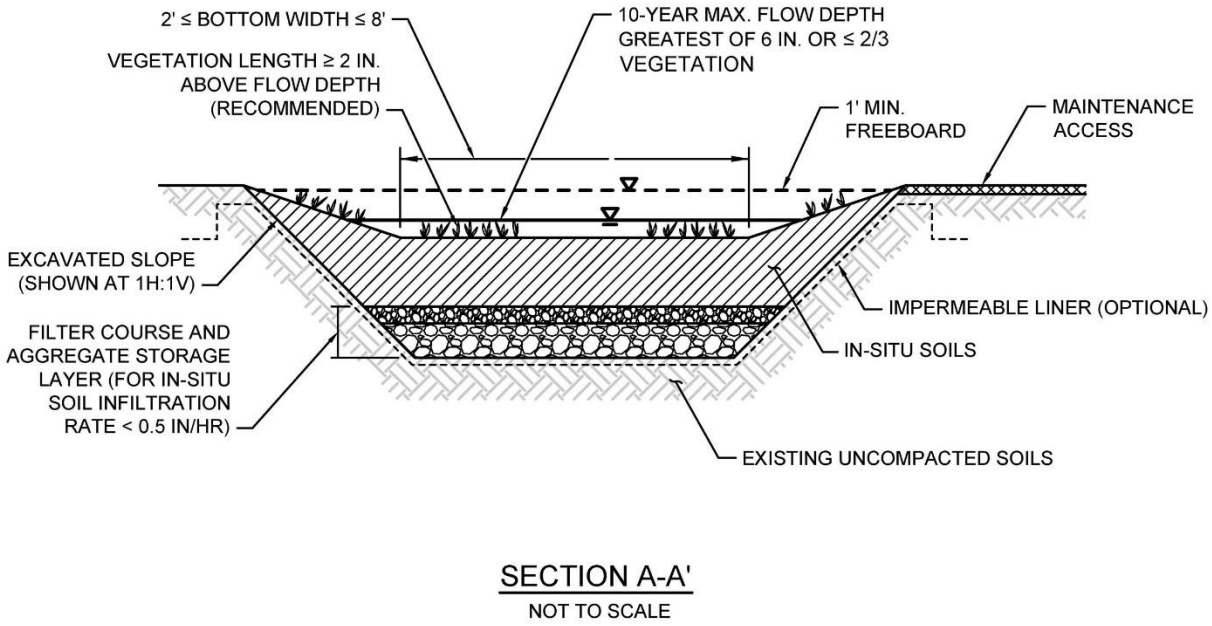
Description

Vegetated swales are shallow, open channels that are designed to remove storm water pollutants by physically straining/filtering runoff through vegetation in the channel. Swales can be used in place of traditional curbs and gutters and are well-suited for use in linear transportation corridors to provide both conveyance and treatment via filtration. An effectively designed vegetated swale achieves uniform sheet flow through densely vegetated areas. When soil conditions allow, infiltration and volume reduction are enhanced by adding a gravel drainage layer underneath the swale. Vegetated swales with a subsurface media layer can provide enhanced infiltration, water retention, and pollutant-removal capabilities. Pollutant removal effectiveness can also be maximized by increasing the hydraulic residence time of water in swale using weirs or check dams.

Typical vegetated swale components include:

- Inflow distribution mechanisms (e.g., flow spreader)
- Surface flow
- Vegetated surface layer
- Check dams (if required)
- Optional aggregate storage layer with underdrain(s)





Typical plan and Section view of a Vegetated Swale BMP

Design Adaptations for Project Goals

Site design BMP to reduce runoff volumes and storm peaks. Swales without underdrains are an alternative to lined channels and pipes and can provide volume reduction through infiltration. Swales can also reduce the peak runoff discharge rate by increasing the time of concentration of the site and decreasing runoff volumes and velocities.

Flow-thru treatment BMP for storm water pollutant control. The system is lined or un-lined to provide incidental infiltration with an underdrain and designed to provide pollutant removal through settling and filtration in the channel vegetation (usually grasses). This configuration is considered to provide flow-thru treatment via horizontal surface flow through the swale. Sizing for flow-thru treatment control is based on the surface flow rate through the swale that meets water quality treatment performance objectives.

Design Criteria and Considerations

Vegetated swales must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

	Siting and Design	*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, and liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	An impermeable liner or other hydraulic restriction layer is included if site constraints indicate that infiltration or lateral flows should not be allowed.	Lining prevents storm water from impacting groundwater and/or sensitive environmental or geotechnical features. Incidental infiltration, when allowable, can aid in pollutant removal and groundwater recharge.
☐	Contributing tributary area ≤ 2 acres.	Higher ratios increase the potential for clogging but may be acceptable for relatively clean tributary areas.
☐	Longitudinal slope is ≥ 1.5% and ≤ 6%.	Flatter swales facilitate increased water quality treatment while minimum slopes prevent ponding.
☐	For site design goal, in-situ soil infiltration rate ≥ 0.5 in/hr (if < 0.5 in/hr, an underdrain is required and design goal is for pollutant control only).	Well-drained soils provide volume reduction and treatment. An underdrain should only be provided when soil infiltration rates are low or per geotechnical or groundwater concerns.

	Siting and Design	***Intent/Rationale***
Surface Flow		
☐	Maximum flow depth is ≤ 6 inches or ≤ $^2/_3$ the vegetation length, whichever is greater. Ideally, flow depth will be ≥ 2 inches below shortest plant species.	Flow depth must fall within the height range of the vegetation for effective water quality treatment via filtering.
	A minimum of 1 foot of freeboard is provided.	Freeboard minimizes risk of uncontrolled surface discharge.
☐	Cross sectional shape is trapezoidal or parabolic with side slopes ≥ 3H:1V.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.
☐	Bottom width is ≥ 2 feet and ≤ 8 feet.	A minimum of 2 feet minimizes erosion. A maximum of 8 feet prevents channel braiding.
☐	Minimum hydraulic residence time ≥ 10 minutes.	Longer hydraulic residence time increases pollutant removal.
☐	Swale is designed to safely convey the 10-yr storm event unless a flow splitter is included to allow only the water quality event.	Planning for larger storm events lessens the risk of property damage due to flooding.
☐	Flow velocity is ≤ 1 ft/s for water quality event. Flow velocity for 10-yr storm event is ≤ 3 ft/s.	Lower flow velocities provide increased pollutant removal via filtration and minimize erosion.
Vegetated Surface Layer (amendment with media is Optional)		
☐	Soil is amended with 2 inches of media mixed into the top 6 inches of in-situ soils, as needed, to promote plant growth (optional). For enhanced pollutant control, 2 feet of media can be used in place of in-situ soils. Media meets either of these two media specifications: City of San Diego Storm Water Standards Appendix F, February 2016; Or County of San Diego Low Impact Development Handbook, June 2014: Appendix G -Bioretention Soil Specification.	Amended soils aid in plant establishment and growth. Media replacement for in-situ soils can improve water quality treatment and site design volume reduction.

	Siting and Design	***Intent/Rationale***
Vegetated Surface Layer (amendment with media is Optional)		
☐	Vegetation is appropriately selected low-growing, erosion-resistant plant species that effectively bind the soil, thrive under site-specific climatic conditions and require little or no irrigation.	Plants suited to the climate and expected flow conditions are more likely to survive.
Check Dams		
☐	Check dams are provided at 50-foot increments for slopes ≥ 2.5%.	Check dams prevent erosion and increase the hydraulic residence time by lowering flow velocities and providing ponding opportunities.
Filter Course Layer (For Underdrain Design)		
☐	A filter course is used to prevent migration of fines through layers of the facility. Filter fabric is not used.	Migration of media can cause clogging of the aggregate storage layer void spaces or subgrade. Filter fabric is more likely to clog.
☐	Filter course is washed and free of fines.	Washing aggregate will help eliminate fines that could clog the facility and impede infiltration.
☐	Filter course calculations assessing suitability for particle migration prevention have been completed.	Gradation relationship between layers can evaluate factors (e.g., bridging, permeability, and uniformity) to determine if particle sizing is appropriate or if an intermediate layer is needed.
Aggregate Storage Layer (For Underdrain Design)		
☐	The depth of aggregate provided (12-inch typical) and storage layer configuration is adequate for providing conveyance for underdrain flows to the outlet structure.	Proper storage layer configuration and underdrain placement will minimize facility drawdown time.
☐	Aggregate used for the aggregate storage layer is washed and free of fines.	Washing aggregate will help eliminate fines that could clog aggregate storage layer void spaces or underdrain.
Inflow and Underdrain Structures		
☐	Inflow and underdrains are accessible for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.

Siting and Design		*Intent/Rationale*
Inflow and Underdrain Structures		
☐	Underdrain outlet elevation should be a minimum of 3 inches above the bottom elevation of the aggregate storage layer.	A minimal separation from subgrade or the liner lessens the risk of fines entering the underdrain and can improve hydraulic performance by allowing perforations to remain unblocked.
☐	Minimum underdrain diameter is 6 inches.	Smaller diameter underdrains are prone to clogging.
☐	Underdrains are made of slotted, PVC pipe conforming to ASTM D 3034 or equivalent or corrugated, HDPE pipe conforming to AASHTO 252M or equivalent.	Slotted underdrains provide greater intake capacity, clog resistant drainage, and reduced entrance velocity into the pipe, thereby reducing the chances of solids migration.
☐	An underdrain cleanout with a minimum 6-inch diameter and lockable cap is placed every 250 to 300 feet as required based on underdrain length.	Properly spaced cleanouts will facilitate underdrain maintenance.

Conceptual Design and Sizing Approach for Site Design

1. Determine the areas where vegetated swales can be used in the site design to replace traditional curb and gutter facilities and provide volume reduction through infiltration.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design vegetated swales for storm water pollutant control only, the following steps should be taken:

1. Verify that siting and design criteria have been met, including bottom width and longitudinal and side slope requirements.
2. Calculate the design flow rate per Appendix B based on expected site design runoff for tributary areas.
3. Use the sizing worksheet to determine flow-thru treatment sizing of the vegetated swale and if flow velocity, flow depth, and hydraulic residence time meet required criteria. Swale configuration should be adjusted as necessary to meet design requirements.

Maintenance Overview

Normal Expected Maintenance. Vegetated swales require routine maintenance to: remove accumulated materials such as sediment, trash, and debris; maintain vegetation health; and maintain integrity of side slopes, channel bottom, inlets, energy dissipaters, weirs or check dams, and outlets to

ensure runoff will be conveyed as uniform flow throughout the swale (i.e., flow will spread uniformly across the width of the swale as it is conveyed from upstream to downstream).

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from deposited materials or overgrowth of vegetation within the swale blocking drainage conveyance or blocking an outlet structure, or localized erosion issues that cause channelization and prevent uniform flow throughout the swale. The specific cause of the drainage issue must be determined and corrected. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.
- Sediment, trash, or debris accumulation blocking drainage becomes a chronic issue observed at every inspection. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials.
- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

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Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to vegetation.	• Inspect monthly. If accumulated materials are observed blocking drainage, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP following a storm event	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, loosening or replacing top soil to allow for better infiltration, or minor re-grading for proper drainage. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

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E.18 FT-2 Media Filters



MS4 Permit Category
Flow-thru Treatment Control

Manual Category
Flow-thru Treatment Control

Applicable Performance Standard
Pollutant Control
Flow Control

Primary Benefits
Treatment
Peak Flow Attenuation (Optional)

Photo Credit: Contech Storm Water Solutions

Description

Media filters are manufactured devices that consist of a series of modular filters packed with engineered media that can be contained in a catch basin, manhole, or vault that provide treatment through filtration and sedimentation. The manhole or vault may be divided into multiple chambers where the first chamber acts as a presettling basin for removal of coarse sediment while the next chamber acts as the filter bay and houses the filter cartridges. A variety of media types are available from various manufacturers that can target pollutants of concern via primarily filtration, sorption, ion exchange, and precipitation. **Specific products must be selected to meet the flow-thru BMP selection requirements described in Appendix J.5**. Treatment effectiveness is contingent upon proper maintenance of filter units.

Typical media filter components include:

- Vault for flow storage and media housing
- Inlet and outlet
- Media filters

Design Adaptations for Project Goals

Flow-thru treatment BMP for storm water pollutant control. Water quality treatment is provided through filtration. This configuration is considered to provide flow-thru treatment, not biofiltration treatment. Storage provided within the vault restricted by an outlet is considered detention storage and is included in calculations for the flow-thru treatment volume.

Integrated storm water flow control and pollutant control configuration. Media filters can also be designed for flow rate and duration control via additional detention storage. The vault storage can be designed to accommodate higher volumes than the storm water pollutant control volume and can utilize multi-stage outlets to mitigate both the duration and rate of flows within a prescribed range.

Design Criteria and Considerations

Media filters must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

	Siting and Design	***Intent/Rationale***
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, and liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	Recommended for tributary areas with limited available surface area or where surface BMPs would restrict uses.	Maintenance needs may be more labor intensive for media filters than surface BMPs. Lack of surface visibility creates additional risk that maintenance needs may not be completed in a timely manner.
☐	Vault storage drawdown time ≤96 hours.	Provides vector control.
☐	Vault storage drawdown time ≤36 hours if the vault is used for equalization of flows for pollutant treatment.	Provides required capacity to treat back to back storms. Exception to the 36 hour drawdown criteria is allowed if additional vault storage is provided using the curves in Appendix B.4.1.
☐	All manhole access points to underground BMPs must include a ladder or steps.	Provides required access during inspections.
☐	BMPs must include inspection ports.	Inspection ports are for observing all underground components that require inspection and maintenance
	Inflow and Outflow Structures	
☐	Inflow and outflow structures are accessible by required equipment (e.g., vactor truck) for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design a media filter for storm water pollutant control only (no flow control required), the following steps should be taken

1. Verify that the selected BMP complies with BMP selection requirements in Appendix J.5.
2. Verify that placement and tributary area requirements have been met.
3. Calculate the required DCV and/or flow rate per Appendix J.5.3 based on expected site design runoff for tributary areas.
4. Media filter can be designed either for DCV or flow rate. To estimate the drawdown time, divide the vault storage by the treatment rate of media filters.

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or durations will typically require significant vault storage volume, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that placement and tributary area requirements have been met.
2. Iteratively determine the vault storage volume required to provide detention storage to reduce flow rates and durations to allowable limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control levels. Multi-level orifices can be used within an outlet structure to control the full range of flows to MS4.
3. If a media filter cannot fully provide the flow rate and duration control required by this manual, an upstream or downstream structure with appropriate storage volume such as an underground vault can be used to provide remaining controls.
4. After the media filter has been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.
5. Verify that the vault drawdown time is 96 hours or less. To estimate the drawdown time:
    a. Divide the vault volume by the filter surface area.
    b. Divide the result (a) by the design filter rate.

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Maintenance Overview

Normal Expected Maintenance. Media filters require routine maintenance to: remove accumulated materials such as sediment, trash, and debris; replace filter cartridges; and maintain integrity of any internal components such as weirs and piping. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. The normal expected maintenance described above ensures the BMP functionality. Lapses in the normal expected maintenance can lead to clogging of the BMP and potentially blocking the storm drain system. If clogging is observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. In addition, clogged BMPs can lead to flooding, standing water and mosquito breeding habitat. Maintenance is critical to ensure the flood protection capacity of the storm drain system is not compromised. If proper routine maintenance is not performed, corrective maintenance and increased inspection and maintenance will be required. For persistent clogging or presence of mosquitos, contact the County reviewer to determine a permanent solution. For example, adding pretreatment measures within the tributary area draining to the BMP to intercept sediment, trash, and debris. Pretreatment components, especially for sediment, will extend the life of the filter media. For mosquitos, a Vector Management Plan, prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

Other Special Considerations. Media filters are proprietary systems that include proprietary media that must be replaced as part of normal expected maintenance. They are typically installed underground and may require entry into the underground vault to perform the maintenance. The BMP owner is responsible to hire a maintenance operator qualified to service the units. The maintenance operator must obtain the appropriate filter media and/or any parts that need to be replaced. If maintenance conditions require maintenance personnel to enter the underground structure, the maintenance personnel must be trained and certified in confined space entry. To find a qualified maintenance operator, the BMP owner shall contact the manufacturer of the proprietary BMP.

The design of media filters includes consideration of the specific pollutants expected from the area tributary to the media filter and the specific pollutants of concern for the downstream waterways. Therefore, it is expected that the filter media selected during design of the project will not be substituted. If a need arises to substitute a different filter configuration or filter media, the County reviewer shall be contacted prior to any changes.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris. The threshold for removal of materials depends on the specific type of proprietary filter and configuration and shall be based on the manufacturer's recommendation. In any case, materials must be removed if accumulation blocks flow through the BMP.	Remove and properly dispose of accumulated materials.	• Inspect monthly. • Remove materials annually (minimum), or more frequently when BMP reaches manufacturer's threshold for removal of materials in less than one year, or if accumulation blocks outlet.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Spent or clogged filter media. The threshold for changing media depends on the specific type of proprietary media and shall be based on the manufacturer's recommendation. In any case, media must be replaced if flow cannot pass through the media or passes through at less than the design capacity.	Remove and properly dispose filter media, and replace with fresh media.	• Inspect condition of media annually or more frequently if recommended by manufacturer. • Inspect BMP drainage monthly and after every 0.5-inch or larger storm event. If standing water has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed based on manufacturer's threshold/indicator for the specific media, or if standing water in the BMP indicates flow cannot pass through the media.
Any other recommendations pursuant to the proprietary filter manufacturer's maintenance guide.	Any other actions pursuant to the proprietary filter manufacturer's maintenance guide.	• As recommended by the proprietary filter manufacturer's maintenance guide
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove and properly dispose any standing water; second, remove any accumulated materials that obstruct flow through the BMP to restore BMP drainage to prevent standing water. Ensure access covers are tight fitting, with gaps or holes no greater than 1/16 inch, and/or install barriers such as inserts or screens that prevent mosquito access to the subsurface storage. If the BMP includes a permanent sump, contact the County reviewer to determine a permanent solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Damage to structural components of the filtration system such as weirs, underdrains, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.

E.19 FT-3 Sand Filters



Photo Credit: City of San Diego LID Manual

MS4 Permit Category
Flow-thru Treatment Control

Manual Category
Flow-thru Treatment Control

Applicable Performance Standard
Pollutant Control
Flow Control

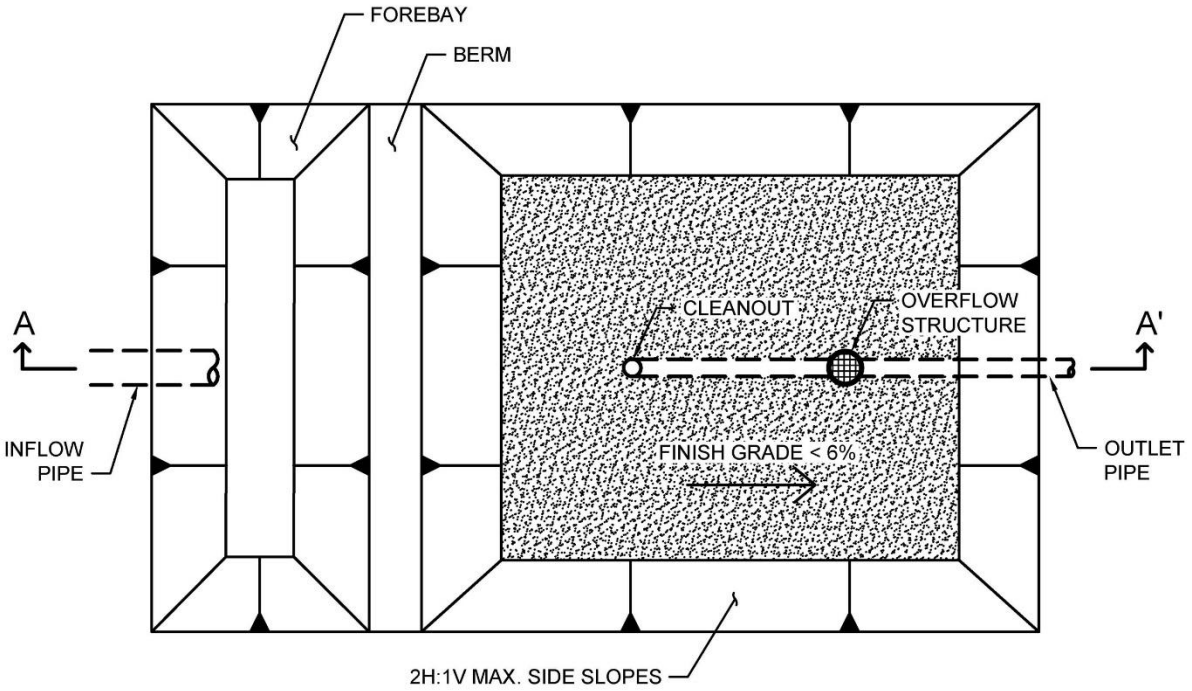
Primary Benefits
Treatment
Volume Reduction (Incidental)
Peak Flow Attenuation (Optional)

Description

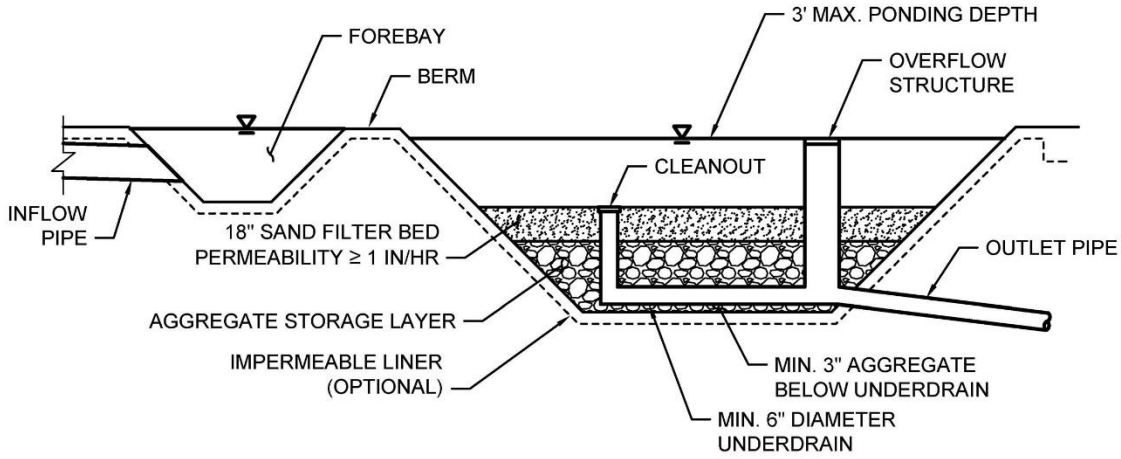
Sand filters operate by filtering storm water through a constructed sand bed with an underdrain system. Runoff enters the filter and spreads over the surface. Sand filter beds can be enclosed within concrete structures or within earthen containment. As flows increase, water backs up on the surface of the filter where it is held until it can percolate through the sand. The treatment pathway is downward (vertical) through the media to an underdrain system that is connected to the downstream storm drain system. As storm water passes through the sand, pollutants are trapped on the surface of the filter, in the small pore spaces between sand grains or are adsorbed to the sand surface. The high filtration rates of sand filters, which allow a large runoff volume to pass through the media in a short amount of time, can provide efficient treatment for storm water runoff.

Typical sand filter components include:

- Forebay for pretreatment/energy dissipation
- Surface ponding for captured flows
- Sand filter bed
- Aggregate storage layer with underdrain(s)
- Overflow structure



PLAN
NOT TO SCALE



SECTION A-A'
NOT TO SCALE

Typical plan and Section view of a Sand Filter BMP

Design Adaptations for Project Goals

Flow-thru treatment BMP for storm water pollutant control. The system is lined or un-lined to provide incidental infiltration, and an underdrain is provided at the bottom to carry away filtered runoff. This configuration is considered to provide flow-thru treatment via vertical flow through the sand filter bed. Storage provided above the underdrain within surface ponding, the sand filter bed, and aggregate storage is considered included in the flow-thru treatment volume. Saturated storage within the aggregate storage layer can be added to this design by including an upturned elbow installed at the downstream end of the underdrain or via an internal weir structure designed to maintain a specific water level elevation.

Integrated storm water flow control and pollutant control configuration. The system can be designed to provide flow rate and duration control by primarily providing increased surface ponding and/or having a deeper aggregate storage layer above the underdrain. This will allow for significant detention storage, which can be controlled via inclusion of an outlet structure at the downstream end of the underdrain.

Design Criteria and Considerations

Sand filters must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

	Siting and Design	*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, and liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	An impermeable liner or other hydraulic restriction layer is included if site constraints indicate that infiltration or lateral flows should not be allowed.	Lining prevents storm water from impacting groundwater and/or sensitive environmental or geotechnical features. Incidental infiltration, when allowable, can aid in pollutant removal and groundwater recharge.
☐	Contributing tributary area (≤ 5 acres).	Bigger BMPs require additional design features for proper performance. Contributing tributary area greater than 5 acres may be allowed at the discretion of County staff if the following conditions are met: 1) incorporate design features (e.g. flow spreaders) to minimize short circuiting of flows in the BMP and 2) incorporate additional design features requested by County staff for proper performance of the regional BMP.

Siting and Design		***Intent/Rationale***
☐	Finish grade of facility is < 6%.	Flatter surfaces reduce erosion and channelization within the facility.
☐	Earthen side slopes are ≥ 3H:1V.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.
☐	Surface ponding is limited to a 36-hour drawdown time.	Provides required capacity to treat back to back storms. A surface ponding drawdown of up to 96 hours may be permitted if additional surface storage is provided using the curves in Appendix B.4.1.
☐	Surface ponding is limited to a 96-hour drawdown time.	Prolonged surface ponding can create a vector hazard.
☐	Maximum ponding depth does not exceed 3 feet.	Surface ponding capacity lowers subsurface storage requirements and results in lower cost facilities. Deep surface ponding raises safety concerns.
☐	Sand filter bed consists of clean washed concrete or masonry sand (passing ¼ inch sieve) or sand similar to the ASTM C33 gradation.	Washing sand will help eliminate fines that could clog the void spaces of the aggregate storage layer.
☐	Sand filter bed permeability is at least 1 in/hr.	A high filtration rate through the media allows flows to quickly enter the aggregate storage layer, thereby minimizing bypass.
☐	Sand filter bed depth is at least 18 inches deep.	Different pollutants are removed in various zones of the media using several mechanisms. Some pollutants bound to sediment, such as metals, are typically removed within 18 inches of the media.
☐	Aggregate storage should be washed, bank-run gravel.	Washing aggregate will help eliminate fines that could clog the aggregate storage layer void spaces or subgrade.
☐	The depth of aggregate provided (12-inch typical) and storage layer configuration is adequate for providing conveyance for underdrain flows to the outlet structure.	Proper storage layer configuration and underdrain placement will minimize facility drawdown time.
☐	Inflow, underdrains and outflow structures are accessible for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.

Siting and Design		*Intent/Rationale*
☐	Inflow must be non-erosive sheet flow (≤ 3 ft/s) unless an energy-dissipation device, flow diversion/splitter or forebay is installed.	Concentrated flow and/or excessive volumes can cause erosion in a sand filter and can be detrimental to the treatment capacity of the system.
☐	Underdrain outlet elevation should be a minimum of 3 inches above the bottom elevation of the aggregate storage layer.	A minimal separation from subgrade or the liner lessens the risk of fines entering the underdrain and can improve hydraulic performance by allowing perforations to remain unblocked.
☐	Minimum underdrain diameter is 6 inches.	Smaller diameter underdrains are prone to clogging.
☐	Underdrains should be made of slotted, PVC pipe conforming to ASTM D 3034 or equivalent or corrugated, HDPE pipe conforming to AASHTO 252M or equivalent.	Slotted underdrains provide greater intake capacity, clog resistant drainage, and reduced entrance velocity into the pipe, thereby reducing the chances of solids migration.
☐	Overflow is safely conveyed to a downstream storm drain system or discharge point.	Planning for overflow lessens the risk of property damage due to flooding.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design a sand filter for storm water pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, and maximum finish grade slope.
2. Calculate the required DCV and/or flow rate per Appendix J.5.3 based on expected site design runoff for tributary areas.
3. Sand filter can be designed either for DCV or flow rate. To estimate the drawdown time, divide the average ponding depth by the permeability of the filter sand.

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or durations will typically require significant surface ponding and/or aggregate storage volumes, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the Manual.

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, and maximum finish grade slope.
2. Iteratively determine the facility footprint area, surface ponding and/or aggregate storage layer depth required to provide detention storage to reduce flow rates and durations to allowable

limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control levels. Multi-level orifices can be used within an outlet structure to control the full range of flows.

3. If a sand filter cannot fully provide the flow rate and duration control required by the MS4 permit, an upstream or downstream structure with appropriate storage volume such as an underground vault can be used to provide remaining controls.
4. After the sand filter has been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.

Maintenance Overview

Normal Expected Maintenance. Sand filters require routine maintenance to: remove accumulated materials such as sediment, trash, and debris from the forebay; and clear the underdrain(s). To ensure runoff is passed through the sand bed, sand at the top of the sand bed (approximately 2 inches, or more if necessary) must be removed and replaced to restore flow when the drain time exceeds 24-96 hours. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. The normal expected maintenance described above ensures the BMP functionality. Lapses in the normal expected maintenance can lead to clogging of the BMP and runoff bypassing the filter. If clogging is observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. In addition, clogged BMPs can lead to flooding, standing water and mosquito breeding habitat. Corrective maintenance and increased inspection and maintenance will be required. For persistent clogging or presence of mosquitos, contact the County reviewer to determine a permanent solution. For example, adding pretreatment measures within the tributary area draining to the BMP to intercept sediment, trash, and debris. Pretreatment components, especially for sediment, will extend the life of the sand bed. For mosquitos, a Vector Management Plan, prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris in forebay and/or filter bed	Remove and properly dispose of accumulated materials.	• Inspect monthly. If the forebay is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found within the filter bed at each inspection. • When the BMP includes a forebay, materials must be removed from the forebay when the forebay is 25% full*, or if accumulation within the forebay blocks flow to the filter bed.
Standing water in BMP for longer than 24-96 hours following a storm event	Make appropriate corrective measures to restore drainage such as removing obstructions of debris from the forebay, clearing underdrains or repairing/replacing clogged sand bed.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Clogged sand bed This is indicated when the drain time of the surface of the sand bed exceeds 24-96 hours.	Remove and properly dispose sand from the top of the sand bed (approximately 2 inches of sand, or as much as needed to restore flow). Restore sand depth to the design depth.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove and properly dispose any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed
Damage to structural components of the BMP such as weirs, underdrains, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.

E.20 FT-4 Dry Extended Detention Basin



Location: Rolling Hills Ranch, Chula Vista, California; Photo Credit: Eric Mosolgo

MS4 Permit Category
Flow-thru Treatment Control

Manual Category
Flow-thru Treatment Control

Applicable Performance Standard
Pollutant Control
Flow Control

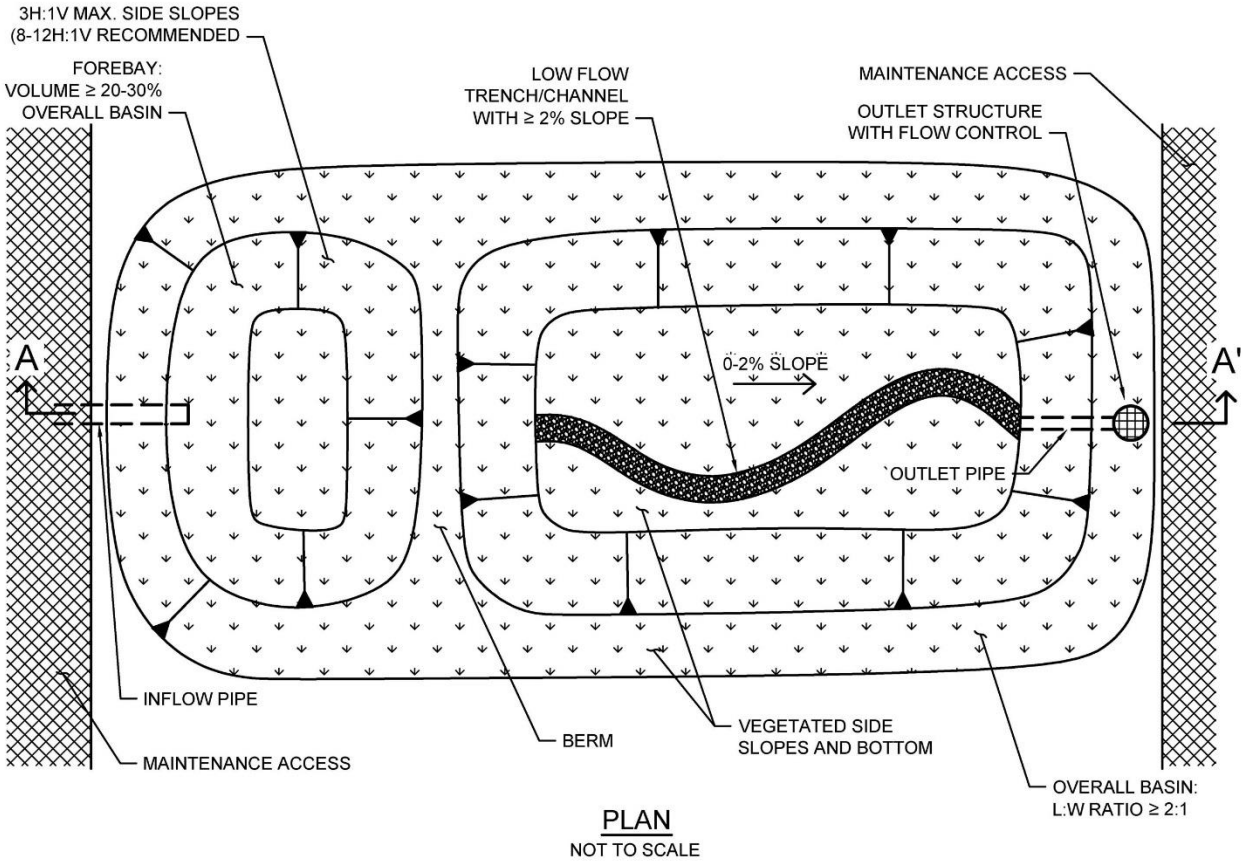
Primary Benefits
Treatment
Volume Reduction (Incidental)
Peak Flow Attenuation

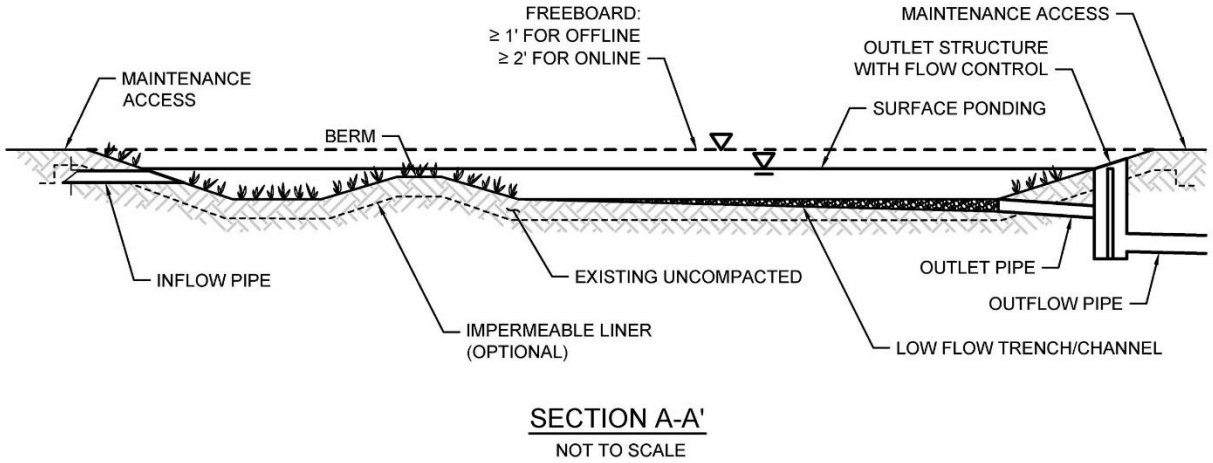
Description

Dry extended detention basins are basins that have been designed to detain storm water for an extended period to allow sedimentation and typically drain completely between storm events. A portion of the dissolved pollutant load may also be removed by filtration, uptake by vegetation, and/or through infiltration. The slopes, bottom, and forebay of dry extended detention basins are typically vegetated. Considerable storm water volume reduction can occur in dry extended detention basins when they are located in permeable soils and are not lined with an impermeable barrier. dry extended detention basins are generally appropriate for developments of ten acres or larger, and have the potential for multiple uses including parks, playing fields, tennis courts, open space, and overflow parking lots. They can also be used to provide flow control by modifying the outlet control structure and providing additional detention storage.

Typical dry extended detention basins components include:

- Forebay for pretreatment
- Surface ponding for captured flows
- Vegetation selected based on basin use, climate, and ponding depth
- Low flow channel, outlet, and overflow device
- Impermeable liner or uncompacted native soils at the bottom of the facility





Typical plan and Section view of a Dry Extended Detention Basin BMP

Design Adaptations for Project Goals

Flow-thru treatment BMP for storm water pollutant control. The system is lined or un-lined to provide incidental infiltration and designed to detain storm water to allow particulates and associated pollutants to settle out. This configuration is considered to provide flow-thru treatment, not biofiltration treatment. Storage provided as surface ponding above a restricted outlet invert is considered detention storage and is included in calculations for the flow-thru treatment volume.

Integrated storm water flow control and pollutant control configuration. Dry extended detention basins can also be designed for flow control. The surface ponding can be designed to accommodate higher volumes than the storm water pollutant control volume and can utilize multi-stage outlets to mitigate both the duration and rate of flows within a prescribed range.

Design Criteria and Considerations

Dry extended detention basins must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of County staff if it is determined to be appropriate:

	Siting and Design	*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, and liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	An impermeable liner or other hydraulic restriction layer is included if site constraints indicate that infiltration or lateral flows should not be allowed.	Lining prevents storm water from impacting groundwater and/or sensitive environmental or geotechnical features. Incidental infiltration, when allowable, can aid in pollutant removal and groundwater recharge.
☐	Contributing tributary area is large (typically ≥ 10 acres).	Dry extended detention basins require significant space and are more cost-effective for treating larger drainage areas.
☐	Longitudinal basin bottom slope is 0 - 2%.	Flatter slopes promote ponding and settling of particles.
☐	Basin length to width ratio is ≥ 2:1 (L:W).	A larger length to width ratio provides a longer flow path to promote settling.
☐	Forebay is included that encompasses 20 - 30% of the basin volume.	A forebay to trap sediment can decrease frequency of required maintenance.
☐	Side slopes are ≥ 3H:1V.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.

Siting and Design		*Intent/Rationale*
☐	Surface ponding drawdown time is between 24 and 96 hours.	Minimum drawdown time of 24 hours allows for adequate settling time and maximizes pollutant removal. Maximum drawdown time of 96 hours provides vector control.
☐	Minimum freeboard provided is ≥1 foot for offline facilities and ≥2 feet for online facilities.	Freeboard provides room for head over overflow structures and minimizes risk of uncontrolled surface discharge.
☐	Inflow and outflow structures are accessible by required equipment (e.g., vactor truck) for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow control structures.
☐	A low flow channel or trench with a ≥ 2% slope is provided. A gravel infiltration trench is provided where infiltration is allowable.	Aids in draining or infiltrating dry weather flows.
☐	Overflow is safely conveyed to a downstream storm drain system or discharge point. Size overflow structure to pass 100-year peak flow.	Planning for overflow lessens the risk of property damage due to flooding.
☐	The maximum rate at which runoff is discharged is set below the erosive threshold for the site.	Extended low flows can have erosive effects.

Conceptual Design and Sizing Approach for Storm Water Pollutant Control Only

To design dry extended detention basins for storm water pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and criteria have been met, including placement requirements, contributing tributary area, forebay volume, and maximum slopes for basin sides and bottom.
2. Calculate the DCV per Appendix B based on expected site design runoff for tributary areas.
3. Use the sizing worksheet to determine flow-thru treatment sizing of the surface ponding of the dry extended detention basin, which includes calculations for a maximum 96-hour drawdown time.

Conceptual Design and Sizing Approach when Storm Water Flow Control is Applicable

Control of flow rates and/or durations will typically require significant surface ponding volume, and therefore the following steps should be taken prior to determination of storm water pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that siting and criteria have been met, including placement requirements, tributary area, and maximum slopes for basin sides and bottom.
2. Iteratively determine the surface ponding required to provide detention storage to reduce flow rates and durations to allowable limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control levels. Multi-level orifices can be used within an outlet structure to control the full range of flows.
3. If a dry extended detention basin cannot fully provide the flow rate and duration control required by this manual, an upstream or downstream structure with appropriate storage volume such as an additional basin or underground vault can be used to provide remaining controls.
4. After the dry extended detention basin has been designed to meet flow control requirements, calculations must be completed to verify if storm water pollutant control requirements to treat the DCV have been met.

Maintenance Overview

Normal Expected Maintenance. Dry extended detention basins require routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure. If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface or underground ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of underlying native soils and/or the outlet structure. The specific cause of the drainage issue must be determined and corrected. If it is determined that the drainage of the basin relies on infiltration and the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted prior to any additional repairs or reconstruction.
- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials.
- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations. Some above-ground dry extended detention basins are vegetated structural BMPs. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, routine maintenance is key to preventing this scenario.

Underground dry extended detention basins are typically designed to be cleaned from above-ground using a vactor. If maintenance conditions require maintenance personnel to enter the underground structure, the maintenance personnel must be trained and certified in confined space entry

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Summary of Standard Inspection and Maintenance

The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district.

Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.

"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Accumulation of sediment, litter, or debris in forebay and/or basin	Remove and properly dispose of accumulated materials, (without damage to vegetation when applicable).	• Inspect monthly. If the forebay is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found within the basin area at each inspection. • When the BMP includes a forebay, materials must be removed from the forebay when the forebay is 25% full*, or if accumulation within the forebay blocks flow to the basin.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Poor vegetation establishment (when the BMP includes vegetated surface by design)	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Dead or diseased vegetation (when the BMP includes vegetated surface by design)	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintain when needed.
Overgrown vegetation (when the BMP includes vegetated surface by design)	Mow or trim as appropriate.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintain when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the County reviewer shall be contacted prior to any additional repairs or reconstruction.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Standing water in above-ground BMP for longer than 24-96 hours following a storm event	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or removing/replacing clogged or compacted surface treatments and/or scarifying or tilling native soils. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller. If it is determined that the drainage of the basin relies on infiltration and the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.
Standing water in underground BMP for longer than 24-96 hours following a storm event	Make appropriate corrective measures such as removing obstructions at the outlet, clearing underdrains, or flushing fine sediment from aggregate layer when applicable. If it is determined that the drainage of the basin relies on infiltration and the underlying native soils have been compacted or do not have the infiltration capacity expected, the County reviewer shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed.

Threshold/Indicator	Maintenance Action	Inspection and Maintenance Frequency
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove and properly dispose any standing water; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. For underground detention basins, ensure access covers are tight fitting, with gaps or holes no greater than 1/16 inch, and/or install barriers such as inserts or screens that prevent mosquito access to the subsurface storage. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the County reviewer shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintain when needed
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintain when needed.

E.21 FT-5 Proprietary Flow-Thru Treatment Control BMPs

The purpose of this fact sheet is to help explain the potential role of proprietary BMPs in meeting flow thru treatment control BMP requirements. The fact sheet does not describe design criteria like the other fact sheets in this appendix because this information varies by BMP product model.

Criteria for Use of a Proprietary BMP as a Flow-Thru Treatment Control BMP

A proprietary BMP may be acceptable as a "flow-thru treatment control BMP" under the following conditions:

(1) The BMP is selected and sized consistent with the method and criteria described in Appendix J.5;

(2) The BMP is designed and maintained in a manner consistent with its performance certifications (See explanation in Appendix J.5); and

(3) The BMP is acceptable at the discretion of County staff. While the County has no obligation to accept the use of any proposed proprietary flow-thru BMP, applicants will be provided a written explanation describing the rationale for the rejection of any proposed devices.

Guidance for Sizing Proprietary BMPs

Proprietary flow-thru BMPs must meet the same sizing guidance as other flow-thru treatment control BMPs. Guidance for sizing flow-thru BMPs to comply with requirements of this manual is provided in Appendix J.5.

Maintenance Overview

Refer to manufacturer for maintenance information.

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Appendix

F

General Standards for Bioretention/Biofiltration BMPs

F.1 Biofiltration Standards and Checklist

F.2 Biofiltration Soil Media Composition, Testing, and Installation

F.3 Plant List for Bioretention Facilities

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Appendix F General Standards for Bioretention/Biofiltration BMPs

F.1 Biofiltration Standards and Checklist

Introduction

The MS4 Permit and this manual define a specific category of storm water pollutant treatment BMPs called "biofiltration BMPs." The MS4 Permit (Section E.3.c.1) states:

Biofiltration BMPs must be designed to have an appropriate hydraulic loading rate to maximize storm water retention and pollutant removal, as well as to prevent erosion, scour, and channeling within the BMP, and must be sized to:

a) **Treat 1.5 times the DCV not reliably retained onsite, OR**

b) **Treat the DCV not reliably retained onsite with a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the DCV not reliably retained onsite.**

A project applicant must be able to affirmatively demonstrate that a given BMP is designed and sized in a manner consistent with this definition to be considered as a "biofiltration BMP" as part of a compliant storm water quality management plan. Retention is defined in the MS4 Permit as evapotranspiration, infiltration, and harvest and use of storm water vs. discharge to a surface water system.

Contents and Intended Uses

This appendix contains a checklist of the key underlying criteria that must be met for a BMP to be considered a biofiltration BMP. The purpose of this checklist is to facilitate consistent review and approval of biofiltration BMPs that meet the "biofiltration standard" defined by the MS4 Permit.

This checklist includes specific design criteria that are essential to defining a system as a biofiltration BMP; however, it does not present a complete design basis. This checklist was used to develop BMP Fact Sheets for PR-1 biofiltration with partial retention and BF-1 biofiltration, which do present a complete design basis. Therefore, biofiltration BMPs that substantially meet all aspects of the Fact sheets PR-1 or BF-1 should be able to complete this checklist without additional documentation beyond what would already be required for a project submittal.

Other biofiltration BMP designs[3] (including both non-proprietary and proprietary designs) may also meet the underlying MS4 Permit requirements to be considered biofiltration BMPs. These BMPs may be classified as biofiltration BMPs if they (1) meet the minimum design criteria listed in this appendix, including the pollutant treatment performance standard in Appendix F.1.1, (2) are designed and maintained in a manner consistent with their performance certifications (See explanation in Appendix F.1.2), if applicable, and (3) are acceptable at the discretion of County staff. The applicant may be required to provide additional studies and/or required to meet additional design criteria beyond the scope of this document in order to demonstrate that these criteria are met.

Organization

The checklist in this appendix is organized into the six (6) main objectives associated with biofiltration BMP design. It describes the associated minimum criteria that must be met in order to qualify a biofiltration BMP as meeting the biofiltration standard. The seven main objectives are listed below. Specific design criteria and associated manual references associated with each of these objectives is provided in the checklist in the following section.

1. Biofiltration BMPs must be sized using acceptable sizing methods described in this manual.
2. Biofiltration BMPs must be designed with a hydraulic loading rate to maximize pollutant retention, preserve pollutant control/sequestration processes, and minimize potential for pollutant washout.
3. Biofiltration BMPs must contain plants and Biofiltration Soil Media to support and maintain treatment processes.
4. Biofiltration BMPs must be designed to prevent erosion, scour, and channeling within the BMP.
5. Biofiltration BMP must include operations and maintenance design features and planning considerations to provide for continued effectiveness of pollutant and flow control functions.
6. Biofiltration BMPs that are proprietary, project applicants must provide evidence that the BMP has been certified for use as part of the Washington State Technology Assessment Protocol-Ecology certification program or other equivalent third party submit evaluation as outlined below.

Biofiltration Criteria Checklist

The applicant must provide documentation of compliance with each criterion in this checklist as part of the project submittal. The right column of this checklist identifies the submittal information that is

[3] Defined as biofiltration designs that do not conform to the specific design criteria described in Fact Sheets PR-1 or BF-1. This category includes proprietary BMPs that are sold by a vendor as well as non-proprietary BMPs that are designed and constructed of primarily of more elementary construction materials.

recommended to document compliance with each criterion. Biofiltration BMPs that substantially meet all aspects of Fact Sheets PR-1 or BF-1 should still use this checklist; however additional documentation (beyond what is already required for project submittal) should not be required.

1. Biofiltration BMPs must be sized using acceptable sizing methods.

Intent: The MS4 Permit and this manual defines specific sizing methods that must be used to size biofiltration BMPs. Sizing of biofiltration BMPs is a fundamental factor in the amount of storm water that can be treated and also influences volume and pollutant retention processes.

☐	The project applicant has demonstrated that biofiltration BMPs are sized to meet one of the biofiltration sizing options available (Appendix B).	Submit sizing worksheets (Appendix B) or other equivalent documentation with the SWQMP.

2. Biofiltration BMPs must be designed with a hydraulic loading rate to maximize pollutant retention, preserve pollutant control processes, and minimize potential for pollutant washout.

Intent: Various decisions about biofiltration BMP design influence the degree to which pollutants are retained. The MS4 Permit requires that biofiltration BMPs achieve maximum feasible retention of storm water pollutants.

☐	Media selected for the biofiltration BMP meets minimum quality and material specifications, including the maximum allowable design filtration rate and minimum thickness of media.	Provide documentation that media meets the BSM specifications outlined in F.2.
	OR	
☐	Alternatively, for proprietary designs and custom media mixes not meeting the media specifications, field scale testing data are provided to demonstrate that proposed media meets the pollutant treatment performance criteria in Section F.1.1 below.	Provide documentation that the media meets the specifications.
☐	To the extent practicable, filtration rates are outlet controlled (e.g., via an underdrain and orifice/weir) instead of controlled by the infiltration rate of the media.	Include outlet control in designs or provide documentation of why outlet control is not practicable.
☐	The water surface drains to at least 12 inches below the media surface within 24 hours from the end of storm event flow to preserve plant health and promote healthy soil structure.	Include calculations to demonstrate that drawdown rate is adequate. Surface ponding drawdown time greater than 24-hours but less than 96 hours may be allowed at the discretion of County staff if certified by a landscape architect or agronomist.

☐	If nutrients are a pollutant of concern, design of the biofiltration BMP follows nutrient-sensitive design criteria.	Follow specifications for nutrient sensitive design in Fact Sheet BF-2. Or provide alternative documentation that nutrient treatment is addressed and potential for nutrient release is minimized.
☐	Media gradation calculations or geotextile selection calculations demonstrate that migration of media between layers will be prevented and permeability will be preserved.	Follow specification for choking layer or geotextile in Fact Sheet PR-1 or BF-1. Or include calculations to demonstrate that choking layer is appropriately specified.
3. Biofiltration BMPs must be vegetated to support and maintain treatment processes. Intent: Plants are important elements of biofiltration performance and longevity.		
☐	Plants have been selected to be tolerant of project climate, design ponding depths and the treatment media composition.	Provide documentation justifying plant selection. Refer to the plant list in Appendix F.
☐	Plants have been selected to minimize irrigation requirements.	Provide documentation describing irrigation requirements for establishment and long-term operation.
☐	Plant location and growth will not impede expected long-term media filtration rates and will enhance long term infiltration rates to the extent possible.	Provide documentation justifying plant selection. Refer to the plant list in Appendix F.
4. Biofiltration BMPs must be designed with a hydraulic loading rate to prevent erosion, scour, and channeling within the BMP. Intent: Erosion, scour, and/or channeling can disrupt treatment processes and reduce biofiltration effectiveness.		
☐	Scour protection has been provided for both sheet flow and pipe inflows to the BMP, where needed.	Provide documentation of scour protection as described in Fact Sheets PR-1 or BF-1 or approved equivalent.
☐	Where scour protection has not been provided, flows into and within the BMP are kept to non-erosive velocities.	Provide documentation of design checks for erosive velocities as described in Fact Sheets PR-1 or BF-1 or approved equivalent.
☐	For proprietary BMPs, the BMP is used in a manner consistent with manufacturer guidelines and conditions of its third-party certification[4] (i.e., maximum tributary area, maximum inflow velocities, etc., as applicable).	Provide copy of manufacturer recommendations and conditions of third-party certification.

[4] Certifications or verifications issued by the Washington Technology Acceptance Protocol-Ecology program and the New Jersey Corporation for Advanced Technology programs are typically accompanied by a set of guidelines regarding appropriate design and maintenance conditions that would be consistent with the certification/verification

5. Biofiltration BMP must include operations and maintenance design features and planning considerations for continued effectiveness of pollutant and flow control functions.

Intent: Biofiltration BMPs require regular maintenance in order provide ongoing function as intended. Additionally, it is not possible to foresee and avoid potential issues as part of design; therefore, plans must be in place to correct issues if they arise.

☐	The biofiltration BMP maintenance plan describes specific inspection activities, regular/periodic maintenance activities and specific corrective actions relating to scour, erosion, channeling, media clogging, vegetation health, and inflow and outflow structures.	Include maintenance plan with the SWQMP as described in Chapter 7.
☐	Adequate site area and features have been provided for BMP inspection and maintenance access.	Illustrate maintenance access routes, setbacks, maintenance features as needed on project water quality plans.
☐	For proprietary biofiltration BMPs, the BMP maintenance plan is consistent with manufacturer guidelines and conditions of its third-party certification (i.e., maintenance activities, frequencies).	Provide copy of manufacturer recommendations and conditions of third-party certification.

6. Proprietary Biofiltration BMPs must provide evidence that the BMP has been certified for use as part of the Washington State Technology Assessment Protocol-Ecology certification program or other equivalent third party submit evaluation.

Intent: Must prove through a vetted testing protocol that the BMP functions at the same level or better than a non-proprietary Biofiltration BMP.

☐	Must be Biofiltration BMPs that have an active Technology Acceptance Protocol-Ecology certification, with General Use Level Designation.	Provide documentation as outlined in F.1.1, below with the SWQMP
☐	BMP must be used in a manner consistent with all conditions of the Technology Acceptance Protocol-Ecology certification while meeting the flow rate or volume design criteria that is required for biofiltration BMPs under this manual.	See guidance below in F.1.2.1 to provide proper documentation.
	OR	
☐	BMP may be acceptable if it meets other third-party protocol and the pollutant treatment performance of the system is consistent with the performance levels associated with the necessary Technology Acceptance Protocol-Ecology certifications	See Guidance below in F.1.1 to provide proper documentation.

F.1.1 Pollutant Treatment Performance Standard

Standard biofiltration BMPs that are designed following the criteria in Fact Sheets PR-1 and BF-1 are presumed to the meet the pollutant treatment performance standard associated with biofiltration BMPs. This presumption is based on the MS4 Permit Fact Sheet which cites analyses of standard biofiltration BMPs conducted in the Ventura County Technical Guidance Manual (July 2011).

For BMPs that do not meet the biofiltration media specification and/or the range of acceptable media filtration rates described in Fact Sheet, PR-1 and BF-1, additional documentation must be provided to demonstrate that adequate pollutant treatment performance is provided to be considered a biofiltration BMP. Project applicants have three options for documenting compliance:

1) Project applicants may provide documentation to substantiate that the minor modifications to the design is expected to provide equal or better pollutant removal performance for the project pollutants of concern than would be provided by a biofiltration design that complies with the criteria in Fact Sheets PR-1 and BF-1. Minor modifications are design elements that deviate only slightly from standard design criteria and are expected to either not impact performance or to improve performance compared to standard biofiltration designs. The County has the discretion to accept or reject this documentation and/or request additional documentation to substantiate equivalent or better performance to BF-1 or PR-1, as applicable. Examples of minor deviations include:

    - Different particle size distribution of aggregate, with documentation that system filtration rate will meet specifications.
    - Alternative source of organic components, with documentation of material suitability and stability from appropriate testing agency.
    - Specialized amendments to provide additional treatment mechanisms, and which have negligible potential to upset other treatment mechanisms or otherwise deteriorate performances.

2) For proprietary BMPs, project applicants may provide evidence that the BMP has been certified for use as part of the Washington State Technology Assessment Protocol-Ecology Certification program and meets each of the following requirements:

    a. The applicant must demonstrate (using the checklist in this Appendix) that the BMP meets all other conditions to be considered as a biofiltration BMP. For example, a cartridge media filter or hydrodynamic separator would not meet biofiltration BMP design criteria regardless of Technology Acceptance Protocol-Ecology certification because they are not vegetated.

    b. The applicant must select BMPs that have an active Technology Acceptance Protocol-Ecology certification, with General Use Level Designation for the appropriate project pollutants of concern as identified in Table F.1-1. The list of certified technologies is

updated as new technologies are approved (link below). Technologies with Pilot Use Level Designation and Conditional Use Level Designations are not acceptable. Refer to: http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html.

c. The applicant must demonstrate that BMP is being used in a manner consistent with all conditions of the Technology Acceptance Protocol-Ecology certification while meeting the flow rate or volume design criteria that is required for biofiltration BMPs under this manual. Conditions of Technology Acceptance Protocol-Ecology certification are available by clicking on the technology name at the website listed in bullet b. Additional discussion about sizing of proprietary biofiltration BMPs to comply with applicable sizing standards is provided below in Section F.1.2.

3) For BMPs that do not fall into options 1 or 2 above, County staff may allow the applicant to submit alternative third-party documentation that the pollutant treatment performance of the system is consistent with the performance levels associated with the necessary Technology Acceptance Protocol-Ecology certifications. Table F.1-1 describes the required levels of certification and Table F.l-2 describes the pollutant treatment performance levels associated with each level of certification. Acceptance of this approach is at the sole discretion of County staff. While the County has no obligation to accept the use of any proposed proprietary flow-thru BMP, applicants will be provided a written explanation describing the rationale for the rejection of any proposed devices. If Technology Acceptance Protocol-Ecology certifications are not available, preference would be given to:

a. Verified third-party, field-scale testing performance under the Technology Acceptance Reciprocity Partnership Tier II Protocol. This protocol is no longer operated, however this is considered to be a valid protocol and historic verifications are considered to be representative provided that product models being proposed are consistent with those that were tested. Technology Acceptance Reciprocity Partnership verifications were conducted under New Jersey Corporation for Advance Testing and are archived at the website linked below. Note that Technology Acceptance Reciprocity Partnership verifications must be matched to pollutant treatment standards in Table F.1-2 then matched to an equivalent Technology Acceptance Protocol-Ecology certification in Table F.1-1.

b. Verified third-party, field-scale testing performance under the New Jersey Corporation for Advance Testing protocol. Note that New Jersey Corporation for Advance Testing verifications must be matched to pollutant treatment standards in Table F.1-2 then matched to an equivalent Technology Acceptance Protocol-Ecology certification in Table F.1-1.

A list of field-scale verified technologies under Technology Acceptance Reciprocity Partnership Tier II and New Jersey Corporation for Advance Testing can be accessed at:

http://www.njcat.org/verification-process/technology-verification-database.html (refer to field verified technologies only).

Table F.1-1: Required Technology Acceptance Protocol-Ecology Certifications for Polltuants of Concern for Biofiltration Performance Standard

Project Pollutant of Concern	Required Technology Acceptance Protocol-Ecology Certification for Biofiltration Performance Standard
Trash	Basic Treatment OR Phosphorus Treatment OR Enhanced Treatment
Sediments	Basic Treatment OR Phosphorus Treatment OR Enhanced Treatment
Oil and Grease	Basic Treatment OR Phosphorus Treatment OR Enhanced Treatment
Nutrients	Phosphorus Treatment[1]
Metals	Enhanced Treatment
Pesticides	Basic Treatment (including filtration)[2] OR Phosphorus Treatment OR Enhanced Treatment
Organics	Basic Treatment (including filtration)[2] OR Phosphorus Treatment OR Enhanced Treatment
Bacteria and Viruses	Basic Treatment (including bacteria removal processes)[3] OR Phosphorus Treatment OR Enhanced Treatment

1 – There is no Technology Acceptance Protocol-Ecology equivalent for nitrogen compounds; however systems that are designed to retain phosphorus (as well as meet basic treatment designation), generally also provide treatment of nitrogen compounds. Where nitrogen is a pollutant of concern, relative performance of available certified systems for nitrogen removal should be considered in BMP selection.

2 – Pesticides, organics, and oxygen demanding substances are typically addressed by particle filtration consistent with the level of treatment required to achieve Basic treatment certification; if a system with Basic treatment certification does not provide filtration, it is not acceptable for pesticides, organics or oxygen demanding substances.

3 – There is no Technology Acceptance Protocol-Ecology equivalent for pathogens (viruses and bacteria), and testing data are limited because of typical sample hold times. Systems with Technology Acceptance Protocol-Ecology Basic Treatment must include one or more significant bacteria removal process such as media filtration, physical sorption, predation, reduced redox conditions, and/or solar inactivation. Where design options are available to enhance pathogen removal (i.e., pathogen-specific media mix offered by vendor), this design variation should be used.

Table F.1-2: Performance Standards for Technology Acceptance Protocol-Ecology Certification

Performance Goal	Influent Range	Criteria
Basic Treatment	20 – 100 mg/L TSS	Effluent goal ≤ 20 mg/L TSS
	100 – 200 mg/L TSS	≥ 80% TSS removal
	>200 mg/L TSS	> 80% TSS removal
Enhanced (Dissolved Metals) Treatment	Dissolved copper 0.005 – 0.02 mg/L	Must meet basic treatment goal and better than basic treatment currently defined as >30% dissolved copper removal
	Dissolved zinc 0.02 – 0.3 mg/L	Must meet basic treatment goal and better than basic treatment currently defined as >60% dissolved zinc removal
Phosphorous Treatment	Total phosphorous 0.1 – 0.5 mg/L	Must meet basic treatment goal and exhibit ≥50% total phosphorous removal
Oil Treatment	Total petroleum hydrocarbon > 10 mg/L	No ongoing or recurring visible sheen in effluent Daily average effluent Total petroleum hydrocarbon concentration < 10 mg/L Maximum effluent Total petroleum hydrocarbon concentration for a 15 mg/L for a discrete (grab) sample
Pretreatment	50 – 100 mg/L TSS	≤ 50 mg/L TSS
	≥ 200 mg/L TSS	≥ 50% TSS removal

F.1.2 Guidance on Sizing and Design of Non-Standard Biofiltration BMPs

This section explains the general process for design and sizing of non-standard biofiltration BMPs. This section assumes that the BMPs have been selected based on the criteria in Section F.1.1.

F.1.2.1 Guidance on Design per Conditions of Certification/Verification

The biofiltration standard and checklist in this appendix requires that "the BMP is used in a manner consistent with manufacturer guidelines and conditions of its third-party certification." Practically, what this means is that the BMP is used in the same way in which it was tested and certified. For example, it is not acceptable for a BMP of a given size to be certified/verified with a 100 gallon per minute treatment rate and be applied at a 150 gallon per minute treatment rate in a design.

Certifications or verifications issued by the Washington Technology Acceptance Protocol-Ecology program and the Technology Acceptance Reciprocity Partnership or New Jersey Corporation for Advance Testing programs are typically accompanied by a set of guidelines regarding appropriate

design and maintenance conditions that would be consistent with the certification/verification. It is common for these approvals to specify the specific model of BMP, design capacity for given unit sizes, type of media that is the basis for approval, and/or other parameters. The applicant must demonstrate conclusively that the proposed application of the BMP is consistent with these criteria.

For alternate non-proprietary systems that do not have a Technology Acceptance Protocol-Ecology / Technology Acceptance Reciprocity Partnership / New Jersey Corporation for Advance Testing certification (but which still must provide quantitative data per Appendix F.1.1), it must be demonstrate that the configuration and design proposed for the project is reasonably consistent with the configuration and design under which the BMP was tested to demonstrate compliance with Appendix F.1.1.

F.1.2.2 Sizing of Flow-Based Biofiltration BMP

This sizing method is only available when the BMP meets the pollutant treatment performance standard in Appendix F.1.1.

Proprietary biofiltration BMPs are typically designed as a flow-based BMPs (i.e., a constant treatment capacity with negligible storage volume). Proprietary biofiltration is only acceptable if the sizing criteria in this Appendix and the retention performance standard identified in Appendix B.5 are satisfied. The applicable sizing method for biofiltration is reduced to: Treat 1.5 times the DCV.

The following steps should be followed to demonstrate that the system is sized to treat 1.5 times the DCV.

1. Calculate the flow rate required to meet the pollutant treatment performance standard without scaling for the 1.5 factor. Options include either:
    - Calculate the runoff flow rate from a 0.2 inch per hour uniform intensity precipitation event (See methodology Appendix J.5.3), or
    - Conduct a continuous simulation analysis to compute the size required to capture and treat 80 percent of average annual runoff; for small catchments, 5-minute precipitation data should be used to account for short time of concentration. Nearest rain gage with 5-minute precipitation data is allowed for this analysis.
2. Multiply the flow rate from Step 1 by 1.5 to compute the design flow rate for the biofiltration system.
3. Based on the conditions of certification/verification (discussed above), establish the design capacity, as a flow rate, of a given sized unit.
4. Demonstrates that an appropriate unit size and number of units is provided to provide a flow rate that meets the required flow rate from Step 2.
5. Provide supplemental retention BMPs that will satisfy retention requirements in Appendix B.2.
6. Demonstrate that the BMP design is expected to last 10 years before major maintenance is anticipated per guidance in Appendix B.4.1

F.2 Biofiltration Soil Media Composition, Testing, and Installation

803-1 GENERAL.

Biofiltration Soil Media (BSM) is intended to filter storm water and support plant growth while minimizing the leaching of potential pollutants. This specification includes requirements that apply to BSM used in stormwater treatment BMPs, including bioretention and biofiltration. Biofiltration Soil Media is also referred to as Engineered Soil Media and Bioretention Soil Media.

803-2 BLENDED BSM CRITERIA AND TESTING REQUIREMENTS

803-2.1 General. Blended BSM shall consist of 60% to 80% by volume sand, up to 20% by volume topsoil, and up to 20% by volume compost. Sand, Topsoil, and Compost used in BSM shall conform to requirements listed in Sections 803-3, 803-4, and 803-5, respectively. For bioretention/biofiltration with outlet-controlled designs, it is likely that topsoil will need to be omitted or reduced to achieve permeability targets.

Alternative mix components and proportions may be utilized, provided that the whole blended mix conforms to whole BSM criteria, detailed in Section 803-2.3 through 803-2.5. Alternative mix designs may include alternative proportions and/or alternative organic amendments. Alternative mixes are subject to approval by the County. Alternative mixes that use an alternative organic component (rather than compost) may be necessary when BMPs are installed in areas with nitrogen or phosphorus impaired receiving waters in order to meet more stringent BSM quality requirements as detailed in Section 803-2.5.

803-2.2 Testing and Submittals. At least 30 days prior to ordering materials, the Contractor shall submit the following to the County reviewer (upon request): source/supplier of BSM, location of source/supplier, a physical sample of the BSM, whole BSM test results from a third-party independent laboratory, test results for individual component materials as required, and description of proposed methods and schedule for mixing, delivery, and placement of BSM. The test results shall be no older than 120 days and shall accurately represent the materials and feed stocks that are currently available from the supplier.

Test results shall demonstrate conformance to agronomic suitability and hydraulic suitability criteria listed in Sections 803-2.3 and 803-2.4, respectively. BSM for use in BMPs in areas with water quality impairments in receiving waters shall also comply with applicable Chemical Suitability criteria in Section 803-2.5. No delivery, placement, or planting of BSM shall begin until test results confirm the suitability of the BSM. The Contractor shall submit a written request for approval which shall be accompanied by written analysis results from a written report of a testing agency. The testing agency must be registered by the State for agronomic soil evaluation laboratory test fees shall be paid for by the Contractor.

803-2.3 Agronomic Suitability. The BSM shall conform to the requirements herein to support plant growth. BSM which requires amending to comply with the below specifications shall be uniformly blended and tested in its blended state prior to testing and delivery.

a) pH range shall be between 6.0-8.5.

b) Salinity shall be between 0.5 and 3.0 millimho/cm (as measure by electrical conductivity)

c) Sodium absorption ratio (SAR) shall be less than 5.0

d) Chloride shall be less than 800 ppm.

e) Cation exchange capacity shall be greater than 10 meq/100 g.

f) Organic matter shall be between 2 and 5%.

g) Carbon:Nitrogen ratio shall be between 12 and 40 (15 to 40 preferred).

Textural class fraction shall adhere to limits in Table 803-2.1, as determined by ASTM Method D422 or an approved alternative method:

TABLE 803-2.3

Textural Class (ASTM D422)	Size Range	Mass Fraction (percent)
Gravel	Larger than 2 mm	0 to 25 of total sample
Clay	Smaller than 0.005 mm	0 to 5 of non-gravel fraction

Test results shall show the following information:

a) Date of testing

b) Project name, contractor name, and source of materials and supplier name

c) Copies of all testing reports including, at a minimum, analytical results sufficient to confirm compliance with all requirements listed in this section.

803-2.4 Hydraulic Suitability. BSM shall meet the have appropriate hydraulic properties for filtering stormwater. The BSM shall conform to the requirements herein to support plant growth. BSM which requires amending, shall be uniformly blended and tested in its blended state prior to testing and delivery.

803-2.4.1 Testing. The saturated hydraulic conductivity of the whole BSM shall be measured according to the method detailed in the measurement of hydraulic conductivity (USDA Handbook 60, method 34b), commonly available as part of standard agronomic soil evaluation, or ASTM D24234 Permeability of Granular Soils (at approximately 85% relative compaction Standard Proctor, ASTM

D698). BSM shall conform to hydraulic criteria associated with the BMP design configuration that best applies to the facility where the BSM will be installed (Section 803-2.4.2 or 803-2.4.3).

803-2.4.2 Systems with Unrestricted Underdrain System (i.e., media control). For systems with underdrains that are not restricted, the BSM shall meet the minimum and maximum measured hydraulic conductivity found in Table 803-2.4 to ensure adequate flow rate through the BMP and longevity of the system but reduce excessive velocities through the media. In all cases, an upturned elbow system on the underdrain, measuring 9 to 12 inches above the invert of the underdrain, should be used to control velocities in the underdrain pipe and reduce potential for solid migration through the system.

803-2.4.3 Systems with Restricted Underdrain System (i.e., outlet control). For systems in which the flow rate of water through the media is controlled via an outlet control device (e.g., orifice or valve) affixed to the outlet of the underdrain system, the hydraulic conductivity of the media should meet the requirements in Table 803-2.4 and the outlet control device should control the flow rate to between 5 and 12 inches per hour. This configuration reduces the sensitivity of system performance to the hydraulic conductivity, compaction, and clogging of the material, reduces the likelihood of preferential flow through media, and allows more precise design and control of system flow rates. For these reasons, outlet control should be considered the preferred design option over unrestricted underdrain systems.

803-2.4.4 Systems without Underdrains. For systems without underdrains, the BSM shall have a hydraulic conductivity of at least 5 inches per hour, or at least 2 times higher than the design infiltration rate of the underlying soil, whichever is greater.

Table 803-2.4.

	Hydraulic Conductivity Requirements	
Underdrain System	**Minimum (in/hr)**	**Maximum (in/hr)**
Unrestricted (media control)	8	24
Restricted (outlet control) Preferred Design Option.	20	80

803-2.5 Chemical Suitability for Areas Draining to Impaired Receiving Waters.

803-2.5.1 General. The chemical suitability criteria listed in this section do not apply to systems without underdrains, unless groundwater is impaired or susceptible to nutrient contamination. Limits for a given parameter only apply if that parameter is associated with a water quality impairment, priority water quality condition, and/or TMDL in the receiving water. Limits may be waived at the discretion of the County if it is determined that it is unreasonable to meet the specification using locally-available materials (available within 100 miles).

803-2.5.2 Testing. Potential for pollutant leaching shall be assessed using either the Saturated Media Extract Method (aka, Saturation Extract) that is commonly performed by agronomic laboratories or the Synthetic Precipitation Leaching Procedure (SPLP) (EPA SW-846, Method 1312). If the saturation extract method is used, samples may be rinsed with up to five pore volumes before collecting extract for analysis.

803-2.5.3 BSM Limits in Areas Draining to Impaired Receiving Waters. The limits in this section are in terms of the concentration of a parameter in water that has been contacted with the BSM.

Table 803-2.5.3

Applicable Pollutant(s)	Saturation Extract or SPLP Criteria
Phosphorus*	< 1 mg/L
Zinc	< 1 mg/L
Copper	< 0.04 mg/L
Lead	< 0.025 mg/L
Arsenic	< 0.02 mg/L
Cadmium	< 0.01 mg/L
Mercury	< 0.01 mg/L
Selenium	< 0.01 mg/L

803-2.5.4 Alternative BSM for Reduced Phosphorus Leaching. In areas with impaired receiving waters, alternative BSM should be considered, especially if receiving waters are phosphorus impaired. BSM with 20% compost may result in phosphorus leaching and soluble phosphorus test results in excess of the 1 mg/L limit presented in Table 803-2.5.3 Alternative organic amendments, such as coco coir pith and/or composted wood products, in place of compost should be considered in these areas. Sand and soil components with higher levels of iron and aluminum should also be considered to limit the solubility of phosphorus.

803-5.5.5. Nitrogen Impaired Receiving Waters. In areas with a downstream water quality impairment or TMDL for nitrogen, a combination of BSM composition and BMP design shall be used to reduce the potential for nitrate leaching from BMPs.

- BSM: The C:N ratio of BSM shall be between 15 and 40 to reduce the potential for nitrate leaching.

- BMP design: BMPs shall be designed to either enhance infiltration into underlying soils or with internal water storage to promote reduction of nitrogen:

    - If a BMP is installed with a liner, the BMP must include an internal saturated zone, consisting of at least an 18-inch thick layer of gravel, to enhance denitrification.

    - If a BMP does not include a liner, it must be installed with a retention zone below the

underdrain discharge elevation, consisting of at least an 18-inch thick layer of gravel, to enhance infiltration into underlying soils.

803-3 SAND FOR BSM.

803-3.1 General. Sand used in BSM should preferably be washed prior to delivery. If sand is not washed it must still meet sieve analysis requirements in Table 1.

803-3.2 Gradation Limits. A sieve analysis shall be performed in accordance with California Test 202, ASTM D 422, or approved equivalent method to demonstrate compliance with the gradation limits shown in Table 803-3.2. Fines passing the No. 200 sieve shall be non-plastic.

TABLE 803-3.2

	Percentage Passing Sieve (by weight)	
Sieve Size (ASTM D422)	**Minimum**	**Maximum**
3/8 inch	100	100
#4	90	100
#8	70	100
#16	40	95
#30	15	70
#40	5	55
#100	0	15
#200	0	5

803-4 TOPSOIL FOR BSM.

803-4.1 General. Topsoil shall be free of hazardous materials and shall be consistent with a common definition of topsoil. Decomposed granite and derivatives of decomposed granite are not considered to be topsoil for the purpose of this specification.

803-4.2 Textural Class. Topsoil shall be classified as a sandy loam or a loamy sand according to the US Department of Agriculture soil classification system. In addition, a textural class analysis shall be performed in accordance with ASTM D422, or an approved alternative method to demonstrate compliance with the gradation limits in Table 803-4.2.

Table 803-4.2

Textural Class (ASTM D422)	Size Range	Mass Fraction (percent)
Gravel	Larger than 2 mm	0 to 25 of total sample
Clay	Smaller than 0.005 mm	0 to 15 of non-gravel fraction

803-5 COMPOST FOR BSM.

803-5.1 General. Compost shall be produced at a facility inspected and regulated by the local enforcement agency for CalRecycle. Compost should also preferably be certified by the U.S. Composting Council's Seal of Testing Assurance Program (USCC STA) or an approved equivalent program. Compost shall not be produced from biosolids feedstock.

803-5.1.1 Gradation Limits. A sieve analysis shall be performed in accordance with ASTM D 422 or approved equivalent method to demonstrate compliance with the gradation limits show in Table 803-5.1.1.

Table 803-5.1.1

Sieve Size (ASTM D422)	Percent Passing Sieve (by weight)
1/2"	97 to 100
2 mm	40 to 90

803-5.1.2 Material Content. Organic Material Content shall be 35% to 100% by dry weight and moisture shall be 25% to 60% wet weight basis. Physical contaminants (manmade inert materials) shall not exceed 1% by dry weight.

803-5.2 Compost Testing. Compost shall meet the following requirements as demonstrated through standard agronomic testing methods:

a) **Carbon to nitrogen (C:N) ratio.** C:N shall be between 15:1 and 40:1, preferably above 20:1 to reduce the potential for nitrogen leaching/washout.

b) **pH.** pH shall be between 6.0 and 8.5.

c) **Soluble Salt Concentration.** Soluble Salt Concentration shall be less than 10 dS/m. (Method TMECC 4.10-A, USDA and U.S. Composting Council).

d) **Stability.** Carbon Dioxide evolution rate shall be less than 3.0 mg CO2-C per g compost organic matter (OM) per day or less than 6 mg CO2-C per g compost carbon per day, whichever unit is reported. (Method TMECC 5.08-B, USDA and U.S. Composting Council). Alternatively, a Solvita rating of 5.5 or higher is acceptable.

803-5.2.1 Pathogens and Pollutant Limits. Select pathogens shall pass US EPA Class A standard, 40 CFR Section 503.32(a). Trace Metals shall pass US EPA Class A standard, 40 CFR Section 503.13, Table 1 for Ceiling Concentrations.

803-6 DELIVERY, STORAGE, HANDLING, AND PAYMENT

803-6.1 General. BSM shall be thoroughly mixed prior to delivery using mechanical mixing methods such as a drum mixer. The Contractor shall protect soils and mixes from absorbing excess water and from erosion at all times.

803-6.1.1 Delivery. The Contractor shall not deliver or place soils in wet or muddy conditions.

803-6.1.2 Storage. The Contractor shall not store materials unprotected during large rainfall events (>0.25 inches). If water is introduced into the material while it is stockpiled, the Contractor shall allow the material to drain to the acceptance of the County before placement.

803-6.1.3 Handling and Placement. BSM shall be lightly compacted and placed in loose lifts approximately 12 inches (300 mm) to ensure reasonable settlement without excessive compaction. Compaction within the BSM area should not exceed 75 to 85% standard proctor within the BSM. Machinery shall not be used in the bioretention facility to place the BSM. A conveyor or spray system shall be used for media placement in large facilities. Low ground pressure equipment may be authorized for large facilities at the discretion of the County. Placement methods and BSM quantities shall account for approximately 10% loss of volume due to settling. Planting methods and timing shall account for settling of media without exposing plant root systems.

803-6.1.4 Hydraulic Suitability. The County may request up to three double ring infiltrometer tests (ASTM D3385) or approved alternative tests to confirm that the placed material meets applicable hydraulic suitability criteria. In the event that the infiltration rate of placed material does not meet applicable criteria, the County may require replacement and/or de-compaction of materials.

803-6.2 Quality Control and Acceptance

803-6.2.1 General. Close adherence to the material quality controls herein are necessary in order to support healthy vegetation, minimize pollutant leaching, and assure sufficient permeability to infiltrate/filter runoff during the life of the facility. Amendments may be included to adjust agronomic properties. Acceptance of the material will be based on test results certified to be representative. Test results shall be conducted no more than 120 days prior to delivery of the blended BSM to the project site. For projects installing more than 100 cubic yards of BSM, batch-specific tests of the blended mix shall be provided to the County for every 100 cubic yards of BSM along with a site plan showing the placement locations of each BSM batch within the facility.

803-6.5 Measurement and Payment. Quantities of mixed BSM will be measured as shown in the Bid. The volumetric quantity of mixed BSM to be paid for shall be the volume of BSM placed within the limits of the dimensions shown on the Plans.

803-7 AGGREGATE MATERIALS FOR BIORETENTION AND BIOFILTRATION DRAINAGE LAYERS

803-7.1 General. This section provides material specifications for drainage layers below BSM in bioretention BMPs. This consists of a two-layer filter course placed below the BSM and above an open-graded aggregate stone reservoir.

803-7.2 Rock and Sand Materials for Drainage Layers

803-7.2.1 General. All sand and stone products used in BSM drainage layers shall be clean and thoroughly washed.

803-7.2.2 Filter Course. Graded aggregate choker material is installed as a filter course to separate BSM from the drainage rock reservoir layer. The purpose of this layer is to limit migration of sand or other fines from the BSM. The filter course consists of two layers of choking material increasing in particle size. The top layer (closets to the BSM) of the filter course shall be constructed of thoroughly washed ASTMC33 Choker Sand as detailed in Table 200-1.5.5. The bottom layer of the filter course shall be constructed of thoroughly washed ASTM No. 8 aggregate material conforming to gradation limits contained in Table 200-1.2.1.

803-7.2.3 Open-Graded Aggregate Stone. Open-graded aggregate material is installed below filter course layers to provide additional storm water storage capacity and contain the underdrain pipe(s). This layer shall be constructed of thoroughly washed AASHTO No. 57 open graded aggregate material conforming to gradation limits contained in Table 200-1.2.1.

803-7.3 Layer Thicknesses and Construction.

803-7.3.1 General. Aggregate shall be deposited on underlying layers at a uniform quantity per linear foot (meter), which quantity will provide the required compacted thickness within the tolerances specified herein without resorting to spotting, picking up, or otherwise shifting the aggregate material.

803-7.3.2 Filter Course Layers. Each of the two filter course layers (top layer of ASTM C33 Choker Sand and bottom layer of ASTM No. 8) shall be installed to a thickness of 3 inches (75 mm). Both layers shall be spread in single layers. Marker stakes should be used to ensure uniform lift thickness.

803-7.3.3 Aggregate Drainage and Storage Layer. The thickness of the aggregate drainage and storage layer (AASHTO No. 57) will depend on site specific design and shall be detailed in contract documents.

803-7.3.4 Spreading. Drainage layers shall be as delivered as uniform mixtures and each layer shall be spread in one operation. Segregation within each aggregate layer shall be avoided and the layers shall be free from pockets of coarse or fine material.

803-7.3.5 Compacting. Filter course material and aggregate storage material shall be lightly compacted to approximately 80% standard proctor without the use of vibratory compaction.

803-7.4 Measurement and Payment. Quantities of graded aggregate choker material and open-graded aggregate storage material will be measured as shown in the Bid. The volumetric quantities of graded aggregate choker stone material and open-graded storage material shall be those placed within the limits of the dimensions shown on the Plans. The weight of material to be paid for will be determined by deducting (from the weight of material delivered to the Work) the weight of water in the material (at the time of weighing) in excess of 1% more than the optimum moisture content. No payment will be made for the weight of water deducted as provided in this subsection.

803-8 SUMMARY

Summary of BSM specification requirements for the City of San Diego and County of San Diego included in Table 803-8.

Table 803-8

Component	Requirement
BSM Material Composition	Sand: 60-80% by volume Topsoil: 0-20% by volume Compost: 20% by volume
Alternative Blends Acceptable?	Yes, but they must meet performance-based specifications.
Sand Type	Washed sand conforming to particle size distribution
Topsoil Type	Sandy loam or loamy sand with clay < 15% and gravel < 25%
Compost Type	From a CalRecycle permitted facility. Biosolids derived materials are not acceptable
BSM Permeability	8-24 inches/hour for BMPs without outlet control; 15-80 inches/hour for BMPs with outlet control; testing is required to demonstrate.
Agronomic Suitability Requirements	Limits for salts and potential toxins. C:N ratio between 12 and 40.
Water Quality Related Limits?	Requirements related to specific pollutants when water quality of receiving waters is impaired for those pollutants.

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F.3 Plant List for Bioretention Facilities

Plant Name		Irrigation Requirements		Preferred Location in Basin		Applicable Bioretention Sections (Un-Lined Facilities)				Applicability to Flow-Through Planter? (Lined Facility)	
Latin Name	Common Name	Temporary Irrigation during Plant Establishment Period	Permanent Irrigation (Drip / Spray)[1]	Basin Bottom	Basin Side Slopes	Section A Treatment-Only Bioretention in Hydrologic Soil Group A or B Soils	Section B Treatment-Only Bioretention in Hydrologic Soil Group C or D soils	Section C Treatment Plus Flow Control Bioretention in Hydrologic Soil Group A or B Soils	Section D Treatment Plus Flow Control Bioretention in Hydrologic Soil Group C or D Soils	**NO** Applicable to Un-lined Facilities Only (Bioretention Only)	**YES** Can Use in Lined or Un-Lined Facility (Flow-Through Planter OR Bioretention)
TREES[2]											
Alnus rhombifolia	White Alder	X		X	X	X	X	X	X	X	
Platanus racemosa	California Sycamore	X		X	X	X	X	X	X	X	
Salix lasiolepsis	Arroyo Willow	X			X	X	X	X	X	X	
Salix lucida	Lance-Leaf Willow	X			X	X	X	X	X	X	
Sambucus mexicana	Blue Elderberry	X			X	X	X	X	X	X	
SHRUBS / GROUNDCOVER											
Achillea millefolium	Yarrow	X			X	X	X				X
Agrostis palens	Thingrass	X			X	X	X	X	X		X
Anemopsis californica	Yerba Manza	X			X	X	X	X	X		X
Baccharis douglasii	Marsh Baccahris	X	X	X		X	X	X	X		X
Carex praegracillis	California Field Sedge	X	X	X		X	X	X	X		X
Carex spissa	San Diego Sedge	X	X	X		X	X	X	X		X
Carex subfusca	Rusty Sedge	X	X	X	X	X	X	X	X		X
Distichlis spicata	Salt Grass	X	X	X		X	X	X	X		X
Eleocharis macrostachya	Pale Spike Rush	X	X	X		X	X	X	X		X
Festuca rubra	Red Fescue	X	X	X	X	X	X				X
Festuca californica	California Fescue	X	X		X	X	X				X
Iva hayesiana	Hayes Iva	X			X	X	X				X
Juncus Mexicana	Mexican Rush	X	X	X	X	X	X	X	X		X
Jucus patens	California Gray Rush	X	X	X	X	X	X	X	X		X
Leymus condensatus ‘Canyon Prince’	Canyon Prince Wild Rye	X	X	X	X	X	X	X	X		X
Mahonia nevinii	Nevin’s Barberry	X			X	X	X	X	X		X
Muhlenburgia rigens	Deergrass	X	X	X	X	X	X	X	X		X
Mimulus cardinalis	Scarlet Monkeyflower	X		X	X	X	X				X
Ribes speciosum	Fushia Flowering Goose.	X			X	X	X				X
Rosa californica	California Wild Rose	X	X		X	X	X				X
Scirpus cenuus	Low Bullrush	X	X	X		X	X	X	X		X
Sisyrinchium bellum	Blue-eyed Grass	X			X	X	X				X

1. All plants will benefit from some supplemental irrigation during hot dry summer months, particularly those on basin side slopes and further inland.
2. All trees should be planted a min. of 10’ away from any drain pipes or structures.
3. This list can also be used for Biofiltration with Partial Retention and Biofiltration Facilities

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Appendix

G

Guidance for Continuous Simulation and Hydromodification Management and Sizing Factors

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Appendix G Guidance for Continuous Simulation and Hydromodification Management Sizing Factors

G.1 Guidance for Continuous Simulation Hydrologic Modeling for Hydromodification Management Studies in San Diego County Region 9

This Section G.1 provides guidance for project-specific continuous simulation modeling to demonstrate compliance with hydromodification flow control requirements. Alternatives to project-specific continuous simulation modeling include use of sizing factors described in Section G.2 for structural BMP design or use of dispersion areas or tree wells as SSD-BMPs in lieu of structural BMPs (see Section 5.2.3 and Appendix I).

G.1.1 Introduction

Continuous simulation hydrologic modeling is used to demonstrate compliance with the performance standards for hydromodification management in San Diego. There are several available hydrologic models that can perform continuous simulation analyses. Each has different methods and parameters for determining the amount of rainfall that becomes runoff, and for representing the hydraulic operations of certain structural BMPs such as biofiltration with partial retention or biofiltration. This Appendix is intended to:

- Identify acceptable models for continuous simulation hydrologic analyses for hydromodification management;
- Provide guidance for selecting climatology input to the models;
- Provide standards for rainfall loss parameters to be used in the models;
- Provide standards for defining physical characteristics of LID components; and
- Provide guidance for demonstrating compliance with performance standards for hydromodification management.

This Appendix is not a user's manual for any of the acceptable models, nor a comprehensive manual for preparing a hydrologic model. This Appendix provides guidance for selecting model input parameters for the specific purpose of hydromodification management studies. The model preparer must be familiar with the user's manual for the selected software to determine how the parameters are entered to the model.

G.1.2 Software for Continuous Simulation Hydrologic Modeling

The following software models may be used for hydromodification management studies in San Diego:

- HSPF – Hydrologic Simulation Program-FORTRAN, distributed by USEPA, public domain.
- SDHM – San Diego Hydrology Model, distributed by Clear Creek Solutions, Inc. This is an HSPF-based model with a proprietary interface that has been customized for use in San Diego for hydromodification management studies.
- SWMM – Storm Water Management Model, distributed by USEPA, public domain.

Third-party and proprietary software, such as XPSWMM or PCSWMM, may be used for hydromodification management studies in San Diego, provided that:

- Input and output data from the software can interface with public domain software such as SWMM. In other words, input files from the third party software should have sufficient functionality to allow export to public domain software for independent validation.
- The software's hydromodification control processes are substantiated.

G.1.3 Climatology Parameters

G.1.3.1 Rainfall

In all software applications for preparation of hydromodification management studies in San Diego, rainfall data must be selected from approved data sets that have been prepared for this purpose. As part of the development of the March 2011 Final HMP, long-term hourly rainfall records were prepared for public use. The rainfall record files are provided on the Project Clean Water website. The rainfall station map is provided in the March 2011 Final HMP and is included in this Appendix as Figure G.1-1.

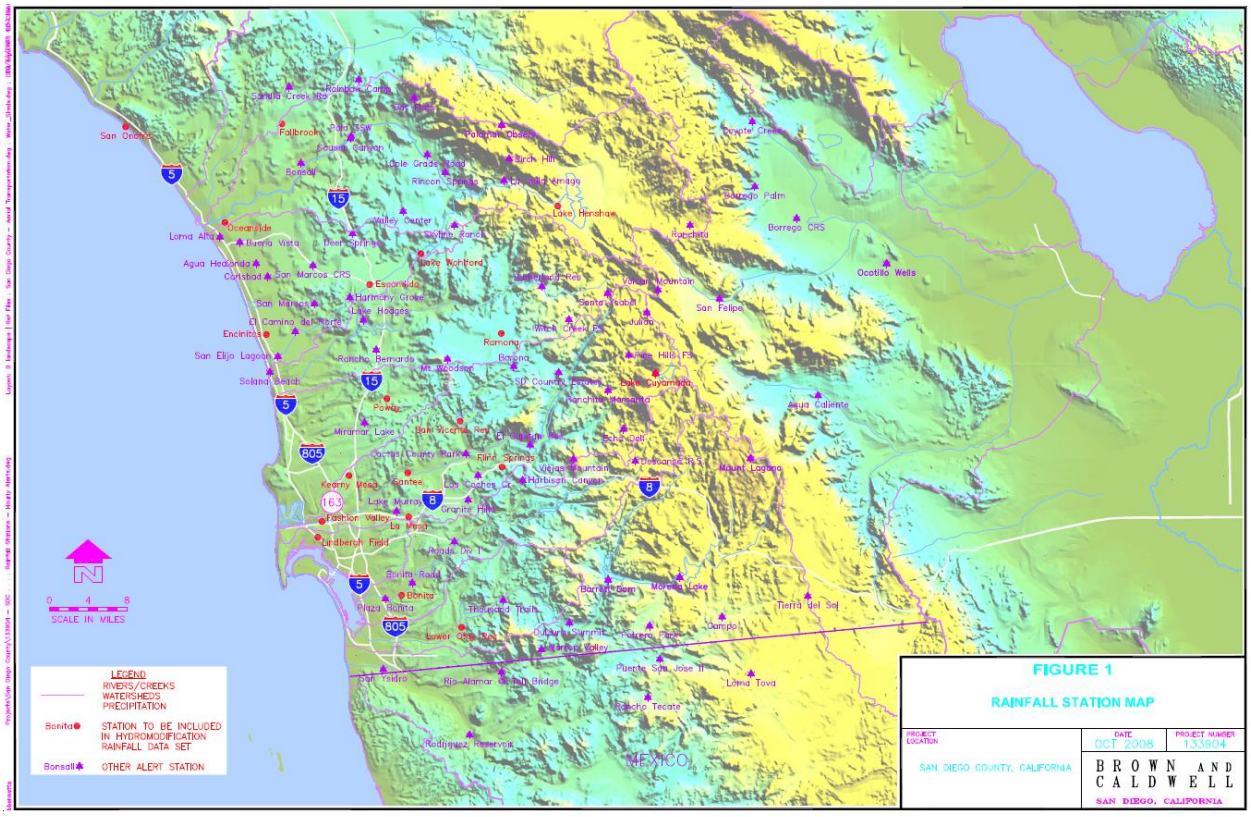

Figure G.1-1: Rainfall Station Map

Project applicants preparing continuous simulation models shall select the most appropriate rainfall data set from the rainfall record files provided on the Project Clean Water website. For a given project location, the following factors should be considered in the selection of the appropriate rainfall data set:

- In most cases, the rainfall data set in closest proximity to the project site will be the appropriate choice (refer to the rainfall station map).
- In some cases, the rainfall data set in closest proximity to the project site may not be the most applicable data set. Such a scenario could involve a data set with an elevation significantly different from the project site. In addition to a simple elevation comparison, the project proponent may also consult with the San Diego County's average annual precipitation isopluvial map, which is provided in the San Diego County Hydrology Manual (2003). Review of this map could provide an initial estimate as to whether the project site is in a similar rainfall zone as compared to the rainfall stations. Generally, precipitation totals in San Diego County increase with increasing elevation.
- Where possible, rainfall data sets should be chosen so that the data set and the project location are both located in the same topographic zone (coastal, foothill, mountain) and major watershed unit (Upper San Luis Rey, Lower San Luis Rey, Upper San Diego River, Lower San Diego River, etc.).

For SDHM users, the approved rainfall data sets are pre-loaded into the software package. SDHM users may select the appropriate rainfall gage within the SDHM program. HSPF or SWMM users shall

download the appropriate rainfall record from the Project Clean Water website and load it into the software program.

Both the pre-development and post-project model simulation period shall encompass the entire rainfall record provided in the approved rainfall data set. Scaling the rainfall data is not permitted.

G.1.3.2 Potential Evapotranspiration

Project applicants preparing continuous simulation models shall select a data set from the sources described below to represent potential evapotranspiration.

For HSPF users, this parameter may be entered as an hourly time series. The hourly time series that was used to develop the BMP Sizing Calculator parameters is provided on the project clean water website and may be used for hydromodification management studies in San Diego. For SDHM users, the hourly evaporation data set is pre-loaded into the program. HSPF users may download the evaporation record from the Project Clean Water website and load it into the software program.

For HSPF or SWMM users, this parameter may be entered as monthly values in inches per month or inches per day. Monthly values may be obtained from the California Irrigation Management Information System "Reference Evapotranspiration Zones" brochure and map (herein "CIMIS ETo Zone Map"), prepared by California Department of Water Resources, dated January 2012. The CIMIS ETo Zone Map is available from www.cimis.gov, and is provided in this Appendix as Figure G.1-2. Determine the appropriate reference evapotranspiration zone for the project from the CIMIS ETo Zone Map. The monthly average reference evapotranspiration values are provided below in Table G.1-1.

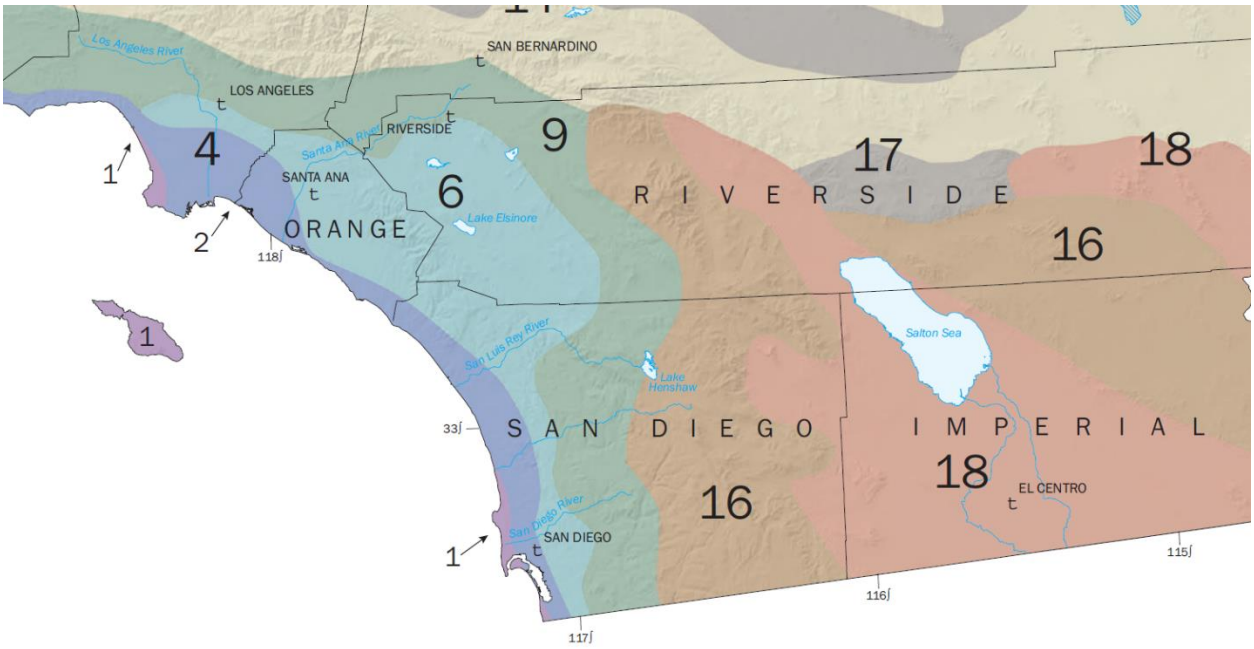

Figure G.1-2: California Irrigation Management Information System "Reference Evapotranspiration Zones"

Table G.1-1: Monthly Average Reference Evapotranspiration by ETo Zone (inches/month and inches/day) for use in SWMM Models for Hydromodification Management Studies in San Diego County CIMIS Zones 1, 4, 6, 9, and 16 (See CIMIS ETo Zone Map)

	January	February	March	April	May	June	July	August	September	October	November	December
Zone	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month
1	0.93	1.4	2.48	3.3	4.03	4.5	4.65	4.03	3.3	2.48	1.2	0.62
4	1.86	2.24	3.41	4.5	5.27	5.7	5.89	5.58	4.5	3.41	2.4	1.86
6	1.86	2.24	3.41	4.8	5.58	6.3	6.51	6.2	4.8	3.72	2.4	1.86
9	2.17	2.8	4.03	5.1	5.89	6.6	7.44	6.82	5.7	4.03	2.7	1.86
16	1.55	2.52	4.03	5.7	7.75	8.7	9.3	8.37	6.3	4.34	2.4	1.55
	January	February	March	April	May	June	July	August	September	October	November	December
Days	31	28	31	30	31	30	31	31	30	31	30	31
Zone	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day
1	0.030	0.050	0.080	0.110	0.130	0.150	0.150	0.130	0.110	0.080	0.040	0.020
4	0.060	0.080	0.110	0.150	0.170	0.190	0.190	0.180	0.150	0.110	0.080	0.060
6	0.060	0.080	0.110	0.160	0.180	0.210	0.210	0.200	0.160	0.120	0.080	0.060
9	0.070	0.100	0.130	0.170	0.190	0.220	0.240	0.220	0.190	0.130	0.090	0.060
16	0.050	0.090	0.130	0.190	0.250	0.290	0.300	0.270	0.210	0.140	0.080	0.050

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G.1.4 Land Characteristics and Loss Parameters

In all software applications for preparation of hydromodification management studies in San Diego, rainfall loss parameters must be consistent with this Appendix unless the preparer can provide documentation to substantiate use of other parameters, subject to County approval. HSPF and SWMM use different processes and different sets of parameters. SDHM is based on HSPF, therefore parameters for SDHM and HSPF are presented together in Section G.1.4.1. Parameters that have been pre-loaded into SDHM may be used for other HSPF hydromodification management studies outside of SDHM. Parameters for SWMM are presented separately in Section G.1.4.2.

G.1.4.1 Rainfall Loss Parameters for HSPF and SDHM

Rainfall losses in HSPF are characterized by PERLND/PWATER parameters and IMPLND parameters, which describe processes occurring when rainfall lands on pervious lands and impervious lands, respectively. "BASINS Technical Notice 6, Estimating Hydrology and Hydraulic Parameters for HSPF," prepared by the USEPA, dated July 2000, provides details regarding these parameters and summary tables of possible ranges of these parameters. Table G.1-2, excerpted from the above-mentioned document, presents the ranges of these parameters.

For HSPF studies for hydromodification management in San Diego, PERLND/PWATER parameters and IMPLND parameters shall fall within the "possible" range provided in EPA Technical Note 6. To select specific parameters, HSPF users may use the parameters established for development of the San Diego BMP Sizing Calculator, and/or the parameters that have been established for SDHM. Parameters for the San Diego BMP Sizing Calculator and SDHM are based on research conducted specifically for HSPF modeling in San Diego.

Documentation of parameters selected for the San Diego BMP Sizing Calculator is presented in the document titled, San Diego BMP Sizing Calculator Methodology, prepared by Brown and Caldwell, dated January 2012 (herein "BMP Sizing Calculator Methodology"). The PERLND/PWATER parameters selected for development of the San Diego BMP Sizing Calculator represent a single composite pervious land cover that is representative of most pre-development conditions for sites that would commonly be managed by the BMP Sizing Calculator. The parameters shown below in Table G.1-3 are excerpted from the BMP Sizing Calculator Methodology.

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Table G.1-2: HSPF PERLND/PWATER and IMPLND Parameters from EPA Technical Note 6

			Range of Values					
Name	**Definition**	**Units**	**Typical**		**Possible**		**Function of ...**	**Comment**
			Min	**Max**	**Min**	**Max**		
PWAT – PARM2								
FOREST	Fraction forest cover	none	0.0	0.50	0.0	0.95	Forest cover	Only impact when SNOW is active
LZSN	Lower Zone Nominal Soil Moisture Storage	inches	3.0	8.0	2.0	15.0	Soils, climate	**Calibration**
INFILT	Index to Infiltration Capacity	in/hr	0.01	0.25	0.001	0.50	Soils, land use	**Calibration**, divides surface and subsurface flow
LSUR	Length of overland flow	feet	200	500	100	700	Topography	Estimate from high resolution topo maps or GIS
SLSUR	Slope of overland flow plane	ft/ft	0.01	0.15	0.001	0.30	Topography	Estimate from high resolution topo maps or GIS
KVARY	Variable groundwater recession	1/inches	0.0	3.0	0.0	5.0	Baseflow recession variation	Used when recession rate varies with GW levels
AGWRC	Base groundwater recession	none	0.92	0.99	0.85	0.999	Baseflow recession	**Calibration**
PWAT – PARM3								
PETMAX	Temp below which ET is reduced	deg. F	35.0	45.0	32.0	48.0	Climate, vegetation	Reduces ET near freezing, when SNOW is active
PETMIN	Temp below which ET is set to zero	deg. F	30.0	35.0	30.0	40.0	Climate, vegetation	Reduces ET near freezing, when SNOW is active
INFEXP	Exponent in infiltration equation	none	2.0	2.0	1.0	3.0	Soils variability	Usually default to 2.0
INFILD	Ratio of max/mean infiltration capacities	none	2.0	2.0	1.0	3.0	Soils variability	Usually default to 2.0
DEEPFR	Fraction of GW inflow to deep recharge	none	0.0	0.20	0.0	0.50	Geology, GW recharge	Accounts for subsurface losses
BASETP	Fraction of remaining ET from baseflow	none	0.0	0.05	0.0	0.20	Riparian vegetation	Direct ET from riparian vegetation
AGWETP	Fraction of remaining ET from active GW	none	0.0	0.05	0.0	0.20	Marsh/wetlands extent	Direct ET from shallow GW
PWAT – PARM4								
CEPSC	Interception storage capacity	inches	0.03	0.20	0.01	0.40	Vegetation type/density, land use	Monthly values usually used
UZSN	Upper zone nominal soil moisture storage	inches	0.10	1.0	0.05	2.0	Surface soil conditions, land use	Accounts for near surface retention
NSUR	Manning's n (roughness) for overland flow	none	0.15	0.35	0.05	0.50	Surface conditions, residue, etc.	Monthly values often used for croplands
INTFW	Interflow inflow parameter	none	1.0	3.0	1.0	10.0	Soils, topography, land use	**Calibration**, based on hydrograph separation
IRC	Interflow recession parameter	none	0.5	0.70	0.30	0.85	Soils, topography, land use	Often start with a value of 0.7, and then adjust
LZETP	Lower zone ET parameter	none	0.2	0.70	0.1	0.9	Vegetation type/density, root depth	**Calibration**
IWAT – PARM2								
LSUR	Length of overland flow	feet	50	150	50	250	Topography, drainage system	Estimate from maps, GIS, or field survey
SLSUR	Slope of overland flow plane	ft/ft	0.01	0.05	0.001	0.15	Topography, drainage	Estimate from maps, GIS, or field survey
NSUR	Manning's n (roughness) for overland flow	none	0.03	0.10	0.01	0.15	Impervious surface conditions	Typical range is 0.05 to 0.10 for roads/parking lots
RETSC	Retention storage capacity	inches	0.03	0.10	0.01	0.30	Impervious surface conditions	Typical range is 0.03 to 0.10 for roads/parking lots
IWAT – PARM3 (PETMAX and PETMIN, same values as shown for PWAT – PARM3)								

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Table G.1-3: HSPF PERLND/PWATER Parameters from BMP Sizing Calculator Methodology

		Hydrologic Soil Group A			Hydrologic Soil Group B			Hydrologic Soil Group C			Hydrologic Soil Group D		
	Slope	5%	10%	15%	5%	10%	15%	5%	10%	15%	5%	10%	15%
PWAT_PARM2	Units												
FOREST	None	0	0	0	0	0	0	0	0	0	0	0	0
LZSN	inches	5.2	4.8	4.5	5.0	4.7	4.4	4.8	4.5	4.2	4.8	4.5	4.2
INFILT	in/hr	0.090	0.070	0.045	0.070	0.055	0.040	0.050	0.040	0.032	0.040	0.030	0.020
LSUR	Feet	200	200	200	200	200	200	200	200	200	200	200	200
SLSUR	ft/ft	0.05	0.1	0.15	0.05	0.1	0.15	0.05	0.1	0.15	0.05	0.1	0.15
KVARY	1/inches	3	3	3	3	3	3	3	3	3	3	3	3
AGWRC	None	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PWAT_PARM3													
PETMAX (F)	F	35	35	35	35	35	35	35	35	35	35	35	35
PETMIN (F)	F	30	30	30	30	30	30	30	30	30	30	30	30
INFEXP	None	2	2	2	2	2	2	2	2	2	2	2	2
INFILD	None	2	2	2	2	2	2	2	2	2	2	2	2
DEEPFR	None	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
BASETP	None	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
AGEWTP	None	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
PWAT_PARM4													
CEPSC	inches	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
UZSN	inches	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NSUR	None	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
INTFW	None	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
IRC	None	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
LZETP	None	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Parameters within SDHM are documented in "San Diego Hydrology Model User Manual," prepared by Clear Creek Solutions, Inc. (as of the development of the Manual, the current version of the SDHM User Manual is dated January 2012). Parameters established for SDHM represent "grass" (non-turf grasslands), "dirt," "gravel," and "urban" cover. The documented PERLND and IMPLND parameters for the various land covers and soil types have been pre-loaded into SDHM. SDHM users shall use the parameters that have been pre-loaded into the program without modification unless the preparer can provide documentation to substantiate use of other parameters.

G.1.4.2 Rainfall Loss Parameters for SWMM

In SWMM, rainfall loss parameters (parameters that describe processes occurring when rainfall lands on pervious lands and impervious lands) are entered in the "subcatchment" module. In addition to specifying parameters, the SWMM user must also select an infiltration model.

The SWMM Manual provides details regarding the subcatchment parameters and summary tables of possible ranges of these parameters. For SWMM studies for hydromodification management in San Diego, subcatchment parameters shall fall within the range provided in the SWMM Manual. Some of the parameters depend on the selection of the infiltration model. For consistency across the San Diego region, SWMM users shall use the Green-Ampt infiltration model for hydromodification management studies. Table G.1-4 presents SWMM subcatchment parameters for use in hydromodification management studies in the San Diego region.

Table G.1-4: Subcatchment Parameters for SWMM Studies for Hydromodification Management in San Diego

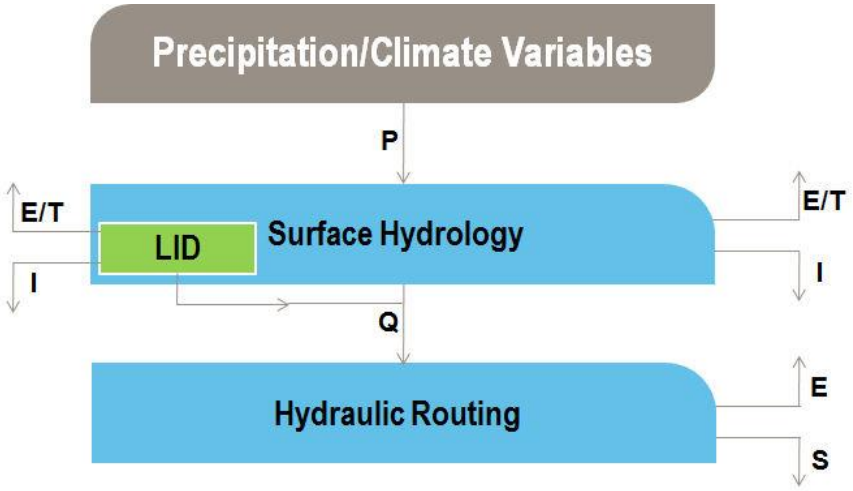
SWMM Parameter Name	Unit	Range	Use in San Diego
Name X-Coordinate Y-Coordinate Description Tag Rain Gage Outlet	N/A	N/A – project-specific	Project-specific
Area	acres (ac)	Project-specific	Project-specific
Width	feet (ft)	Project-specific	Project-specific
% Slope	percent (%)	Project-specific	Project-specific
% Imperv	percent (%)	Project-specific	Project-specific
N-imperv	--	0.011 – 0.024 presented in Table A.6 of SWMM Manual	default use 0.012 for smooth concrete, otherwise provide documentation of other surface consistent with Table A.6 of SWMM Manual
N-Perv	--	0.05 – 0.80 presented in Table A.6 of SWMM Manual	default use 0.15 for short prairie grass, otherwise provide documentation of other surface consistent with Table A.6 of SWMM Manual
Dstore-Imperv	inches	0.05 – 0.10 inches presented in Table A.5 of SWMM Manual	0.05
Dstore-Perv	inches	0.10 – 0.30 inches presented in Table A.5 of SWMM Manual	0.10
%ZeroImperv	percent (%)	0% – 100%	25%
Subarea routing	--	OUTLET IMPERVIOUS PERVIOUS	Project-specific, typically OUTLET
Percent Routed	%	0% – 100%	Project-specific, typically 100%
Infiltration	Method	HORTON GREEN_AMPT CURVE_NUMBER	GREEN_AMPT

SWMM Parameter Name	Unit	Range	Use in San Diego
Suction Head (Green-Ampt)	Inches	1.93 – 12.60 presented in Table A.2 of SWMM Manual	Hydrologic Soil Group A: 1.5 Hydrologic Soil Group B: 3.0 Hydrologic Soil Group C: 6.0 Hydrologic Soil Group D: 9.0
Conductivity (Green-Ampt)	Inches per hour	0.01 – 4.74 presented in Table A.2 of SWMM Manual by soil texture class 0.00 – ≥0.45 presented in Table A.3 of SWMM Manual by hydrologic soil group	Hydrologic Soil Group A: 0.3 Hydrologic Soil Group B: 0.2 Hydrologic Soil Group C: 0.1 Hydrologic Soil Group D: 0.025 Note: reduce conductivity by 25% in the post-project condition when native soils will be compacted. Conductivity may also be reduced by 25% in the pre-development condition model for redevelopment areas that are currently concrete or asphalt but must be modeled according to their underlying soil characteristics. For fill soils in post-project condition, see Section G.1.4.3.
Initial Deficit (Green-Ampt)		The difference between soil porosity and initial moisture content. Based on the values provided in Table A.2 of SWMM Manual, the range for completely dry soil would be 0.097 to 0.375	Hydrologic Soil Group A: 0.33 Hydrologic Soil Group B: 0.32 Hydrologic Soil Group C: 0.31 Hydrologic Soil Group D: 0.30 Note: in long-term continuous simulation, this value is not important as the soil will reach equilibrium after a few storm events regardless of the initial moisture content specified.
Groundwater	yes/no	yes/no	NO
LID Controls			Project Specific
Snow Pack Land Uses Initial Buildup Curb Length			Not applicable to hydromodification management studies

A schematic of the basic SWMM setup for hydromodification management studies is shown below, with the LID module is shown as a feature within the hydrology computational block. Surface water hydrology is distinguished from groundwater, however the groundwater module is not typically used in hydromodification management studies.

The rainfall and climatology input time series data are used to generate surface runoff which in turn is hydraulically routed through the collection system and storage/treatment facilities. The figure includes the following terms in the water balance equation:

- P = Precipitation
- E/T = Evaporation / Transpiration
- I/S = Infiltration / Seepage
- Q = Runoff



Evapotranspiration was previously addressed above; the remainder of this section discusses the other hydrologic losses and parameters.

Soil and Infiltration Parameters

Of the infiltration options available in SWMM, the Green-Ampt equation can best handle variable water content conditions in the shallow soil layers beneath the ground surface, which is critical for long-term continuous simulation of surface water hydrology. The Green-Ampt parameters suggested in Table G.1-4 are referenced according to hydrologic soil group. Green-Ampt parameters can also be determined by relating infiltration parameters to soil texture properties, as identified by in-situ geotechnical analysis results or published County soil survey information. Infiltration parameters include:

- Capillary Tension (Suction Head): a measure of how tightly water is held within the soil pore space;

- Saturated Hydraulic Conductivity: a measure of how quickly the water can be drained vertically; and

- Initial Moisture Deficit: a measure of the initial soil water deficit, also known as porosity (i.e., the volumetric fraction of water within the soil pore space under initially dry conditions).

Note that when SWMM is used without the Groundwater module, there is no distinction between the upper and lower zone soil moisture storage as in HSPF/SDHM. The LID module does however distinguish several layers/zones within each facility, and these are described below.

Overland Flow Parameters

Overland flow parameters describe the slope and length characteristics of shallow surface runoff. These are determined by identifying representative overland flow paths for each subcatchment using available digital topographic data for pre-development conditions and the proposed grading plan for post-project conditions. Overland flow path lengths and slopes are measured directly from the available information. Generally, overland flow paths should be less than 1,000 feet in length, otherwise channelized flow is likely present and should be modeled hydraulically. Overland flow path widths are determined based on the subcatchment area divided by the corresponding flow path length for each subcatchment.

Although Surface Storage is not depicted in SWMM schematic, it is a component of the water balance equation and includes excess runoff that is held in both hydrologic depression storage and hydraulic storage units.

LID Module

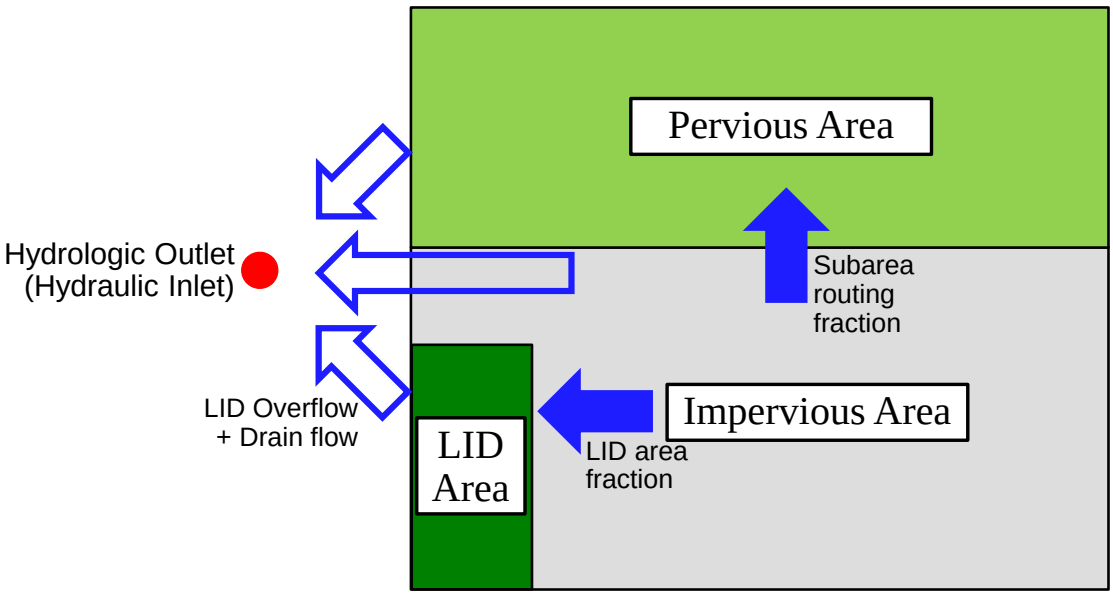
There are two approaches for representing LID facilities in SWMM:

- **Modeling Approach No. 1:** Place LID controls within the appropriate subcatchment and then adjust parameters accordingly to reflect untreated areas within the parent subcatchment; and

- **Modeling Approach No. 2:** Create a new subcatchment for each LID control, allowing "run-on" from the treated portion of the parent subcatchment.

Modeling Approach No.1 schematic is presented below. As described above, a portion of the impervious subarea from a given subcatchment can be routed onto the pervious area for infiltration (see arrow denoting subarea routing fraction). When the LID module of SWMM is used, the portion

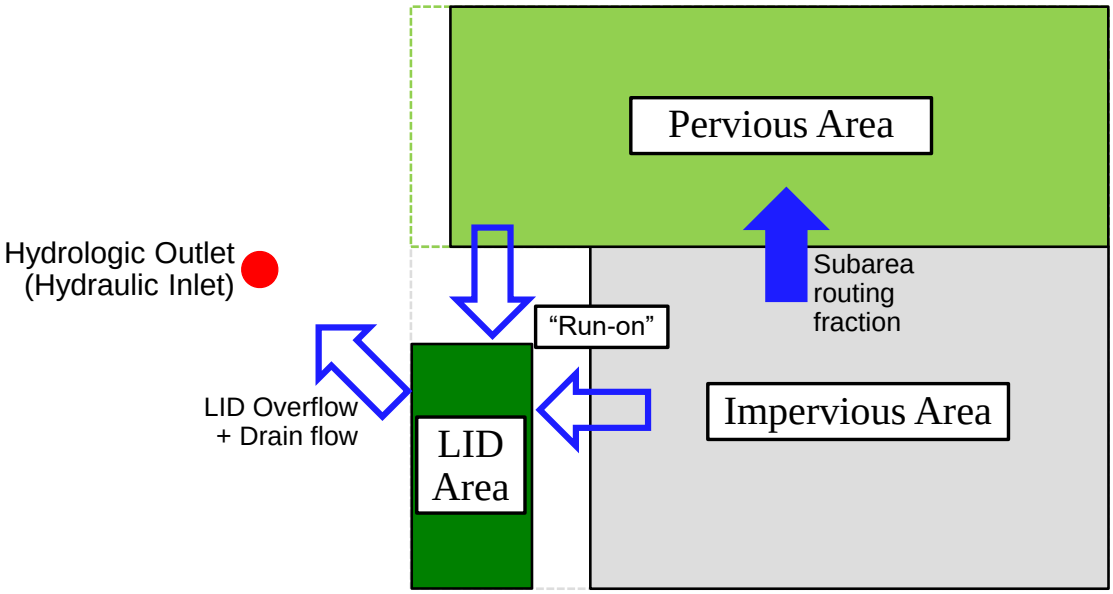
of the impervious area that is captured and treated by an LID facility is specified (see arrow denoting LID area fraction). The remaining impervious area, if any, is routed directly to the outlet.



Modeling Approach No. 1 (LID within Parent Subcatchment)

The first approach is the easiest of the two for representing LID facilities in SWMM, as it allows a mix of controls to be placed within an existing subcatchment and each facility can capture and treat a different portion of the runoff generated from the parent subcatchment (i.e., outside of the LID footprint). A drawback of this approach is that it will not appropriately represent LID facilities in series (i.e., where the outflow from one LID control becomes the inflow to another LID control). No adjustments to the parent subcatchment hydrology parameters are needed if the cumulative LID area is small in comparison to the subcatchment area. However when the cumulative LID area is significant (e.g., greater than 10% of the subcatchment), at a minimum, the imperviousness and overland flow width values will need to be adjusted to compensate for the parent subcatchment area that was replaced with the cumulative LID footprint area.

Modeling Approach No.2 schematic is presented below. In this approach the LID facility is assigned to a new subcatchment and runoff from upstream subcatchments can be directed to this new subcatchment (i.e., "run-on"). In this way, LID controls can be modeled in series. Adjustments to the imperviousness and overland flow width values in the parent subcatchment will need to be made. For typical development or redevelopment sites that are evaluated in hydromodification management studies, LID capture areas often comprise a large portion of the parent subcatchments, and therefore this is the preferred approach.



Modeling Approach No. 2 (LID in New Subcatchment)

More details on the use and application of LID controls are provided in the SWMM Manual and program help file. Suggested parameter values for use with hydromodification management studies in San Diego are provided in Appendix G.1.5.

G.1.4.3 Pervious Area Rainfall Loss Parameters in Post-Project Condition (HSPF, SDHM, and SWMM)

The following guidance applies to HSPF, SDHM, and SWMM. When modeling pervious areas in the post-project condition, fill soils shall be modeled as hydrologic soil group Type D soils, or the project applicant may provide an actual expected infiltration rate for the fill soil based on testing (must be approved by the County reviewer for use in the model). Where landscaped areas on fill soils will be re-tilled and/or amended in the post-project condition, the landscaped areas may be modeled as Type C soils. Areas to be re-tilled and/or amended in the post-project condition must be shown on the project plans. For undisturbed pervious areas (i.e., native soils, no fill), use the actual hydrologic soil group, the same as in the pre-development condition.

G.1.5 Modeling Structural BMPs (Ponds and LID Features)

There are many ways to model structural BMPs. There are standard modules for several pond or LID elements included in SDHM and SWMM. Users may also set up project-specific stage-storage-discharge relationships representing structural BMPs. Regardless of the modeling method, certain characteristics of the structural BMP, including infiltration of water from the bottom of the structural BMP into native soils, porosity of biofiltration soils and/or gravel sublayers, and other program-specific parameters must be consistent with those presented below, unless the preparer can provide documentation to substantiate use of other parameters, subject to County approval. The geometry of

structural BMPs is project-specific and shall match the project plans.

G.1.5.1 Infiltration into Native Soils Below Structural BMPs

Infiltration into native soils below structural BMPs may be modeled as a constant outflow rate equal to the project site-specific design infiltration rate (Worksheet D.5-1) multiplied by the area of the infiltrating surface (and converted to cubic feet per second). This infiltration rate is not the same as an infiltration parameter used in the calculation of rainfall losses, such as the HSPF INFILT parameter or the Green-Ampt conductivity parameter in the SWMM subcatchment module. It must be site-specific and must be determined based on the methods presented in Appendix D of this manual.

For preliminary analysis when site-specific geotechnical investigation has not been completed, project applicants proposing infiltration into native soils as part of the structural BMP design shall prepare a sensitivity analysis to determine a potential range for the structural BMP size based on a range of potential infiltration rates. As shown in Appendices B and D of this manual, many factors influence the ability to infiltrate storm water. Therefore even when soils types A and B are present, which are generally expected to infiltrate storm water, the possibility that a very low infiltration rate could be determined at design level must be considered. The range of potential infiltration rates for preliminary analysis is shown below in Table G.1-5.

Table G.1-5: Range of Potential Infiltration Rates to be Studied for Sensitivity Analysis when Native Infiltration is Proposed but Site-Specific Geotechnical Investigation has not been Completed

Hydrologic Soil Group at Location of Proposed Structural BMP	Low Infiltration Rate for Preliminary Study (inches/hour)	High Infiltration Rate for Preliminary Study (inches/hour)
A	0.02	2.4
B	0.02	0.52
C	0	0.08
D	0	0.02

The infiltration rates shown above are for preliminary investigation only. Final design of a structural BMP must be based on the project site-specific design infiltration rate (Worksheet D.5-1).

G.1.5.2 Structural BMPs That Do Not Include Sub-Layers (Ponds)

To model a pond, basin, or other depressed area that does not include processing runoff through sublayers of amended soil and/or gravel, create a stage storage discharge relationship for the pond, and supply the information to the model according to the program requirements. For HSPF users, the stage-storage-discharge relationship is provided in FTABLES. SDHM users may use the TRAPEZOIDAL POND element for a trapezoidal pond or IRREGULAR POND element to request the program to create the stage-storage-discharge relationship, use the SSD TABLE element to supply a user-created stage-storage-discharge relationship, or use other available modules such as TANK or VAULT. For SWMM users, the stage-storage relationship is supplied in the storage unit module, and the stage-discharge relationship may be represented by various other modules such as the orifice, weir, or outlet modules. Stage-storage and stage-discharge curves for structural BMPs must be fully

documented in the project-specific HMP report and must be consistent with the structural BMP(s) shown on project plans.

For user-created stage-discharge relationships, refer to local drainage manual criteria for equations representing hydraulic behavior of outlet structures. Users relying on the software to develop the stage-discharge relationship may use the equations built into the program. This manual does not recommend that all program modules calculating stage-discharge relationships must be uniform because the flows to be controlled for hydromodification management are low flows, calculated differently from the single-storm event peak flows studied for flood control purposes, and hydromodification management performance standards do not represent any performance standard for flood control drainage design. Note that for design of emergency outlet structures, and any calculations related to single-storm event routing for flood control drainage design, stage-discharge calculations must be consistent with the local drainage design requirements. This may require separate calculations for stage-discharge relationship pursuant to local manuals. The HMP flow rates shall not be used for flood control calculations.

G.1.5.3 Structural BMPs That Include Sub-Layers (Bioretention and Other LID)

G.1.5.3.1 Characteristics of Biofiltration Soil Media

The biofiltration soil media used in bioretention, biofiltration with partial retention, and biofiltration structural BMPs is a sandy loam. The following parameters presented in Table G.1-6 are characteristics of a sandy loam for use in continuous simulation models.

Table G.1-6: Characteristics of Sandy Loam to Represent Biofiltration Soil Media in Continuous Simulation for Hydromodification Management Studies in San Diego

Soil Texture	Porosity	Field Capacity	Wilting Point	Conductivity	Suction Head
Sandy Loam	0.4	0.2	0.1	5 inches/hour	1.5 inches

- Porosity is the volume of pore space (voids) relative to the total volume of soil (as a fraction).
- Field Capacity is the volume of pore water relative to total volume after the soil has been allowed to drain fully (as a fraction). Below this level, vertical drainage of water through the soil layer does not occur.
- Wilting point is the volume of pore water relative to total volume for a well dried soil where only bound water remains (as a fraction). The moisture content of the soil cannot fall below this limit.
- Conductivity is the hydraulic conductivity for the fully saturated soil (in/hr or mm/hr).
- Suction head is the average value of soil capillary suction along the wetting front (inches or mm).

Figures G.1-3 and G.1-4, from http://www.stevenswater.com/articles/irrigationscheduling.aspx, illustrate unsaturated soil and soil saturation, field capacity, and wilting point.

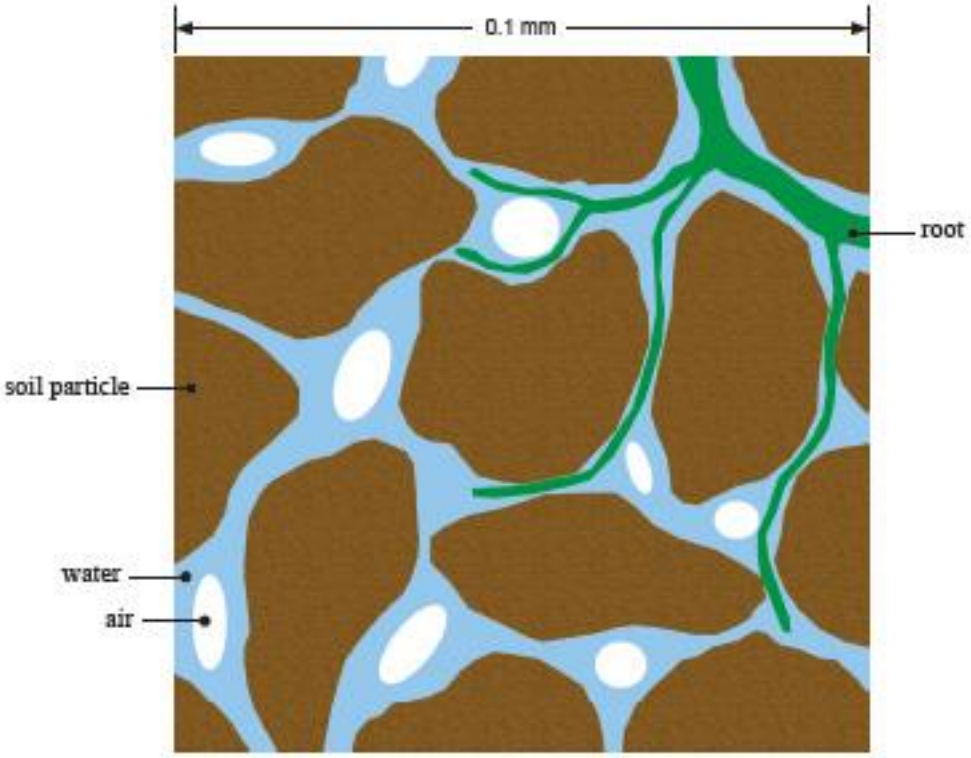


Figure G.1-3: Unsaturated Soil Composition

Unsaturated soil is composed of solid particles, organic material and pores. The pore space will contain air and water.

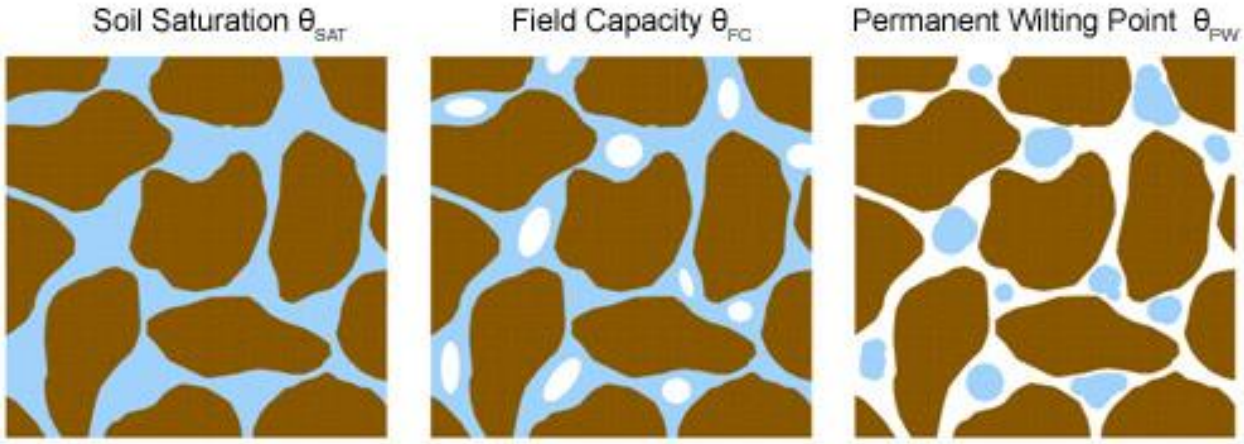


Figure G.1-4: Soil saturation, field capacity, and wilting point

G.1.5.3.2 Characteristics of Gravel

For the purpose of hydromodification management studies, it may be assumed that water moves freely through gravel, not limited by hydraulic properties of the gravel. For the purpose of calculating available volume, use porosity of 0.4, or void ratio of 0.67. Porosity is equal to void ratio divided by (1 + void ratio).

G.1.5.3.3 Additional Guidance for SDHM Users

The module titled "bioretention/rain garden element" may be used to represent bioretention or biofiltration BMPs. SDHM users using the available "bioretention/rain garden element" shall customize the soil media characteristics to use the parameters from Table G.1-6 above, and select "gravel" for gravel sublayers. All other input variables are project-specific. "Native infiltration" refers to infiltration from the bottom of the structural BMP into the native soil. This variable is project-specific, see Section G.1.5.1.

G.1.5.3.4 Additional Guidance for SWMM Users

The latest version of SWMM (version 5.1.012) includes the following eight types of LID controls:

- Bio-Retention Cell: surface storage facility with vegetation in a biofiltration soil mixture placed above a gravel drainage bed.
- Rain Garden: same setup as bio-retention cell, but without an underlying gravel bed.
- Green Roof: bio-retention cell with shallow surface storage and soil layers, underlain by a drainage mat that conveys excess percolated rainfall to the regular roof drainage system.
- Infiltration Trench: drainage swale or narrow storage basin filled with gravel or other porous media designed to capture and infiltrate runoff to the native soil below.
- Permeable Pavement: continuous pavement systems with porous concrete, asphalt mix, or paver blocks above a sand or gravel drainage bed with gravel storage layer below.
- Rain Barrel: container (cistern) to collect roof runoff for later use (e.g., landscape irrigation) or release.
- Rooftop Disconnection: to simulate redirection of downspout discharge onto pervious landscaped areas and lawns instead of directly into storm drains.
- Vegetative Swale: grassed conveyance channel (drainage ditch or swale) with vegetation designed to slow down runoff to allow more time for infiltration into the native soil below.

The "bio-retention cell" LID control may be used to represent bioretention or biofiltration BMPs. For bio-retention cells, a number of LID process layers have been defined in SWMM and these are described below. Table G.1-7 provides parameters required for the standard "bio-retention cell" available in SWMM. The parameters are entered in the LID Control Editor.

Table G.1-7: Parameters for SWMM "Bio-Retention Cell" Module for Hydromodification Management Studies in San Diego

SWMM Parameter Name	Unit	Use in San Diego
Surface		
Berm Height also known as Storage Depth	inches	Project-specific
Vegetative Volume Fraction also known as Vegetative Cover Fraction	---	0
Surface Roughness	---	0 (this parameter is not applicable to bio-retention cell)
Surface Slope	---	0 (this parameter is not applicable to bio-retention cell)
Soil		
Thickness	inches	project-specific
Porosity	---	0.40
Field Capacity	---	0.2
Wilting Point	---	0.1
Conductivity	Inches/hour	5
Conductivity Slope	---	5
Suction Head	inches	1.5
Storage		
Thickness also known as Height	inches	Project-specific
Void Ratio	---	0.67
Seepage Rate also known as Conductivity	Inches/hour	Conductivity from the storage layer refers to infiltration from the bottom of the structural BMP into the native soil. This variable is project-specific, see Section G.5.1. Use 0 if the bio-retention cell includes an impermeable liner
Clogging Factor	---	0
Underdrain		
Flow Coefficient Also known as Drain Coefficient	---	Project-specific
Flow Exponent Also known as Drain Exponent	---	Project-specific, typically 0.5
Offset Height Also known as Drain Offset Height	Inches	Project-specific

Surface Layer

This process layer receives direct rainfall (and run-on from upstream subcatchments) and the resultant storm water is available for ponding, infiltration, evapotranspiration, or overflow to the outlet. The following parameters are used:

- Berm Height: This value is the maximum depth that water can pond above the ground surface before overflow occurs. In some cases, this volume may overlap with the hydraulic representation of existing surface storage or another proposed BMP facility. In any case, the user must avoid double-counting the physical storage volume.
- Vegetation Volume Fraction: This represents the surface storage volume that is occupied by the stems and leaves of vegetation within the bio-retention cell.

Soil Layer

This process layer is typically composed of an amended soil or compost mix. Water that infiltrates into this component is stored in the soil void space and is available for evapotranspiration via plant roots or can percolate into the storage layer below. The following parameters are used:

- Thickness: This parameter represents the depth of the amended soil layer.
- Porosity: Ratio of pore space volume to soil volume.
- Field Capacity: Pore water volume ratio after the soil has been drained.
- Wilting Point: Pore water volume ratio after the soil has been dried.
- Conductivity: This represents the saturated hydraulic conductivity.
- Conductivity Slope: Rate at which conductivity decreases with decreasing soil moisture content.
- Suction Head: This represents the capillary tension of water in the soil.

Porosity, conductivity and suction head values as a function of soil texture were included in Table G.1-5. The flow of water through partially saturated soil is less than under fully saturated conditions. The SWMM program accounts for this reduced hydraulic conductivity to predict the rate at which infiltrated water moves through a layer of unsaturated soil when modeling groundwater or LID controls. The conductivity slope is a dimensionless curve-fitting parameter that relates the partially saturated hydraulic conductivity to the soil moisture content.

Storage Layer

This process layer is typically composed of porous granular media such as crushed stone or gravel. Water that percolates into this component is stored in the void space and is available for infiltration into the native soil, or collected by an underdrain and discharged to the outlet. The following parameters are used:

- Thickness: This parameter represents the depth of the stone base.
- Void Ratio: Volume of void space relative to volume of solids. Note, by definition, Porosity = Void Ratio ÷ (1 + Void Ratio).
- Seepage Rate: Filtration rate from the granular media into the native soil below. A value of zero should be used if the facility has an impermeable bottom (e.g., concrete) or is underlain by an impermeable liner.
- Clogging Factor: This value is determined by the total volume of treated runoff to completely clog the bottom of the layer divided by the void volume of the layer.

Drain Layer

This process layer is used to characterize the discharge rate of an underdrain system to the outlet. The following parameters are used:

Flow Coefficient: This value (coupled with the flow exponent described below) characterizes the rate of discharge to the outlet as a function of the height of water stored in the bio-retention cell. The coefficient can be determined by the following equation:

$$C = c_g\left(\frac{605}{A_{LID}}\right)\left(\frac{\pi D^2}{8}\right)\sqrt{\frac{g}{6}}$$

where,

cg is the orifice discharge coefficient, typically 0.60-0.65 for thin walled plates and higher for thicker walls;
ALID is the cumulative footprint area (ft2) of all LID controls;
D is the underdrain orifice diameter (in); and
g is the gravitational constant (32.2 ft/s2).
Flow Exponent: A value of 0.5 should be used to represent flow through an orifice.
Offset Height: This represents the height of the underdrain above the bottom of the storage layer in the bio-retention cell.

G.1.6 Flow Frequency and Duration

The continuous simulation model will generate a flow record corresponding to the frequency of the rainfall data input as its output. This flow record must then be processed to determine pre-development and post-project flow rates and durations. Compliance with hydromodification management requirements of this manual is achieved when results for flow duration meet the performance standards. The performance standard is as follows (also presented in Chapter 6 of this manual):

1. For flow rates ranging from 10 percent, 30 percent or 50 percent of the pre-development 2-year runoff event ($0.1Q_2$, $0.3Q_2$, or $0.5Q_2$) to the pre-development 10-year runoff event (Q_{10}), the post-project discharge rates and durations must not exceed the pre-development rates and durations by more than 10 percent. The specific lower flow threshold will depend on the erosion susceptibility of the receiving stream for the project site (see Section 6.3.4).

To demonstrate that a flow control facility meets the hydromodification management performance standard, first pre-development Q_2 and Q_{10} must be identified, then a flow duration summary must be generated and compared for pre-development and post-project conditions between the appropriate fraction of Q_2 to Q_{10}. The range from a fraction of Q_2 to Q_{10} represents the range of geomorphically significant flows for hydromodification management in San Diego. The upper bound of the range of flows to control is pre-development Q_{10} for all projects. The lower bound of the range of flows to control, or "lower flow threshold" is a fraction of pre-development Q_2 that is based on the erosion susceptibility of the stream and depends on the specific natural system (stream) that a project will discharge to. Tools have been developed in the March 2011 Final HMP for assessing the erosion susceptibility of the stream (see Section 6.3.4). Simply multiply the pre-development Q_2 by the appropriate fraction (e.g., $0.1Q_2$) to determine the lower flow threshold.

The following guidelines shall be used for determining flow rates and durations.

G.1.6.1 Determining Flow Rates

In the context of hydromodification management in San Diego, Q_2 and Q_{10} refer to flow rates determined based on either continuous simulation hydrologic modeling or an approved regression equation. Either method may be applied, provided that the same methodology is be applied to determination of both Q_2 and Q_{10} (i.e. cannot mix and match methods at a POC) and be consistent across all POCs for the project (i.e. cannot mix and match methods between multiple POCs).

G.1.6.1.1 Determining Flow Rates from Regression Equation

The following approved regression equation may be used to determine pre-development Q_2 and Q_{10}:

$$Q_2 = 3.60 \times A^{0.672} \times P^{0.753}$$

$$Q_{10} = 6.56 \times A^{0.783} \times P^{1.07}$$

where:

Q_2 = 2-year recurrence interval discharge in cubic feet per second
Q_{10} = 10-year recurrence interval discharge in cubic feet per second
A = Drainage area in square miles
P = Mean annual precipitation in inches (Refer to Table 6-1)

When determining Q_2 and Q_{10} the same methodology must be applied to determination of both flow rates (i.e. cannot mix and match methods at a POC), and be consistent across all POCs for the project (i.e. cannot mix and match methods between multiple POCs).

Table G.1-8. Mean Annual Precipitation

Gage	Latitude	Longitude	Mean Annual Precipitation (inches)
Oceanside	33.2105556	-117.353333	12.29
Encinitas	33.044567	-117.277213	10.73
Kearney Mesa	32.835118	-117.128456	11.43
Fashion Valley	32.7652778	-117.1758333	10.75
Bonita	32.6561111	-117.0341667	10.88
Poway	32.9522222	-117.0472222	13.08
Fallbrook AP	33.354669	-117.251279	16.18
Lake Wohlford	33.166423	-117.004955	16.63
Ramona	33.0480556	-116.8608333	16.57
Lake Henshaw	33.2386111	-116.7616667	21.58
Borrego	33.2211111	-116.3369444	4.00
Lindbergh	32.7337	-117.1767	10.75
Escondido	33.1197222	-117.095	14.67
Flinn Springs	32.847104	-116.857801	15.55
Lake Cuyamaca	32.9894	-116.5867	31.30
Lower Otay	32.6111	-116.9319	11.90
San Onofre	33.3513889	-117.5319444	11.13
San Vicente	32.912082	-116.926513	16.47
Santee	32.839016	-117.024857	13.15

G.1.6.1.2 Determining Flow Rates from Continuous Hourly Flow Output

Flow rates for hydromodification management studies in San Diego must be based on partial duration series analysis of the continuous hourly flow output. Partial duration series frequency calculations consider multiple storm events in a given year. To construct the partial duration series:

1. Parse the continuous hourly flow data into discrete runoff events. The following separation criteria may be used for separation of flow events: a new discrete event is designated when the flow falls below an artificially low flow value based on a fraction of the contributing watershed area (e.g., 0.002 to 0.005 cfs/acre) for a time period of 24 hours. Project applicants may consider other separation criteria provided the separation interval is not more than 24 hours and the criteria is clearly described in the submittal document.

2. Rank the peak flows from each discrete flow event, and compute the return interval or plotting position for each event.

Readers who are unfamiliar with how to compute the partial-duration series should consult reference books or online resources for additional information. For example, Hydrology for Engineers, by Linsley et all, 1982, discusses partial-duration series on pages 373-374 and computing recurrence intervals or plotting positions on page 359. Handbook of Applied Hydrology, by Chow, 1964, contains a detailed discussion of flow frequency analysis, including Annual Exceedance, Partial-Duration and Extreme Value series methods, in Chapter 8. The US Geological Survey (USGS) has several hydrologic study reports available online that use partial duration series statistics (see http://water.usgs.gov/ and http://water.usgs.gov/osw/bulletin17b/AGU_Langbein_1949.pdf).

Pre-development Q_2 and Q_{10} shall be determined from the partial duration analysis for the pre-development hourly flow record. Pre-development Q_{10} is the upper threshold of flow rates to be controlled in the post-project condition. The lower flow threshold is a fraction of the pre-development Q_2 determined based on the erosion susceptibility of the receiving stream. Simply multiply the pre-development Q_2 by the appropriate fraction (e.g., $0.1Q_2$) to determine the lower flow threshold.

G.1.6.2 Determining Flow Durations from Continuous Hourly Flow Output

Flow durations must also be summarized within the range of flows to control. Flow duration statistics provide a simple summary of how often a particular flow rate is exceeded. To prepare this summary:

1. Rank the entire hourly runoff time series output.

2. Extract the portion of the ranked hourly time series output from the lower flow threshold to the upper flow threshold – this is the portion of the record to be summarized.

3. Divide the applicable portion of the record into 100 equal flow bins (compute the difference between the upper flow threshold (cfs) and lower flow threshold (cfs) and divide this value by 99 to establish the flow bin size).

4. Count the number of hours of flow that fall into each flow bin.

Both pre-development and post-project flow duration summary must be based on the entire length of the flow record. Compare the post-project flow duration summary to the pre-development flow duration summary to determine if it meets performance criteria for post-project flow rates and durations (criteria presented under Section G.1.6).

G.2 Sizing Factors for Hydromodification Management BMPs

This section presents sizing factors for design of flow control structural BMPs based on the sizing factor method identified in Chapter 6.3.5.1. The sizing factors included here have been updated based on the requirements in the 2015 MS4 permit and are different than the sizing factors presented in previous manuals. These updated values replace the previous sizing factors which shall no longer be used for sizing of hydromodification flow control BMPs. A discussion of the rationale for the update is included below.

The sizing factors included in previous edition was re-printed from the "San Diego BMP Sizing Calculator Methodology," dated January 2012, prepared by Brown and Caldwell (herein "BMP Sizing Calculator Methodology"). These sizing factors were linked to the specific details and descriptions that were presented in the BMP Sizing Calculator Methodology, which included certain assumptions and limited options for modifications. The sizing factors were developed based on the 2007 MS4 Permit. Some of the original sizing factors developed based on the 2007 MS4 Permit and presented in the BMP Sizing Calculator Methodology were not compatible with new requirements of the 2015 MS4 Permit, and therefore were not included in the February 2016 manual. Since publishing the 2016 Model Manual, the Copermittees have developed updated hydromodification factors that more accurately represent the BMP configurations specified in this model manual and account for the revised flow-duration performance standard of the 2015 MS4 Permit (110% exceedance allowance for entire flow-duration curve).

The updated sizing factors were generated using continuous simulation models in USEPA SWMM in accordance with the procedures, methodologies, and values presented in Appendix G.1. All sizing factors are in relation to the effective impervious area draining to the BMP.

The sizing factor method is intended for simple studies that do not include diversion, do not include significant offsite area draining through the project from upstream, and do not include offsite area downstream of the project area. Use of the sizing factors is limited to the specific structural BMPs described in this Appendix. When using the sizing factor methodology, the area fraction reported in the sizing tables represents the plan view area at the surface of the BMP before any ponding occurs. The BMP footprint as defined by this methodology is depicted in Figure G.2-1.

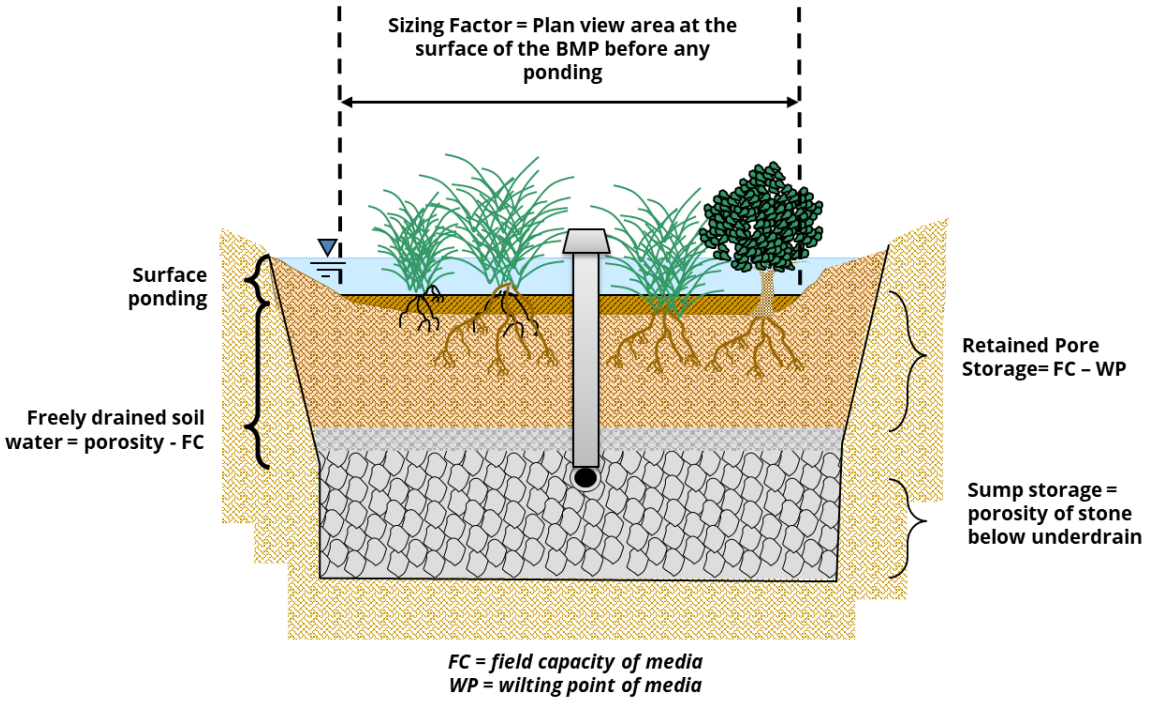


Figure G.2-1: Representation of BMP Footprint for use of Sizing Factors

Sizing factors are available for the following specific structural BMPs:

- **Full infiltration condition:**
    - **Infiltration**: Sizing factors available for A, B, C, and D soils represent surface and/or below-ground structures (infiltration vaults).
- **Partial infiltration condition:**
    - **Biofiltration with partial retention**: Sizing factors available for A, B, C, and D soils represent a bioretention area with biofiltration soil media and gravel storage layer, with an underdrain, with gravel storage below the underdrain and a flow control orifice, with no impermeable liner.
- **No infiltration condition:**
    - **Biofiltration**: Sizing factors available for A, B, C, and D soils represent a biofiltration system with biofiltration soil media and gravel storage layer, with an underdrain and flow control orifice, with gravel storage, with an impermeable liner (formerly known as flow-through planter and/or biofiltration with impermeable liner)

- **Other:**
    - **Cistern**: Sizing factors available for A, B, C, or D soils represent a vessel with a flow control orifice outlet to meet the hydromodification management performance standard. For this BMP, the sizing factor result is a volume in cubic feet, not a surface footprint in square feet.

Sizing factors were created based on three rainfall basins: Lindbergh Field, Oceanside, and Lake Wohlford.

The following information is needed to use the sizing factors:

- Determine the appropriate rainfall basin for the project site from Figure G.2-2, Rainfall Basin Map
- Hydrologic soil group at the project site (use available information pertaining to existing underlying soil type such as soil maps published by the Natural Resources Conservation Service)
- Pre-development and pre-project slope categories (flat = 0% – 5%, moderate = 5% – 10%, steep = >10%)
- Area tributary to the structural BMP
- Area weighted runoff factor (C) for the area draining to the BMP from Table G.2-1. Note: runoff coefficients and adjustments presented in Appendices B.1 and B.2 are for pollutant control only and are not applicable for hydromodification management studies
- Fraction of Q_2 to control (see Chapter 6.3.4)[5]

When using the sizing factor method, Worksheet G.2-1 may be used to present the calculations of the required minimum areas and/or volumes of BMPs as applicable. Additionally, the "BMP Sizing Spreadsheet V3.0" available at projectcleanwater.org implements the sizing factor methodology.

[5] All updated sizing factors refer to the "High Susceptibility" threshold value of 0.1*Q2, where Q2 is determined using the Weibull Plotting position and results of the SWMM model runs for unit pervious catchments (refer to Table G.2-2).

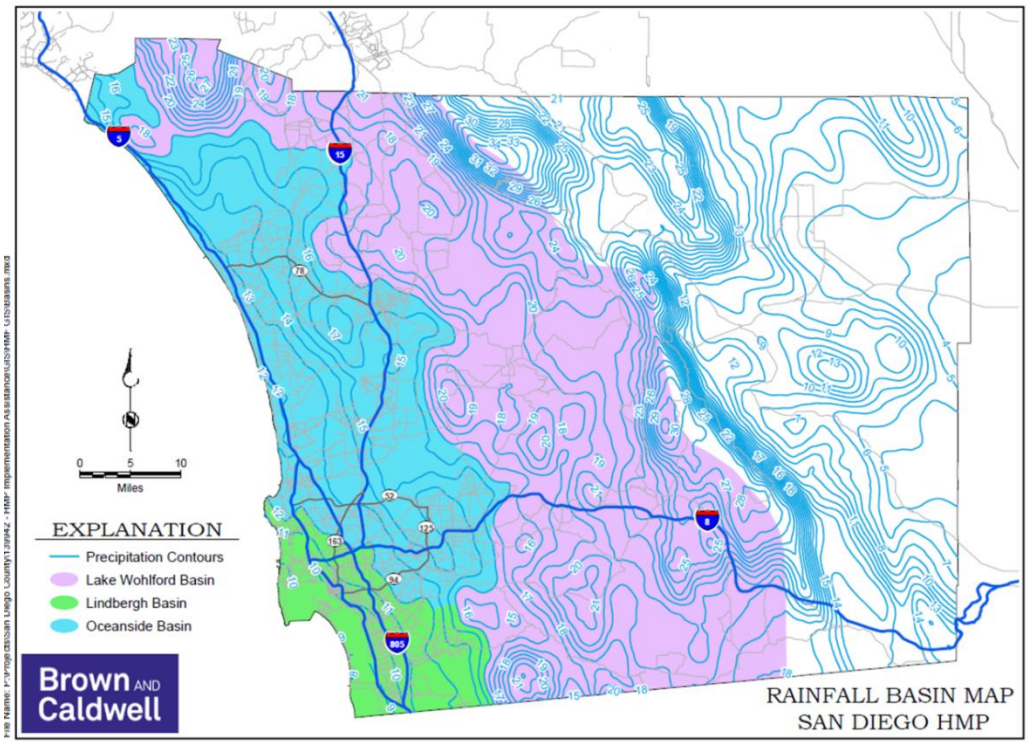


Figure G.2-2: Rainfall Basin Map

Table G.2-1: Runoff factors for surfaces draining to BMPs for Hydromodification Sizing Factors Method

Surface	Runoff Factor
Roofs	1.0
Concrete	1.0
Pervious Concrete	0.10
Porous Asphalt	0.10
Grouted Unit Pavers	1.0
Solid Unit Pavers on granular base, min. 3/16 inch joint space	0.20
Crushed Aggregate	0.10
Turf block	0.10
Amended, mulched soils	0.10
Landscape	0.10

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Worksheet G.2-1: Sizing Factor Worksheet

Site Information			
Project Name:		Hydrologic Unit	
Project Applicant:		Rain Gauge:	
Jurisdiction:	County of San Diego	Total Project Area:	
Assessor's Parcel Number:		Low Flow Threshold:	$0.1Q_2$
BMP Name:		BMP Type:	

Areas Draining to BMP						Sizing Factors		Minimum BMP Size	
DMA Name	Area (sf)	Soil Type	Pre-Project Slope	Post-Project Surface Type	Runoff Factor (From Table G.2-1)	Surface Area	Volume	Surface Area (sf)	Volume (cf)
Total DMA Area							Minimum BMP Size*		
							Proposed BMP Size*		

*Minimum BMP Size = Total of rows above.

*Proposed BMP Size ≥ Minimum BMP size.

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G.2.1 Unit Runoff Ratios and Low Flow Control Orifice Design

G.2.1.1 Unit Runoff Ratios

Table G.2-2 presents unit runoff ratios for calculating pre-development Q_2, to be used when applicable to determine the lower flow threshold for low flow control orifice sizing for biofiltration with partial retention, biofiltration, or cistern BMPs. There is no low flow control orifice in the infiltration BMP. The unit runoff ratios are updated from the previously reported BMP Sizing Calculator methodology ratios to account for changes in modeling methodologies. Unit runoff ratios for "urban" and "impervious" cover categories were not transferred to this manual due to the requirement to control runoff to pre-development condition (see Chapter 6.3.3).

How to use the unit runoff ratios:

Obtain unit runoff ratio from Table G.2-2 based on the project's rainfall basin, hydrologic soil group, and pre-development slope (for redevelopment projects, pre-development slope may be considered if historic topographic information is available, otherwise use pre-project slope). Multiply the area tributary to the structural BMP (A, acres) by the unit runoff ratio (Q_2, cfs/acre) to determine the pre-development Q_2 to determine the lower flow threshold, to use for low flow control orifice sizing.

Table G.2-2: Unit Runoff Ratios for Sizing Factor Method

Rain Gauge	Soil	Pre-Project Slope	Q_2 (cfs/acre)	Q_{10} (cfs/acre)
Lake Wohlford	A	Flat	0.256	0.518
Lake Wohlford	A	Moderate	0.275	0.528
Lake Wohlford	A	Steep	0.283	0.531
Lake Wohlford	B	Flat	0.371	0.624
Lake Wohlford	B	Moderate	0.389	0.631
Lake Wohlford	B	Steep	0.393	0.633
Lake Wohlford	C	Flat	0.490	0.729
Lake Wohlford	C	Moderate	0.495	0.733
Lake Wohlford	C	Steep	0.496	0.735
Lake Wohlford	D	Flat	0.548	0.784
Lake Wohlford	D	Moderate	0.554	0.788
Lake Wohlford	D	Steep	0.556	0.788
Oceanside	A	Flat	0.256	0.679
Oceanside	A	Moderate	0.277	0.694

Rain Gauge	Soil	Pre-Project Slope	Q_2 (cfs/acre)	Q_{10} (cfs/acre)
Oceanside	A	Steep	0.285	0.700
Oceanside	B	Flat	0.377	0.875
Oceanside	B	Moderate	0.391	0.879
Oceanside	B	Steep	0.395	0.881
Oceanside	C	Flat	0.488	0.981
Oceanside	C	Moderate	0.497	0.985
Oceanside	C	Steep	0.499	0.986
Oceanside	D	Flat	0.571	0.998
Oceanside	D	Moderate	0.575	0.999
Oceanside	D	Steep	0.576	0.999
Lindbergh	A	Flat	0.057	0.384
Lindbergh	A	Moderate	0.073	0.399
Lindbergh	A	Steep	0.082	0.403
Lindbergh	B	Flat	0.199	0.496
Lindbergh	B	Moderate	0.220	0.509
Lindbergh	B	Steep	0.230	0.513
Lindbergh	C	Flat	0.335	0.601
Lindbergh	C	Moderate	0.349	0.610
Lindbergh	C	Steep	0.354	0.613
Lindbergh	D	Flat	0.429	0.751
Lindbergh	D	Moderate	0.437	0.753
Lindbergh	D	Steep	0.439	0.753

G.2.1.2 Low Flow Control Orifice Design

When used as hydromodification flow control BMPs, biofiltration with partial retention, biofiltration, and cistern BMPs include a low flow control orifice to control the rate that flow is released from the underdrain or primary outlet. The sizing factors were developed using a standard process for sizing the low flow control orifice, therefore BMPs designed using the sizing factor method must size the low flow control orifice using the same basis. The low flow control orifice must be designed to release the lower flow threshold flow rate (fraction of pre-development Q_2) when the water surface elevation in the BMP is equal to the crest elevation of the next outflow structure. To size the low flow control

orifice, determine the head on the orifice measured from the bottom of the orifice to the minimum elevation of the next outflow structure of the BMP. The next outflow structure is typically the BMP overflow structure, except in some multi-use BMPs (e.g., BMPs that are designed for flood control in addition to hydromodification management). In this application, the difference between the bottom of the orifice and the centroid of the orifice is small relative to the total head for the calculation and may be neglected in the calculation by measuring from the orifice invert. This calculation is automated in the "BMP Sizing Spreadsheet V3.0" posted on www.projectcleanwater.org.

Steps to size the low flow control orifice:

- Determine pre-development Q_2 using the unit runoff ratios above.
- Multiply pre-development Q_2 by 0.1 to determine the low flow threshold flow rate. Note sizing factors are only available for streams with high susceptibility to erosion where the low flow threshold is $0.1Q_2$.
- Determine the head (H) on the orifice measured from the bottom of the orifice to the minimum elevation of the next outflow structure of the BMP.
- Use the orifice equation (below) and solve for the maximum orifice area to release the lower flow threshold flow rate.
- Consider how the orifice will be created. Determine the constructible dimension(s) (e.g., a standard drill bit diameter) that will produce an orifice with an area equal to or less than the maximum orifice area. The final orifice area determined based on constructible dimensions shall not exceed the maximum orifice area.

$$Q = C \times A \times (64.4\ x\ H)^{0.5}$$

where:

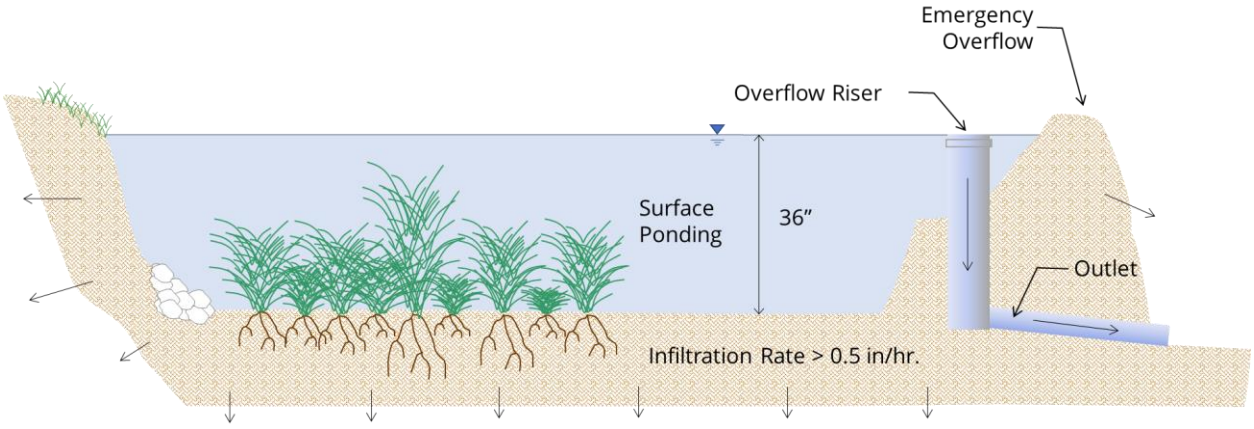
Q	=	Flow rate in cubic feet per second
C	=	Orifice coefficient; in this application use C = 0.65
A	=	Area in square feet
H	=	Head in feet

G.2.2 Sizing Factors for "Infiltration" BMP

Table G.2-3 presents sizing factors for calculating the required surface area (A) for an infiltration BMP. There is no underdrain and therefore no low flow orifice in the infiltration BMP. Sizing factors were developed for hydrologic soil groups A B, C, and D. This BMP is generally not applicable in

hydrologic soil groups C and D, but applicants have the option if there are no geotechnical or water balance issues and the underlying design infiltration rate for the BMP is greater than 0.5 inches per hour. The infiltration BMP is surface ponding feature that allows infiltration into the native or amended soils of the BMP surface.

- **Ponding layer:** a nominal 36-inch ponding layer shall be included below the overflow elevation.
- **Design infiltration rate:** the design infiltration rate shall be greater than 0.5 inches per hour.
- **Overflow structure:** San Diego Regional Standard Drawing Type I Catch Basin (D-29). For the purposes of hydromodification flow control other type of overflow structures are allowed.



Infiltration BMP Example Illustration

How to use the sizing factors for flow control BMP Sizing:

Obtain sizing factors from Table G.2-3 based on the project's lower flow threshold fraction of Q_2, hydrologic soil group, pre-project slope, and rain gauge (rainfall basin). Multiply the area tributary to the structural BMP (A, square feet) by the area weighted runoff factor (C, unitless) (see Table G.2-1) by the sizing factors to determine the required surface area (A, square feet) for the infiltration BMP. The civil engineer shall provide the necessary surface area of the BMP on the plans.

Additional steps to use this BMP as a combined pollutant control and flow control BMP:

The BMP sized using the sizing factors in Table G.2-3 meets both pollutant control and flow control requirements.

Table G.2-3: Sizing Factors for Hydromodification Flow Control Infiltration BMPs Designed Using Sizing Factor Method

Lower Flow Threshold	Soil Group	Pre-Project Slope	Rain Gauge	A
$0.1Q_2$	A	Flat	Lindbergh	0.055
$0.1Q_2$	A	Moderate	Lindbergh	0.055
$0.1Q_2$	A	Steep	Lindbergh	0.055
$0.1Q_2$	B	Flat	Lindbergh	0.045
$0.1Q_2$	B	Moderate	Lindbergh	0.045
$0.1Q_2$	B	Steep	Lindbergh	0.045
$0.1Q_2$	C	Flat	Lindbergh	0.035
$0.1Q_2$	C	Moderate	Lindbergh	0.035
$0.1Q_2$	C	Steep	Lindbergh	0.035
$0.1Q_2$	D	Flat	Lindbergh	0.030
$0.1Q_2$	D	Moderate	Lindbergh	0.030
$0.1Q_2$	D	Steep	Lindbergh	0.030
$0.1Q_2$	A	Flat	Oceanside	0.060
$0.1Q_2$	A	Moderate	Oceanside	0.060
$0.1Q_2$	A	Steep	Oceanside	0.060
$0.1Q_2$	B	Flat	Oceanside	0.050
$0.1Q_2$	B	Moderate	Oceanside	0.050
$0.1Q_2$	B	Steep	Oceanside	0.050
$0.1Q_2$	C	Flat	Oceanside	0.050
$0.1Q_2$	C	Moderate	Oceanside	0.050
$0.1Q_2$	C	Steep	Oceanside	0.045
$0.1Q_2$	D	Flat	Oceanside	0.035
$0.1Q_2$	D	Moderate	Oceanside	0.035
$0.1Q_2$	D	Steep	Oceanside	0.035
$0.1Q_2$	A	Flat	L Wohlford	0.085
$0.1Q_2$	A	Moderate	L Wohlford	0.085
$0.1Q_2$	A	Steep	L Wohlford	0.085
$0.1Q_2$	B	Flat	L Wohlford	0.070
$0.1Q_2$	B	Moderate	L Wohlford	0.070
$0.1Q_2$	B	Steep	L Wohlford	0.070
$0.1Q_2$	C	Flat	L Wohlford	0.055
$0.1Q_2$	C	Moderate	L Wohlford	0.055
$0.1Q_2$	C	Steep	L Wohlford	0.055
$0.1Q_2$	D	Flat	L Wohlford	0.040
$0.1Q_2$	D	Moderate	L Wohlford	0.040
$0.1Q_2$	D	Steep	L Wohlford	0.040

Q_2 = 2-year pre-project flow rate based upon partial duration analysis of long-term hourly rainfall records
A = Surface area (at surface of the BMP before any ponding occurs) sizing factor for flow control

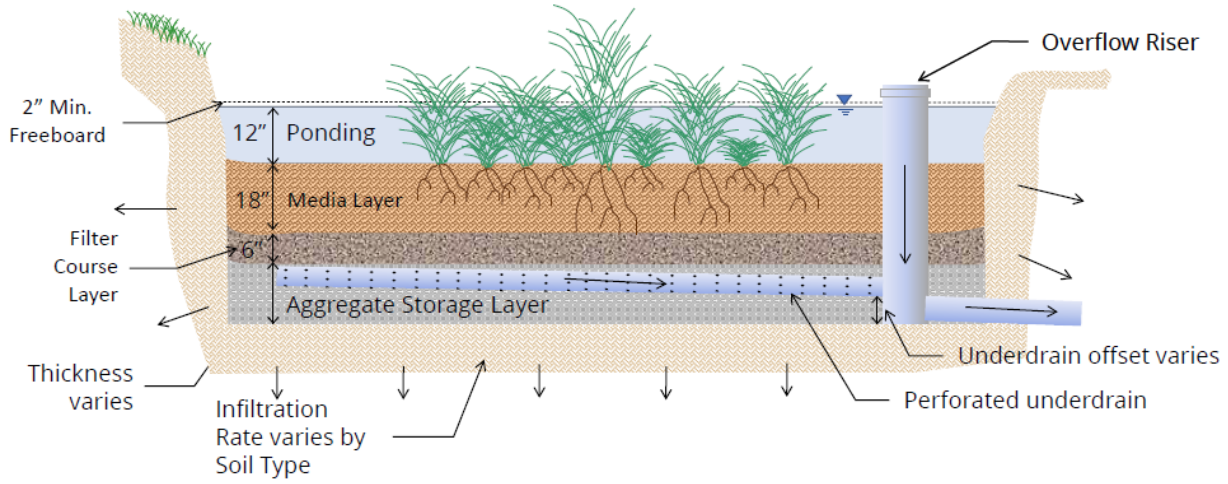
G.2.3 Sizing Factors for Biofiltration with Partial Retention

Table G.2-4 presents sizing factors for calculating the required surface area (A) for a biofiltration with partial retention BMP. The BMPs consist of four layers:

- **Ponding layer:** 12-inches active storage, [minimum] 2-inches of freeboard above overflow relief

- ~~**Growing medium**~~ **Media Layer:** 18-inches of soil [biofiltration soil media]
- **Filter Course:** 6-inches
- **Storage layer:** 18-inches of gravel at 40 percent porosity for A and B soils and 12-inches of gravel at 40 percent porosity for C and D soils. The underdrain offset for A and B soils shall be 18-inches, for C soils it shall be 6-inches and for D soils it shall be 3-inches.
- **Overflow structure:** San Diego Regional Standard Drawing Type I Catch Basin (D-29). For the purposes of hydromodification flow control other type of overflow structures are allowed.

This BMP does not include an impermeable layer at the bottom of the facility to prevent infiltration into underlying soils, regardless of hydrologic soil group. If a facility is to be lined, the designer must use the sizing factors for biofiltration (Refer to Appendix G.2.4).



Biofiltration with Partial Retention BMP Example Illustration

How to use the sizing factors for flow control BMP Sizing:

Obtain sizing factors from Table G.2-4 based on the project's lower flow threshold fraction of Q_2, hydrologic soil group, pre-project slope, and rain gauge (rainfall basin). Multiply the area tributary to the structural BMP (A, square feet) by the area weighted runoff factor (C, unitless) (see Table G.2-1) by the sizing factors to determine the required surface area (A, square feet). Select a low flow control orifice for the underdrain that will discharge the lower flow threshold flow at the overflow riser elevation. Standard head (H) for this calculation (based on the standard detail) is 3.0 feet for A or B soils, 3.5 feet for C soils, or 3.75 feet for D soils. The civil engineer shall provide the necessary surface area of the BMP and the underdrain and orifice detail on the plans.

Additional steps to use this BMP as a combined pollutant control and flow control BMP:

The BMP sized using the sizing factors in Table G.2-4 meets both pollutant control and flow control requirements.

Table G.2-4: Sizing Factors for Hydromodification Flow Control Biofiltration with Partial Retention BMPs Designed Using Sizing Factor Method

Lower Flow Threshold	Soil Group	Pre-Project Slope	Aggregate below low orifice invert (inches)	Rain Gauge	A
$0.1Q_2$	A	Flat	18	Lindbergh	0.080
$0.1Q_2$	A	Moderate	18	Lindbergh	0.080
$0.1Q_2$	A	Steep	18	Lindbergh	0.080
$0.1Q_2$	B	Flat	18	Lindbergh	0.065
$0.1Q_2$	B	Moderate	18	Lindbergh	0.065
$0.1Q_2$	B	Steep	18	Lindbergh	0.060
$0.1Q_2$	C	Flat	6	Lindbergh	0.050
$0.1Q_2$	C	Moderate	6	Lindbergh	0.050
$0.1Q_2$	C	Steep	6	Lindbergh	0.050
$0.1Q_2$	D	Flat	3	Lindbergh	0.050
$0.1Q_2$	D	Moderate	3	Lindbergh	0.050
$0.1Q_2$	D	Steep	3	Lindbergh	0.050
$0.1Q_2$	A	Flat	18	Oceanside	0.080
$0.1Q_2$	A	Moderate	18	Oceanside	0.075
$0.1Q_2$	A	Steep	18	Oceanside	0.075
$0.1Q_2$	B	Flat	18	Oceanside	0.070
$0.1Q_2$	B	Moderate	18	Oceanside	0.070
$0.1Q_2$	B	Steep	18	Oceanside	0.070
$0.1Q_2$	C	Flat	6	Oceanside	0.070
$0.1Q_2$	C	Moderate	6	Oceanside	0.070
$0.1Q_2$	C	Steep	6	Oceanside	0.070
$0.1Q_2$	D	Flat	3	Oceanside	0.070

Lower Flow Threshold	Soil Group	Pre-Project Slope	Aggregate below low orifice invert (inches)	Rain Gauge	A
$0.1Q_2$	D	Moderate	3	Oceanside	0.070
$0.1Q_2$	D	Steep	3	Oceanside	0.070
$0.1Q_2$	A	Flat	18	L Wohlford	0.110
$0.1Q_2$	A	Moderate	18	L Wohlford	0.110
$0.1Q_2$	A	Steep	18	L Wohlford	0.105
$0.1Q_2$	B	Flat	18	L Wohlford	0.090
$0.1Q_2$	B	Moderate	18	L Wohlford	0.085
$0.1Q_2$	B	Steep	18	L Wohlford	0.085
$0.1Q_2$	C	Flat	6	L Wohlford	0.065
$0.1Q_2$	C	Moderate	6	L Wohlford	0.065
$0.1Q_2$	C	Steep	6	L Wohlford	0.065
$0.1Q_2$	D	Flat	3	L Wohlford	0.060
$0.1Q_2$	D	Moderate	3	L Wohlford	0.060
$0.1Q_2$	D	Steep	3	L Wohlford	0.060

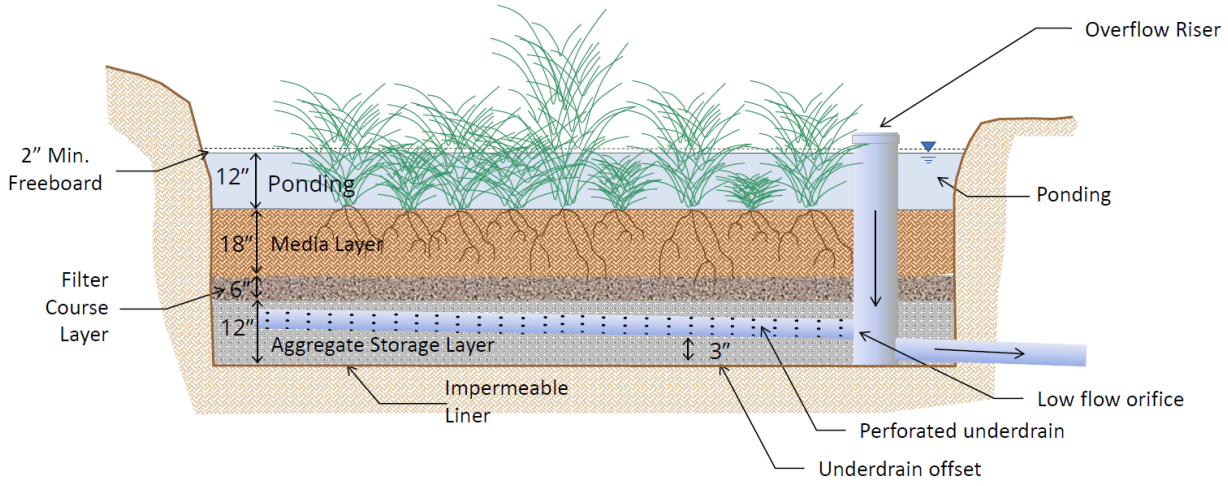
Q_2 = 2-year pre-project flow rate based upon partial duration analysis of long-term hourly rainfall records
A = Surface area (at surface of the BMP before any ponding occurs) sizing factor for flow control

G.2.4 Sizing Factors for Biofiltration

Table G.2-5 presents sizing factors for calculating the required surface area (A) for a biofiltration BMP (formerly known as flow-through planter and/or biofiltration BMP with impermeable liner). The BMPs consist of four layers:

- **Ponding layer:** 12-inches active storage, [minimum] 2-inches of freeboard above overflow relief
- **Media layer:** 18-inches of soil [biofiltration soil media]
- **Filter Course:** 6-inches
- **Storage layer:** 12-inches of gravel at 40 percent porosity. The underdrain offset shall be 3-inches.
- **Overflow structure:** San Diego Regional Standard Drawing Type I Catch Basin (D-29). For the purposes of hydromodification flow control other type of overflow structures are allowed.

This BMP includes an impermeable liner to prevent infiltration into underlying soils.



Biofiltration BMP Example Illustration

How to use the sizing factors for flow control BMP Sizing:

Obtain sizing factors from Table G.2-5 based on the project's lower flow threshold fraction of Q_2, hydrologic soil group, pre-project slope, and rain gauge (rainfall basin). Multiply the area tributary to the structural BMP (A, square feet) by the area weighted runoff factor (C, unitless) (see Table G.2-1) by the sizing factors to determine the required surface area (A, square feet). Select a low flow control orifice for the underdrain that will discharge the lower flow threshold flow at the overflow riser elevation. Standard head (H) for this calculation (based on the standard detail) is 3.75 feet for all soil groups. The civil engineer shall provide the necessary surface area of the BMP and the underdrain and orifice detail on the plans.

Additional steps to use this BMP as a combined pollutant control and flow control BMP:

The BMP sized using the sizing factors in Table G.2-5 meets both pollutant control and flow control requirements except for surface drawdown requirements. Applicant must perform surface drawdown calculations and if needed develop a vector management plan (Refer to Section 6.3.7) or revise the BMP design to meet the drawdown requirements. If changes are made to the BMP design applicants must perform site specific continuous simulation modeling (Refer to Appendix G).

Table G.2-5: Sizing Factors for Hydromodification Flow Control Biofiltration BMPs Designed Using Sizing Factor Method

Lower Flow Threshold	Soil Group	Pre-Project Slope	Rain Gauge	A
$0.1Q_2$	A	Flat	Lindbergh	0.320
$0.1Q_2$	A	Moderate	Lindbergh	0.300
$0.1Q_2$	A	Steep	Lindbergh	0.285
$0.1Q_2$	B	Flat	Lindbergh	0.105
$0.1Q_2$	B	Moderate	Lindbergh	0.100
$0.1Q_2$	B	Steep	Lindbergh	0.095
$0.1Q_2$	C	Flat	Lindbergh	0.055
$0.1Q_2$	C	Moderate	Lindbergh	0.050
$0.1Q_2$	C	Steep	Lindbergh	0.050
$0.1Q_2$	D	Flat	Lindbergh	0.050
$0.1Q_2$	D	Moderate	Lindbergh	0.050
$0.1Q_2$	D	Steep	Lindbergh	0.050
$0.1Q_2$	A	Flat	Oceanside	0.150
$0.1Q_2$	A	Moderate	Oceanside	0.140
$0.1Q_2$	A	Steep	Oceanside	0.135
$0.1Q_2$	B	Flat	Oceanside	0.085
$0.1Q_2$	B	Moderate	Oceanside	0.085
$0.1Q_2$	B	Steep	Oceanside	0.085
$0.1Q_2$	C	Flat	Oceanside	0.075
$0.1Q_2$	C	Moderate	Oceanside	0.075
$0.1Q_2$	C	Steep	Oceanside	0.075

Lower Flow Threshold	Soil Group	Pre-Project Slope	Rain Gauge	A
$0.1Q_2$	D	Flat	Oceanside	0.070
$0.1Q_2$	D	Moderate	Oceanside	0.070
$0.1Q_2$	D	Steep	Oceanside	0.070
$0.1Q_2$	A	Flat	L Wohlford	0.285
$0.1Q_2$	A	Moderate	L Wohlford	0.275
$0.1Q_2$	A	Steep	L Wohlford	0.270
$0.1Q_2$	B	Flat	L Wohlford	0.150
$0.1Q_2$	B	Moderate	L Wohlford	0.145
$0.1Q_2$	B	Steep	L Wohlford	0.145
$0.1Q_2$	C	Flat	L Wohlford	0.070
$0.1Q_2$	C	Moderate	L Wohlford	0.070
$0.1Q_2$	C	Steep	L Wohlford	0.070
$0.1Q_2$	D	Flat	L Wohlford	0.060
$0.1Q_2$	D	Moderate	L Wohlford	0.060
$0.1Q_2$	D	Steep	L Wohlford	0.060

Q2 = 2-year pre-project flow rate based upon partial duration analysis of long-term hourly rainfall records
flow control

A = Surface area (at surface of the BMP before any ponding occurs)) sizing factor for flow control

G.2.5 Sizing Factors for "Cistern" BMP

Table G.2-6 presents sizing factors for calculating the required volume (V) for a cistern BMP. In this context, a "cistern" is a detention facility that stores runoff and releases it at a controlled rate. A cistern can be a component of a harvest and use system, however the sizing factor method will not account for any retention occurring in the system. The sizing factors were developed assuming runoff is released from the cistern. The sizing factors presented in this section are to meet the hydromodification management performance standard only. The cistern BMP is based on the following assumptions:

- **Cistern configuration:** The cistern is modeled as a 4-foot tall vessel. However, designers could use other configurations (different cistern heights), as long as the lower outlet orifice is sized to properly restrict outflows and the minimum required volume is provided.

- **Cistern upper outlet:** The upper outlet from the cistern would consist of a weir or other flow control structure with the overflow invert set at an elevation of 7/8 of the water height associated with the required volume of the cistern – V. For the assumed 4-foot water depth in the cistern associated with the sizing factor analysis, the overflow invert is assumed to be located at an elevation of 3.5 feet above the bottom of the cistern. The overflow weir would be sized to pass the peak design flow based on the tributary drainage area.

How to use the sizing factors:

Obtain sizing factors from Table G.2-6 based on the project's lower flow threshold fraction of Q_2, hydrologic soil group, pre-project slope, and rain gauge (rainfall basin). Multiply the area tributary to the structural BMP (A, square feet) by the area weighted runoff factor (C, unitless) (see Table G.2-1) by the sizing factors to determine the required volume (V, cubic feet). Select a low flow control orifice that will discharge the lower flow threshold flow at the overflow elevation (i.e. when there is 3.5 feet of head over the lower outlet orifice or adjusted head as appropriate if the cistern overflow elevation is not 3.5 feet tall). The civil engineer shall provide the necessary volume of the BMP and the lower outlet orifice detail on the plans.

Additional steps to use this BMP as a combined pollutant control and flow control BMP:

A cistern could be a component of a full retention, partial retention, or no retention BMP depending on how the outflow is disposed. However, use of the sizing factor method for design of the cistern in a combined pollutant control and flow control system is not recommended. The sizing factor method for designing a cistern does not account for any retention or storage occurring in BMPs combined with the cistern (i.e., cistern sized using sizing factors may be larger than necessary because sizing factor method does not recognize volume losses occurring in other elements of a combined system). Furthermore, when the cistern is designed using the sizing factor method, the cistern outflow must be set to the low flow threshold flow for the drainage area, which may be inconsistent with requirements for other elements of a combined system. To optimize a system in which a cistern

provides temporary storage for runoff to be either used onsite (harvest and use), infiltrated, or biofiltered, project-specific continuous simulation modeling is recommended. Refer to Sections 5.4 and 6.3.6.

Table G.2-6: Sizing Factors for Hydromodification Flow Control Cistern BMPs Designed Using Sizing Factor Method

Lower Flow Threshold	Soil Group	Pre-Project Slope	Rain Gauge	V
$0.1Q_2$	A	Flat	Lindbergh	0.54
$0.1Q_2$	A	Moderate	Lindbergh	0.51
$0.1Q_2$	A	Steep	Lindbergh	0.49
$0.1Q_2$	B	Flat	Lindbergh	0.19
$0.1Q_2$	B	Moderate	Lindbergh	0.18
$0.1Q_2$	B	Steep	Lindbergh	0.18
$0.1Q_2$	C	Flat	Lindbergh	0.11
$0.1Q_2$	C	Moderate	Lindbergh	0.11
$0.1Q_2$	C	Steep	Lindbergh	0.11
$0.1Q_2$	D	Flat	Lindbergh	0.09
$0.1Q_2$	D	Moderate	Lindbergh	0.09
$0.1Q_2$	D	Steep	Lindbergh	0.09
$0.1Q_2$	A	Flat	Oceanside	0.26
$0.1Q_2$	A	Moderate	Oceanside	0.25
$0.1Q_2$	A	Steep	Oceanside	0.25
$0.1Q_2$	B	Flat	Oceanside	0.16
$0.1Q_2$	B	Moderate	Oceanside	0.16
$0.1Q_2$	B	Steep	Oceanside	0.16
$0.1Q_2$	C	Flat	Oceanside	0.14
$0.1Q_2$	C	Moderate	Oceanside	0.14
$0.1Q_2$	C	Steep	Oceanside	0.14
$0.1Q_2$	D	Flat	Oceanside	0.12
$0.1Q_2$	D	Moderate	Oceanside	0.12

Lower Flow Threshold	Soil Group	Pre-Project Slope	Rain Gauge	V
$0.1Q_2$	D	Steep	Oceanside	0.12
$0.1Q_2$	A	Flat	L Wohlford	0.53
$0.1Q_2$	A	Moderate	L Wohlford	0.49
$0.1Q_2$	A	Steep	L Wohlford	0.49
$0.1Q_2$	B	Flat	L Wohlford	0.28
$0.1Q_2$	B	Moderate	L Wohlford	0.28
$0.1Q_2$	B	Steep	L Wohlford	0.28
$0.1Q_2$	C	Flat	L Wohlford	0.14
$0.1Q_2$	C	Moderate	L Wohlford	0.14
$0.1Q_2$	C	Steep	L Wohlford	0.14
$0.1Q_2$	D	Flat	L Wohlford	0.12
$0.1Q_2$	D	Moderate	L Wohlford	0.12
$0.1Q_2$	D	Steep	L Wohlford	0.12

Q2 = 2-year pre-project flow rate based upon partial duration analysis of long-term hourly rainfall records
V = Cistern volume sizing factor

Appendix H

Guidance for Investigating Potential Critical Coarse Sediment Yield Areas

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Appendix H Guidance for Investigating Potential Critical Coarse Sediment Yield Areas

The following guidance provides methodologies for protecting CCSYAs:

H.1. Step 1: Identify CCSYAs

H.2. Step 2: Avoidance of Onsite CCSYAs

H.3. Step 3: Bypass Onsite and Upstream CCSYAs

H.4. Step 4: Demonstrate No Net Impact

H.5. References

H.6. PCCSYAs: Regional WMAA Maps

H.7. PCCSYAs: Refinement Options

H.8. Calculation Methodology for Ep and Sp

H.9. Mitigation Measures Fact Sheets

H.1 Step 1: Identify CCSYAs

A critical coarse sediment yield area (CCSYA) is an active or potential source of bed sediment to downstream channel reaches. When a Priority Development Project (PDP) is constructed, it has the potential to negatively impact characteristics of sediment supply and delivery which can lead to degradation of receiving waters. In order to prevent these impacts, PDP applicants must examine the tributary areas delineated in the project's storm water management plans and identify sources of critical coarse sediment within the following locations:

- **Onsite CCSYAs**: CCSYAs identified within the project's property boundary as indicated in the SWQMP. Refer to Section 1.3 for defining a project.
- **Upstream CCSYAs**: CCSYAs identified within the drainage area draining through the project's property boundary as indicated in the SWQMP. Refer to Section 1.3 for defining a project.

Applicants must first identify potential critical coarse sediment yield areas (PCCSYAs) using one of the methods presented in Appendix H.1.1. Once these PCCSYAs are identified, applicants may either accept the PCCSYA mapping as final, or may elect to further refine the results of the mapping through consideration of the refinement methods outlined in Appendix H.1.2. At the end of Step 1, applicants will have identified CCSYAs that must be avoided and bypassed by the project.

H.1.1 Identification Methods

As outlined on the following pages, applicants have two available options to identify PCCSYAs; (1) the RPO Method, and (2) the WMAA Method.

H.1.1.1 RPO Method

The County of San Diego has performed a jurisdictional analysis demonstrating that, in most cases, enforcement of the existing Resource Protection Ordinance (RPO) effectively preserves sources critical coarse sediment within the Unincorporated County of San Diego. This correlation between critical coarse sediment and lands that are currently protected through existing ordinances typically makes it more feasible for a development project to satisfy critical coarse sediment criteria. As outlined below, the process for identifying onsite sources of critical coarse sediment through the RPO Method may vary with respect to the project scenario, while the process for identifying upstream PCCSYAs through the RPO Method is identical for all project types.

Identification of Onsite PCCSYAs

- **Scenario 1:** PDP is subject to and in compliance with RPO requirements (without utilization of RPO exemptions 86.604(e)(2)(cc) or 86.604(e)(3) that result in impacts to more than 15% of the project scale CCSYAs).
    - Applicant must identify onsite PCCSYAs as areas that are coarse grained[6], ≥25% slope, and ≥50' in height.
- **Scenario 2:** PDP is entirely exempt/not subject to RPO requirements without utilization of exemptions 86.604(e)(2)(cc) or 86.604(e)(3).
    - Applicant has no obligation to identify and/or avoid onsite critical coarse sediment.
- **Scenario 3:** PDP utilizes exemption(s) via RPO Section 86.604(e)(2)(cc) or 86.604(e)(3) and impacts more than 15% of the project-scale CCSYAs.
    - Applicant is not permitted to use the RPO Method to identify sources of critical coarse sediment. Applicant must instead demonstrate no net impact through utilization of Appendix H.4 of this guidance.

Identification of Upstream PCCSYAs

- **All Scenarios:** All PDP applicants must identify upstream PCCSYAs that drain through their project site as areas that are coarse grained, ≥25% slope and ≥50' in height.
    - Alternatively, if a project can demonstrate that the entire upstream boundary incorporates drainage elements that bypass the 2 year 24 hour flow rate at the peak velocity of 3 fps, then identification of the upstream sources may be omitted from the analysis.

[6] Refer to Table H.6-1 for a list of geologic units that are anticipated to produce coarse grained sediment.

H.1.1.2 WMAA Mapping Method

It is anticipated that most applicants will elect to identify critical coarse sediment yield areas through the RPO Method presented in the section above; however, applicants are not expressly forbidden from utilizing the Watershed Management Area Analysis PCCSYA maps that were developed through previous regional analysis. Applicants electing to pursue this alternate method must identify onsite and/or upstream sources of critical coarse sediment through examination of the PCCSYA maps provided in Appendix H.6.

H.1.2 Refinement Options

After identifying PCCSYAs using one of the methods above, the applicant may either accept the PCCSYA mapping as final, or may elect to further refine the results of the mapping through consideration of one or more of the refinement methods outlined below.

H.1.2.1 Depositional Analysis

Areas identified as PCCSYAs may be removed from consideration if it is demonstrated that these sources are deposited into existing systems prior to reaching the first downstream unlined water of the state. Systems resulting in deposition may include existing natural sinks, existing structural BMPs, existing hardened MS4 systems, or other existing similar features that produce a peak velocity from the discrete 2-year, 24 hour runoff event of less than three feet per second in the system being analyzed. Applicants electing to perform depositional analysis to refine PCCSYA mapping must refer to the detailed guidance provided in Appendix H.7.1.

H.1.2.2 Threshold Channel Analysis

Areas identified as PCCSYAs may be removed from consideration if they discharge to a "threshold channel" that does not exhibit characteristics associated with significant bed load movement during design flows. Applicants electing to perform threshold channel analysis to refine PCCSYA mapping must refer to the detailed guidance provided in Appendix H.7.2.

H.1.2.3 Coarse Sediment Source Area Verification

Areas identified as PCCSYAs may be removed from consideration if an applicant demonstrates that these areas actually consist of fine grained sediment. Applicants electing to perform coarse sediment source area verification to refine PCCSYA mapping must refer to the detailed guidance provided in Appendix H.7.3.

H.1.2.4 Verification of Geomorphic Landscape Units (GLUs)

If an applicant has identified sources of critical coarse sediment via the alternate WMAA Method discussed in Appendix H.1.1, PCCSYAs mapping may be refined through verification of GLUs. If this method is used, applicants must refer to detailed guidance provided in Appendix H.6.1.

H.2 Step 2: Avoidance of Onsite CCSYAs

A key element of preserving the stability of receiving waters is to avoid changes in bed sediment supply by avoiding development on CCSYAs. Avoidance is best achieved through proper site design. The following are some potential strategies that should be considered while determining the site layout to avoid CCSYAs:

- The civil engineer shall designate onsite CCSYAs that are to be avoided (undisturbed) for the purpose of preserving coarse soil supply. When feasible, use and/or access restriction should be established for these areas.
- Minimize new impervious footprint. Refer to SD-3 in Chapter 4 for guidance on minimizing impervious footprint.

If onsite CCSYAs are not avoided per the metrics defined below, the applicant must demonstrate no net impact to the receiving water using guidance in Appendix H.4.

H.2.1 Avoidance Metrics

H.2.1.1 RPO Method

Avoidance of onsite CCSYA does not always mean that 100% of the CCSYAs must be avoided. Applicants that have identified CCSYAs using the RPO Method are typically permitted to encroach anywhere from 10-20% into the onsite CCSYAs that were determined in Step 1. This onsite encroachment is permitted through the existing RPO enforcement mechanism, which allows each lot within a project to encroach into steep slope areas anywhere from 10-20% depending on the percentage of the lot that is comprised of steep slopes. For example, a lot comprised of less than 75% steep slopes is typically permitted a 10% encroachment while a lot comprised of 100% steep slopes is typically permitted a 20% encroachment.

In some instances, a project (or portions of a project) may be exempted from RPO requirements such that encroachments beyond 10-20% may be permitted. Utilization of specific RPO exemptions 86.604(e)(2)(cc) or 86.604(e)(3) will require an applicant to translate conventional lot-level impact values into a single project-level impact value for analysis.

As outlined below, the metric for avoiding impacts to onsite sources of critical coarse sediment through the RPO Method may vary with respect to the project scenario

Avoidance of Onsite CCSYAs

- **Scenario 1:** PDP is subject to and in compliance with RPO requirements (without utilization of RPO exemptions 86.604(e)(2)(cc) or 86.604(e)(3) that result in impacts to more than 15% of the project scale CCSYAs).
    - Applicant demonstrates avoidance of onsite critical coarse sediment by simply complying with existing RPO encroachment allowances.

- **Scenario 2:** PDP is entirely exempt/not subject to RPO requirements without utilization of exemptions 86.604(e)(2)(cc) or 86.604(e)(3).
    - Applicant has no obligation to identify and/or avoid onsite critical coarse sediment.
- **Scenario 3:** PDP utilizes exemption(s) via RPO Section 86.604(e)(2)(cc) or 86.604(e)(3) and impacts more than 15% of the project-scale CCSYAs.
    - Applicant is not permitted to use the RPO Method to demonstrate avoidance of critical coarse sediment. Applicant must instead demonstrate no net impact through utilization of Appendix H.4 of this guidance.

Avoidance of Upstream CCSYAs

- **All Scenarios:** Upstream CCSYAs must be bypassed per criteria presented in Section H.3 of this guidance.

H.2.1.2 WMAA Mapping Method

If the applicant has identified onsite CCSYAs using the WMAA Mapping Method, encroachments of up to 5% into the onsite CCSYAs may be permitted.

H.3 Step 3: Bypass Onsite and Upstream CCSYAs

Another key element of preserving the stability of receiving waters is to maintain current bed sediment supply characteristics through effective bypass of onsite and upstream sediment sources. Upstream bed sediment sources may include overland flow from CCSYAs and/or concentrated channel flows. Applicants must ensure both onsite and upstream sources of bed sediment are effectively bypassed through their project. If onsite and/or upstream CCSYAs are not effectively bypassed per the criteria below, applicant must demonstrate no net impact to the receiving water per the guidance presented in Appendix H.4.

H.3.1 Bypass CCSYAs from Hillslopes

Both onsite and upstream hillslopes mapped as CCSYAs must be effectively bypassed through and/or around the proposed project site.

- Proposed hardened drainage systems (e.g. storm drains, drainage ditches) that convey the bed sediment from the hillslopes to the downstream waters of the state should maintain a peak velocity from the discrete 2-year, 24-hour runoff event greater than three feet per second.
    - When drainage ditches are proposed for bypass, this velocity may be achieved by designing to the minimum dimensions listed in the San Diego Regional Standard drawing D-75.
    - When an 18" concrete storm drain is proposed for bypass, this velocity may typically be achieved by maintaining a storm drain slope of ≥0.5%. In instances where 2 year, 24-hour peak flow rates associated with the storm drain are less than 1.1 cfs, applicants may refer to the table below for minimum slopes needed to maintain three feet per second. Applicants may interpolate the values from the table below, or may elect to perform more detailed cleansing velocity calculations presented in Appendix H.7.1.

2-Year, 24-Hour Peak Flow (cfs)	Minimum Slope for 18" Concrete Storm Drain
<0.25	n/a, this PCCSYA is considered de-minimis
0.25	2.0%
0.50	1.0%
1.10	0.5%

- Storm water runoff that contains the bed sediment from CCSYAs must not be routed through detention basins or other facilities with restricted outlets that will trap sediment. Bypass systems shall be designed as necessary so that the bed material is conveyed to the downstream receiving water. Structural BMPs (including most flow-thru BMPs) are likely to trap sediment.
- For scenarios where a BMP must be constructed to treat offsite drainage area and there are CCSYAs outside of the project footprint, it may be feasible to achieve mitigation by construction of an outlet structure that can convey the bed load to the downstream receiving water and clear water through a bypass structure to a BMP.

- Proposed crossings (culverts, driveways, etc.) should not impede the transport of upstream critical coarse sediment. Crossings should be designed to avoid headwater conditions that would result in the trapping/settling of sediment.

H.3.2 Bypass CCSYAs from Channels

Projects that effectively avoid and bypass CCSYAs mapped in Step 1 of this guidance are not required to take specific action to ensure bypass of channel flows. This guidance does not set forth channel bypass criteria for this scenario because it recognizes that existing regulator mechanisms (such as 401 certifications, site design requirements, etc) are generally sufficient to preserve the sediment transport functions of onsite channels.

However, projects that do not effectively avoid and bypass the CCSYAs mapped in Step 1, will be required to specifically account for bypass of channel flows as part of the demonstration of no net impact outlined in Appendix H.4.

H.3.3 De Minimis Upstream CCSYA

Applicants have an option to exclude de minimis upstream CCSYAs. De minimis upstream CCSYAs consist of coarse hillslope areas that are not significant contributors of bed sediment yield due to their small size, and are considered by the owner and County as not practicable to bypass to the downstream waters of the state. In limited scenarios where all of the criteria below are satisfied, de minimis upstream CCSYAs may be omitted from consideration.

- De minimis upstream CCSYA is not disturbed through the proposed project activities.
- De minimis upstream CCSYA is not part of an upstream drainage contributing more than 0.31 total acres to the project site.
- Multiple de minimis upstream CCSYAs cannot be adjacent to each other and hydraulically connected.
- The SWQMP must document the reason why each de minimis upstream CCSYA could not be bypassed to the downstream waters of the state.

The 0.31-acre (13,500 square feet) de minimis threshold was established using 0.25 cfs as the cut off peak flow for the 2-year, 24-hour event, rational method equation and the following assumptions:

- C = 0.225 (average runoff coefficient (C) for soil type A and B);
- Average 6-hour, 2-year storm depth = 1.5 inches;
- Time of concentration = 6 minutes; and
- 2-year peak intensity = 3.51 in/hr. (based on procedures from the County Hydrology Manual).

The strategies for sediment bypass do not mitigate for the reduction of CCSYA that have been replaced by development onsite but can only mitigate scenarios where development hinders movement of bed sediment through the project footprint. When preservation of existing channels and/or implementation of sediment bypass measures is not feasible and/or not implemented, the applicant must demonstrate no net impact to the receiving water via the guidance presented in Appendix H.4.

H.4 Step 4: Demonstrate No Net Impact

When impacts to CCSYAs cannot be avoided or effectively bypassed, the applicant must demonstrate that their project generates no net impact to the receiving water per the performance metrics identified herein.

- **Appendix H.4.1** provides background on the state of the current science for predicting hydromodification impacts due to reductions in sediment supply;
- **Appendix H.4.2** defines the management standard that will be the basis for evaluating whether "no net impact to the receiving water" is achieved;
- **Appendix H.4.3** identifies the type of mitigation measures (i.e., additional flow control, stream rehabilitation, and applicant proposed mitigation measures) that can be used to meet the management standard;
- **Appendix H.8** provides the methodology for calculation of Erosion Potential (Ep) and Sediment Supply Potential (Sp); and
- **Appendix H.9** provides fact sheets for implementation of the mitigation measures.

H.4.1 Background

Channel form, by definition, is composed of bed and bank material as well as channel geometry (in plan, cross-section, and profile); however, the dominant forces typically controlling channel form are discharge and sediment supply (notably bed material) since a stream's most basic function is to convey water and sediment (Knighton, 1998). The interaction between form and function is qualitatively described through Lane's relationship:

Equation H.4-1: Lane's Relationship

$$Q_s \times d \propto Q_w \times S$$

Where:

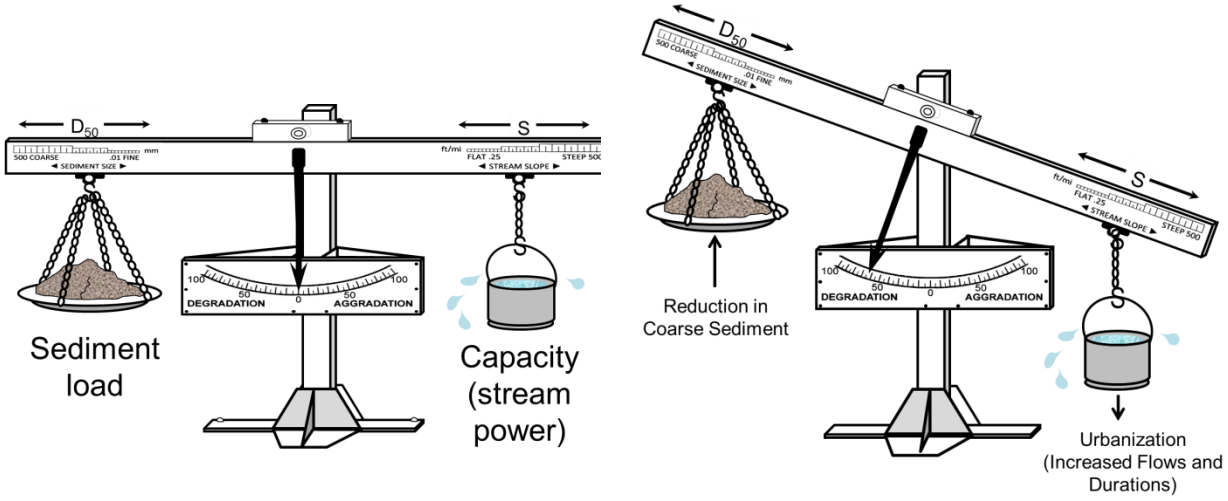
Q_s = Sediment discharge
D = Particle diameter or size of sediment
Q_w = Streamflow
S = Stream slope

Lane's relationship qualitatively states that the sediment load (size and volume of sediment), which is the first half of the relationship, is proportional to the stream power (volume of runoff and slope) which is represented by the second half of the relationship. The sediment discharge (Q_s) in the relationship is the coarser part of sediment load, referred to as the "bed sediment", since this is the part of the load which largely molds the bed formation (Lane, 1955). Lane's relationship (Equation H.4-1) cannot be used for quantitative calculations since the proportionality is not necessarily linear.

For a stream at equilibrium, Lane's relationship states that if one of the variables changes and the other variables do not change proportionately, then the stream channel is no longer in equilibrium.

Sediment load and stream power can change considerably during and following new development, leading to changes in the equilibrium state of the receiving channel.

- Typically, sediment load increases during the construction period, due to the additional exposure of bare soil during the grading and construction process, and before landscaping vegetation has stabilized the soil. This is regulated through the construction-phase BMP requirements established by the Construction General Permit and/or the MS4 Permit.
- Following the construction period, sediment load typically decreases to below pre-development levels, as less sediment is available from areas that have been paved or stabilized by landscape vegetation. When this decrease is not regulated, the bed sediment supplied to the stream (first half of the relationship) is reduced and the sediment transport capacity (stream power) is increased due to increased flows and durations resulting from the addition of impervious areas (second half of the relationship). This may result in degradation of the stream system as illustrated in Figure H.4-1.



Stream in equilibrium

Post-construction condition with no flow control and/or sediment supply regulations

Schematics credit: SCCWRP

Figure H.4-1: Illustration of Lane's Relationship

Lane's relationship is useful for making qualitative predictions concerning channel impacts due to changes in runoff and/or sediment loads from the watershed. Although this qualitative assessment is useful for understanding how the watershed responds to development, quantitative predictions are valuable for determining the magnitude of response and they can inform the identification of locations where the greatest management attention should be invested.

Lane's relationship can be supplemented by the use of quantitative predictions which allow the evaluation of the stream under changing conditions. Quantitative predictions will include bed

sediment supply calculations for the first half of the Lane relationship, and bed sediment transport capacity calculations for the second half of the Lane relationship. Imbalances between the bed sediment supply rate and transport capacity determines the rate of sediment deposition or erosion in the channel and the associated channel change (Wilcock et al., 2009).

The common practice is to use the Erosion Potential (Ep) metric to evaluate the changes in sediment transport capacity and the Sediment Supply Potential (Sp) metric to evaluate the changes in bed sediment supply for susceptible receiving channels of concern. In regards to Ep metric,

- SCCWRP Technical Report 667 (SCCWRP, 2012) states:

  "The underlying premise of the erosion potential approach advances the concept of flow duration control by addressing in-stream processes related to sediment transport. An erosion potential calculation combines flow parameters with stream geometry to assess long term (decadal) changes in the sediment transport capacity. The cumulative distribution of shear stress, specific stream power and sediment transport capacity across the entire range of relevant flows can be calculated and expressed using an erosion potential metric, Ep."

- SCCWRP Technical Report 753 (SCCWRP, 2013) states the following based on review of field measurements from 61 sites in Southern California:

  "Results indicate that channel enlargement is highly dependent on the ratio of post- to pre-urban sediment-transport capacity over cumulative duration simulations of 25 years (load ratio, a.k.a. erosion potential), which explained nearly 60% of the variance."

For the purposes of implementing mitigation measures within the MS4-permitted region of the County of San Diego: this manual defines Ep as the ratio of post-project/pre-development (natural) long-term transport capacity or work; and Sp as the ratio of post-project/pre-project (existing) long-term bed sediment supply. Guidance for calculating Ep and Sp are provided in Appendix H.8.

H.4.2 Management Standard

This guidance defines a sediment supply management standard through which no net impact to receiving water can be quantitatively indicated. This management standard is demonstrated through the Net Impact Index (NII), a dimensionless index that must be used by the applicant to evaluate if there is, or is not, a net impact to the receiving water. NII is defined in this manual as the ratio of Ep to Sp. Mitigation measures shall be designed to meet the NII management standard shown in Equation H.4-2 to achieve no net impact to the receiving water. The NII management standard is based on Lane's relationship (Ep is directly proportional to Sp) and an allowance of 10% (based on Appendix H.4.2.1). This represents the most appropriate current understanding of how to quantitatively account for sediment supply changes without replacing bed sediment sources (Palhegyi and Rathfelder, 2007 and Parra, 2015).

Equation H.4-2: Net Impact Index

$$NII = \frac{Ep}{Sp} \leq 1.1$$

Where:

NII = Net Impact Index
Ep = Erosion Potential
Sp = Sediment Supply Potential

If NII ≤ 1.1, then the project produces no net impact to the receiving water in terms of coarse sediment yield, and no further analysis is required. If NII > 1.1, then the project generates an impact on the receiving water and the project is required to implement mitigation measures defined in Appendix H.4.3 such that the NII is reduced to a compliant value (NII ≤ 1.1).

H.4.2.1 Allowance to the NII Management Standard

This manual establishes the NII defined in Appendix H.4.2 as the management standard for coarse sediment supply. The 10% allowance to the management standard is supported by the following research studies or projects:

- The authors of the USACE report for channel design (USACE, 2001) state that, "achieving an optimum Capacity-Supply Ratio, within 10 percent of unity, should ensure dynamic stability while allowing the river itself to recover some of the fluvial detail that cannot be engineered."
- The authors of SCCWRP Technical Report 605 (SCCWRP, 2010), "anticipate that changes of less than 10% in either driver [discharge or sediment flux] are unlikely to instigate, on their own, significant channel changes. This value is a conservative estimate of the year-to-year variability in either discharge or sediment flux that can be accommodated by a channel system in a state of dynamic equilibrium."
- Sediment transport and supply measurements and calculations are inherently inexact. Discrepancies of up to 10% should not be a source of concern (PCR et al., 2002).

H.4.3 Types of Mitigation Measures

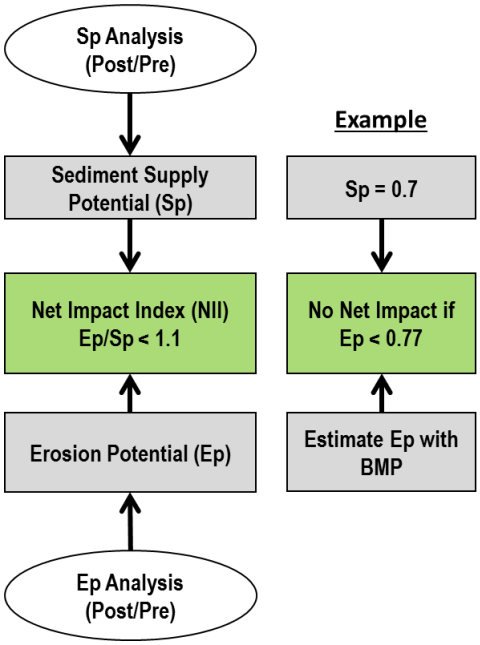
The following text discusses mitigation measures that may be used by the applicant to meet the NII management standard defined in Appendix H.4.2. These include:

- Additional Flow Control;
- Stream Rehabilitation; and
- Applicant Proposed Mitigation Measures

Appendix H.9 provides additional guidance for implementation of these mitigation measures.

H.4.3.1 Additional Flow Control

One option for managing bed sediment supply reductions is to provide additional detention and retention of site runoff to compensate for the reduction of bed sediment supply. This measure requires increasing flow attenuation by adding storage volume in structural BMPs. This management option accounts for changes in hydrology, channel geometry, and bed/bank material, but not sediment supply. For example, if there is a 30% reduction in bed-load due to proposed urbanization, then the sediment supply potential (Sp) equals 0.7. Assuming the appropriate range is +10%, hydromodification controls can be sized and situated such that the post-project effective in-stream work is lowered to less than 77% of the baseline pre-development condition.



Structural BMPs designed for hydromodification control utilize the following two basic principles:

- Detain runoff and release it in a controlled way that either mimics pre-development in-stream sediment transport capacity, mimics flow durations, or reduces flow durations to account for a reduction in bed sediment supply.
- Manage excess runoff volumes through one or more of the following pathways: (1) infiltration; (2) evapotranspiration; (3) storage and use; (4) discharge at a rate below the critical low flowrate; or (5) discharge downstream to a receiving water that is not susceptible to hydromodification impacts.

If desired, structural BMPs can be designed to support flood control and LID objectives in addition to hydromodification control. To the maximum extent possible, structural BMPs should be designed to receive flows from developed areas only. This facilitates design optimization as well as avoiding intercepting coarse sediments from open spaces that should ideally be passed through to the stream channel.

A fact sheet for additional flow control is provided in Appendix H.9.1.

H.4.3.2 Stream Rehabilitation

Hydromodification control can be achieved by stream rehabilitation projects including: drop structures, grade control structures, bed and bank reinforcement, increased channel sinuosity or meandering, increased channel width, and flow diversion. The objective of these in-stream controls, or stream restoration measures, is to reduce or maintain the overall Erosion Potential (Ep) of the receiving channel by modifying its hydraulic properties and/or bed/bank material resistance without fully replacing sediment supply or controlling increases in runoff. Stream rehabilitation is only an option where the receiving channel of concern is already impacted by erosive flows and shows evidence of excessive sediment, erosion, deposition, or is a hardened channel.

Stream rehabilitation projects are subject to the permitting requirements of the resource agencies. Stream rehabilitation projects may require the following permits:

- California Department of Fish and Wildlife – 1602 Streambed Alteration Agreement.
- US Fish and Wildlife Service – Authorization under the Endangered Species Act.
- US Army Corps of Engineers – Clean Water Act Section 404 Permit.
- Regional Water Quality Control Board – Clean Water Act Section 401 Water Quality Certification.
- Local Grading Permit

A fact sheet for stream rehabilitation is provided in Appendix H.9.2.

H.4.3.3 Applicant Proposed Mitigation Measures

The applicant may propose a mitigation measure not identified in this manual if it will achieve no net impact to the receiving water. Additional analysis may be requested by the County prior to approval of the mitigation measure to substantiate the finding of no net impact to the receiving water.

H.5 References

American Society of Civil Engineers and Water Environment Federation. 1992. Design and Construction of Urban Stormwater Management Systems. ASCE Manual No. 77, WEF Manual No. 20, Alexandria, VA.

ASCE, 1970. Design and construction of sanitary and storm sewers, ASCE Manual of Engineering Practice No. 37, WPCF Manual of Practice No. 9. Prepared by the Joint Committee of the American Society of Civil Engineers and the Water Pollution Control Federation

Chow, V.T. 1959. Open-Channel Hydraulics. McGraw-Hill Book Company.

Fischenich, C. 2001. "Stability Thresholds for Stream Restoration Materials." EMRRP Technical Notes Collection (ERDC TN-EMRRP-SR-29), U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Hawley, R.J., and Bledsoe, B.P. 2011. "How do flow peaks and durations change in suburbanizing semi-arid watersheds? A southern California Study," Journal of Hydrology, Elsevier, Vol 405, pp 69-82.

Knighton D., 1998. Fluvial Forms and Processes: A New Perspective. Arnold Publishers.

Lane, E.W. 1955. The Importance of Fluvial Morphology in Hydraulic Engineering. American Society of Civil Engineers. Proceedings, Vol. 81, Paper No. 745.

Los Angeles Regional Water Quality Control Board (LARWQCB). 2012. Los Angeles County MS4 Permit (Order No. R4-2012-0175).

National Resource Conservation Service (NRCS), 2007. National Engineering Handbook Part 654 - Stream Restoration Design.

Palhegyi, G.E. and Rathfelder, K. 2007. "Applying the Erosion Potential Methodology to Natural Channel Design Procedures in Southern California". Presented at CASQA, Sept 2007, Orange County, California.

Parra, L.A., 2015. Addressing Critical Coarse Sediment Impact by Defining Dimensionless Indexes of Coarse Sediment Production, Transport and Net Impact.

Parra, L.A., 2016. Link between Flow Duration Curve and Erosion Work – Expanded.

PCR Services Corporation, Philip Williams and Associates, and Balance Hydrologics, Inc. 2002. Baseline Geomorphic and Hydrologic Conditions Report, Ranch Mission Viejo: Portions of the San Juan and Western San Mateo Watersheds, prepared for Rancho Mission Viejo.

Renard, K.G., G.R. Foster, G.A. Weesies, D.K. McCool and D.C. Yoder, 1997. Predicting Soil Erosion by Water. A guide to conservation planning with Revised Universal Soil Loss Equation (RUSLE). U.S. Department of Agriculture, Agriculture Handbook No. 703.

San Diego, County of. 2011. Final Hydromodification Management Plan.

Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). 2005. Hydromodification Management Plan. April 21, 2005.

Shields, F.D. 1996. Hydraulic and Hydrologic Stability In: A Brooks and FD Shields (Eds.), River Channel Restoration, 23-74.

Shields, F.D., A. Brooks and J. Haltiner. 1999. Geomorphological Approaches to Incised Stream Channel Restoration in the United States and Europe. In: SE Darby and A Simon (Eds.) Incised River Channels.

Southern California Coastal Water Research Project (SCCWRP), 2008. Stream Channel Classification and Mapping Systems: Implications for Assessing Susceptibility to Hydromodification Effects in Southern California, Technical Report 562.

Southern California Coastal Water Research Project (SCCWRP), 2005. Effect of Increases in Peak Flows and Impervious on the Morphology of Southern California Streams, Technical Report 450.

Southern California Coastal Water Research Project (SCCWRP), 2010. Hydromodification Screening Tools: GIS-based catchment analyses of potential changes in runoff and sediment discharge. Technical Report 605.

Southern California Coastal Water Research Project (SCCWRP), 2010a. Hydromodification Screening Tools: Field Manual for Assessing Channel Susceptibility. Technical Report 606.

Southern California Coastal Water Research Project (SCCWRP), 2012. Hydromodification Assessment and Management in California. Technical Report 667.

Southern California Coastal Water Research Project (SCCWRP), 2013. Modeling and Managing Hydromodification Effects: summary of Available Tools and Decision-Making Approach. Technical Report 753.

USACE, 2001. Channel Restoration Design for Meandering Rivers. US Army Corps of Engineers, Final Report, ERDC/CHL CR-01-1. Prepared by Soar, P.J., and Thorne, C.R.

USDA, 1974. Present Sediment Yield Rates for Western United States. U. S. Department of Agriculture Soil Conservation Service.

Wilcock, P., J. Pitlick, and Y. Cui. 2009. Sediment Transport Primer Estimating Bed-Material Transport in Gravel-bed Rivers. USDA General Technical Report, RMRS-GTR-226.

H.5.1 Terms of Reference

The guidance described in Appendix H of this manual was developed by Geosyntec Consultants (Geosyntec) on behalf of the County of San Diego and the City of San Diego. Appendix H was specifically developed to provide PDP applicants guidance to meet the MS4 Permit Provision E.3.c.(2)(b) within the MS4-permitted region within the San Diego County. This guidance is not intended to be used for purposes, other than to meet this MS4 Permit requirement.

The guidance was developed with input from a Technical Advisory Committee (TAC) members through a series of meetings conducted in January 2016. The TAC input resulted in a streamlined guidance enhanced to provide applicants with simplified methods to determine impacts to coarse sediment delivery based on complex scientific principles. TAC participants included:

Bill Woolsey | Brian Haines | Charles Mohrlock | Chris Wolff | Dave Hammar | David Garcia | Emir Williams | Eric Mosolgo | Eric Stein | Erica Ryan | Howard Chang | Jon VanRhyn | Jonard Talamayan| Judd Goodman| Ken Susilo| Laura Henry| Luis Parra| Max Dugan | Rich Lucera | Sheri McPherson | Sumer Hasenin | Trevor Alsop | Venkat Gummadi | Wayne Chiu |

H.6 PCCSYAs: Regional WMAA Maps

PCCSYAs identified by the Regional WMAA were delineated using regional datasets for elevation, land cover, and geology. The methodology used to identify PCCSYAs from these datasets is based on Geomorphic Landscape Unit (GLU) methodology presented in the SCCWRP Technical Report 605. GLUs characterize the magnitude of sediment production from areas through three factors judged to exert the greatest influence on the variability on sediment-production rates: geology types, hillslope gradient, and land cover. The Regional WMAA document and the GIS layers for the map can be found on the Project Clean Water website at the following address:

http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=248&Itemid=219

The regional-level mapping is based on the following sources:

Dataset	Source	Year	Description
Elevation	USGS	2013	1/3rd Arc Second (~10 meter cells) digital elevation model for San Diego County
Land Cover	SanGIS	2013	Ecology-Vegetation layer for San Diego County downloaded from SanGIS
Geology	Kennedy, M.P., and Tan, S.S.	2002	Geologic Map of the Oceanside 30'x60' Quadrangle, California, California Geological Survey, Regional Geologic Map No. 2, 1:100,000 scale.
	Kennedy, M.P., and Tan, S.S.	2008	Geologic Map of the San Diego 30'x60' Quadrangle, California, California Geological Survey, Regional Geologic Map No. 3, 1:100,000 scale.
	Todd, V.R.	2004	Preliminary Geologic Map of the El Cajon 30'x60' Quadrangle, Southern California, United States Geological Survey, Southern California Areal Mapping Project, Open File Report 2004-1361, 1:100,000 scale.
	Jennings et al.	2010	"Geologic Map of California," California Geological Survey, Map No. 2 – Geologic Map of California, 1:750,000 scale

The regional data set is a function of the inherent data resolution of the macro-level data sets and may not conform to all site conditions, or does not reflect changes to particular areas that have occurred since the underlying data was developed. This means slopes, geology, or land cover at the project site can be mischaracterized in the regional data set. If an applicant feels the Regional WMAA analysis inaccurately mapped their project area, they may elect to perform a site-specific GLU analysis based on data collected from project-level investigations to refine the mapping as outlined below.

The following PCCSYAs may be removed from the mapping without performing the full GLU analysis described in Appendix H.6.1 a) areas under 10% slope, b) paved areas.

H.6.1 Site-Specific GLU Analysis

In order to perform a site-specific GLU analysis the applicant must first delineate the project boundary and any areas draining through the project boundary. The applicant must then determine appropriate slopes, geology, and land cover categories for this area as identified below.

There are four slope categories in the GLU analysis. Category numbers shown (1 to 4) were assigned for the purpose of GIS processing.

- 0% to 10% (1)
- 10% to 20% (2)
- 20% to 40% (3)
- >40% (4)

There are seven geology categories in the GLU analysis:

- Coarse bedrock (CB)
- Coarse sedimentary impermeable (CSI)
- Coarse sedimentary permeable (CSP)
- Fine bedrock (FB)
- Fine sedimentary impermeable (FSI)
- Fine sedimentary permeable (FSP)
- Other (O)

There are six land cover categories in the GLU analysis:

- Agriculture/grass
- Forest
- Developed
- Scrub/shrub
- Other
- Unknown

Project site slopes shall be classified into the categories based on project-level topography. Project site geology may be determined from geologic maps (may be the same as regional-level information) or classified in the field by a qualified geologist. Table H.6-1 provides information to classify geologic map units into each geology category. Project site land cover shall be determined from aerial photography and/or field visit. For reference, Table H.6-2 provides information to classify land cover categories from the SanGIS Ecology-Vegetation data set into land cover categories. The civil engineer shall not rely on the SanGIS Ecology-Vegetation data set to identify actual land cover at the project

site (for project-level investigation land cover must be confirmed by aerial photo or field visit). Intersect the geologic categories, land cover categories, and slope categories within the project boundary to create GLUs. The GLUs listed in Table H.6-3 are considered to be PCCSYAs. Note the GLU nomenclature is presented in the following format: Geology – Land Cover – Slope Category (e.g., "CB-Agricultural/Grass-3" for a GLU consisting of coarse bedrock geology, agricultural/grass land cover, and 20% to 40% slope).

GLUs are created by intersecting the geologic categories, land cover categories, and slope categories. This is a similar procedure to intersecting land uses with soil types to determine runoff coefficients or runoff curve numbers for hydrologic studies, but there are three categories to consider for the GLU analysis (slope, geology, and land cover), and the GLUs are not to be composited into a single GLU. When GLUs have been created, determine whether any of the GLUs listed in Table H.6-3 are found within the project boundary. The GLUs listed in Table H.6-3 are considered to be PCCSYAs.

If none of the GLUs listed in Table H.6-3 are present within the project boundary and area draining through the project boundary, no measures for protection of critical coarse sediment yield areas are necessary. If one or more GLUs listed in Table H.6-3 are present within the project boundary, they shall be considered critical coarse sediment yield areas. Complete Worksheet H.6-1 to document verification of GLUs.

Table H.6-1: Geologic Grouping for Different Map Units

Map Unit	Map Name	Anticipated Grain size of Weathered Material	Bedrock or Sedimentary	Impermeable / Permeable	Geology Grouping
gr-m	Jennings; CA	Coarse	Bedrock	Impermeable	CB
grMz	Jennings; CA	Coarse	Bedrock	Impermeable	CB
Jcr	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Jhc	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Jsp	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Ka	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kbm	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kbp	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kcc	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kcg	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kcm	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kcp	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kd	San Diego & Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kdl	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kg	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgbf	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgd	San Diego & Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgdf	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgh	San Diego 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgm	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgm1	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgm2	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB

Map Unit	Map Name	Anticipated Grain size of Weathered Material	Bedrock or Sedimentary	Impermeable / Permeable	Geology Grouping
Kgm3	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgm4	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgp	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgr	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kgu	San Diego 30' x 60'	Coarse	Bedrock	Impermeable	CB
Khg	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Ki	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kis	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kjd	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
KJem	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
KJld	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kjv	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Klb	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Klh	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Klp	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Km	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kmg	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kmgp	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kmm	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kpa	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kpv	El Cajon 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kqbd	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kr	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Krm	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Krr	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kt	San Diego & Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Ktr	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kvc	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kwm	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kwp	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Kwsr	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
m	Jennings; CA	Coarse	Bedrock	Impermeable	CB
Mzd	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Mzg	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Mzq	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Mzs	Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
sch	Jennings; CA	Coarse	Bedrock	Impermeable	CB
Kp	San Diego & Oceanside 30' x 60'	Coarse	Bedrock	Impermeable	CB
Ql	El Cajon 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
QTf	El Cajon 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Ec	Jennings; CA	Coarse	Sedimentary	Impermeable	CSI
K	Jennings; CA	Coarse	Sedimentary	Impermeable	CSI
Kccg	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Kcs	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI

Map Unit	Map Name	Anticipated Grain size of Weathered Material	Bedrock or Sedimentary	Impermeable / Permeable	Geology Grouping
Kl	San Diego, Oceanside & El Cajon 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Ku	Jennings; CA	Coarse	Sedimentary	Impermeable	CSI
Qvof	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop8a	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop9a	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tmsc	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tmss	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tp	San Diego & El Cajon 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tpm	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tsc	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tscu	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tsd	San Diego & El Cajon 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tsdcg	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tsdss	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tsm	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tso	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tst	San Diego, Oceanside & El Cajon 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tt	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tta	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tmv	San Diego, Oceanside & El Cajon 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tsi	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvoa	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvoa11	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvoa12	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvoa13	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvoc	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop1	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop10	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop10a	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop11	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop11a	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI

Map Unit	Map Name	Anticipated Grain size of Weathered Material	Bedrock or Sedimentary	Impermeable / Permeable	Geology Grouping
Qvop12	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop13	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop2	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop3	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop4	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop5	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop6	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop7	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop8	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qvop9	San Diego 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Tsa	Oceanside 30' x 60'	Coarse	Sedimentary	Impermeable	CSI
Qof	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qof1	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qof2	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Q	Jennings; CA	Coarse	Sedimentary	Permeable	CSP
Qa	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qd	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qf	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qmb	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qop	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qw	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qyf	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qt	El Cajon 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qoa1-2	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qoa2-6	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qoa5	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qoa6	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qoa7	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qoc	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qop1	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qc	El Cajon 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qu	El Cajon 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qoa	San Diego, Oceanside & El Cajon 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qop2-4	San Diego 30' x 60'	Coarse	Sedimentary	Permeable	CSP

Map Unit	Map Name	Anticipated Grain size of Weathered Material	Bedrock or Sedimentary	Impermeable / Permeable	Geology Grouping
Qop3	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qop4	Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qop6	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qop7	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qya	San Diego, Oceanside & El Cajon 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Qyc	San Diego & Oceanside 30' x 60'	Coarse	Sedimentary	Permeable	CSP
Mzu	San Diego & Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
gb	Jennings; CA	Fine	Bedrock	Impermeable	FB
JTRm	El Cajon 30' x 60'	Fine	Bedrock	Impermeable	FB
Kat	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
Kc	El Cajon 30' x 60'	Fine	Bedrock	Impermeable	FB
Kgb	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
KJvs	El Cajon 30' x 60'	Fine	Bedrock	Impermeable	FB
Kmv	El Cajon 30' x 60'	Fine	Bedrock	Impermeable	FB
Ksp	El Cajon 30' x 60'	Fine	Bedrock	Impermeable	FB
Kvsp	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
Kwmt	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
Qv	Jennings; CA	Fine	Bedrock	Impermeable	FB
Tba	San Diego 30' x 60'	Fine	Bedrock	Impermeable	FB
Tda	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
Tv	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
Tvsr	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
Kgdfg	Oceanside 30' x 60'	Fine	Bedrock	Impermeable	FB
Ta	San Diego 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Tcs	Oceanside 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Td	San Diego & Oceanside 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Td+Tf	San Diego 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Qls	San Diego, Oceanside & El Cajon 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Tm	Oceanside 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Tf	San Diego, Oceanside & El Cajon 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Tfr	El Cajon 30' x 60'	Fine	Sedimentary	Impermeable	FSI
To	San Diego & El Cajon 30' x 60'	Fine	Sedimentary	Impermeable	FSI
Qpe	San Diego & Oceanside 30' x 60'	Fine	Sedimentary	Permeable	FSP
Mexico	San Diego 30' x 60'	NA	NA	Permeable	Other

Map Unit	Map Name	Anticipated Grain size of Weathered Material	Bedrock or Sedimentary	Impermeable / Permeable	Geology Grouping
Kuo	San Diego 30' x 60'	NA (Offshore)	NA	Permeable	Other
Teo	San Diego & Oceanside 30' x 60'	NA (Offshore)	Sedimentary	Permeable	Other
Tmo	Oceanside 30' x 60'	NA (Offshore)	Sedimentary	Permeable	Other
Qmo	San Diego 30' x 60'	NA (Offshore)	Sedimentary	Permeable	Other
QTso	San Diego 30' x 60'	NA (Offshore)	Sedimentary	Permeable	Other
af	San Diego & Oceanside 30' x 60'	Variable, dependent on source material	Sedimentary		Other

Table H.6-2: Land Cover Grouping for SanGIS Ecology-Vegetation Data Set

Id	SanGIS Legend	SanGIS Grouping	Land Cover Grouping
1	42000 Valley and Foothill Grassland	Grasslands, Vernal Pools, Meadows, and Other Herb Communities	Agricultural/Grass
2	42100 Native Grassland		Agricultural/Grass
3	42110 Valley Needlegrass Grassland		Agricultural/Grass
4	42120 Valley Sacaton Grassland		Agricultural/Grass
5	42200 Non-Native Grassland	Grasslands, Vernal Pools, Meadows, and Other Herb Communities	Agricultural/Grass
6	42300 Wildflower Field		Agriculture/Grass
7	42400 Foothill/Mountain Perennial Grassland		Agriculture/Grass
8	42470 Transmontane Dropseed Grassland		Agriculture/Grass
9	45000 Meadow and Seep		Agriculture/Grass
10	45100 Montane Meadow		Agriculture/Grass
11	45110 Wet Montane Meadow		Agriculture/Grass
12	45120 Dry Montane Meadows		Agriculture/Grass
13	45300 Alkali Meadows and Seeps		Agriculture/Grass
14	45320 Alkali Seep		Agriculture/Grass
15	45400 Freshwater Seep		Agriculture/Grass
16	46000 Alkali Playa Community		Agriculture/Grass
17	46100 Badlands/Mudhill Forbs		Agriculture/Grass
18	Non-Native Grassland		Agriculture/Grass
19	18000 General Agriculture	Non-Native Vegetation, Developed Areas, or Unvegetated Habitat	Agriculture/Grass
20	18100 Orchards and Vineyards		Agriculture/Grass
21	18200 Intensive Agriculture		Agriculture/Grass
22	18200 Intensive Agriculture - Dairies, Nurseries, Chicken Ranches		Agriculture/Grass
23	18300 Extensive Agriculture - Field/Pasture, Row Crops		Agriculture/Grass
24	18310 Field/Pasture		Agriculture/Grass
25	18310 Pasture		Agriculture/Grass
26	18320 Row Crops		Agriculture/Grass
27	12000 Urban/Developed		Developed
28	12000 Urban/Develpped		Developed
29	81100 Mixed Evergreen Forest	Forest	Forest
30	81300 Oak Forest		Forest
31	81310 Coast Live Oak Forest		Forest
32	81320 Canyon Live Oak Forest		Forest

Id	SanGIS Legend	SanGIS Grouping	Land Cover Grouping
33	81340 Black Oak Forest		Forest
34	83140 Torrey Pine Forest		Forest
35	83230 Southern Interior Cypress Forest		Forest
36	84000 Lower Montane Coniferous Forest		Forest
37	84100 Coast Range, Klamath and Peninsular Coniferous Forest		Forest
38	84140 Coulter Pine Forest	Forest	Forest
39	84150 Bigcone Spruce (Bigcone Douglas Fir)-Canyon Oak Forest		Forest
40	84230 Sierran Mixed Coniferous Forest		Forest
41	84500 Mixed Oak/Coniferous/Bigcone/Coulter		Forest
42	85100 Jeffrey Pine Forest		Forest
43	11100 Eucalyptus Woodland	Non-Native Vegetation, Developed Areas, or Unvegetated Habitat	Forest
44	60000 RIPARIAN AND BOTTOMLAND HABITAT	Riparian and Bottomland Habitat	Forest
45	61000 Riparian Forests		Forest
46	61300 Southern Riparian Forest		Forest
47	61310 Southern Coast Live Oak Riparian Forest		Forest
48	61320 Southern Arroyo Willow Riparian Forest		Forest
49	61330 Southern Cottonwood-willow Riparian Forest		Forest
50	61510 White Alder Riparian Forest		Forest
51	61810 Sonoran Cottonwood-willow Riparian Forest		Forest
52	61820 Mesquite Bosque		Forest
53	62000 Riparian Woodlands		Forest
54	62200 Desert Dry Wash Woodland		Forest
55	62300 Desert Fan Palm Oasis Woodland		Forest
56	62400 Southern Sycamore-alder Riparian Woodland		Forest
57	70000 WOODLAND	Woodland	Forest
58	71000 Cismontane Woodland		Forest
59	71100 Oak Woodland		Forest
60	71120 Black Oak Woodland		Forest
61	71160 Coast Live Oak Woodland		Forest
62	71161 Open Coast Live Oak Woodland		Forest
63	71162 Dense Coast Live Oak Woodland		Forest
64	71162 Dense Coast Love Oak Woodland		Forest
65	71180 Engelmann Oak Woodland	Woodland	Forest
66	71181 Open Engelmann Oak Woodland		Forest
67	71182 Dense Engelmann Oak Woodland		Forest
68	72300 Peninsular Pinon and Juniper Woodlands		Forest
69	72310 Peninsular Pinon Woodland		Forest

Id	SanGIS Legend	SanGIS Grouping	Land Cover Grouping
70	72320 Peninsular Juniper Woodland and Scrub		Forest
71	75100 Elephant Tree Woodland		Forest
72	77000 Mixed Oak Woodland		Forest
73	78000 Undifferentiated Open Woodland		Forest
74	79000 Undifferentiated Dense Woodland		Forest
75	Engelmann Oak Woodland		Forest
76	52120 Southern Coastal Salt Marsh	Bog and Marsh	Other
77	52300 Alkali Marsh		Other
78	52310 Cismontane Alkali Marsh		Other
79	52400 Freshwater Marsh		Other
80	52410 Coastal and Valley Freshwater Marsh		Other
81	52420 Transmontane Freshwater Marsh		Other
82	52440 Emergent Wetland		Other
83	44000 Vernal Pool	Grasslands, Vernal Pools, Meadows, and Other Herb Communities	Other
84	44320 San Diego Mesa Vernal Pool		Other
85	44322 San Diego Mesa Claypan Vernal Pool (southern mesas)		Other
86	13100 Open Water	Non-Native Vegetation, Developed Areas, or Unvegetated Habitat	Other
87	13110 Marine		Other
88	13111 Subtidal		Other
89	13112 Intertidal		Other
90	13121 Deep Bay		Other
91	13122 Intermediate Bay		Other
92	13123 Shallow Bay		Other
93	13130 Estuarine		Other
94	13131 Subtidal		Other
95	13133 Brackishwater		Other
96	13140 Freshwater	Non-Native Vegetation, Developed Areas, or Unvegetated Habitat	Other
97	13200 Non-Vegetated Channel, Floodway, Lakeshore Fringe		Other
98	13300 Saltpan/Mudflats		Other
99	13400 Beach		Other
100	21230 Southern Foredunes	Dune Community	Scrub/Shrub
101	22100 Active Desert Dunes		Scrub/Shrub
102	22300 Stabilized and Partially-Stabilized Desert Sand Field		Scrub/Shrub
103	24000 Stabilized Alkaline Dunes		Scrub/Shrub
104	29000 ACACIA SCRUB		Scrub/Shrub
105	63000 Riparian Scrubs	Riparian and Bottomland Habitat	Scrub/Shrub
106	63300 Southern Riparian Scrub		Scrub/Shrub
107	63310 Mule Fat Scrub		Scrub/Shrub
108	63310 Mulefat Scrub		Scrub/Shrub
109	63320 Southern Willow Scrub		Scrub/Shrub
110	63321 Arundo donnax Dominant/Southern Willow Scrub		Scrub/Shrub
111	63330 Southern Riparian Scrub		Scrub/Shrub
112	63400 Great Valley Scrub		Scrub/Shrub
113	63410 Great Valley Willow Scrub		Scrub/Shrub

Id	SanGIS Legend	SanGIS Grouping	Land Cover Grouping
114	63800 Colorado Riparian Scrub		Scrub/Shrub
115	63810 Tamarisk Scrub		Scrub/Shrub
116	63820 Arrowweed Scrub		Scrub/Shrub
117	31200 Southern Coastal Bluff Scrub	Scrub and Chaparral	Scrub/Shrub
118	32000 Coastal Scrub		Scrub/Shrub
119	32400 Maritime Succulent Scrub		Scrub/Shrub
120	32500 Diegan Coastal Sage Scrub		Scrub/Shrub
121	32510 Coastal form		Scrub/Shrub
122	32520 Inland form (> 1,000 ft. elevation)		Scrub/Shrub
123	32700 Riversidian Sage Scrub		Scrub/Shrub
124	32710 Riversidian Upland Sage Scrub		Scrub/Shrub
125	32720 Alluvial Fan Scrub		Scrub/Shrub
126	33000 Sonoran Desert Scrub		Scrub/Shrub
127	33100 Sonoran Creosote Bush Scrub		Scrub/Shrub
128	33200 Sonoran Desert Mixed Scrub		Scrub/Shrub
129	33210 Sonoran Mixed Woody Scrub		Scrub/Shrub
130	33220 Sonoran Mixed Woody and Succulent Scrub	Scrub and Chaparral	Scrub/Shrub
131	33230 Sonoran Wash Scrub		Scrub/Shrub
132	33300 Colorado Desert Wash Scrub		Scrub/Shrub
133	33600 Encelia Scrub		Scrub/Shrub
134	34000 Mojavean Desert Scrub		Scrub/Shrub
135	34300 Blackbush Scrub		Scrub/Shrub
136	35000 Great Basin Scrub		Scrub/Shrub
137	35200 Sagebrush Scrub		Scrub/Shrub
138	35210 Big Sagebrush Scrub		Scrub/Shrub
139	35210 Sagebrush Scrub		Scrub/Shrub
140	36110 Desert Saltbush Scrub		Scrub/Shrub
141	36120 Desert Sink Scrub		Scrub/Shrub
142	37000 Chaparral		Scrub/Shrub
143	37120 Southern Mixed Chaparral		Scrub/Shrub
144	37120 Southern Mixed Chapparal		Scrub/Shrub
145	37121 Granitic Southern Mixed Chaparral		Scrub/Shrub
146	37121 Southern Mixed Chaparral		Scrub/Shrub
147	37122 Mafic Southern Mixed Chaparral		Scrub/Shrub
148	37130 Northern Mixed Chaparral		Scrub/Shrub
149	37131 Granitic Northern Mixed Chaparral		Scrub/Shrub
150	37132 Mafic Northern Mixed Chaparral		Scrub/Shrub
151	37200 Chamise Chaparral		Scrub/Shrub
152	37210 Granitic Chamise Chaparral		Scrub/Shrub
153	37220 Mafic Chamise Chaparral		Scrub/Shrub
154	37300 Red Shank Chaparral		Scrub/Shrub
155	37400 Semi-Desert Chaparral		Scrub/Shrub
156	37500 Montane Chaparral		Scrub/Shrub
157	37510 Mixed Montane Chaparral		Scrub/Shrub
158	37520 Montane Manzanita Chaparral		Scrub/Shrub
159	37530 Montane Ceanothus Chaparral		Scrub/Shrub
160	37540 Montane Scrub Oak Chaparral		Scrub/Shrub
161	37800 Upper Sonoran Ceanothus Chaparral		Scrub/Shrub

Id	SanGIS Legend	SanGIS Grouping	Land Cover Grouping
162	37830 Ceanothus crassifolius Chaparral		Scrub/Shrub
163	37900 Scrub Oak Chaparral		Scrub/Shrub
164	37A00 Interior Live Oak Chaparral		Scrub/Shrub
165	37C30 Southern Maritime Chaparral	Scrub and Chaparral	Scrub/Shrub
166	37G00 Coastal Sage-Chaparral Scrub		Scrub/Shrub
167	37K00 Flat-topped Buckwheat		Scrub/Shrub
168	39000 Upper Sonoran Subshrub Scrub		Scrub/Shrub
169	Diegan Coastal Sage Scrub		Scrub/Shrub
170	Granitic Northern Mixed Chaparral		Scrub/Shrub
171	Southern Mixed Chaparral		Scrub/Shrub
172	11000 Non-Native Vegetation	Non-Native Vegetation, Developed Areas, or Unvegetated Habitat	Unknown
173	11000 Non-Native VegetionVegetation		Unknown
174	11200 Disturbed Wetland		Unknown
175	11300 Disturbed Habitat		Unknown
176	13000 Unvegetated Habitat		Unknown
177	Disturbed Habitat		Unknown

Table H.6-3: Potential Critical Coarse Sediment Yield Areas

GLU	Geology	Land Cover	Slope (%)
CB-Agricultural/Grass-3	Coarse Bedrock	Agricultural/Grass	20% - 40%
CB-Agricultural/Grass-4	Coarse Bedrock	Agricultural/Grass	>40%
CB-Forest-2	Coarse Bedrock	Forest	10 – 20%
CB-Forest-3	Coarse Bedrock	Forest	20% - 40%
CB-Forest-4	Coarse Bedrock	Forest	>40%
CB-Scrub/Shrub-4	Coarse Bedrock	Scrub/Shrub	>40%
CB-Unknown-4	Coarse Bedrock	Unknown	>40%
CSI-Agricultural/Grass-2	Coarse Sedimentary Impermeable	Agricultural/Grass	10 – 20%
CSI-Agricultural/Grass-3	Coarse Sedimentary Impermeable	Agricultural/Grass	20% - 40%
CSI-Agricultural/Grass-4	Coarse Sedimentary Impermeable	Agricultural/Grass	>40%
CSP-Agricultural/Grass-4	Coarse Sedimentary Permeable	Agricultural/Grass	>40%
CSP-Forest-3	Coarse Sedimentary Permeable	Forest	20% - 40%
CSP-Forest-4	Coarse Sedimentary Permeable	Forest	>40%
CSP-Scrub/Shrub-4	Coarse Sedimentary Permeable	Scrub/Shrub	>40%

Worksheet H.6-1: Verification of GLUs

Verification of GLUs		Worksheet H.6-1
Detailed project-level review of GLUs may be performed to verify the presence or absence of potential critical coarse sediment yield areas within the project site and/or upstream areas. Use this form to document the evaluation of slope, geology, and land cover combined to determine the site-specific GLUs. Complete all sections of this form.		
Project Name:		
Project Tracking Number / Permit Application Number:		
1	What are the pre-project slopes?	☐ 0% to 10% (1) ☐ 10% to 20% (2) ☐ 20% to 40% (3) ☐ >40% (4)
2	What is the underlying geology? Refer to Appendix H.6 to classify geologic categories into a geology grouping. Note: site-specific geology may be determined in the field by a qualified geologist.	☐ Coarse bedrock (CB) ☐ Coarse sedimentary impermeable (CSI) ☐ Coarse sedimentary permeable (CSP) ☐ Fine bedrock (FB) ☐ Fine sedimentary impermeable (FSI) ☐ Fine sedimentary permeable (FSP) ☐ Other (O)
3	What is the pre-project land cover? Refer to Appendix H.6 for land cover category definitions. Note: Land cover shall be determined from aerial photography and/or field visit.	☐ Agriculture/grass ☐ Forest ☐ Developed ☐ Scrub/shrub ☐ Other ☐ Unknown
4	List the GLU(s) within the project site and/or upstream areas. Note the GLU nomenclature format is as follows: Geology – Land Cover – Slope Category (e.g. "CB-Agricultural/Grass-3" for a GLU consisting of coarse bedrock geology, agricultural/grass land cover, and 20% to 40% slope).	

Worksheet H.6-1; Page 2 of 2			
5	Photo(s) Insert photos representative of the slopes, land cover, and geology.		
6	Are any of the GLUs found within the project boundary and/or upstream areas listed in Table H.6-3?	☐ Yes	Go to 7
		☐ No	Go to 8
7	End – Provide management measures for preservation of coarse sediment supply as described in this guidance document, or the project applicant may elect to determine whether downstream systems would be sensitive to reduction of coarse sediment yield from the project site and/or perform site-specific method for mapping critical coarse sediment yield areas.		
8	End – Site-specific GLUs do not warrant preservation of coarse sediment supply, no measures for protection of critical coarse sediment yield areas onsite are necessary. Optional: use the note section below to provide justification for these findings.		
9	Notes		

H.6.2 Assumptions for Regional WMAA PCCSYA Maps

This appendix summarizes the assumptions used while developing Regional WMAA PCCSYA maps that are not discussed in Appendix H.6.1:

- Critical coarse sediment would be generated from GLUs that are
    - composed of geologic units likely to generate coarse sediment (i.e. produces greater than 50% sand (0.074 mm; no. 200 sieve) by weight when weathered); and
    - have a potential for high relative sediment production (GLUs that produce soil loss greater than 8.4 tons/acre/year are assigned a high relative rating, this corresponds to 42% of the total coarse soil loss from the MS4-permitted region within the County of San Diego)
- Relative sediment production was assigned using RUSLE analysis of GLUs. It was assumed that this relative rating represents sediment production from sheet erosion, rill erosion, gullies and lower order channels, since these features are mostly on the hillslopes that are represented by the GLUs.
    - While performing the RUSLE analysis to assign the relative ranking, C factor from the regional maps from USEPA was adjusted to 0 for developed land covers to account for management actions implemented on developed sites (e.g. impervious surfaces).
- WMAA mapping does not account for sediment production from in-stream sediment supply (since these are mostly protected through other regulations) and sediment production from mass failures like landslides which are difficult to estimate on a regional scale without performing extensive field investigations.
- Regional WMAA map assumes that all receiving waters require coarse sediment and the map also does not account for potential existing impediments that may hinder delivery of coarse sediment to receiving waters.

For additional details refer to the Regional WMAA document on the Project Clean Water website at the following address:

http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=248&Itemid=219

H.6.3 Encroachment Allowance for Regional PCCSYA WMAA Map

When an applicant uses the regional PCCSYA map from WMAA to define onsite CCSYAs an encroachment allowance of up to 5% is allowed.

The following provides the supporting rational for 5% encroachment:

Step 1. Sp has to be greater than 0.5, based on current understanding of risks to receiving waters arising from changes in sediment production (SCCWRP Technical Report 605, 2010).

Step 2. Estimated Sp (Equation H.8-11) = $0.7*SY_{RUSLE}+0.3*SY_{NHD} = 0.7*0.42 + 0.3*1 = 0.59$

a. Based on RUSLE analysis conducted during Regional WMAA the GLUs mapped as PCCSYAs contribute 42% of the bed sediment yield (i.e. $SY_{RUSLE} = 0.42$)

b. Disturbance to NHDPlus channels are protected through 401 water quality certifications issued by the RWQCB, so it is assumed that $SY_{NHD} = 1$

Step 3. Dividing the Sp estimate from Step 2 by the required Sp in Step 1 provides the factor of safety that is currently implicit in the regional WMAA PCCSYA map = 0.59/0.5 = 1.18 or 18% factor of safety

Step 4. The remaining factor of safety after accounting for the proposed encroachment of 5% = 18% - 5% = 13%

H.7 PCCSYAs: Refinement Options

If an applicant has identified onsite and/or upstream PCCSYAs and elects to perform additional optional analyses to refine the PCCSYA designation, the guidance presented below should be followed. Protection of critical coarse sediment yield areas is a necessary element of hydromodification management because coarse sediment supply is as much an issue for causing erosive conditions to receiving streams as are accelerated flows. However, not all downstream systems warrant preservation of coarse sediment supply nor all source areas need to be protected. The following guidance shall be used to refine PCCSYA designations:

- Depositional Analysis (Appendix H.7.1)
- Threshold Channel Analysis (Appendix H.7.2)
- Coarse Sediment Source Area Verification (Appendix H.7.3)

H.7.1 Depositional Analysis

Areas identified as PCCSYAs may be removed from consideration if it is demonstrated that these sources are deposited into existing systems prior to reaching the first downstream unlined water of the state. Systems resulting in deposition may include existing natural sinks, existing structural BMPs, existing hardened MS4 systems, or other existing similar features. Applicants electing to perform depositional analysis to refine PCCSYA mapping must meet the following criteria to qualify for exemption from CCSYA designation:

- The existing hardened MS4 system that is being analyzed should be upstream of the first downstream unlined waters of the state; and
- The peak velocity from the discrete 2-year, 24-hour runoff event for the existing hardened MS4 system that is being analyzed is less than three feet per second.

The three feet per second criteria is consistent with the recommended minimum velocity for storm and sanitary sewers in ASCE Manual of Engineering Practice No. 37 (ASCE, 1970).

In limited scenarios, applicant may have the option to establish site specific minimum self-cleansing velocity using Equation H.7-1 or other appropriate equations instead of using the default three feet per second criteria. This site specific analysis must be documented in the SWQMP and the County has the discretion to request additional analysis prior to approving a site specific minimum self-cleansing velocity. If an applicant chooses to establish a site specific minimum self-cleansing velocity for refinement, then the applicant must design any new bypass hardened conveyance systems proposed by the project to meet the site specific criteria.

Equation H.7-1: Minimum Self Cleansing Velocity

$$V = \frac{1.486}{n} R^{1/6} \left[B\left(s_g - 1\right) D_g \right]^{1/2}$$

Where:

V = minimum self-cleansing velocity (ft/sec)
R = hydraulic radius (ft)
n = Manning's roughness coefficient (unitless)
B = constant equal to 0.04 for clean granular particles (unitless)
s_g = specific gravity of sediment particle (unitless): **Use 2.65**
D_g = sediment particle diameter (inches): **Use 0.20 in**

H.7.2 Threshold Channel Analysis

A threshold channel is a stream channel in which channel boundary material has no significant movement during the design flow. If there is no movement of bed load in the stream channel, then it is not anticipated that reductions in sediment supply will be detrimental to stream stability because the channel bed consists of the parent material and not coarse sediment supplied from upstream. In such a situation, changes in sediment supply are not considered a geomorphic condition of concern. SCCWRP Technical Report 562 (2008) states the following in regards to sand vs. gravel bed behavior/threshold vs. live-bed contrasts:

> "Sand and gravel systems are quite varied in their transport of sediment and their sensitivity to sediment supply. On the former, sand-bed channels typically have live beds, which transport sediment continuously even at relatively low flows. Conversely, gravel/cobble-bed channels generally transport the bulk of their bed sediment load more episodically, requiring higher flow events for bed mobility (i.e., threshold behavior)."
>
> "Sand-bed streams without vertical control are much more sensitive to perturbations in flow and sediment regimes than coarse-grain (gravel/cobble) threshold channels. This has clear implications in their respective management regarding hydromodification (i.e., sand systems being relatively more susceptible than coarser systems). This also has direct implications for the issue of sediment trapping by storm water practices in watersheds draining to sand-bed streams, as well as general loss of sediment supply following the conversion from undeveloped sparsely-vegetated to developed well-vegetated via irrigation."

The following provides guidance for evaluating whether a stream channel is a threshold channel or not. This determination is important because while accounting for changes in bed sediment supply is appropriate for quantifying geomorphic impacts in non-threshold stream channels, it is not considered appropriate for threshold channels. The domain of analysis for this evaluation shall be the same as that used to evaluate susceptibility, per SCCWRP Technical Report 606, Field Manual for Assessing Channel Susceptibility (2010). This domain is defined by the following upstream and downstream boundaries:

- From the point of compliance proceed downstream until reaching one of the following:

- At least one reach downstream of the first grade-control point (preferably second downstream grade control location);
- Tidal backwater/lentic (still water) waterbody;
- Equal order tributary (Strahler 1952);
- A 2-fold increase in drainage area.

OR demonstrate sufficient flow attenuation through existing hydrologic modeling.

- From the point of compliance proceed upstream for 20 channel top widths OR to the first grade control in good condition, whichever comes first.

Applicant must complete Worksheet H.7-1 to document selection of the domain of analysis. If the entire domain of analysis is classified as a threshold channel, then the PDP can be exempt from the MS4 Permit requirement for sediment supply. The following definitions from the Natural Resources Conservation Service's (NRCS) National Engineering Handbook Part 654 - Stream Restoration Design (2007) are helpful in understanding what a threshold channel is.

- **Alluvial Channel**: Streams and channels that have bed and banks formed of material transported by the stream. There is an exchange of material between the inflowing sediment load and the bed and banks of an alluvial channel (NRCS, 2007).
- **Threshold Channel**: A channel in which channel boundary material has no significant movement during the design flow (NRCS, 2007).

The key factor for determining whether a channel is a threshold channel is the composition of its bed material. Larger bed sediment consisting primarily of cobbles and boulders are typically immobile, unless the channel is a large river with sufficient discharge to regularly transport such grain sizes as bed load. As a rule-of-thumb, channels with bed material that can withstand a 10-year peak discharge without incipient motion are considered threshold channels and not live-bed alluvial channels. Threshold channel beds typically consist of cobbles, boulders, bedrock, or very dense vegetation (e.g., a thicket). Threshold channels also includes channels that have existing grade control structures that protect the stream channels from hydromodification impacts.

For a project to be exempt from coarse sediment supply requirements, the applicant must submit the following for approval by the County:

- Photographic documentation and grain size analysis used to determine the d_{50} of the bed material; and
- Calculations that show that the receiving water of concern meets the specific stream power criteria defined below or a finding from a geomorphologist that the stream channel has existing grade control structures that protect the stream channel from hydromodification impacts.

Specific Stream Power

Specific (i.e., unit) stream power is the rate at which the energy of flowing water is expended on the bed and banks of a channel (refer to Equation H.7-2). SCCWRP studies have found that locating channels on a plot of Specific Stream Power at Q_{10} (as calculated by the Hawley et al. method

optimized for Southern California watersheds – Figure H.7-2) versus median channel grain size is a good predictor of channel stability. The Q_{10} equation from SCCWRP TR 606 is presented as Equation H.7-3.

Equation H.7-2: Calculation of Specific Stream Power

$$Specific\ Stream\ Power = \frac{Total\ Stream\ Power}{Channel\ Width} = \frac{\gamma QS}{w}$$

Where:

γ: Specific Weight of Water (9810 N/m^3)
Q: Flow Rate (dominant discharge in many cases, m^3/sec)
S: Slope of Channel
w: Channel Width (meters)

Equation H.7-3: Calculation of Q_{10} using the Hawley et al. method

$$Q_{10cfs} = 18.2 * A^{0.87} * P^{0.77}$$

Where:

Q_{10cfs}: 10 year Flow Rate in cubic feet per second
A: Drainage Area in sq. miles
P: Mean Annual Precipitation in inches

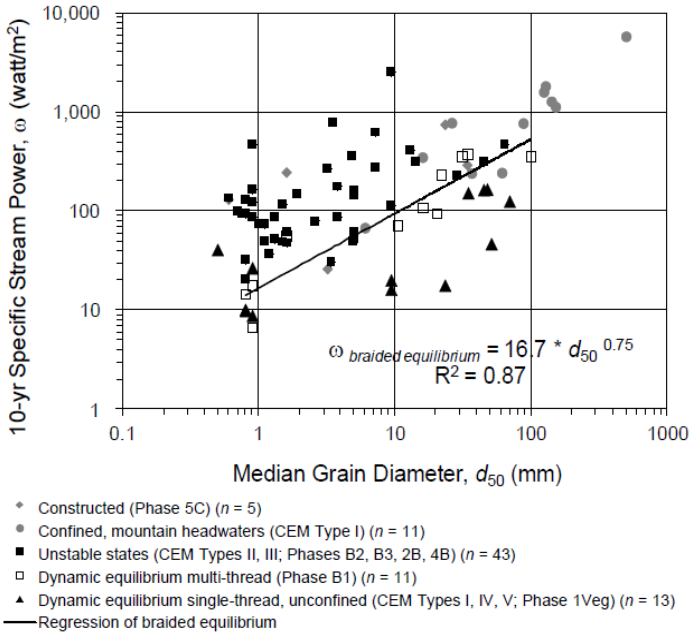


Figure H.7-1: Threshold of stream instability based on specific stream power and channel sediment diameter

Since the SCCWRP TR 606 Q_{10} (Equation H.7-3) does not explicitly consider watershed imperviousness, adjustment factors (AF) shown in Figure H.7-2 were developed using the following Equation H.7-4 for Q_{10} from SCCWRP TR 654 to account for imperviousness while estimating Q_{10}.

Equation H.7-4: Calculation of Q_{10} using equation from SCCWRP TR 654

$$Q_{10} = e^{3.61} * A^{0.865} * DD^{0.804} * P_{224}^{0.778} * IMP^{0.096}$$

Where:

Q_{10}: 10 year Flow Rate
A: Drainage Area in sq. miles
DD: Drainage Density
P_{224}: 2-Year 24-Hour Precipitation in inches
IMP: Watershed Imperviousness

Adjustment factors were developed as part of this methodology by changing the watershed imperviousness in Equation H.7-4 and keeping the remaining terms constant. Adjustment factor for imperviousness of 3.6% was set to 1; since it is the mean imperviousness of the dataset used to develop the stability curve in Figure H.7-1. Updated Q_{10} equation with adjustment factor is presented as Equation H.7-5 below:

Equation H.7-5: Calculation of Q_{10} with Adjustment Factor for Watershed Imperviousness

$$Q_{10cfs} = AF * 18.2 * A^{0.87} * P^{0.77}$$

Where:

Q_{10cfs}: 10 year Flow Rate in cubic feet per second
AF: Adjustment Factor
A: Drainage Area in sq. miles
P: Mean Annual Precipitation in inches

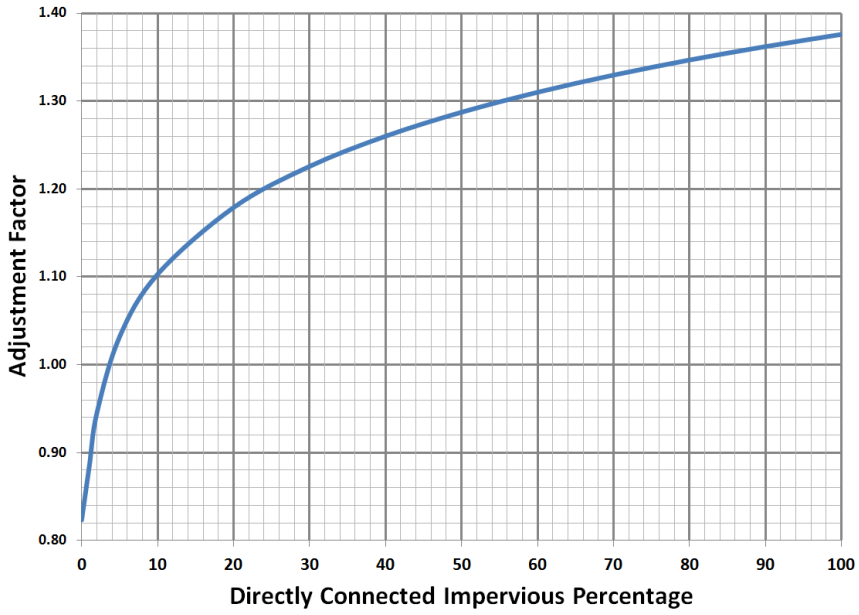


Figure H.7-2: Adjustment factor to account for imperviousness while estimating Q_{10}

Steps for evaluating the specific stream power criteria are presented below:

- **Step 1**: Calculate the specific stream power for the receiving water. Use Equation H.7-2, H.7-5 and Figure H.7-2. Directly connected imperviousness shall be estimated using guidance provided in the Water Quality Equivalency guidance document.
- **Step 2**: Determine the d_{50} of representative cross section within the domain of analysis.
- **Step 3**: Use results from Step 1 and Step 2; and Figure H.7-1 to determine if the receiving water meets the specific stream power criteria. Receiving water shall be considered meeting the specific stream power criteria when the point plotted based on results from Step 1 and Step 2 is below the solid line in Figure H.7-1.

H.7.3 Coarse Sediment Source Area Verification

When it has been determined that PCCSYAs are present, and it has been determined that downstream systems require protection, additional analysis may be performed that may refine the extents of actual CCSYAs to be protected onsite. The following analysis shall be performed to determine if the mapped PCCSYAs are a significant source of bed sediment supply to the receiving water, based on the coarse sediment proportion of the soil onsite

- Obtain a grain size distribution per ASTM D422 for the project's PCCSYA that is being evaluated.
- Identify whether the source material is a coarse grained or fine grained soil. Coarse grained is defined as over 50% by weight coarse than no. 200 sieve (i.e., $d_{50} > 0.074$ mm).
- By performing this analysis, the applicant can exclude PCCSYAs that are determined to be fine grained (i.e., $d_{50} < 0.074$ mm). Fine grained soils are not considered significant sources of bed sediment supply.
- Applicant shall include the following information in the SWQMP when this refinement option is performed:
    - Map with locations on where the grain size distribution analysis was performed;
    - Photographic documentation; and
    - Grain size distribution.
- Additional grain size distribution analysis may be requested at specific locations by the County prior to approval of this refinement.

Areas that are not expected to be a significant source of bed sediment supply (i.e. fine grained soils) to the receiving stream do not require protection and are not considered CCSYAs.
If it is determined that the PCCSYAs are producing sediment that is critical to receiving streams, or if the optional additional analysis presented above has not been performed, the project must provide management measures for protection of critical coarse sediment yield (refer to Appendix H.2, H.3 and H.4).

Worksheet H.7-1: Domain of Analysis

Domain of Analysis			Worksheet H.7-1
Use this form to document the domain of analysis			
Project Name:			
Project Tracking Number / Permit Application Number:			
Part 1: Identify Domain of Analysis			
Project Location (at proposed storm water discharge point)			
1	Address:		
2	Latitude (decimal degrees):		
3	Longitude (decimal degrees):		
4	Watershed:		
Basis for determining downstream limit:			
Channel length from discharge point to downstream limit:			
Basis for determining upstream limit:			
Channel length from discharge point to upstream limit:			

Worksheet H.7-1; Page 2 of 2
Photo(s) Map or aerial photo of site. Include channel alignment and tributaries, project discharge point, upstream and downstream limits of analysis, ID number and boundaries of geomorphic channel units, and any other features used to determine limits (e.g. exempt water body, grade control).

H.8 Calculation Methodology for Ep and Sp

One method for quantifying hydromodification impacts to stream channels, which takes into account changes in the four factors in Lane's relationship (i.e., hydrology, channel geometry, bed and bank material, and sediment supply), is to compare long-term changes in sediment transport capacity, or in-stream work, to bed sediment supply. For the purposes of demonstrating no net impact within the MS4-permitted region of the County of San Diego, Erosion Potential (Ep) is defined as the ratio of post-project/pre-development (natural) long-term transport capacity or work. To calculate Ep, the hydrology, channel geometry, and bed/bank material factors mentioned above need to be characterized for both land use scenarios. Sediment Supply Potential (Sp) is defined as the ratio of post-project/pre-project (existing) long-term bed sediment supply. While evaluating changes in discharge and sediment supply is done primarily as a desktop analysis, geomorphic field assessment is often necessary to characterize channel geometry and bed/bank material, and to ground truth assumptions for the desktop analyses. This appendix provides methodologies for the following:

- Calculation of Ep, and
- Calculation of Sp.

H.8.1 Calculation of Ep

Erosion Potential (Ep) is defined as the ratio of post-project/pre-development (natural) long-term transport capacity or work. To calculate Ep, the hydrology, channel geometry, and bed/bank material factors mentioned above need to be characterized for both land use scenarios. Traditionally, Ep is calculated based on a watershed-scale analysis (using future built out conditions) of the area tributary to a given receiving channel of concern at the point of compliance. However, watershed-scale continuous hydrologic modeling might not be feasible for small projects, with this understanding specific simplification steps for project-scale modeling are provided in this appendix. The applicant shall perform Ep calculations using one of the following methods, as applicable:

- **Simplified Ep Method**: Applicable when the default low flow threshold of $0.1Q_2$ is used and no changes to the receiving water are proposed. Refer to Appendix H.8.1.1.
- **Standard Ep Method**: Applicable for all scenarios. Refer to Appendix H.8.1.2.

H.8.1.1 Simplified Ep Method

The simplified method is based on the relationships developed by Parra (2016) between the flow duration curve in the pre-development and post-project conditions and the standard simplified work equation. These relationships were developed using standard hydraulic equations and approximations that are applicable for channels of any lateral slope and the following geometrical cross sections: (a) wide rectangular sections; (b) relatively wide parabolic sections, and (c) triangular sections. The simplified Ep method is only applicable when the default low flow threshold of $0.1Q_2$ has been selected by the applicant for flow duration control and no changes to the receiving water geometry are proposed. Applicants shall follow Steps 1 through 3 to calculate Ep using the simplified methodology:

1. Perform continuous hydrologic simulation for the pre-development and post-project condition following guidelines in Appendix G. Generate flow bins and flow duration tables for the range of flows from $0.1Q_2$ to Q_{10}.
2. Calculate the total work in the pre-development and the post-project condition using Equation H.8-1

Equation E.8-1: Total Work (Simplified)

$$W_t = \sum_{j=1}^{n} \Delta t_j . \left(Q^{3m/2} - (0.1Q_2)^{3m/2}\right)^{1.5} \quad Q^m$$

Where:

W_t = Total Work [dimensionless]

Δt_j = Duration per flow bin

Q = Flow Rates estimated in STEP 1 [cfs] for a typical bin "j". Usually, in Flow Duration Curve (FDC) analyses, the number of bins is 100, so j = 1 to n (with n= 100). However, the number of bins can be as small as 20 (n = 20).

Q_2 = Pre-development 2-year peak flow [cfs]

m = exponent based on the function of the receiving channels geometry.

- For narrow creek where the top width is 7 times or less the corresponding depth, m = 1/4.
- For intermediate creeks, where the top width is more than 7 times but less than 25 times the depth, m = 4/13.
- For wide creeks, where the top width is more than 25 times the depth, m = 2/5.

3. Ep is calculated by dividing the total work of the post-project condition by that of the pre-development (natural) condition. Ep is expressed as:

Equation H.8-2: Ep (Simplified)

$$E_p = W_{t,post} / W_{t,pre}$$

Where:

E_p = Erosion Potential [unitless]

$W_{t,post}$ = Total Work associated with the post-project condition [unitless]

$W_{t,pre}$ = Total Work associated with the pre-development condition [unitless]

H.8.1.2 Standard Ep Method

While using the standard method, Ep calculation must be performed using the receiving water information from the point of compliance. Suggested steps for performing an Ep analysis are shown in the Figure H.8-1 below. This appendix describes each analysis step shown in Figure H.8-1, including the inputs and outputs of each step.

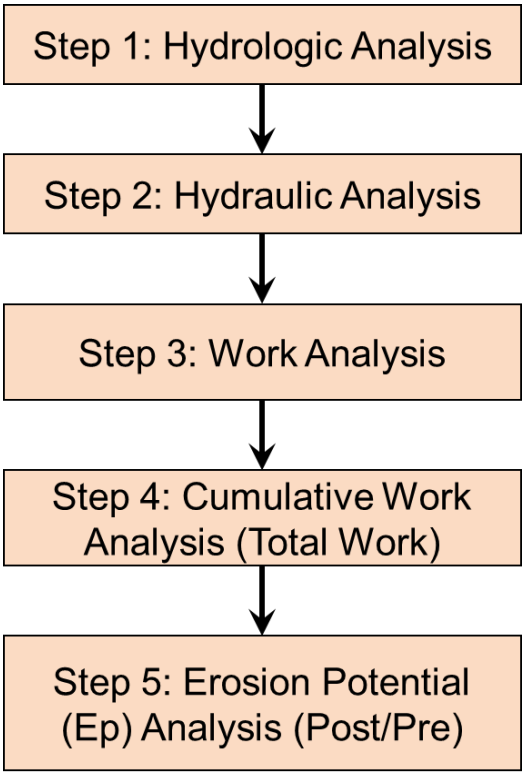


Figure H.8-1: Erosion Potential Flow Chart

STEP 1: CONTINUOUS HYDROLOGIC ANALYSIS

Hydrologic models are applied to simulate the hydrologic response of the watershed under pre-development and post-project conditions for a continuous period of record. Modeling software appropriate for this type of simulation includes USEPA's Storm Water Management Model (SWMM), Hydrological Simulation Program – Fortran (HSPF) developed by the USGS and USEPA, USACE's Hydrologic Modeling System (HEC-HMS), and the San Diego Hydrology Model (SDHM) developed by Clear Creek Solutions, Inc. SDHM uses an HSPF computational engine, long-term precipitation data, and is a visually-oriented interactive tool for automated modeling and facility sizing.

Input parameters for these continuous simulations are hourly precipitation data for a long-term (>30 years) record, sub-catchment delineation, impervious cover, soil type, vegetative cover, terrain steepness, lag time or flow path length, and monthly evapotranspiration rate. The primary output is a simulated discharge record associated with the receiving channel of concern. Flow routing through drainage conveyances is necessary for continuous hydrologic analysis at the watershed scale. Appendix G provides guidance for developing continuous simulation models.

Traditionally, a hydrograph (Figure H.8-2) is the primary means for graphically comparing discharge records; however, a hydrograph is not ideal because long-term flow records span several decades.

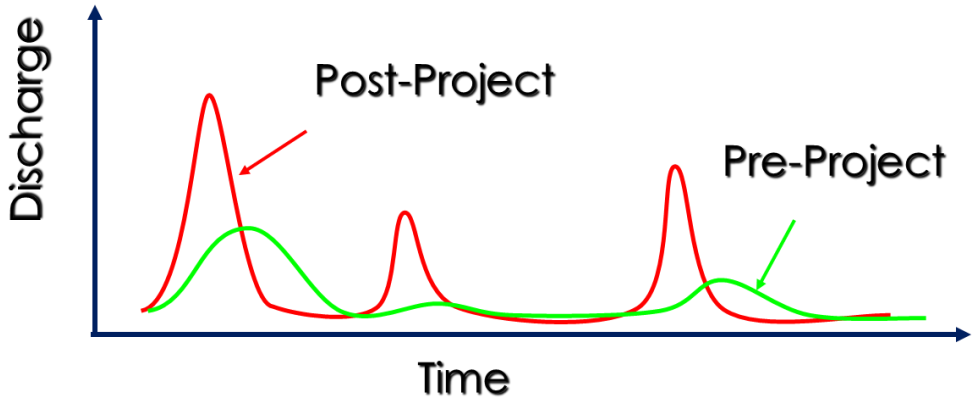


Figure H.8-2: Example Hydrograph Comparison

Instead, a more effective means for comparing long-term continuous discharge records is to create a flow histogram, which differentiates the simulated flowrates into distinct "flow bins" so that the duration of flow for each bin can be tabulated. One method for establishing the distribution of flow bins is to increment the flow bins according to increments of flow stage using a hydraulic analysis, such as the normal depth equation. In this way, the hydraulic analysis step (Step 2) can be considered an input to the continuous hydrologic analysis step. While there is no established rule of thumb for how many flow bins are necessary, it is suggested that no less than 20 be used for an Ep analysis. An example of a flow histogram is provided on Figure H.8-3.

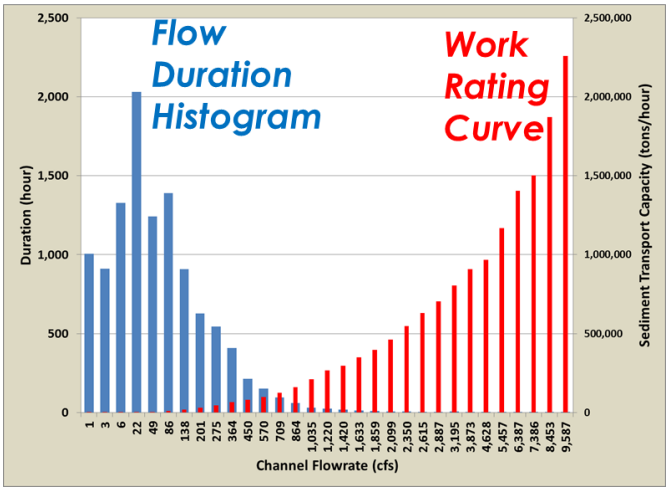


Figure H.8-3: Example Flow Duration Histogram

Flow duration curves are another commonly used method for graphically interpreting long-term flow records. A flow duration curve is simply a plot of flowrate (y-axis) versus the cumulative duration, or percentage of time, that a flowrate is equaled or exceeded in the simulation record (x-axis). Figure H.8-4 provides an example flow duration curve comparison.

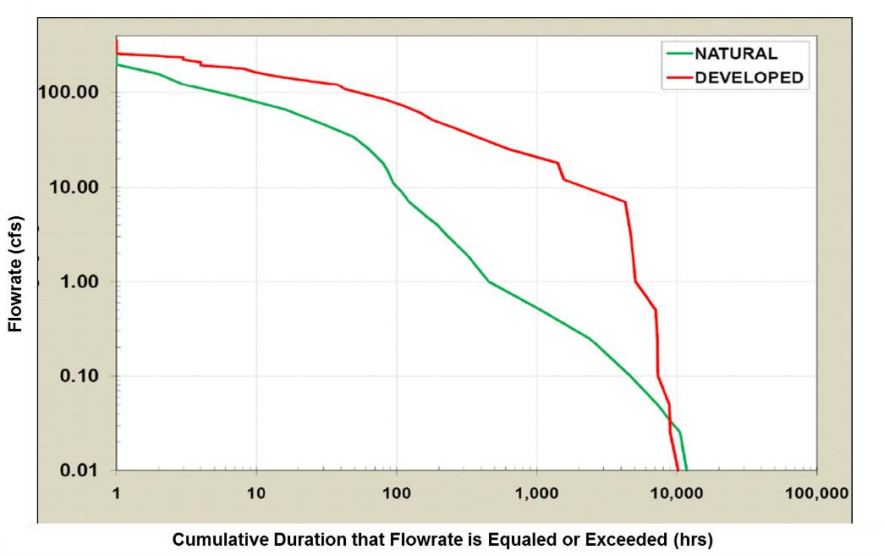


Figure H.8-4: Example Flow Duration Curve

Scaling Factor for Project-Scale Modeling

Project-scale flow rates derived from continuous hydrologic simulation can be scaled using the ratio of the pre-development 2-year peak discharge for the watershed and project catchment (i.e., Q_2 watershed / Q_2 project catchment) so that hydraulic and effective work calculations can be performed at the point of compliance with a larger tributary watershed. This scaling translates the runoff from the project catchment to its contribution to erosivity in the down gradient receiving channel, without the need for a complex watershed-scale continuous hydrologic model.

Applicant can estimate the scaling factor using Equation H.8-3. The scaling factor equation was developed using the 2-year peak flow rate empirical equation from Hawley and Bledsoe (2011) and removing the terms (average annual precipitation and imperviousness (pre-development condition as required by the MS4 Permit) that are constant.

Equation H.8-3: Scaling Factor

$$Scaling\ Factor = \left(\frac{A_{watershed}}{A_{project}}\right)^{0.667}$$

Where:

$A_{watershed}$ = total watershed drainage area at the point of compliance(mi^2)

$A_{project}$= total project drainage area (mi^2)

STEP 2: HYDRAULIC ANALYSIS

Hydraulic parameters, such as stage, effective shear stress, and flow velocity, are computed for each designated flow bin using channel geometry and roughness data. Hydraulic calculations can be as simple as using the normal flow equation and obtaining results for the central channel or as complicated as using hydraulic models which account for backwater effects, such as HEC-RAS.

Using the formula for unit tractive force (Chow 1959), effective shear stress is expressed using equation H.8-4

Equation H.8-4: Effective Shear Stress

$$\tau = \gamma RS$$

Where:

τ = Effective Shear Stress [lb/ft^2]

γ = Unit Weight of Water [62.4 lb/ft^3]

R= Hydraulic Radius [ft]

S = Energy Gradient Assumed Equal to Longitudinal Slope [ft/ft].

Normal depth can be estimated using Manning's equation (Equation H.8-5). Several sources provide lists of roughness coefficients for use in hydraulic analysis (Chow, 1959).

Equation H.8-5: Manning's Equation

$$Q = \frac{1.49AR^{0.67}S^{0.5}}{n} \; or \; V = \frac{1.49R^{0.67}S^{0.5}}{n}$$

Where:

Q = Peak Flowrate [cfs]

V = Average Flow Velocity [ft/s]

A = Cross-Section Flow Area [ft^2]

R = Hydraulic Radius [ft] = A/P

P = Wetted Perimeter [ft]

S = Energy Gradient Assumed Equal to Longitudinal Slope [ft/ft]

n = Manning Roughness [unit less]

Channel geometry inputs should be characterized by surveying cross sections and longitudinal profiles of the active channel at strategic locations. Methods of collecting topographic survey data can range from traditional survey techniques (auto level, cloth tape, and survey rod), to conducting a detailed ground based LiDAR survey.

STEP 3: WORK ANALYSIS

Hydraulic results for each flow bin along with the critical bed/bank material strength parameters are input into a work or sediment transport function in order to produce a work or transport rating curve. An example of such a rating curve is provided on Figure H.8-3. The work equations can range from simplistic indices, material-specific sediment transport equations, or more complex functions based on site-calibrated sediment transport rating curves.

- **Simplistic indices:** An acceptable equation for effective work, as stated in the Los Angeles Regional MS4 Permit (LARWQCB, 2012) is expressed using equation H.8-6:

Equation H.8-6: Effective Work

$$W = (\tau - \tau_c)^{1.5} V$$

Where:

W = Work [dimensionless];
τ = Effective Shear Stress [lb/ft^2];
τ_c = Critical Shear Stress [lb/ft^2];
V = Mid-Channel Flow Velocity [ft/s]

- **Material-specific sediment transport equations**: Material specific sediment transport equations are allowed to estimate the sediment transport capacity in the post-project and pre-development condition.

- **Site-calibrated sediment transport curves**: Applicants may have an option to use site-calibrated sediment transport curves. In the future these may be available based on monitoring efforts being performed to support the County of San Diego's Hydromodification Management Plan.

The critical shear stress to be used in equation H.8-6 must be estimated using one of the following:

- Shear stress corresponding to the critical flow rate or low flow threshold (Qc). Qc is the flowrate that results in incipient motion of bed or bank material, whichever is least resistant. Qc is expressed as a fraction of the pre-development 2-year peak flow. The allowable low flow threshold Qc can be estimated as 10%, 30%, or 50% of the pre-development 2-year peak flow ($0.1Q_2$, $0.3Q_2$, or $0.5Q_2$) depending on the receiving stream susceptibility to erosion, per SCCWRP Technical Report 606, Field Manual for Assessing Channel Susceptibility (SCCWRP, 2010). If a channel susceptibility assessment is not performed, then the conservative default is a Qc equal to $0.1Q_2$.

- Bed and bank material can also be characterized through a geomorphic field assessment. For each stream location analyzed, a measure of critical shear stress can be obtained for the weakest bed or bank material prevalent in the channel. For non-cohesive material, a Wolman pebble count or sieve analysis can be used to obtain a grain size distribution, which can be converted to a critical shear stress using empirical relationships or published reference tables. For

cohesive material, an in-situ jet test or reference tables are used. For banks reinforced with vegetation, reference tables are generally used. Appropriate references for critical shear stress values are provided in ASCE No.77 (1992) and Fischenich (2001). To account for the effects of vegetation density and channel irregularities, the applied shear stress can be partitioned into channel form and bed/bank roughness components. SCCWRP Technical Report 667 also has guidance for estimating critical shear stress.

STEP 4: CUMULATIVE WORK ANALYSIS

Cumulative work is a measure of the long-term total work or sediment transport capacity performed at a creek location. It incorporates the distribution of both discharge magnitude and duration for the flow rates simulated. The cumulative work analysis must be performed up to the maximum geomorphically significant flow of Q_{10}. To calculate cumulative work, first multiply the work (from STEP 3) and duration associated with each flow bin (from STEP 1). Then, the total work is obtained by summing the cumulative for all flow binds (Q_c to Q_{10}). This analysis can be expressed as:

Equation H.8-7: Cumulative Work

$$W_t = \sum_{i=1}^{n} W_i \, \Delta t_i$$

Where:
W_t = Total Work [dimensionless]
W_i = Work per flow bin [dimensionless]
Δt = Duration per flow bin [hours]
n = number of flow bins

The distribution of cumulative work, also referred to as a work curve (or work histogram), is helpful in understanding which flow rates are performing the most work on the channel of interest. An example work curve is provided in Figure H.8-5.

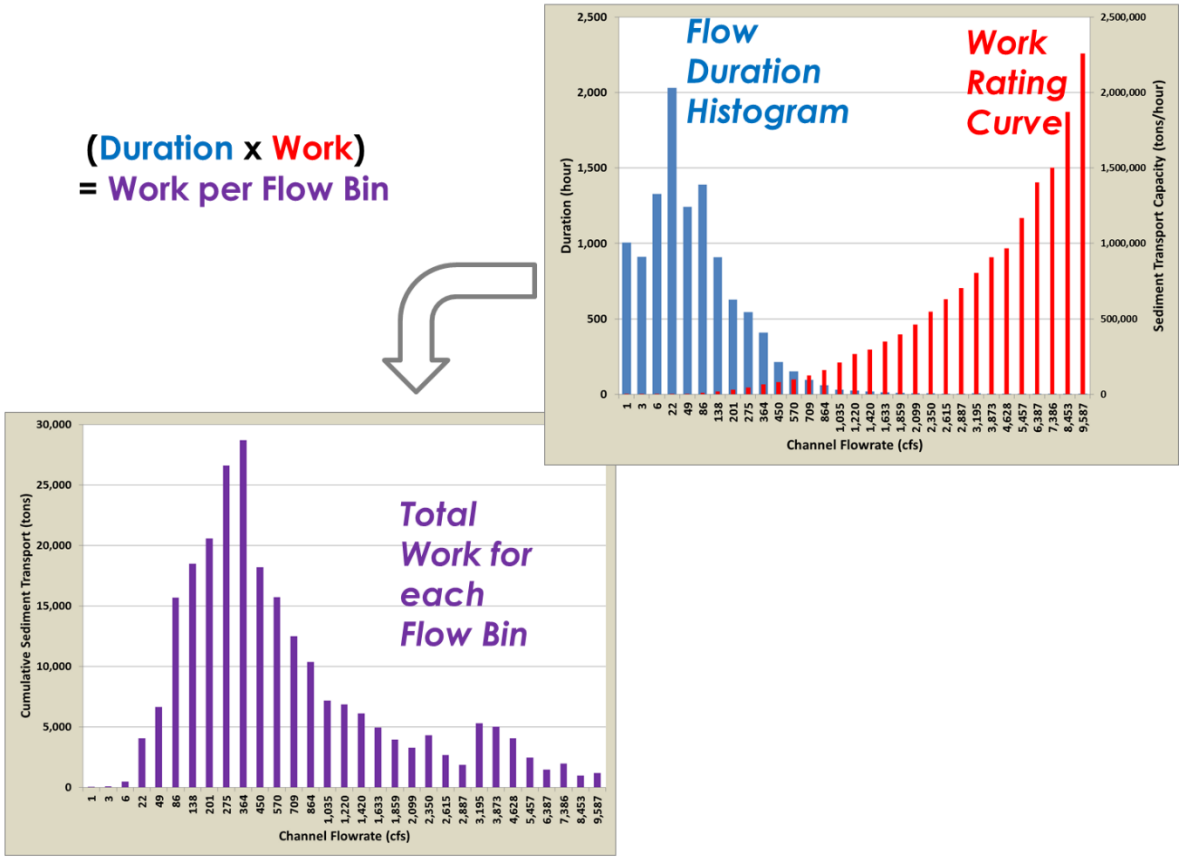


Figure H.8-5: Example Work Curve

STEP 5: EROSION POTENTIAL ANALYSIS

Ep is calculated by simply dividing the total work of the post-project condition by that of the pre-development (natural) condition. Ep is expressed as:

Equation H.8-8: Erosion Potential

$$E_p = W_{t,post} / W_{t,pre}$$

Where:

E_p = Erosion Potential [unitless]

$W_{t,post}$ = Total Work associated with the post-project condition [unitless]

$W_{t,pre}$ = Total Work associated with the pre-development condition [unitless]

As applicable, the applicant must use Worksheet H.8-1 and H.8-2 to document the Ep calculations for each point of compliance.

Erosion Potential (Ep) Analysis		Worksheet H.8-1	
Background Information			
1	Low Flow Threshold: results of SCCWRP channel susceptibility analysis (Select 0.1*Q_2 if analysis has not been performed).	☐ 0.1*Q2 ☐ 0.3*Q2 ☐ 0.5*Q2	
2	Selected Ep Method	☐ Simplified Ep Method ☐ Standard Ep Method	
2	Hydrologic Analysis: Select hydrologic analysis method.	☐ Project-Scale ☐ Project-Scale and Watershed-Scale Continuous Simulation	
4	Number of Points of Compliance (Copy and complete worksheet for each Point of Compliance)		unitless
Step 1: Hydrologic Analysis (not applicable for Simplified Ep Method)			
5	Project-Scale Q_2 (from continuous simulation)		cfs
6	Project Area draining to the point of compliance		sq. miles
7	Watershed Area draining to the point of compliance		sq. miles
8	Scaling Factor for Flows (Line 7/Line 6)$^{0.667}$		unitless
9	Low flow threshold (factor from Line 1 x Line 6)		cfs
10	Watershed-Scale Q_{10} at Point of Compliance (from continuous simulation or Project Q_{10} * Line 8)		cfs
	Hydrologic analysis results (Attach results of continuous simulation including: full pre-development runoff time series at POC, full post-development runoff time series at POC, and flow duration histogram and/or cumulative flow duration curve for each POC).		☐ Yes ☐ No
Step 2: Hydraulic Analysis (not applicable for Simplified Ep Method)			
11	Provide details about the cross-section (width, depth, slope, roughness, etc.)		
Step 3: Work Analysis (not applicable for Simplified Ep Method)			

Erosion Potential (Ep) Analysis		Worksheet H.8-1	
12	Select work index, equation, or transport curve method for use in work analysis.	☐ Equation H.8-6 ☐ Sediment Transport Equation ☐ Sediment Transport Curve ☐ Other: _____	
13	Describe/Justify selection in Line 12 above:		
14	Calculate work done for each flow bin under the pre-development and post-project condition using Worksheet H.8-2. Or similar documentation for sediment transport modeling or transport curve analysis.	☐ Yes ☐ No	
Step 4: Cumulative Work Analysis			
14	Cumulative pre-development work (Equation H.8-1 for Simplified Ep Method) (from Worksheet H.8.-2 for Standard Ep Method)		
15	Cumulative post-project work (Equation H.8-1 for Simplified Ep Method) (from Worksheet H.8-2 for Standard Ep Method)		
Step 5: Erosion Potential Analysis			
16	Erosion Potential (Line 15 / Line 14)		unitless

Work Calculations (Supplement to Worksheet H.8-1)									Worksheet H.8-2	
1	Channel Slope								(ft/ft)	
2	Channel Roughness (n)								(unitless)	
3	Low Flow Threshold (Line 9 from Worksheet H.8-1)								cfs	
4	Critical Shear Stress								(lb/ft^2)	
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**
Bin	**Flow (cfs)**			**Duration (hours)**		**Hydraulic Radius (ft)**	**Average Velocity (ft/s)**	**Shear Stress (lb/ft^2)**	**Work (unitless)**	
	Lower Limit	**Upper Limit**	**Average**	**Pre-development**	**Post-Project**				**Pre-development**	**Post-Project**
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
n										
Sum (Bins 1 to n) =										

Worksheet H.8-2 Key

A Number of flow bins, add additional rows as needed

B Lower limit for the corresponding flow bin

C Upper limit for the corresponding flow bin

D Average flow for the corresponding flow bin; [(**B** + **C**)/2]

E Duration in hours for the corresponding flow bin in pre development condition

F Duration in hours for the corresponding flow bin in post project condition

G Hydraulic radius (in feet) associated with the average flow for the corresponding flow bin (from Manning's equation and/or hydraulic analysis)

H Average flow velocity (in fps) associated with the average flow for the corresponding flow bin (from Manning's equation and/or hydraulic analysis)

I Shear stress (lb/ft^2) associated with the average flow for the corresponding flow bin = γ * Hydraulic Radius*Slope = 62.4 * **G** * Line 1

J Pre-development work for associated flow bin

J = 0; If (**I** – Line 4) ≤ 0

J = **E** * (**I** – Line 4)$^{1.5}$ * **H**; If (**I** – Line 4) > 0

K Post-project work for associated flow bin

K = 0; If (**I** – Line 4) ≤ 0

K = **F** * (**I** – Line 4)$^{1.5}$ * **H**; If (**I** – Line 4) > 0

Note: If the receiving water dimensions are different in pre-development and post-project condition then Worksheet H.8-2 is not valid for work calculations.

H.8.2 Calculation of Sp

While there are many categories of erosion processes (e.g., landslides, debris flows, gullies, tree throw, animal burrows, sheetwash erosion, wind erosion, dry ravel, bank erosion), in this evaluation processes will be simplified to sediment production from hillslopes and channels. Under ideal circumstances, the total bed sediment supply rate (tons/year) would be calculated for both the post-project built-out condition and pre-project condition using a watershed-scale Geomorphic Landscape Unit (GLU) and Geomorphic Channel Unit (GCU) approach which:

(1) identifies different sources of sediment supply based on categories of terrain slope, geology, land cover, and stream order;
(2) estimates the base erosion rate of those sources (GLUs and GCUs);
(3) approximates the sediment delivery ratio (SDR) to the receiving channel;
(4) evaluates the coarse bed-load fraction of the sources; and
(5) integrates these considerations into a bed-load yield rate for both the existing condition and proposed built-out condition.

However, calculation of sediment yield rates for each GLU (tons/mi^2-yr) and GCU (tons/mi-yr) using the available science is inherently inexact and requires extensive field calibration. Additionally, performing the geospatial calculations necessary for such a comprehensive GLU and GCU analysis may not be straightforward for some project applicants. Since the objective is to determine the fraction of reduction in bed sediment supply in the post-project condition compared to the pre-project condition, but not to determine the bed sediment yield in physical units (tons/year/acre, for example) the following simplifications are allowed. These simplifications take into consideration the regional sediment yield map shown in Figure H.8.6.

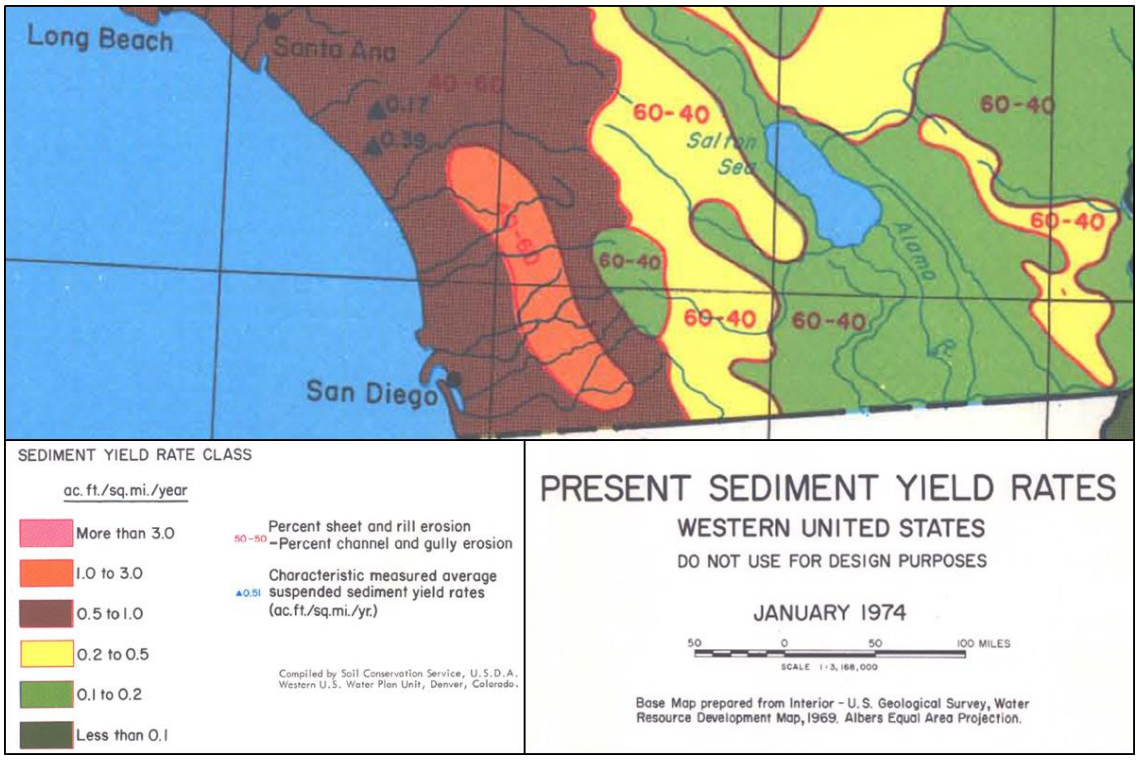


Figure H.8-6: Regional Sediment Yield Map

According to a regional sediment yield map of the Western US (USDA, 1974), hillslope processes (sheet and rill erosion) account for approximately 40% of the sediment yield in the San Diego County region, while channel processes (in-stream and gully erosion) account for approximately 60% of the sediment yield. Figure H.8-7 shows the different erosion processes. Provision E.3.a.(3)(a) of the MS4 Permit requires, "maintenance or restoration of natural storage reservoirs and drainage corridors (including topographic depressions, areas of permeable soils, natural swales, and ephemeral and intermittent streams)", effectively making maintenance or restoration of channels and gullies within a project site a site design requirement.

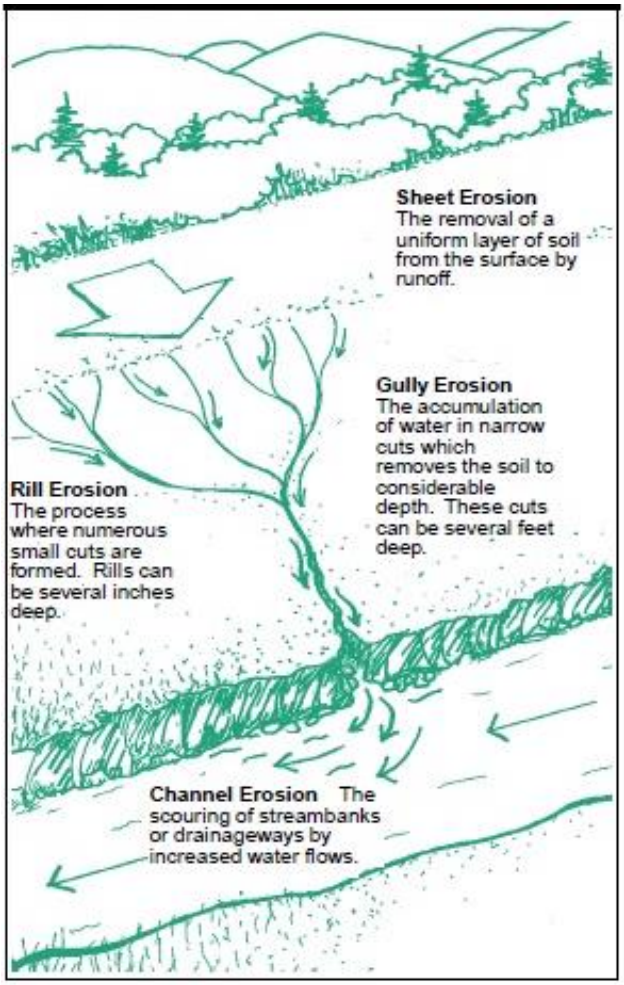


Figure H.8-7: Different Erosion Processes that Contribute Sediment

Source: http://www.fairfaxcounty.gov/nvswcd/youyourland/soil.htm

Sediment yield from hillslope processes (sheet and rill erosion) can be estimated using the Revised Universal Soil Loss Equation (RUSLE) and a sediment delivery ratio. For channel processes, the best available regional datasets are the USGS National Hydrography Dataset (NHD) and the NHDPlus dataset from USEPA and USGS (http://www.horizon-systems.com/nhdplus/). Both these datasets may not include the lowest order channels or gullies in the stream network, which can contribute a considerable amount of sediment produced from channel processes. Since the lower order channels and gullies originate and are mostly on the hillslopes, it is assumed for the Sp analysis that the sediment

yield from lower order channels and gullies is proportional to the sediment yield from hill slopes. Based on feedback received during the TAC meetings (Appendix H.5.1) the following distribution is proposed for the calculation of Sp:

- 70% of bed sediment yield ratio from RUSLE analysis (assumed to account for sediment yield from hillslope processes (sheet and rill erosion) and channels and gullies not part of the NHDPlus dataset); and
- 30% of bed sediment yield ratio from channels in the NHDPlus dataset.

Note:

- If an applicant elects to map the waters of the state, the Sp distribution shall be revised to
  - 40% of bed sediment yield ratio from RUSLE analysis;
  - 30% of bed sediment yield ratio from waters of the state that are not part of NHDPlus dataset; and
  - 30% of bed sediment yield ratio from channels in the NHDPlus dataset.

SCALE OF ANALYSIS

The project applicant shall perform the Sp analysis at point (or points) where runoff leaves the project site[7]. The steps for performing an Sp analysis are shown in Figure H.8-8 and described below.

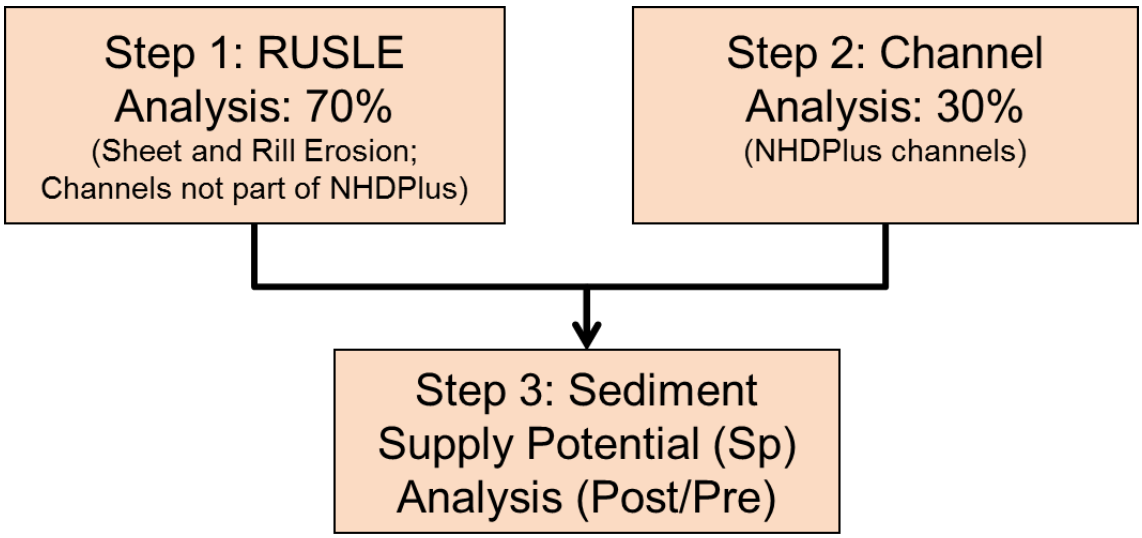


Figure H.8-8: Sediment Supply Potential Flow Chart

[7] In limited scenarios, the County has the discretion allow for a watershed-scale Sp analysis to be performed at the point of compliance it the future built-out conditions of the watershed are used in the analysis.

STEP 1: RUSLE ANALYSIS

RUSLE analysis is assumed to account for sediment yield from hillslope processes (sheet and rill erosion) and channels and gullies not part of the NHDPlus dataset. The change in bed sediment yield in the post-project condition compared to the pre-project condition using the RUSLE analysis must be estimated using equation H.8-9. This equation is a modified form of the standard RUSLE equation. Only hillslopes that are anticipated to generate coarse sediment must be used in this analysis. Since Sp is a dimensionless index the terms that are relatively constant in the pre and post project condition, such as rainfall factor, have been removed.

Equation H.8-9: Sediment Yield (Hillslope)

$$SY_{RUSLE} = \frac{Post-Project \sum\{A \times K \times LS \times C \times P\}}{Pre-Project \sum\{A \times K \times LS \times C\}}$$

Where:

A = Hillslope Area (acres)

K = Soil erodibility factor, this value can be obtained from regional K factor map from SWRCB or web soil survey or site-specific grain size analysis

LS = Slope length and steepness factor, this value can be obtained from the regional LS factor map from SWRCB or site-specific determination using look up tables based on slope and horizontal slope length from USDA Agriculture Handbook Number 703 (Renard et al., 1997) or other relevant sources

C= Cover management factor, use regional C factor map from USEPA or site-specific information; this is the reciprocal of the amount of surface cover on soil, whether it be vegetation, temporary mulch or other material. It is roughly the percentage of exposed soil, i.e., 95 percent cover yields a "C" value of 0.05. Use C=0 for areas where management actions are implemented (e.g. impervious areas)

P = Practice factor, only included in post-project condition. This term is added to account for sediment yield from engineered slopes. Practice factor of 0.25 shall be used for fill slopes and a practice factor of 0.50 shall be used for cut slopes. Use a practice factor of 1 for undisturbed areas.

The applicant may be allowed to receive credit for bed sediment yield from engineered slopes on the project perimeter directly discharging to conveyance systems if all of the following criteria are met:

- The engineered slopes consist of coarse bed material. This is confirmed by performing grain size distribution per ASTM D422 for the engineered slope and verifying that the d_{50} is greater than no. 200 sieve (0.074 mm).
- Cover factor in the post project condition shall not be greater than the cover factor used in the pre project condition for the same area.
- A maximum practice factor of 0.25 may applied to proposed fill slopes. A maximum practice factor of 0.50 may be applied to proposed cut slopes.

- A statement from the geotechnical engineer is included in the SWQMP certifying that the engineered slope will be stable even after accounting for bed sediment generation and the anticipated soil loss during the planned lifetime of the engineered slope is acceptable.

Additional analysis and/or documentation may be requested by the County prior to approval of the credit for bed sediment yield from engineered slopes.

STEP 2: CHANNEL ANALYSIS

If an NHDPlus mapped channel exists within the project property boundary, applicants must consider the sediment production from this existing channel system. The change is bed sediment yield in the post-project condition compared to the pre-project condition from channels in the NHDPlus dataset must be estimated using equation H.8-10 (SY_{NHD}). This equation is based on screening-level GIS calculations of stream length that will be contributing sediment in the post-project condition in the watershed tributary to the point of compliance.

Equation H.8-10: Sediment Yield (NHD)

$$SY_{NHD} = \frac{L_{post}}{L_{pre}}$$

Where:

L_{post} = Length of NHDplus streams in the watershed contributing to bed sediment supply in the post-project condition [miles]

L_{pre} = Length of NHDplus streams in the watershed contributing to bed sediment supply in the pre-project existing condition [miles]

STEP 3: SEDIMENT SUPPLY POTENTIAL ANALYSIS

Sediment Supply Potential (Sp) is defined as the ratio of post-project/pre-project (existing) long-term bed sediment supply. Sp must be calculated using equation H.8-11 presented below:

Equation H.8-11: Sediment Supply Potential

$$S_p = 0.7 \times SY_{RUSLE} + 0.3 \times SY_{NHD}$$

Where:

S_p = Sediment Supply Potential [unitless]

SY_{RUSLE} = Change in bed sediment yield from hillslopes and lower order channels and gullies not part of NHDPlus dataset [unitless]

SY_{NHD} = Change in bed sediment yield from channels in NHDPlus dataset [unitless]

When estimating Sp the following additional conditions apply:

- Projects that do not have onsite NHDPlus channels shall omit consideration of SY_{NHD} and weighting factors depicted in Equation H.8-11. This simply results in Sp = $SY_{RUSLE.}$

- It must be assumed that the sediment yield from an area that drains to a structural BMP is zero. Consideration of sediment yield from an area draining to the structural BMP may be allowed if sediment bypass measures are implemented upstream of the structural BMP. However, additional analysis may be requested by the County to substantiate the sediment yield estimates proposed by the applicant from implementing sediment bypass measures.
- For scenarios where an upstream coarse sediment yield area drains through the project footprint and the project footprint cuts off conveyance of bed sediment generated upstream of the project footprint to the point of compliance, (e.g., via debris basins) the contribution from the upstream area shall be assumed to be zero.

As applicable, the applicant must use Worksheet H.8-3 to document the Sp calculations for each point of compliance.

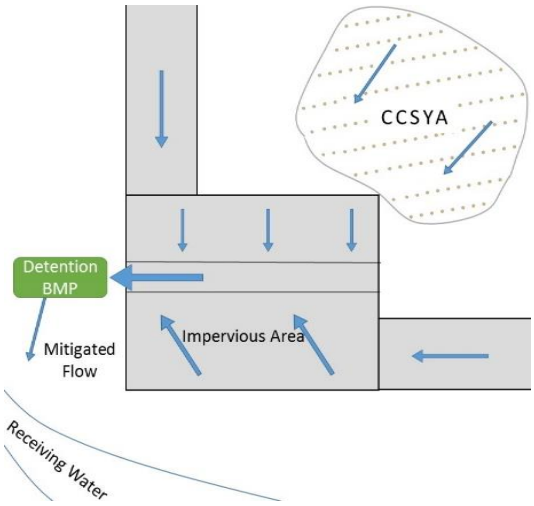
Sediment Supply Potential (Sp) Analysis												Worksheet H.8-3
1	Scale of Analysis						☐ Project Scale ☐ Watershed Scale (built-out condition)					
Step 1: RUSLE Analysis												
2	GLU	Pre-Project					Post-Project					
		A	K	LS	C	A*K*LS*C	A	K	LS	C	P	A*K*LS*C*P
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											
	Add additional rows as needed											
3	Sum Pre-Project						Sum Post-Project					
4	SY_{RUSLE}: (Sum Post-Project/ Sum Pre-Project) (From Line 3)											unitless
Step 2: Channel Analysis: NHDPlus Channels												
5	L_{pre} (from GIS analysis of pre-project existing condition)											miles
6	L_{post} (from GIS analysis of post-project condition)											miles
7	SY_{NHD}: (Line 6 / Line 5)											unitless
Step 3: Sediment Supply Potential Analysis												
8	RUSLE Analysis Bed Sediment Yield Ratio Calculated (Line 4)											unitless
9	Channel Bed Sediment Yield Ratio from NHDPlus dataset (Line 7)											unitless
10	Sediment Supply Potential Calculated using Equation H.8-11. (0.7 x Line 8 + 0.3 x Line 9)											unitless

H.9 Mitigation Measures Fact Sheets

The following fact sheets were developed to assist the project applicants with designing mitigation measures:

- Additional flow control
- Stream Rehabilitation

H.9.1 Additional Flow Control



Description

Additional flow control refers to the modification of post-development flow rates and durations beyond the levels required by standard HMP criteria (i.e. control of flow rates and durations from Q_c to Q10). Additional flow control can mitigate the effect of decreased sediment delivery by equivalently limiting sediment transport capacity. BMPs providing additional flow control are detention/retention type BMPs and will typically be larger than those that meet HMP criteria only. The performance standard for additional flow control can be demonstrated through the NII management standard.

Management Standard and Sizing Approach

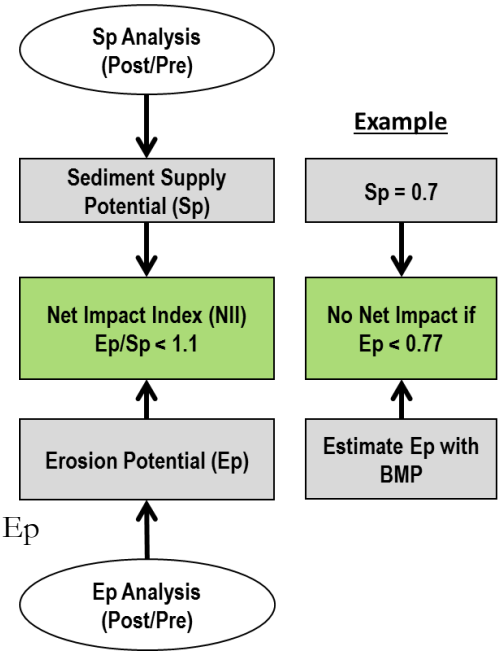
The management standard additional flow control BMPs need to meet to demonstrate that there is no net impact to the receiving waters is presented in the equation below:

$$NII = \frac{Ep}{Sp} \leq 1.1$$

Where:

Ep: is the ratio of post-project/pre-development sediment transport capacity

Sp: ratio of post-project/pre-project (existing) long-term bed sediment supply



Note: Redevelopment projects typically do not have critical coarse sediment yield areas onsite because management actions have been implemented onsite (e.g. impervious areas, etc.). Refer to Appendix H.8 for methodologies to calculate Ep and Sp.

Project applicants must demonstrate that the NII management standard will be met under the post-project scenario through the following steps:

1. Calculate the Sp at the point of compliance using guidance in Appendix H.8.2.
2. Determine the Target Ep: $Ep_{Target} \leq 1.1 * Sp$
3. Calculate the pre-development sediment transport capacity or work (Ep denominator). Refer to Section 6.3.3 for definition of pre-development and refer to Appendix H.8.1 for guidance on calculating the sediment transport capacity or work.
4. Iteratively size additional flow control BMPs and calculate the post-project sediment transport capacity (Ep numerator) until the target Ep is reached.
5. Summarize the calculations performed to size the BMPs in the SWQMP.

In addition to the general approach outlined above, additional flow control BMPs must meet the design criteria presented in the Appendix E Fact Sheets. Deviations from these criteria may be approved at the discretion of the County if it is determined appropriate.

Design Adaption for Project Goals

NII management standard is met by additional flow control. Larger BMPs may be able to provide adequate additional flow control to meet the required performance standard. In this scenario no additional sediment BMPs are required.

For example, project that has an Sp = 0 (i.e. 100% of the bed sediment in the drainage area to the point of compliance is impacted by the project) can be mitigated by designing a BMP such that there is no discharge within the geomorphically significant flow range (i.e. Q_c to Q_{10}).

NII management standard is not fully met by additional flow control. Additional flow control alone may not be able to entirely meet the NII management standard due to site, or other, constraints. In scenarios where the target Ep cannot be met by additional flow control, additional BMPs that increase the supply of bed sediment or reduce the susceptibility of the receiving channel will be required.

Note: Additional flow control BMPs can be independent BMPs that provide flow control only or they can be integrated with storm water pollutant control BMPs.

Conceptual Design and Sizing Approach

The following steps detail an approach that can be used to appropriately size BMPs that provide additional flow control:

Step 1: **Calculate the Sediment Supply Potential (Sp) based on pre- and post-project condition at the point of compliance.**

- Refer to Appendix H.8.2 for methodology to calculate Sp. Applicant must document this analysis using Worksheet H.8-3.

Step 2: D**etermine the Target Ep based on the results of Step 1.**

- $Ep_{Target} \leq 1.1 * Sp$

Step 3: **Perform continuous simulation modeling for pre-development condition.**

- Perform continuous simulation (refer to Appendix G) for the pre-development condition.

- Determine the flow durations for the pre-project scenario as described in Appendix G.1.6.2.

Step 4: Perform pre-development work analysis.

- Calculate the cumulative work performed by the range of geomorphically significant flows for the pre-development scenario, (refer to Step 3 and Step 4 in Appendix H.8.1 for calculation of work).

Step 5: **Implement flow control BMPs and perform continuous simulation modeling for post-project scenario.**

- Appropriately size pollutant control and hydromodification management BMPs according to the procedures presented in this manual.
- Perform continuous simulation (refer to Appendix G) for the post-project condition.
- Determine the flow durations for the post-project scenario as described in Appendix G.1.6.2.
- Typically, BMPs sized to satisfy the flow duration control will provide for some level of Sp reduction and will ensure that the minimum design standards and sizing requirements are met.

Step 6: **Perform post-project work analysis.**

- Follow the steps presented in Step 4 to determine the post-project total work.

Step 7: **Calculate Ep and determine if Target Ep has been met.**

- Divide the post-project total work by the pre-development total work and determine if the target Ep has been met.
- If the target Ep is met by the standard BMPs, document results and compliance with hydrologic and sediment supply performance standards.
- If the target Ep is not met, proceed to Step 8.

Step 8: Provide additional flow control storage and calculate Ep.

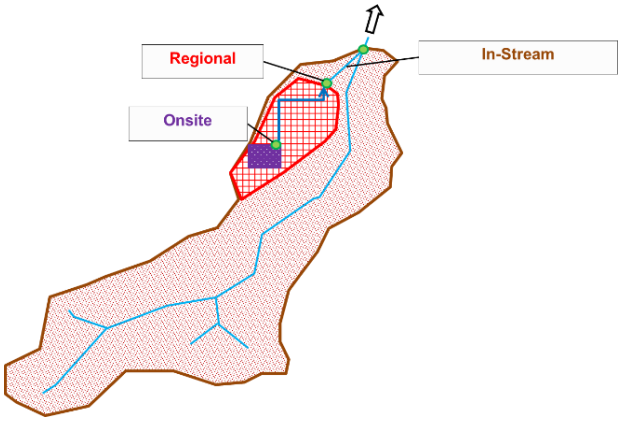
- Following the procedures presented in the previous steps, iteratively calculate Ep for increasingly large BMPs until the target Ep is met.
- Document results and compliance with hydrologic and NII management standard.

As applicable, the applicant must use Worksheet H.8-1, Worksheet H.8-3 and Worksheet H.9-1 to document sizing of the additional flow control mitigation measure.

Additional Flow Control Mitigation Measure		Worksheet H.9-1	
1	Sediment Supply Potential (Line 10 of Worksheet H.8-3)		unitless
2	Attached completed Worksheet H.8-3 and associated documentation	☐ Yes ☐ No	
3	Target Ep ≤ 1.1 * Line 1		unitless
4	Erosion Potential (Line 16 of Worksheet H.8-1)		unitless
5	Attached completed Worksheet H.8-1 and associated documentation	☐ Yes ☐ No	
6	Is Line 4 ≤ Line 3? If Yes, NII management standard is met. If No, increase the size of the BMP and recalculate Line 4.	☐ Yes ☐ No	

H.9.2 Stream Rehabilitation

Description



Hydromodification control can be achieved by stream rehabilitation projects including: drop structures, grade control structures, bed and bank reinforcement, increased channel sinuosity or meandering, increased channel width, and flow diversion. The objective of these in-stream controls, or stream restoration measures, is to reduce or maintain the overall Erosion Potential (Ep) of the receiving channel. Stream rehabilitation option is only available when the receiving channel of concern is already impacted by erosive flows and shows evidence of excessive sediment, erosion, deposition, or is a hardened channel.

Management Standard and Sizing Approach

The management standard stream rehabilitation projects need to meet to demonstrate that there is no net impact to the receiving waters is presented in the equation below:

$$NII = \frac{Ep}{Sp} \leq 1.1$$

Where:

Ep: is the ratio of post-project/pre-development sediment transport capacity

Sp: ratio of post-project/pre-project (existing) long-term bed sediment supply

Note: Stream rehabilitation project reduce Ep by modifying the stream's hydraulic properties and/or bed/bank material resistance without fully replacing sediment supply or controlling increases in runoff. Refer to Appendix H.8 for methodologies to calculate Ep and Sp.

Design Adaption for Project Goals

The following describes different types of stream rehabilitation projects that could be implemented to meet the NII management standard by reducing or maintaining the overall Ep:

Drop Structures: Drop structures are designed to reduce the average channel slope, thereby reducing the shear stresses generated by stream flows. These controls can be incorporated as natural looking rock structures with a step-pool design which allows drop energy to be dissipated into the pools while providing a reduced longitudinal slope between structures.

Grade Control Structures: Grade control structures are designed to maintain the existing channel slope while allowing for minor amounts of local scour. These control measures are often buried and entail a narrow trench across the width of the stream backfilled with concrete or similar material, as well as the creation of a "plunge pool" feature by placing boulders and vegetation on the downstream side of the sill. A grade control structure provides a reduced footprint and impact as compared to drop structures, which are designed to alter the channel slope.

Bed and Bank Reinforcement: Channel reinforcement serves to increase bed and bank resistance to instream erosion. A number of vegetated approaches are widely used. Such approaches include large woody debris, live crib walls, vegetated mechanically stabilized earth, live siltation, live brushlayering, willow posts and poles, live staking, live fascine, rootwad revetment, live brush mattresses, and vegetated reinforcement mats. These technologies provide erosion control that stabilizes bed and bank surfaces and allows for re-establishment of native plants, which serves to further increase channel stability.

Channel Sinuosity: Increasing channel sinuosity (meandering) can serve to reduce the channel slope, thereby reducing the shear stresses generated by stream flows. However, forcing a channel to be too sinuous is likely to lead to subsequent channel avulsion (cutting a new stream path) to a straighter course. Channel sinuosity needs to be supported by a geomorphic basis of design that shows the proposed form and gradient are appropriate for the valley slope, sediment, and water regime. This support may take the form of reference reaches in similar watersheds that have supported the proposed morphology over a significant period of time, or comparison between the proposed form and typical literature values.

Channel Widening: Increasing the width-to-depth ratio of a stream's cross section is meant to spread flows out over a wider cross section with lower depths, thereby reducing shear stress for a given flow rate. This approach can be a useful management strategy in incised creeks to restore them to equilibrium conditions once vertical incision has ceased. As with sinuosity, it is important to develop a robust geomorphic basis of design that shows the increase in width-to-depth ratio to be sustainable.

Flow Diversion: Flow diversions can be designed to divert the excess flows caused by development to an hydromodification management exempt water body so that the shear stresses do no increase in the susceptible receiving water. When diversions are proposed to a water body exempt through watershed management area analysis, the applicant is required to provide a supporting analysis that the excess flows diverted to the exempt water body do not invalidate the exemption.

Design Considerations

Each stream rehabilitation project is to some degree unique because of differences in geomorphic process, morphology and previous watershed history. For this reason, this fact sheet does not provide a prescriptive 'cookery book' approach for rehabilitating streams, but instead provides guidelines and recommendations. Shields (1996) provides a helpful overview of the analytical steps involved in stream restoration and Shields et al. (1999) provides examples of approaches used to rehabilitate incised channels. Applicant will need to provide geomorphic and engineering information to support their proposed project approach. It is recommended that multiple lines of technical evidence be used by applicants to develop creek restoration plans based on the preponderance of evidence for design criteria such as channel width, depth, slope and planform. It is also important to understand that all creek rehabilitation projects must comply with relevant Federal, State and local regulations and permits. These will likely include obtaining permits from the RWQCB, USACE and California DF&W, and may involve additional permits or consultation with USDF&W and FEMA, as well as permits from the County. The proposed design shall also meet local drainage design guidelines for channel design.

Appendix

I

Significant Site Design BMP (SSD-BMP) Sizing Methods and Calculations

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Appendix I Significant Site Design BMP (SSD-BMP) Sizing Methods and Calculations

I.1 Significant Site Design BMPs (SSD-BMPs)

I.2 Step 1: Determine DCV

I.3 Step 2: Dispersion Areas

I.4 Step 3: Tree Wells

I.1 Significant Site Design BMPs (SSD-BMPs)

Significant site design BMPs (SSD-BMPs) are site design BMPs designed to fully retain the Design Capture Volume (DCV) for the Drainage Management Area (DMA) (Section 5.2.3). Tree Wells (Fact Sheet SD-A), Impervious Area Dispersion (Fact Sheet SD-B), Permeable Pavement (Fact Sheet SD-D), or any other SSD-BMP acceptable to the County may be used. This Appendix provides sizing methods for impervious area dispersion ("dispersion areas") and tree wells used as SSD-BMPs. An automated worksheet is available to prepare the calculations described in this Appendix. Dispersion areas and tree wells may be sized for pollutant control only or for pollutant control plus hydromodification control.

Permeable pavement may be used as an SSD-BMP for pollutant control only. Sizing methods for permeable pavement as an SSD-BMP for pollutant control only are provided in Section 5.2.3 and are not included in this Appendix or the automated worksheet. Hydromodification management performance standards can be satisfied using permeable pavement only if the permeable pavement is constructed to structural BMP specifications in accordance with the requirements of Appendix B and Fact Sheet INF-3.

I.2 Step 1: Determine DCV

The first step in performing design calculations for SSD-BMPs is to calculate the DCV. The DCV represents the volume of storm water runoff that must be retained and/or biofiltered in order to satisfy pollutant control requirements. This step is very similar to the first step in performing storm water pollutant control calculations described in Appendix B for the design of structural BMPs, except that the tree well volume reduction described in Appendix B Section B.1.4, when applicable, will be addressed in Step 3 of the SSD-BMP calculations instead of Step 1.

The DCVs for SSD-BMPs can be calculated through use of the SSD-BMP Automated Worksheet I-1: Step 1. Calculation of Design Capture Volume depicted on the following page or can be calculated manually by following procedures presented in Appendix B, Sections B.1.1 through B.1.3 as well as the rain barrel reduction procedure presented in Appendix B, Section B.1.4 when applicable.

$$DCV = \frac{D}{12}\ x\ A\ x\ C - R$$

Where:
DCV: Design Capture Volume (ft^3).
D: Rainfall Depth (inches), refer to Appendix B Section B.1.1.
A: Tributary Area (ft^2), refer to Appendix B Section B.1.2.
C: Runoff Factor (unitless), refer to Appendix B Section B.1.3.
R: Site Design Volume Reductions from Rain Barrels (ft^3). Refer to Appendix B Section B.1.4 regarding rain barrels (note that when tree wells are used as SSD-BMPs, the volume reduction from the use of tree wells will be addressed in Step 3).

If the project includes dispersion areas, proceed to Step 2: Dispersion Areas. If no dispersion areas are proposed, skip Step 2 and proceed to Step 3: Tree Wells.

SSD-BMP Automated Worksheet I-1: Step 1. Calculation of Design Capture Volume

Category	#	Description	i	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name		unitless
	2	85th Percentile 24-hr Storm Depth		inches
	3	Is Hydromodification Control Applicable?		yes/no
	4	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)		sq-ft
	5	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)		sq-ft
	6	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)		sq-ft
	7	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)		sq-ft
	8	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)		sq-ft
	9	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)		sq-ft
	10	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)		sq-ft
SSD-BMPs Proposed	11	Does Tributary Incorporate Dispersion and/or Rain Barrels?		yes/no
	12	Does Tributary Incorporate Tree Wells?		yes/no
Dispersion Area & Rain Barrel Inputs (Optional)	13	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)		sq-ft
	14	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	15	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	16	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	17	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)		sq-ft
	18	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)		sq-ft
	19	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	20	Number of Rain Barrels Proposed per SD-E		#
	21	Average Rain Barrel Size		gal
Initial Runoff Factor Calculation	22	Total Tributary Area	0	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.00	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	unitless
	25	Initial Weighted Runoff Factor	0.00	unitless
	26	Initial Design Capture Volume	0	cubic-feet
Dispersion Area Adjustment & Rain Barrel Adjustment	27	Total Impervious Area Dispersed to Pervious Surface	0	sq-ft
	28	Total Pervious Dispersion Area	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area for DCV Reduction	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	n/a	unitless
	32	Design Capture Volume After Dispersion Techniques	0	cubic-feet
	33	Total Rain Barrel Volume Reduction	0	cubic-feet
Results	34	Final Adjusted Runoff Factor	0.00	unitless
	35	Final Effective Tributary Area	0	sq-ft
	36	Initial Design Capture Volume Retained by Dispersion Area and Rain Barrel(s)	0	cubic-feet
	37	Remaining Design Capture Volume Tributary to Tree Well(s)	0	cubic-feet

SSD-BMP Worksheet I-1 Line Item Notes
1. User input from stormwater plans.
2. User input from BMPDM Figure B.1-1.
3. User input from stormwater plans.
4. User input from stormwater plans.
5. User input from stormwater plans.
6. User input from stormwater plans.
7. User input from stormwater plans.
8. User input from stormwater plans.
9. User input from stormwater plans.
10. User input from stormwater plans.
11. User input. Default is "No". Select Yes if any of the referenced elements are proposed.
12. User input. Default is "No". Select Yes if any of the referenced elements are proposed.
13. User input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
14. User input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
15. User input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
16. User input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
17. User input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
18. User input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
19. User input from stormwater plans. Must satisfy criteria from Fact Sheet SD-B.
20. User input. Must satisfy criteria from Fact Sheet SD-E. Cannot provide more than a 25% reduction to initial DCV.
21. User input. Must satisfy criteria from Fact Sheet SD-E. Acceptable range 0-100 gallons for generic volume reductions.
22. Sum of Lines 4 through 19.
23. [0.9(Line 4) + 0.3(Line 5 + Line 10) + 0.1(Line 6 + Line 7) + 0.14(Line 8) + 0.23(Line 9)] /(Sum of Lines 4 through Line 10).
24. [0.9(Line 13) + 0.3(Line 14 + Line 19) + 0.1(Line 15 + Line 16) + 0.14(Line 17) + 0.23(Line 18)] /(Sum of Lines 13 through Line 19).
25. [(Line 23 x (Sum of Lines 4 through 10) + Line 24 x (Sum of Lines 13 through 19)) / Line 22].
26. (Line 2/12) x Line 22 x Line 25.
27. Line 13.
28. Sum of Lines 14 through 19.
29. [Line 27 / Line 28]. If greater than 4.0 dispersion benefits are not quantified.
30. Lookup values from Table B.1-1 weighted with respect to distribution of dispersion areas specified in Lines 14-19.
31. [Line 23 x (Sum of Lines 4 through Line 10) + Line 24 x Line 30 x (Sum of Lines 13 through Line 19)] / Line 22.
32. (Line 2/12) x Line 22 x Line 31.
33. [Line 20 x Line 21/7.48]. Limited to 100 gallons per rain barrel and limited to maximum of 25% of Line 26.
34. Line 31 x [1 - (Line 33/Line 32)]. Value must be between zero and one.
35. Line 22 x Line 34.
36. [(Line 26 - Line 32) + Line 33].
37. [Line 26 - Line 36]. Minimum result of 0.

I.3 Step 2: Dispersion Areas

Dispersion areas are dedicated pervious areas, typically vegetated, with in-situ soil infiltration capacity for partial or full infiltration (Figure I.3-1). Impervious area dispersion refers to the practice of effectively disconnecting impervious areas from directly draining to the storm drain system by routing runoff from the impervious area onto an adjacent pervious dispersion area. The pervious dispersion area surface may consist of natural in-situ soils, amended soils, or permeable pavement. This appendix discusses natural in-situ soils and amended soils. For permeable pavement dispersion areas, refer to Section 5.2.3.

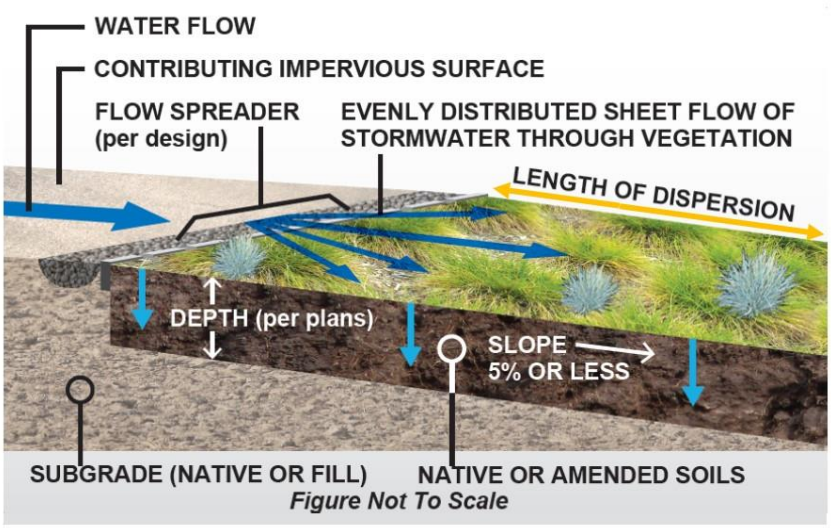

Figure I.3-1 Dispersion Area Schematic

When a dispersion area is proposed to be used as an SSD-BMP, the calculated DCV (Line 37 of the SSD-BMP Automated Worksheet I-1 depicted on the previous pages, "Remaining Design Capture Volume Tributary to Tree Well(s)") must be zero. This is achieved when the ratio of dispersed impervious surface area to total engineered pervious surface and/or natural hydrologic soil group A or B soil dispersion area meets the requirements outlined in Fact Sheet SD-B (2:1 or 1:1 depending on the dispersion area surface and whether hydromodification control applies) and there are no other surfaces within the DMA that contribute to the project DCV, such as surfaces not directed to the dispersion area, semi-pervious surface used as dispersion area, or natural (non-amended) hydrologic soil group C or D soils used as dispersion area.

Semi-pervious surfaces and/or natural (non-amended) hydrologic soil group C or D soils that receive runoff from impervious surfaces may be used as a regular site design BMP to reduce DCV but may not be used as an SSD-BMP because they do not reduce DCV to zero. When soils are amended in accordance with Fact Sheet SD-F, this is considered "engineered pervious surface" regardless of the subgrade. Any natural hydrologic soil group or fill soil may be amended in accordance with Fact Sheet SD-F and then be considered engineered pervious surface.

If the dispersion area is used for pollutant control plus hydromodification control, the dispersion area must include amended soil. As a minimum, the top 11 inches of the pervious area must use amended soils in accordance with Fact Sheet SD-F.

Table I.3-1 summarizes certain design criteria for the use of dispersion areas as SSD-BMPs and illustrates the difference between the criteria for pollutant control only and for pollutant control plus hydromodification control. Refer to Fact Sheet SD-B for additional requirements applicable to all types of dispersion areas.

Table I.3-1 Criteria for use of Dispersion Areas as SSD-BMPs for Pollutant Control Only vs. Pollutant Control Plus Hydromodification Control

SSD-BMP	Criteria for Pollutant Control Only	Criteria for Pollutant Control Plus Hydromodification Control
Dispersion Area (SD-B)	• Ratio of impervious area to engineered pervious surface and/or natural hydrologic soil group A soil area is 2:1 or less; OR ratio of impervious area to natural hydrologic soil group B soil area is 1:1 or less • Sheet flow travel length across dispersion area is 10 feet or more* • Slope is less than 5%	• Ratio of impervious area to engineered pervious surface area is 1:1 or less • Sheet flow travel length across dispersion area is 10 feet or more* • Slope is less than 5% • The top 11 inches of soil is amended in accordance with Fact Sheet SD-F
*Exemption to this minimum travel length criterion may be allowed when the contributing flow path length of the impervious area /pervious area travel length ≤ 2		

The dispersion area sheet flow travel length, slope, and amended soil when applicable must be shown on the project plans. When the SSD-BMP Automated Worksheet is used, these characteristics may be documented in SSD-BMP Automated Worksheet I-2: Step 2. Dispersion Area Validation depicted on the following page in addition to the plans.

Dispersion areas meeting the SSD-BMP criteria do not need an additional downstream BMP. Dispersion areas not meeting the SSD-BMP criteria can be used as regular site design BMPs to reduce the DCV draining to a tree well just as they can be used to reduce the DCV draining to a structural BMP pursuant to Appendix B. If the project includes tree wells, proceed to Step 3: Tree Wells.

SSD-BMP Automated Worksheet I-2: Step 2. Dispersion Area Validation

Category	#	Description	i	Units
Standard Dispersion Area Inputs	1	Drainage Basin ID or Name	-	unitless
	2	Final Design Capture Volume (DCV)	-	cubic-feet
	3	Is Hydromodification Control Applicable?	-	yes/no
	4	Total Impervious Area Dispersed to Pervious Surface	-	sq-ft
	5	Total Engineered Pervious Surface and/or Natural Soil Dispersion Area (Does Not Include Semi-Pervious Surfaces Serving as Dispersion Area)	-	sq-ft
	6	Ratio of Dispersed Impervious Area to Total Engineered Pervious Surface and/or Natural Soil Dispersion Area	-	unitless
	7	Dispersion Area Length (Length of Sheet Flow Across Dispersion Area)		feet
	8	Dispersion Area Slope		%
	9	Thickness of Amended Soil		inches
	10	How is Flow Dispersed Across Width of Dispersion Area (definitions below*)?		unitless
Results	11	Is DCV Requirement Fully Satisfied by Dispersion Area?	-	yes/no
	12	Is Hydromodification Control Requirement Satisfied by Dispersion Area?	-	yes/no
	13	Are Dispersion Area Length, Slope, and Thickness of Amended Soil (when applicable) Adequate?	-	yes/no

Notes:

***How is Flow Dispersed Across Width of Pervious Dispersion Area?**

Sheet Flow:	Flow arrives as sheet flow across the width of the adjacent impervious area
Spreader(s):	Flow is discharged from flow spreader(s) across the width of the pervious area
Roof Drains:	Discharge from roof drains distributed across the width of the pervious area
Curb Cuts:	Discharge from curb cuts distributed across the width of the pervious area
Other:	Other (Describe in PDP SWQMP)

SSD-BMP Worksheet I-2 Line Item Notes
1. Populated per result of Worksheet I-1 (Step 1. DCV) Line 1.
2. Populated per result of Worksheet I-1 (Step 1. DCV) Line 37.
3. Populated per result of Worksheet I-1 (Step 1. DCV) Line 3.
4. Populated per result of Worksheet I-1 (Step 1. DCV) Line 13.
5. Populated per result of Worksheet I-1 (Step 1. DCV) Sum of Lines 15 through 19.
6. Line 4 / Line 5.
7. User input from stormwater plans.
8. User input from stormwater plans.
9. User input from stormwater plans.
10. User input from stormwater plans.
11. "Yes" when DCV = 0.
12. When hydromodification control is applicable, "Yes" when remaining DCV=0, ratio<=1, and thickness >=11.0 inches.
13. "Yes" when length, slope, and thickness (for hydromodification control) meet requirements of SD-B.

I.4 Step 3: Tree Wells

A tree well as a storm water management feature consists of a tree with a minimum amount of soil media to allow for storage, infiltration, and evapotranspiration of runoff (Figure I.4-1).

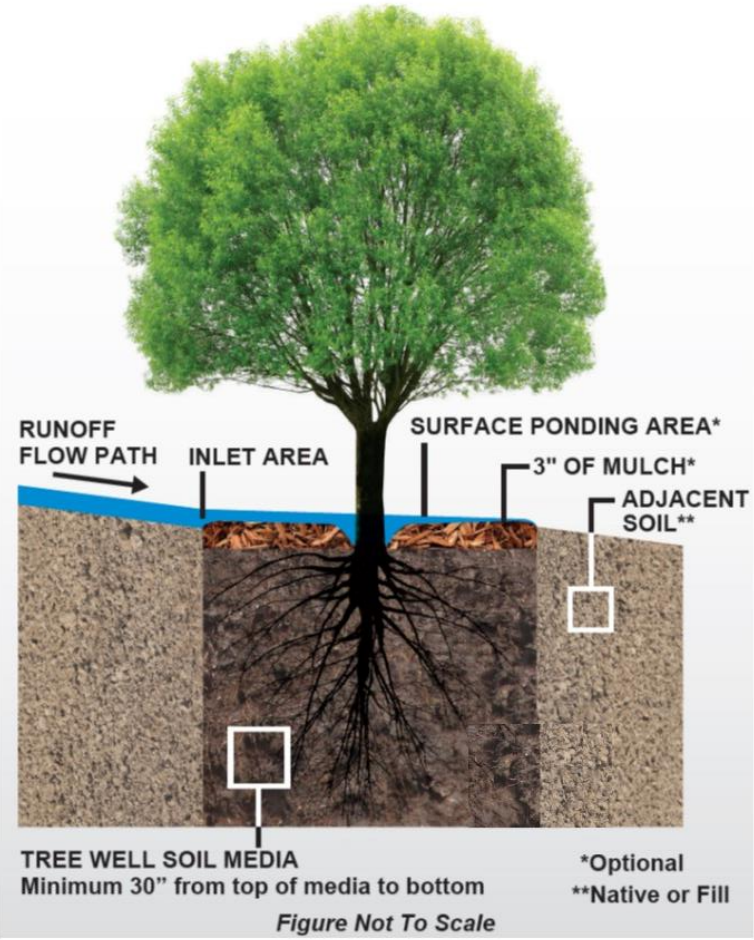

Figure I.4-1 Tree Well Schematic

Tree wells as SSD-BMPs must provide tree credit volume equal to or greater than the DCV for pollutant control only; or for pollutant control plus hydromodification control provide tree credit volume equal to or greater than the required retention volume (RRV), where RRV accounts for a multiplier applied to the DCV value. Tree credit volume for a single tree is based on the mature canopy diameter of the tree. More than one tree may be used in a single DMA in order to provide the total required volume. The tree well must also include tree well soil based on the mature tree canopy diameter in accordance with Fact Sheet SD-A.

Table I.4-1 summarizes certain design criteria for the use of tree wells as SSD-BMPs and illustrates the difference between the criteria for pollutant control only and for pollutant control plus hydromodification control. Refer to Fact Sheet SD-A for additional requirements applicable to all types of tree wells.

Table I.4-1 Criteria for use of Tree Wells as SSD-BMPs for Pollutant Control Only vs. Pollutant Control Plus Hydromodification Control

SSD-BMP	Criteria for Pollutant Control Only	Criteria for Pollutant Control Plus Hydromodification Control
Tree Well (SD-A)	• The total tree credit volume is greater than DCV • Provide tree well soil based on the mature tree canopy diameter in accordance with Fact Sheet SD-A	• The total tree credit volume is greater than RRV, where RRV accounts for a multiplier applied to the DCV value • Provide tree well soil based on the mature tree canopy diameter in accordance with Fact Sheet SD-A

Tree well design can be prepared through the use of SSD-BMP Automated Worksheet I-3: Step 3. Tree Well Sizing depicted on the following page or can be calculated manually by following procedures below in Sections I.4.1 through I.4.4.

SSD-BMP Automated Worksheet I-3: Step 3. Tree Well Sizing

Category	#	Description	i	Units
Standard Tree Well Inputs	1	Drainage Basin ID or Name	-	unitless
	2	Design Capture Volume Tributary to BMP	-	cubic-feet
	3	Is Hydromodification Control Applicable?	-	yes/no
	4	Predominant NRCS Soil Type Within Tree Well(s) Location		unitless
	5	Select a Tree Species for the Tree Well(s) Consistent with SD-A Tree Palette Table Note: Numbers shown in list are Tree Species Mature Canopy Diameters		unitless
	6	Tree Well(s) Soil Depth (Installation Depth) Must be 30, 36, 42, or 48 Inches; Select from Standard Depths**		inches
	7	Number of Identical* Tree Wells Proposed for this DMA		trees
	8	Proposed Width of Tree Well(s) Soil Installation for One (1) Tree		feet
	9	Proposed Length of Tree Well(s) Soil Installation for One (1) Tree		feet
Tree Data	10	Botanical Name of Tree Species	-	unitless
	11	Tree Species Mature Height per SD-A	-	feet
	12	Tree Species Mature Canopy Diameter per SD-A	-	feet
	13	Minimum Soil Volume Required In Tree Well (2 Cubic Feet Per Square Foot of Mature Tree Canopy Projection Area)	-	cubic-feet
	14	Credit Volume Per Tree	-	cubic-feet
Tree Well Sizing Calculations	15	DCV Multiplier To Meet Flow Control Requirements	-	unitless
	16	Required Retention Volume (RRV) To Meet Flow Control Requirements	-	cubic-feet
	17	Number of Trees Required	-	trees
	18	Total Area of Tree Well Soil Required for Each Tree	-	sq-ft
	19	Approximate Required Width of Tree Well Soil Area for Each Tree	-	feet
	20	Approximate Required Length of Tree Well Soil Area for Each Tree	-	feet
	21	Number of Trees Proposed for this DMA	-	trees
	22	Total Area of Tree Well Soil Proposed for Each Tree	-	sq-ft
	23	Minimum Spacing Between Multiple Trees To Meet Soil Area Requirements (when applicable)***	-	feet
Results	24	Are Tree Well Soil Installation Requirements Met?	-	yes/no
	25	Is Remaining DCV Requirement Fully Satisfied by Tree Well(s)?	-	yes/no
	26	Is Hydromodification Control Requirement Satisfied by Tree Well(s)?	-	yes/no

Notes:

*If using more than one mature canopy diameter within the same DMA, only the smallest mature canopy diameter should be entered. Alternatively, if more than one mature canopy diameter is proposed and/or the dimensions of multiple tree well installations will vary, separate DMAs may be delineated.

**If the actual proposed installation depth is not available in the table of standard depths, select the next lower depth.

***Tree Canopy or Agency Requirements May Also Influence the Minimum Spacing of Trees.

SSD-BMP Worksheet I-3 Line Item Notes
1. Populated per result of Worksheet I-1 (Step 1. DCV) Line 1.
2. Populated per result of Worksheet I-1 (Step 1. DCV) Line 37.
3. Populated per result of Worksheet I-1 (Step 1. DCV) Line 3.
4. User input from stormwater plans. Only required when hydromodification control is applicable.
5. User input from stormwater plans. Select from Tree Palette Table in SD-A Tree Wells Fact Sheet. Tree species other than those listed are allowable, but must be approved by the County. Provide documentation in PDP SWQMP for alternative species.
6. User input from stormwater plans. In accordance with SD-A Tree Wells Fact Sheet, depth must be 30 inches or greater. Select from standard depths typical of tree box sizes. If the actual proposed installation depth is not available in the table of standard depths, select the next lower depth.
7. User input from stormwater plans.
8. User input from stormwater plans.
9. User input from stormwater plans.
10. Populated based on selected tree species from Tree Palette Table in SD-A Tree Wells Fact Sheet. Provide documentation in PDP SWQMP for alternative species.
11. Populated from Tree Palette Table in SD-A Tree Wells Fact Sheet. Provide documentation in PDP SWQMP for alternative species.
12. Populated from Tree Palette Table in SD-A Tree Wells Fact Sheet. Provide documentation in PDP SWQMP for alternative species.
13. 2 cubic feet per square foot of mature tree canopy projection area: 2 x Pi x ((Line 12)/2)^2.
14. Populated from Tree Palette Table in SD-A Tree Wells Fact Sheet based on Mature Canopy Diameter.
15. When hydromodification control is applicable, populated from DCV Multiplier Table in SD-A Tree Wells Fact Sheet based on hydrologic soil type and tree well soil installation depth.
16. When hydromodification control is applicable, DCV Multiplier x DCV: Line 15 x Line 2.
17. When hydromodification control is applicable, Line 16 / Line 14 (RRV / Credit Volume per Tree); otherwise Line 2 / Line 14 (DCV / Credit Volume per Tree).
18. Minimum required volume (2 cubic feet per square foot of mature tree canopy projection area) / proposed installation depth: Line 13 / ((Line 6)/12).
19. The square root of the required area (assumes a square installation): (Line 13 / ((Line 6)/12))^0.5. This is a guideline for the user to estimate the installation size; however, the actual length, width and configuration may vary. Lines 7 and 8 control the final result.
20. The square root of the required area (assumes a square installation): (Line 13 / ((Line 6)/12))^0.5. This is a guideline for the user to estimate the installation size; however, the actual length, width and configuration may vary. Lines 7 and 8 control the final result.
21. Reflects user input from Line 7.
22. Line 8 x Line 9.
23. When number of trees proposed > 1, Maximum of Mature Canopy Diameter or Proposed Dimension of Soil Installation (Line 12 or Lines 8 and 9).
24. "Yes" when Lines 3 through 9 are completed and soil installation requirements are satisfied.
25. "Yes" when Lines 3 through 9 are completed and credit volume requirement is satisfied.
26. When hydromodification control is applicable, "Yes" when Lines 3 through 9 are completed and required retention volume is satisfied.

I.4.1 Step 3.1: Determine DCV or RRV as applicable

To design a tree well as an SSD-BMP, first determine whether the tree well is to be sized for pollutant control only or pollutant control plus hydromodification control. Tree wells sized for pollutant control only must provide tree credit volume for the total DCV from the DMA (previously determined in Step 1) tributary to the tree well. Tree wells sized for pollutant control plus hydromodification control must be provide tree credit volume for the RRV tributary to the tree well, where RRV is the total DCV from the DMA increased by a DCV multiplier provided in Fact Sheet SD-A. Table I.4-1 presents the DCV multipliers from Fact Sheet SD-A.

Table I.4-1 DCV Multiplier Table from Fact Sheet SD-A

Minimum Tree Well Soil Depth (inches)	Hydrologic Soil Group				
	A	B	C	D (Default)	
30"	1.60	2.20	2.50	2.90	DCV Multiplier
36"	1.80	2.47	2.83	3.17	
42"	2.00	2.73	3.17	3.43	
48"	2.20	3.00	3.50	3.70	

The DCV multiplier to determine RRV is based on the underlying hydrologic soil group at the location of the tree well and the minimum tree well soil depth. Determining the tree well soil depth requires coordination with the selection of the tree species (Step 3.2). Therefore, determination of the DCV multiplier and RRV may be an iterative process with Step 3.2, selection of tree species and tree well soil depth. The minimum tree well soil depth is 30 inches. If the actual proposed tree well soil depth is not shown in the table of DCV multipliers, select the next lower depth from the table for the purpose of determining the DCV multiplier. For example, if the proposed tree well soil depth is 60 inches, select 48 inches from the table for the purpose of determining the DCV multiplier.

Multiply the DCV by the DCV multiplier to obtain the RRV.

$$RRV\ (ft^3) = DCV\ (ft^3)\ x\ DCV\ Multiplier$$

I.4.2 Step 3.2: Select a tree species and tree well soil depth

Select a tree species that will provide sufficient tree credit volume to meet the DCV or RRV as applicable. Fact Sheet SD-A provides a tree palette table and the tree credit volume per tree, which is based on the mature canopy diameter of the tree. Selection of the tree species should be coordinated with the project landscape architect. Multiple trees may be used in a single DMA to collectively provide sufficient tree credit volume, provided that drainage from the DMA is distributed equally to the trees. If the DMA drainage is not distributed equally to the proposed trees, split the DMA into smaller DMAs and size the proposed tree wells individually based on the DCV or RRV tributary to each tree.

Coordinate with the project landscape architect to determine the tree well soil depth. Ensure that the proposed tree well soil depth is appropriate to the size and type of tree(s) proposed.

I.4.3 Step 3.3: Determine the minimum soil volume required in the tree well

The minimum soil volume required in the tree well is based on the mature canopy diameter of the proposed tree. A tree well for storm water control requires a minimum of 2 cubic feet of soil per square foot of mature tree canopy projection area in accordance with the SD-A Tree Wells Fact Sheet. The minimum tree well soil volume can be calculated by the following equation:

$$Minimum\ Tree\ Well\ Soil\ Volume\ (ft^3) = 2\ x\ \pi\ x\ \left(\frac{D}{2}\right)^2$$

Where D = mature canopy diameter (feet)

I.4.4 Step 3.4: Determine tree well soil installation area and show on plans

Based on the required tree well soil volume and proposed tree well soil depth, the minimum area required for the tree well soil can be determined.

$$Minimum\ Tree\ Well\ Soil\ Area\ (ft^2) = \frac{Minimum\ Tree\ Well\ Soil\ Volume\ (ft^3)}{Tree\ Well\ Soil\ Depth\ (ft)}$$

Show the proposed tree well soil area on the project plans. Ensure that the area reserved for tree well soil meets the following requirements:

- The tree well soil must be placed within 1.5 times the mature tree canopy radius.

When multiple trees are used, the trees must be spaced so that the minimum tree well soil volume for each tree does not overlap.

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Appendix

J

Offsite Alternative Compliance Requirements and Guidance

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Appendix J Offsite Alternative Compliance Requirements and Guidance

J.1 Background

The 2013 MS4 Permit lowers the minimum threshold necessary to trigger classification of projects as Priority Development Projects (PDPs) and sets forth more stringent onsite requirements for stormwater pollutant control and hydromodification management. It also allows the County and other Copermittees to establish programs under which project applicants may satisfy applicable PDP requirements through the completion of offsite Alternative Compliance Projects (ACPs).

The MS4 Permit provides two potential pathways in which participation in an offsite alternative compliance program may be determined necessary or allowable. The first pathway is when an applicant has determined that the PDP cannot meet all of the onsite pollutant control obligations via retention and/or biofiltration. This pathway requires performing feasibility analyses for retention and biofiltration BMPs prior to participation in an offsite alternative compliance program. The County may also allow for an applicant to proceed directly to an offsite alternative compliance project without demonstrating infeasibility of retention and/or biofiltration BMPs onsite.

The County Watershed Protection Ordinance (WPO) incorporates the MS4 Permit requirements and provides the policies for implementation with the unincorporated county.

- Section 67.811(b)(4)(C) establishes the requirements for the flow-thru treatment control BMPs to be implemented onsite by the PDP; and
- Section 67.811(b)(6) establishes the ability to utilize offsite alternative compliance projects in lieu of complying with pollutant control and hydromodification BMP performance requirements onsite.
- Offsite ACPs are considered an extension of the PDPs to which they correspond. They must be designed, constructed and maintained consistent with all applicable requirements of Provision E.3.e of the 2013 MS4 Permit and WPO Section 67.812.

This Appendix introduces the types and varieties of ACPs that may potentially be allowed by the County, conditions and restrictions applicable to them, and requirements for obtaining approvals and implementing offsite ACPs in the unincorporated County of San Diego.

J.2 Key Concepts

IMPLEMENTATION SCENARIOS

In accordance with the 2013 MS4 Permit, the December 2015 *Water Quality Equivalency (WQE) Guidance for Region 9* (WQE Guidance) establishes two ACP implementation scenarios that may be included in Copermittee programs, (1) Applicant-implemented ACPs, and (2) Independent ACPs.

- **Applicant-implemented ACPs** are those for which a project applicant owns or proposes to construct an ACP that will be functional[8] prior to the final release of the proposed PDP. The defining feature of Applicant-implemented ACPs is that the same party is legally responsible for ensuring that all applicable requirements (e.g., design, construction, operation and long term maintenance) are satisfied for both the ACP and the PDP. Because only a single applicant is involved, ACPs can be approved in the absence of a Credit System to track and trade associated Water Quality Impacts and Water Quality Benefits.
- **Independent ACPs** are projects initiated independently of specific PDP impacts. In most instances, they are owned, constructed, or otherwise under the control of a party other than the PDP applicant. Because the completion and approval of Independent ACPs involves more than one legally responsible party, these projects can only be used to mitigate for PDPs within a RWQCB-approved credit system.

At this time, Independent ACPs cannot be approved in the unincorporated County of San Diego. Until such time as the County establishes an in lieu fee structure and/or RWQCB-accepted credit system, Independent ACPs are not allowed under the MS4 Permit. However, please note that Applicant-implemented ACPs providing treatment control or hydromodification benefits in excess of impacts associated with a corresponding PDP may be able to "bank" this additional capacity for future use in the event that a qualifying credit system is established. Applicants are therefore encouraged to fully document excess benefits for potential future application.

ACP TYPES

There are two primary types of ACP: Structural BMPs and Natural System Management Practices (NSMPs). **Structural BMPs** are a subset of BMPs which detain, retain, filter, remove, or prevent the release of pollutants to surface waters from development projects in perpetuity, after construction of the project is completed. These can be further subdivided according to the following project categories:

[8] For ACPs implemented under an in lieu fee structure, a 4-year time frame for completion of the ACP is allowable. However, applicable treatment or hydromodification performance standards must be met through temporal mitigation of the PDP impacts until the final ACP controls are fully functional.

- A **Retrofit BMP** adds or modifies structural BMPs in areas of existing development where practices do not already exist, are ineffective, or can be significantly enhanced.
- A **Regional BMP** treats stormwater from a tributary consisting of more than one development. Its primary purpose is to improve water quality, protect downstream channels, reduce flooding, or to meet other specific jurisdictional water quality objectives.
- A **Water Supply BMP** captures stormwater and infiltrates, pumps, or otherwise replenishes groundwater, surface water reservoirs, or other water supply systems.

NSMPs are practices that are implemented to restore and/or preserve predevelopment watershed functions in lieu of providing direct management of stormwater pollutant control and hydromodification flow control. NSMPs include projects that either reduce the release of pollutants through the reduction of runoff volume (e.g.; removal of impervious surfaces) or provide hydromodification management through the restoration of a sensitive stream segment to address impacts caused by the PDP and legacy impacts. They can include structural or engineered elements as part of the system, but non-engineered elements also provide some level of pollutant control and/or hydromodification management benefits. NSMPs include the following project categories:

- **Land Restoration** permanently restores currently developed land back to a stabilized, predevelopment condition. Land Restoration may provide quantifiable stormwater pollutant control and hydromodification flow control benefits by restoring the predevelopment stormwater runoff volumes, peak flows, and pollutant concentrations of a tributary.
- **Land Preservation** permanently preserves undeveloped land in its current state. In limited scenarios, Land Preservation may provide quantifiable stormwater pollutant control and hydromodification flow control benefits by preventing increases in stormwater runoff volumes, peak flows, and pollutant concentrations associated with the future built out condition of a tributary.
- **Stream Rehabilitation** restores a stream to a natural, stabilized condition that can accommodate both legacy and future hydromodification impacts. Stream Rehabilitation may provide quantifiable hydromodification flow control benefits through permanent stabilization of streams. In limited scenarios, Stream Rehabilitation may also provide quantifiable stormwater pollutant control benefits by reducing impervious channel surfaces.

POTENTIAL ACP BENEFITS

Water quality equivalency for stormwater pollutant control is demonstrated when the stormwater pollutant control benefits provided by the ACP are greater than or equal to the stormwater pollutant control impacts generated by the PDP. These benefits may include either of the following:

- **Stormwater Pollutant Control (pollutant or volume reduction), and**
- **Hydromodification Flow Control**

Both structural BMPs and NSMPs can provide pollutant control or hydromodification management benefits, or a combination of both. Regardless of the proposed implementation scenario, applicant

options will vary depending both on the ACP type and benefit under consideration. Figure J.2-1 summarizes the current availability of different ACP type-benefit combinations. The availability of specific options is largely dependent on the current state of science regarding the demonstration of each benefit type. Because the availability of options is likely to change over time, applicants are advised to consult with staff to make sure they are fully aware of their current availability.

Figure J.2-1: Current Availability ACP Options by Type and Benefit (Source: *Water Quality Equivalency Guidance for Region 9*)

ACP Category	Stormwater Pollutant Control Benefits				Hydromod Flow Control Benefits
	Pollutant Reduction			Volume Reduction	
	Retention	Biofiltration	Flow-Thru		
Retrofit	**Available**	**Available**	Limited Availability	**Available**	**Available**
Regional	**Available**	**Available**	Limited Availability	**Available**	**Available**
Water Supply	**Available**	**Available**	Limited Availability	**Available**	**Available**
Land Restoration	*Not Available*	*Not Available*	*Not Available*	**Available**	**Available**
Land Preservation	*Not Available*	*Not Available*	*Not Available*	Limited Availability	**Available**
Stream Rehabilitation	*Not Available*	*Not Available*	*Not Available*	Limited Availability	**Available**

J.3 Requirements for ACPs in the County of San Diego

The requirements below are applicable if participating in an offsite alternative compliance program. Section 1.8 of the County BMP Design Manual describes policy and procedural requirements for development projects in greater detail. Applicants should also check with County staff for additional information on the availability of, and requirements pertaining to, specific ACP options. As previously

noted, all ACP projects are required to utilize the WQE Guidance. This guidance provides additional detail on the general concepts associated with implementing an ACP along with methodologies for calculating the ACP benefits, example calculations and Water Quality Equivalency Worksheets which can be found at Projectcleanwater.org.

PDP REQUIREMENTS

A PDP wishing to utilize offsite alternative compliance must apply the following requirements to the PDP:

- Determine the portion of the design capture volume or total impervious area not managed on the PDP site;
- Provide onsite flow-thru treatment control BMPs that provide a medium to high pollutant removal efficiency to treat runoff leaving the site consistent with the guidance in Section 5.5.4 of the BMP Design Manual and the methodology for selecting and sizing BMPs described in Appendix J.5; and
- Provide temporal mitigation if the ACP is constructed after the completion of the development project that ensures equivalent or better pollutant removal and/or hydrologic control (as applicable) as compared to the case where the ACP is completed at the same time as the PDP.

ACP REQUIREMENTS

A PDP wishing to utilize offsite alternative compliance must apply the following requirements to the ACP:

- The ACP must demonstrate the water quality benefits generated are greater than or equal to the impact of the PDP that is not treated onsite;
- The benefits generated by ACP must be determined utilizing the water quality equivalency metrics established in the *December 2015 Water Quality Equivalency (WQE) Guidance for Region 9* (WQE Guidance), or any other WQE Guidance Document subsequently accepted by the RWQCB;
- The ACP must be located within the same watershed management area (WMA) as the PDP project;
- The ACP must implement all applicable site design and source control BMPs in accordance with the requirements Section 4 of BMP Design Manual;
- ACPs that are Structural BMPS must be designed in accordance with the requirements in Sections 5 and 6 of the BMP Design Manual;
- ACPs designed to manage hydromodification flow control must meet the location requirements defined in the WQE Guidance; and

- The ACP applicant must ensure effective operation and maintenance in perpetuity consistent with the requirements in Section 7 of the BMP Design Manual.

In addition to the above requirements, any ACP that is partially or wholly located in the County Right-of-way must obtain approval from the Authorized Enforcement Officer.

J.4 Submittal Requirements for Offsite Alternative Compliance Projects

The ACP must be documented in the appropriate attachment of the PDP SWQMP and be consistent with the submittal requirements in Chapter 8. Prior to any design changes to the PDP site layout and/or features that require the PDP SWQMP to be updated; the appropriate attachment in the PDP SWQMP must be reviewed to ensure that the ACP still provides a greater or equal water quality benefit consistent with the requirements of this Manual and the MS4 Permit.

Based on the nature of the project proposal, the County has the discretion to request the submittal of additional information above and beyond the minimum information listed in the PDP SWQMP.

J.5 Flow-Thru Treatment Control BMPs (for use with Alternative Compliance)

The following methodology must be used for selecting and sizing onsite flow-thru treatment control BMPs. These BMPs are to be used only when the project is participating in an alternative compliance program. This methodology consists of three steps:

1) Determine the PDP most significant pollutants of concern (Appendix J.5.1).
2) Select a flow-thru treatment control BMP that treats the PDP most significant pollutants of concern and meets the pollutant control BMP treatment performance standard (Appendix J.5.2).
3) Size the selected flow-thru treatment control BMP (Appendix J.5.3).

J.5.1 PDP Most Significant Pollutants of Concern

The following steps must be followed to identify the PDP most significant pollutants of concern:

1) Compile the following information for the PDP and receiving water:
    a. Receiving water quality (including pollutants for which receiving waters are listed as impaired under the Clean Water Act section 303(d) List; refer to Section 1.9);
    b. Pollutants, stressors, and/or receiving water conditions that cause or contribute to the highest priority water quality conditions identified in the WQIP (refer to Section 1.9);
    c. Land use type(s) proposed by the PDP and the storm water pollutants associated with the PDP land use(s) (see Table J.5–1).

2) From the list of pollutants identified in Step 1 identify the most significant PDP pollutants of concern. A PDP could have multiple most significant pollutants of concerns and must include the highest priority water quality condition identified in the watershed WQIP and pollutants anticipated to be present onsite/generated from land use.

Table J.5–1: Anticipated and Potential Pollutants Generated by Land Use Type

Priority Project Categories	General Pollutant Categories								
	Sediment	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P(1)	P(2)	P	X
Commercial Development >one acre	P(1)	P(1)	X	P(2)	X	P(5)	X	P(3)	P(5)
Heavy Industry	X		X	X	X	X	X		
Automotive Repair Shops			X	X(4)(5)	X		X		
Restaurants					X	X	X	X	P(1)
Hillside Development >5,000 ft2	X	X			X	X	X		X
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X	X	P(1)

X = anticipated
P = potential
(1) A potential pollutant if landscaping exists onsite.
(2) A potential pollutant if the project includes uncovered parking areas.
(3) A potential pollutant if land use involves food or animal waste products.
(4) Including petroleum hydrocarbons.
(5) Including solvents.

J.5.2 Selection of Flow-Thru Treatment Control BMPs

The following steps must be followed to select the appropriate flow-thru treatment control BMPs for the PDP:

1) For each PDP most significant pollutant of concern identify the grouping using Table J.5-2. Table J.5-2 is adopted from the Model SUSMP.

2) Select the flow-thru treatment control BMP based on the grouping of pollutants of concern that are identified to be most significant in Step 1. This section establishes the pollutant control BMP treatment performance standard to be met for each grouping of pollutants in order to meet the standards required by the MS4 permit and how an applicant can select a non-proprietary or a proprietary BMP that meets the established performance standard. The grouping of pollutants of concern are:

    a. Coarse Sediment and Trash (Appendix J.5.2.1)
    b. Pollutants that tend to associate with fine particles during treatment (Appendix J.5.2.2)
    c. Pollutants that tend to be dissolved following treatment (Appendix J.5.2.3)

Table J.5–2: Grouping of Potential Pollutants of Concern

Pollutant	Coarse Sediment and Trash	Suspended Sediment and Particulate-bound Pollutants[1]	Soluble-form Dominated Pollutants[2]
Sediment	X	X	
Nutrients		X	X
Heavy Metals		X	
Organic Compounds		X	
Trash & Debris	X		
Oxygen Demanding		X	
Bacteria		X	
Oil & Grease		X	
Pesticides		X	

[1] Pollutants in this category can be addressed to Medium or High effectiveness by effectively removing suspended sediments and associated particulate-bound pollutants. Some soluble forms of these pollutants will exist, however treatment mechanisms to address soluble pollutants are not necessary to remove these pollutants to a Medium or High effectiveness.

[2] Pollutants in this category are not typically addressed to a Medium or High level of effectiveness with particle and particulate-bound pollutant removal alone.

One flow-thru BMP can be used to satisfy the required pollutant control BMP treatment performance standard for the PDP most significant pollutants of concern. In some situations it might be necessary to implement multiple flow-thru BMPs to satisfy the pollutant control BMP treatment performance standards. For example, a PDP has trash, nutrients and bacteria as the most significant pollutants of concern. If a vegetated filter strip is selected as a flow-thru BMP then it is anticipated to meet the

performance standard in Appendix J.5.2.2 and J.5.2.3 but would need a trash removal BMP to meet the pollutant control BMP treatment performance standard in Appendix J.5.2.1 upstream of the vegetated filter strip. This could be achieved by fitting the inlets and/or outlets with racks or screens on to address trash.

J.5.2.1 Coarse Sediment and Trash

If coarse sediment and/or trash and debris are identified as a pollutant of concern for the PDP, then BMPs must be selected to capture and remove these pollutants from runoff. The BMPs described below can be effective in removing coarse sediment and/or trash. These devices must be sized to treat the flow rate estimated using Worksheet J.5-1. Applicant can only select BMPs that have High or Medium effectiveness.

Trash Racks and Screens [Coarse Sediment: Low effectiveness; Trash: Medium to High effectiveness] are simple devices that can prevent large debris and trash from entering storm drain infrastructure and/or ensure that trash and debris are retained with downstream BMPs. Trash racks and screens can be installed at inlets to the storm drain system, at the inflow line to a BMP, and/or on the outflow structure from the BMP. Trash racks and screens are commercially available in many sizes and configurations or can be designed and fabricated to meet specific project needs.

Hydrodynamic Separation Devices [Coarse Sediment: Medium to High effectiveness; Trash: Medium to High effectiveness] are devices that remove coarse sediment, trash, and other debris from incoming flows through a combination of screening, settlement, and centrifugal forces. The design of hydrodynamic devises varies widely, more specific information can be found by contacting individual vendors. A list of hydrodynamic separator products approved by the Washington State Technology Acceptance Protocol-Ecology protocol can be found at:
http://www.ecy.wa.gov/programs/wq/storm water/newtech/technologies.html.
Systems should be rated for "pretreatment" with a General Use Level Designation or provide results of field-scale testing indicating an equivalent level of performance.

Catch Basin Insert Baskets [Coarse Sediment: Low effectiveness; Trash: Medium effectiveness, if appropriately maintained] are manufactured filters, fabrics, or screens that are placed in inlets to remove trash and debris. The shape and configuration of catch basin inserts varies based on inlet type and configuration. Inserts are prone to clogging and bypass if large trash items are accumulated, and therefore require frequent observation and maintenance to remain effective. Systems with screen size small enough to retain coarse sediment will tend to clog rapidly and should be avoided.

Other Manufactured Particle Filtration Devices [Coarse Sediment: Medium to High effectiveness; Trash: Medium to High effectiveness] include a range of products such as cartridge filters, bag filters, and other configurations that address medium to coarse particles. Systems should be rated for "pretreatment" with a General Use Level Designation under the Technology Acceptance Protocol-Ecology program or provide results of field-scale testing indicating an equivalent level of performance.

Note, any BMP that achieves Medium or High performance for suspended solids (See Section J.5.2.2) is also considered to address coarse sediments. However, some BMPs that address suspended solids do not retain trash (for example, swales and detention basins). These types of BMPs could be fitted with racks or screens on inlets or outlets to address trash.

BMP Selection for Pretreatment:

Devices that address both coarse sediment and trash can be used as pretreatment devices for other BMPs, such as infiltration BMPs. However, it is recommended that BMPs that meet the performance standard in Appendix J.5.2.2 be used. A device with a "pretreatment" rating and General Use Level Designation under Technology Acceptance Protocol-Ecology is required for pretreatment upstream of infiltration basins and underground galleries. Pretreatment may also be provided as presettling basins or forebays as part of a pollutant control BMP instead of implementing a specific pretreatment device for systems where maintenance access to the facility surface is possible (to address clogging), expected sediment load is not high, and appropriate factors of safety are included in design.

J.5.2.2 Suspended Sediment and Particulate-Bound Pollutants

Performance Standard

The pollutant treatment performance standard is shown in Table J.5-3. This performance standard is consistent with the Washington State Technology Acceptance Protocol-Ecology Basic Treatment Level, and is also met by technologies receiving Phosphorus Treatment or Enhanced Treatment certification. This standard is based on pollutant removal performance for total suspended solids. Systems that provide effective TSS treatment also typically address trash, debris, and particulate bound pollutants and can serve as pre-treatment for offsite mitigation projects or for onsite infiltration BMPs.

Table J.5-3: Performance Standard for Flow-Thru Treatment Control

Influent Range	Criteria
20 – 100 mg/L TSS	Effluent goal ≤ 20 mg/L TSS
100 – 200 mg/L TSS	≥ 80% TSS removal
>200 mg/L TSS	> 80% TSS removal

Selecting Non-Proprietary BMPs

Table J.5-4 identifies the categories of non-proprietary BMPs that are considered to meet the pollutant treatment performance standard if designed to contemporary design standards[9]. BMP types with an

[9] Contemporary design standards refers to design standards that are reasonably consistent with the current state of practice and are based on desired outcomes that are reasonably consistent with the context of the MS4 Permit and this manual. For example, a detention basin that is designed solely to mitigate peak flow rates would not be considered a contemporary water quality BMP design because it is not consistent with the goal of water quality improvement. Current state of the practice recognizes that a drawdown time of 24 to 72 hours is typically needed to promote settling. For practical purposes,

"High" ranking should be considered before those with an "Medium" ranking. Statistical analysis by category from the International Storm Water BMP Database (also presented in Table J.5-4) indicates each of these BMP types (as a categorical group) meets or nearly meets the performance standard. The International Storm Water BMP Database includes historic as well as contemporary BMP studies; contemporary BMP designs in these categories are anticipated to meet or exceed this standard on average.

Table J.5-4: Flow-Thru Treatment Control BMPs Meeting Performance Standard

List of Acceptable Flow-Thru Treatment Control BMPs	Statistical Analysis of International Storm Water BMP Database				Evaluation of Conformance to Performance Standard		
	Count In/Out	TSS Mean Influent, mg/L	TSS Mean Effluent[1], mg/L	Average Category Volume Reduct.	Volume-Adjusted Effluent Conc[2], mg/L	Volume-Adjusted Removal Efficiency[2]	Level of Attainment of Performance Standard (with rationale)
Vegetated Filter Strip	361/ 282	69	31	38%	19	72%	Medium, effluent < 20 mg/L after volume adjustment
Vegetated Swale	399/ 346	45	33	48%	17	61%	Medium, effluent < 20 mg/L after volume adjustment
Detention Basin	321/ 346	125	42	33%	28	77%	Medium, percent removal near 80% after volume adjustment
Sand Filter/ Media Bed Filter	381/ 358	95	19	NA[3]	19	80%	High, effluent and % removal meet criteria without adjustment
Lined Porous Pavement[4]	356/ 220	229	46	NA[3,4]	46	80%	High, % removal meets criteria without adjustment
Wet Pond	923/ 933	119	31	NA[3]	31	74%	Medium, percent removal near 80%

Source: 2014 BMP Performance Summaries and Statistical Appendices; 2010 Volume Performance Summary; available at: www.bmpdatabase.org

1 - A statistically significant difference between influent and effluent was detected at a p value of 0.05 for all categories.

2 - Estimates were adjusted to account for category-average volume reduction.

3 - Not Applicable as these BMPs are not designed for volume reduction and are anticipated to have very small incidental volume reduction.

4 - The category presented in this table represents a lined system for flow-thru treatment purposes. Porous pavement for retention purposes is an infiltration BMP, not a flow-thru BMP. This table should not be consulted for porous pavement for infiltration.

design standards can be considered "contemporary" if they have been published within the last 10 years, preferably in California or Washington State, and are specifically intended for storm water quality management.

Selecting Proprietary BMPs

Proprietary BMPs can be used if the BMP meets each of the following conditions:

(1) **The proposed BMP meets the performance standard in Appendix J.5.2.2 as certified through third-party, field scale evaluation.** An active General Use Level Designation for Basic Treatment, Phosphorus Treatment or Enhanced Treatment under the Washington State Technology Acceptance Protocol-Ecology program is the preferred method of demonstrating that the performance standard is met. The list of certified technologies is updated as new technologies are approved (link below). Technologies with Pilot Use Level Designation and Conditional Use Level Designations are not acceptable. Refer to: http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html. Alternatively, other field scale verification of 80 percent TSS capture, such as through Technology Acceptance Reciprocity Partnership or New Jersey Corporation for Advance Testing may be acceptable. A list of field-scale verified technologies under Technology Acceptance Reciprocity Partnership Tier II and New Jersey Corporation for Advance Testing can be accessed at: http://www.njcat.org/verification-process/technology-verification-database.html (refer to field verified technologies only).

(2) **The proposed BMP is designed and maintained in a manner consistent with its performance certifications (see explanation below).** The applicant must demonstrate conclusively that the proposed application of the BMP is consistent with the basis of its certification/verification. Certifications or verifications issued by the Washington Technology Acceptance Protocol-Ecology program and the Technology Acceptance Reciprocity Partnership or New Jersey Corporation for Advance Testing programs are typically accompanied by a set of guidelines regarding appropriate design and maintenance conditions that would be consistent with the certification/verification. It is common for these approvals to specify the specific model of BMP, design capacity for given unit sizes, type of media that is the basis for approval, and/or other parameters.

(3) **The proposed BMP is acceptable at the discretion of the County.** The applicant may be required to provide additional studies and/or required to meet additional design criteria beyond the scope of this document in order to demonstrate that these criteria are met. While the County has no obligation to accept the use of any proposed proprietary BMP, applicants will be provided a written explanation describing the rationale for the rejection of any proposed devices.

J.5.2.3 Soluble-form dominated Pollutants (Nutrients)

If nutrients are identified as a most significant pollutant of concern for the PDP, then BMPs must be selected to meet the performance standard described in Appendix J.5.2.2 **and** must be selected to provide medium or high level of effectiveness for nutrient treatment as described in this section. The most common nutrient of concern in the San Diego region is nitrogen, therefore total nitrogen (TN) was used as the primary indicator of nutrient performance in storm water BMPs.

Selection of BMPs to address nutrients consists of two steps:

1) Determine if nutrients can be addressed via source control BMPs as described in Appendix E and Chapter 4. After applying source controls, if there are no remaining source areas for soluble nutrients, then this pollutant can be removed from the list of pollutants of concerns for the purpose of selecting flow-thru treatment control BMPs. Particulate nutrients will be addressed by the performance standard in Appendix J.5.2.2.

2) If soluble nutrients cannot be fully addressed with source controls, then select a flow-thru treatment control BMPs that meets the performance criteria in Table J.5-5 or select from the nutrient-specific menu of treatment control BMPs in Table J.5-6.

    a. The performance standard for nitrogen removal (Table J.5-5) has been developed based on evaluation of the relative performance of available categories of non-proprietary BMPs.

    b. For proprietary BMPs, submit third party performance data indicating that the criteria in Table J.5-5 are met. The applicant may be required to provide additional studies and/or required to meet additional design criteria beyond the scope of this document in order to demonstrate that these criteria are met. While the County has no obligation to accept the use of any proposed proprietary flow-thru BMP, applicants will be provided a written explanation describing the rationale for the rejection of any proposed devices.

Table J.5-5: Performance Standard for Flow-Thru Treatment Control BMPs for Nutrient Treatment

Basis	Criteria
Treatment Basis	Comparison of mean influent and effluent indicates significant concentration reduction of TN approximately 40 percent or higher based on studies with representative influent concentrations
Combined Treatment and Volume Reduction Basis	Combination of concentration reduction and volume reduction yields TN mass removal of approximately 40 percent or higher based on studies with representative influent concentrations

Table J.5-6: Flow-Thru Treatment Control BMPs Meeting Nutrient Treatment Performance Standard

List of Acceptable Flow-Thru Treatment Control BMPs for Nutrients	Statistical Analysis of International Storm Water BMP Database				Evaluation of Conformance to Performance Standard		
	Count In/Out	TN Mean Influent, mg/L	TN Mean Effluent[1], mg/L	Average Category Volume Reduct.	Volume-Adjusted Effluent Conc[2], mg/L	Volume-Adjusted Removal Efficiency[2]	Level of Attainment of Performance Standard (with rationale)
Vegetated Filter Strip	138/ 122	1.53	1.37	38%	0.85	44%	Medium, if designed to include volume reduction processes
Detention Basin	90/ 89	2.34	2.01	33%	1.35	42%	Medium, if designed to include volume reduction processes
Wet Pond	397/ 425	2.12	1.33	NA	1.33	37%	Medium, best concentration reduction among BMP categories, but limited volume reduction

Source: 2014 BMP Performance Summaries and Statistical Appendices; 2010 Volume Performance Summary; available at: www.bmpdatabase.org

1 - A statistically significant difference between influent and effluent was detected at a p value of 0.05 for all categories included.

2 - Estimates were adjusted to account for category-average volume reduction.

J.5.3 Sizing Flow-Thru Treatment Control BMPs:

Flow-thru treatment control BMPs must be sized to filter or treat the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of every storm event. The required flow-thru treatment rate should be adjusted for the portion of the DCV already retained or biofiltered onsite as described in Worksheet J.5-1. The following hydrologic method must be used to calculate the flow rate to be filtered or treated:

$$Q = C \times i \times A$$

Where:

Q = Design flow rate in cubic feet per second

C = Runoff factor, area-weighted estimate using Table B.1-1.

i = Rainfall intensity of 0.2 in/hr.

A = Tributary area (acres) which includes the total area draining to the BMP, including any offsite or onsite areas that comingle with project runoff and drain to the BMP. Refer to Section 3.3.3 for additional guidance. Street projects consult Section 1.4.3.

Worksheet J.5-1: Flow-Thru Design Flows

Category	#	Description	Value	Units
Flow-Thru BMP Inputs	0	Drainage Basin ID or Name		unitless
	1	Total Tributary Area		sq-ft
	2	Final Adjusted Runoff Factor		unitless
	3	Design Capture Volume		cubic-feet
	4	Volume Effectively Retained and/or Biofiltered		cubic-feet
	5	Deficit of Effectively Treated Stormwater Requiring Flow-Thru Treatment		cubic-feet
	6	Maximum Rated Water Quality Flow Rate of Proposed BMP		CFS
Flow Rate Calculations	7	Adjustment Factor		unitless
	8	Design Rainfall Intensity for Flow-Thru BMPs	0.20	in/hr
	9	Water Quality Flow Rate Requiring Flow-Thru Treatment		CFS
Result	10	Is Flow-Thru BMP Adequately Sized?		unitless

Worksheet J.5-1 General Notes:

A. Applicants may use this worksheet to size flow-thru BMPs. Applicants must provide inputs for yellow shaded cells and calculate appropriate values for unshaded cells. Note that applicants proposing on-site flow-thru BMPs must also implement an offsite alternative compliance project to offset the deficit of effectively treated stormwater volume. An automated version of this worksheet is available for download at the County of San Diego Department of Public Works website.

Worksheet J.5-1 Line Item Notes:

0. Populated per Worksheet B.1-1.
1. Populated per Worksheet B.1-1.
2. Populated per Worksheet B.1-1.
3. Populated per Worksheet B.2-1.
4. Populated per Retention and/or Biofiltration treatment determined in Worksheets B.3-1 through B.5-3.
5. Line 4 - Line 3
6. User input per manufacturer's specification sheet.
7. -Line 5 / Line 3
8. Default value of 0.20 inches per hour
9. (Line 1/43,560) x Line 2 x Line 7 x Line 8
10. If Line 6 ≥ Line 9 then "Yes". If Line 6 < Line 9 then "No".

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Guidance on Green Infrastructure

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Appendix K Guidance on Green Infrastructure

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K.2 Green Streets

K.2.1 Green Streets Performance Standard

K.2.2 Green Streets Guidelines

K.3 Green Parking Lots

K.3.1 Green Parking Lots Guidelines

Design Criteria, Design Standard Drawings, and Specifications for Green Streets and Green Parking Lots can be found on the County's Watershed Protection Program website under Green Infrastructure Resources within the Development Resources tab:

https://www.sandiegocounty.gov/stormwater

K.1 Guidance on Green Infrastructure



County of San Diego Guidance on Green Infrastructure

January 2019

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COUNTY OF SAN DIEGO GUIDANCE ON GREEN INFRASTRUCTURE

Green Infrastructure is an approach to stormwater and flood management that protects, restores, and mimics the natural water cycle using vegetation, mulch, soils, and natural processes while creating healthier environments. At the County scale, green infrastructure refers to the network of natural features that provides habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to stormwater and flood management systems that mimic nature by soaking up and storing water.

Roadways and parking lots present many opportunities for coordinated Green Infrastructure use. A Green Street or Parking Lot use a natural system approach to reduce stormwater flow, improve water quality, reduce urban heating, enhance pedestrian safety, reduce carbon footprints, and beautify neighborhoods. Green Streets and Parking Lots are components of Green Infrastructure, integrating strategies into roads and right-of-ways.

Green Streets Guidelines are an outreach tool and are also intended to serve as a companion to the rest of the Green Streets publications. They include an introduction, strategies, procedures and design examples for implementing Green Streets projects. The strategies include tree wells, dispersion areas, biofiltration, and permeable pavement.

Green Streets Design Criteria lay out general definitions, general policy, and landscape design criteria for Green Infrastructure strategies in the right-of-way. This can be found on the County's Development Resources website.

Green Streets Supplement to County Design Standard Drawings includes construction details which may be referenced in improvement plans similar to current County Design standard drawings. This can be found on the County's Development Resources website within the Green Streets Standard Drawings.

Green Streets Maintenance Schedules include a list with maintenance tasks, frequency, and time of year for initial, routine, and as- needed maintenance of each Green Infrastructure strategy. This can be found on the County's Development Resources website.

Green Streets Specifications include detailed construction material and installation requirements for Green Infrastructure strategies including aggregates, geosynthetics, underdrains, permeable pavement, bioretention soil media, mulch, overflow risers, check dams, and tree grates. This can be found on the County's Development Resources website.

Green Parking Lots Guidelines are an outreach tool and are also intended to serve as a companion to the rest of the Green Parking Lots publications. They include an introduction, strategies, procedures and design examples for implementing Green Parking Lots projects. The strategies include tree wells, dispersion areas, biofiltration, and permeable pavement.

Green Parking Lots Design Criteria lay out general definitions, general policy, and landscape design criteria for Green Infrastructure strategies in parking lots. This can be found on the County's Development Resources website.

Green Parking Lots Supplement to County Design Standard Drawings includes construction details which may be referenced in improvement plans similar to current County Design standard drawings. This can be found on the County's Development Resources website within the Green Streets Standard Drawings.

Green Parking Lots Maintenance Schedules does not have parking lot specific maintenance and references the Green Streets Maintenance Schedules.

Green Parking Lots Specifications does not have unique parking lot specifications and references the Green Streets Specifications.

K.2 Green Streets

K.2.1 Green Streets Performance Standard

This section builds on text from Section 1.4.3 providing more detailed guidance on compliance with the performance standard for Green Street PDP Exempt projects (herein referred to as Green Street projects).

Green Street projects must provide stormwater treatment for the volume of runoff associated with the project's net increase in impervious area. Compliance with this standard may be demonstrated at the project-scale, meaning there is no obligation to treat runoff from each discrete segment of new impervious area. Green Street projects are encouraged to achieve compliance through treatment of runoff from any combination of land uses including existing/proposed surfaces, onsite/offsite surfaces, pervious/impervious surfaces. As summarized below, Green Street compliance can be demonstrated through determination of the following 1) Required Treatment Volume, 2) Provided Treatment Volume, and 3) Comparison of Required and Provided Treatment.

1) REQUIRED TREATMENT VOLUME

Project proponent must calculate a single water quality runoff volume associated with the net increase in impervious area across the entire project site. This calculation should exclude runoff volumes associated with existing/replaced impervious areas within the project footprint, as treatment is not mandated for these areas. Supporting exhibits delineating new impervious areas, existing/replaced impervious areas, and removed impervious areas must be provided as needed to support this determination.

2) PROVIDED TREATMENT VOLUME

Project proponent must calculate the total volume of stormwater runoff treated through site design elements and/or structural BMPs proposed by the project. Completion of this step requires consideration of all surfaces draining to proposed treatment elements (existing/proposed, onsite/offsite, pervious/impervious areas draining to BMPs).

Project proponent must provide treatment through use of "Conventional" treatment elements where feasible but may also be permitted to use "Alternative" treatment elements upon demonstration of infeasibility.

> Conventional Treatment Elements: Elements that utilize conventional retention and/or biofiltration designs that are consistent with the County BMPDM[10]. Use of these elements may achieve Green Street compliance and are eligible to generate alternative compliance credits if implemented sufficiently. [*Examples: tree wells, dispersion areas, biofiltration basins (lined or unlined), bioretention basins, infiltration basins (vegetated or non-vegetated), pervious pavements without impermeable liners.]*

[10] Minimum retention requirements waived for Green Streets.

Alternative Treatment Elements: Elements that provide filtration for anticipated pollutants at medium to high efficacy and provide significant pore storage capacity. Use of these elements may achieve Green Street compliance but are typically not eligible[11] to generate alternative compliance credits. [*Examples: vegetated swales, non-vegetated filtration BMPs (sand filters, biofiltration soil media, pervious pavements with impermeable liners and underdrains), detention basins, wet ponds, proprietary filtration devices with significant pore storage capacity.]*

Treatment Elements lacking significant pore storage such as filter fabrics, debris racks, filter baskets, CDS units, hydrodynamic separators or similar devices may not be classified as either of the two categories above.

3) COMPARISON OF REQUIRED AND PROVIDED TREATMENT

Project proponent must demonstrate that the provided treatment volume is greater than or equal to the required treatment volume. This may be demonstrated at the project-scale, meaning there is no obligation to demonstrate treatment for each discrete segment of new impervious area. The pages that follow present a standard calculation template for demonstrating Green Street compliance as well as several calculation examples.

[11] If project proponent desires to bank credits through use of Alternative Treatment Elements, more detailed guidance outlined in the Regional Water Quality Equivalency must be referenced.

Table K.2-1 : Green Street Performance Standard Calculations

Item			Value	Description
Required Treatment Volume	1	Land Use of Net Impervious Area	Transportation	*Per project drawings.*
	2	Total Net Impervious Area [12]	ft^2	*Per project drawings.*
	3	85th Percentile Rainfall Depth	in.	*Determine per BMPDM Appendix B.1.*
	4	Runoff Coefficient	0.90	*Value of 0.90 applies to new impervious areas.*
	5	Required Treatment Volume	ft^3	*(Line 2 x Line 3 x Line 4) / 12*
Provided Treatment Volume	6	Land Use of Treated Area[13]		*Per project drawings.*
	7	Land Use Factor[14]		*Determine per Note 5 below.*
	8	Conventional Treatment Volume[15]	ft^3	*Determine per Note 6 below.*
	9	Alternative Treatment Volume		*Determine per supplemental applicant calculations.*
	10	Final Treatment Volume	ft^3	*Line 7 x (Line 8 + Line 9)*
Result	11	Is Project Green Street Compliant?		*Compliant if Line 10 ≥ Line 5. Otherwise, non-compliant.*
	12	Optional Credit		*(Line 7 x Line 8) – Line 5*

[12] The Net Increase in Impervious Area should **not** reflect any work occurring within existing impervious areas.

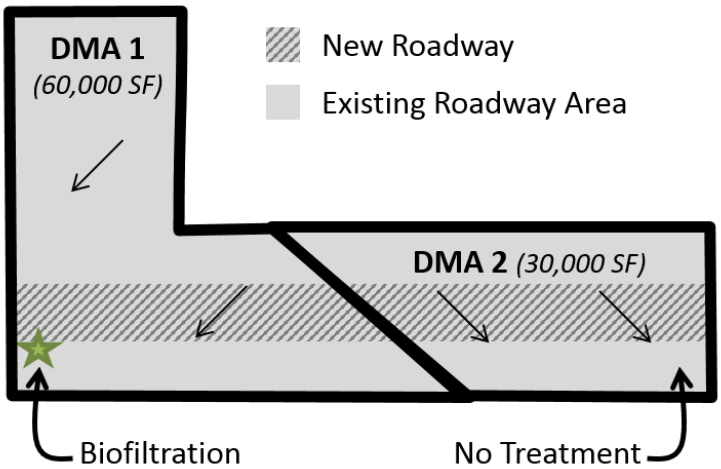
[13] Classify drainage area into following land use types (may use more than one) agriculture, commercial, education, industrial, multi-family residential, orchard, rural residential, single family residential, transportation, open space.

[14] If Land Uses from Lines 1 and 6 match, use a value of 1.0. Otherwise, refer to Regional Water Quality Equivalency Guidance for determination of appropriate Land Use Factor.

[15] Conventional Treatment Volume may be determined by subtracting the project's total "Deficit of Effectively Treated Stormwater" from the project's total Design Capture Volume. These values can be found in Version 2.0 of the County of San Diego Automated Control Worksheet on Line 48 of the BMP Performance Tab and Line 26 of the DCV Tab respectively.

Example 1: Green Street Compliance using **Conventional Treatment Elements**

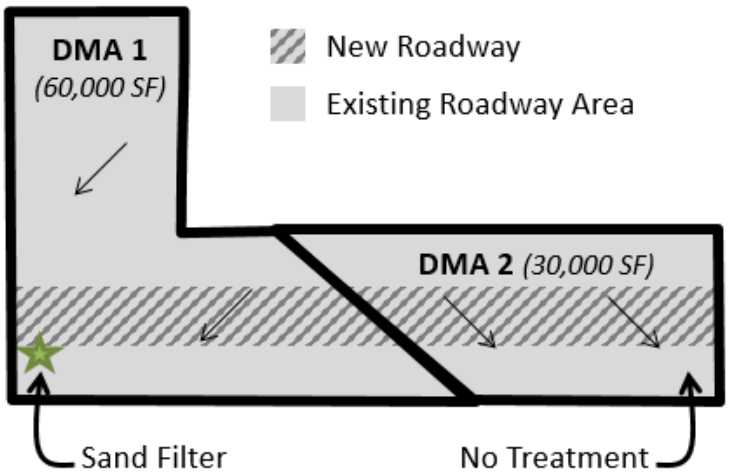
A green street project will create 20,000 SF of new impervious surface through the addition of a center turn lane on an existing road that currently has a vegetated center divide. The project is divided into two Drainage Management Areas (DMAs) as shown below. DMA 1 consists of impervious roadway surfaces that drain westerly to a proposed biofiltration basin. DMA 2 consists of impervious roadway surfaces that sheet flow in an easterly direction and leave the site without treatment. The project applicant demonstrates compliance with the Green Street Performance Standard as presented below.



Item			Value
Required Treatment Volume	1	Land Use of New Impervious Area	Transportation
	2	Total New Impervious Area	20,000 ft^2
	3	85th Percentile Rainfall Depth	0.70 in.
	4	Runoff Coefficient	0.90
	5	Required Treatment Volume *(See Excerpt 1 for calculations)*	1,050 ft^3
Provided Treatment Volume	6	Land Use of Treated Area	Transportation
	7	Land Use Factor	1.00
	8	Conventional Treatment Volume *(See Excerpt 2 for calculations)*	3,150 ft^3
	9	Alternative Treatment Volume	0 ft^3
	10	Final Treatment Volume	3,150 ft^3
Result	11	Is Project Green Street Compliant?	Compliant
	12	Optional Credit	2,100 ft^3

Example 2: Green Street Compliance using **Alternative Treatment Elements**

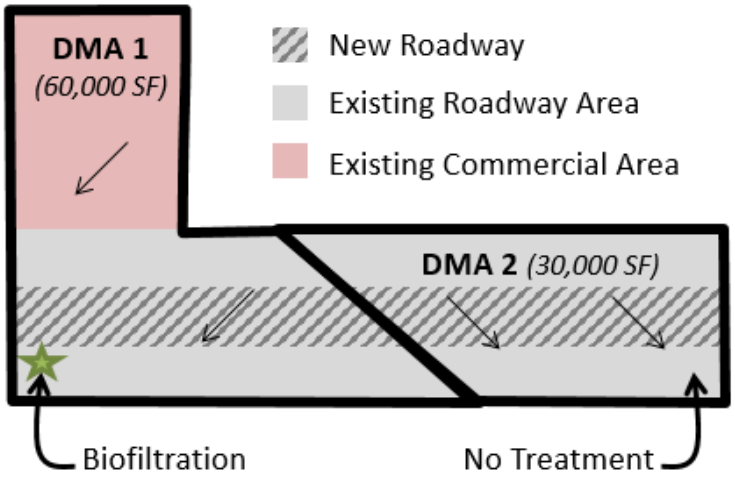
If the project described in the previous Example 1 implemented a sand filter instead of biofiltration, the project would demonstrate compliance with the Green Street Performance Standard as presented below.



Item			Value
Required Treatment Volume	1	Land Use of New Impervious Area	Transportation
	2	Total New Impervious Area	20,000 ft^2
	3	85th Percentile Rainfall Depth	0.70 in.
	4	Runoff Coefficient	0.90
	5	Required Treatment Volume *(See Excerpt 1 for calculations)*	1,050 ft^3
Provided Treatment Volume	6	Land Use of Treated Area	Transportation
	7	Land Use Factor	1.00
	8	Conventional Treatment Volume	0 ft^3
	9	Alternative Treatment Volume *(Applicant Calculations)*	3,150 ft^3
	10	Final Treatment Volume	3,150 ft^3
Result	11	Is Project Green Street Compliant?	Compliant
	12	Optional Credit *(Alternative treatment not eligible)*	0 ft^3

Example 3: Green Street Compliance using Conventional Treatment Elements for **Offsite Run-on**

If the project described in Example 1 provided stormwater treatment for offsite run-on from an adjacent commercial area, the project would demonstrate compliance with the Green Street Performance Standard as presented below.



Item			Value
Required Treatment Volume	1	Land Use of New Impervious Area	Transportation
	2	Total New Impervious Area	20,000 ft^2
	3	85th Percentile Rainfall Depth	0.70 in.
	4	Runoff Coefficient	0.90
	5	Required Treatment Volume *(See Excerpt 1 for calculations)*	1,050 ft^3
Provided Treatment Volume	6	Land Use of Treated Area	Transportation & Commercial
	7	Land Use Factor *(See Excerpt 3 for calculations)*	0.82
	8	Conventional Treatment Volume *(See Excerpt 2 for calculations)*	3,150 ft^3
	9	Alternative Treatment Volume	0 ft^3
	10	Final Treatment Volume	2,583 ft^3
Result	11	Is Project Green Street Compliant?	Compliant
	12	Optional Credit	1,533 ft^3

Excerpt 1 - Required Treatment Volume for New Impervious Surface of 20,000 SF

County of San Diego Automated Stormwater Pollutant Control Worksheet B.1 (Version 2.0)

Category	#	Description	*i*	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	Perf Std	unitless
	2	85th Percentile 24-hr Storm Depth	0.70	inches
	3	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	20,000	sq-ft
	4	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)		sq-ft
	5	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)		sq-ft
	6	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)		sq-ft
	7	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)		sq-ft
	8	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)		sq-ft
	9	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)		sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	yes/no
	11	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)		sq-ft
	12	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	13	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	14	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	15	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)		sq-ft
	16	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)		sq-ft
	17	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	18	Number of Tree Wells Proposed per SD-A		#
	19	Average Mature Tree Canopy Diameter		ft
	20	Number of Rain Barrels Proposed per SD-E		#
	21	Average Rain Barrel Size		gal
Initial Runoff Factor Calculation	22	Total Tributary Area	20,000	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.90	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	unitless
	25	Initial Weighted Runoff Factor	0.90	unitless
	26	Initial Design Capture Volume	1,050	cubic-feet
Dispersion Area Adjustments	27	Total Impervious Area Dispersed to Pervious Surface	0	sq-ft
	28	Total Pervious Dispersion Area	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	0.90	unitless
	32	Design Capture Volume After Dispersion Techniques	1,050	cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction	0	cubic-feet
	34	Total Rain Barrel Volume Reduction	0	cubic-feet
Results	35	Final Adjusted Runoff Factor	0.90	unitless
	36	Final Effective Tributary Area	18,000	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	0	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	1,050	cubic-feet

Excerpt 2- Summary of Stormwater Pollutant Control Calculations (Part 1 of 2)

County of San Diego Automated Stormwater Pollutant Control Worksheet B.1 (Version 2.0)

Category	#	Description	*ii*	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	DMA 1	unitless
	2	85th Percentile 24-hr Storm Depth	0.70	inches
	3	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	60,000	sq-ft
	4	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)		sq-ft
	5	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)		sq-ft
	6	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)		sq-ft
	7	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)		sq-ft
	8	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)		sq-ft
	9	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)		sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	yes/no
	11	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)		sq-ft
	12	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	13	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	14	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	15	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)		sq-ft
	16	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)		sq-ft
	17	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	18	Number of Tree Wells Proposed per SD-A		#
	19	Average Mature Tree Canopy Diameter		ft
	20	Number of Rain Barrels Proposed per SD-E		#
	21	Average Rain Barrel Size		gal
Initial Runoff Factor Calculation	22	Total Tributary Area	60,000	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.90	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	unitless
	25	Initial Weighted Runoff Factor	0.90	unitless
	26	Initial Design Capture Volume	3,150	cubic-feet
	27	~~Total Impervious Area Dispersed to Pervious Surface~~	~~0~~	~~sq-ft~~
Dispersion Area Adjustments	28	Total Pervious Dispersion Area	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	0.90	unitless
	32	Design Capture Volume After Dispersion Techniques	3,150	cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction	0	cubic-feet
	34	Total Rain Barrel Volume Reduction	0	cubic-feet
Results	35	Final Adjusted Runoff Factor	0.90	unitless
	36	Final Effective Tributary Area	54,000	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	0	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	3,150	cubic-feet

Excerpt 2- Summary of Stormwater Pollutant Control Calculations (Part 2 of 2)

County of San Diego Automated Stormwater Pollutant Control Worksheet B.3 (Version 2.0)

Category	#	Description	ii	Units
BMP Inputs	1	Drainage Basin ID or Name	DMA 1	sq-ft
	2	Design Infiltration Rate Recommended	0.000	in/hr
	3	Design Capture Volume Tributary to BMP	3,150	cubic-feet
	4	Is BMP Vegetated or Unvegetated?	Vegetated	unitless
	5	Is BMP Impermeably Lined or Unlined?	Lined	unitless
	6	Does BMP Have an Underdrain?	Underdrain	unitless
	7	Does BMP Utilize Standard or Specialized Media?	Standard	unitless
	8	Provided Surface Area	1,620	sq-ft
	9	Provided Surface Ponding Depth	6	inches
	10	Provided Soil Media Thickness	21	inches
	11	Provided Gravel Thickness (Total Thickness)	14	inches
	12	Underdrain Offset	3	inches
	13	Diameter of Underdrain or Hydromod Orifice (Select Smallest)	8.00	inches
	14	Specialized Soil Media Filtration Rate		in/hr
	15	Specialized Soil Media Pore Space for Retention		unitless
	16	Specialized Soil Media Pore Space for Biofiltration		unitless
	17	Specialized Gravel Media Pore Space		unitless
Retention Calculations	18	Volume Infiltrated Over 6 Hour Storm	0	cubic-feet
	19	Ponding Pore Space Available for Retention	0.00	unitless
	20	Soil Media Pore Space Available for Retention	0.05	unitless
	21	Gravel Pore Space Available for Retention (Above Underdrain)	0.00	unitless
	22	Gravel Pore Space Available for Retention (Below Underdrain)	0.40	unitless
	23	Effective Retention Depth	2.25	inches
	24	Fraction of DCV Retained (Independent of Drawdown Time)	0.10	ratio
	25	Calculated Retention Storage Drawdown Time	120	hours
	26	Efficacy of Retention Processes	0.12	ratio
	27	Volume Retained by BMP (Considering Drawdown Time)	381	cubic-feet
	28	Design Capture Volume Remaining for Biofiltration	2,769	cubic-feet
Biofiltration Calculations	29	Max Hydromod Flow Rate through Underdrain	2.8291	cfs
	30	Max Soil Filtration Rate Allowed by Underdrain Orifice	75.44	in/hr
	31	Soil Media Filtration Rate per Specifications	5.00	in/hr
	32	Soil Media Filtration Rate to be used for Sizing	5.00	in/hr
	33	Depth Biofiltered Over 6 Hour Storm	30.00	inches
	34	Ponding Pore Space Available for Biofiltration	1.00	unitless
	35	Soil Media Pore Space Available for Biofiltration	0.20	unitless
	36	Gravel Pore Space Available for Biofiltration (Above Underdrain)	0.40	unitless
	37	Effective Depth of Biofiltration Storage	14.60	inches
	38	Drawdown Time for Surface Ponding	1	hours
	39	Drawdown Time for Effective Biofiltration Depth	3	hours
	40	Total Depth Biofiltered	44.60	inches
	41	Option 1 - Biofilter 1.50 DCV: Target Volume	4,154	cubic-feet
	42	Option 1 - Provided Biofiltration Volume	4,154	cubic-feet
	43	Option 2 - Store 0.75 DCV: Target Volume	2,077	cubic-feet
	44	Option 2 - Provided Storage Volume	1,971	cubic-feet
	45	Portion of Biofiltration Performance Standard Satisfied	1.00	ratio
Result	46	Do Site Design Elements and BMPs Satisfy Annual Retention Requirements?	Yes	yes/no
	47	Overall Portion of Performance Standard Satisfied (BMP Efficacy Factor)	1.00	ratio
	48	**Deficit of Effectively Treated Stormwater**	0	cubic-feet

Excerpt 3 – Determination of Land Use Factor for Example 2

Water Quality Equivalency Automated Land Use Factor Worksheets (Version 1.0)

Automated Spreadsheet Calculation for Worksheet A.5: Land Use Factor Determination (Version 1.0)

Land Use Designation	ACP Tributary Characteristics		Reference Tributary Characteristics [2]		Relative Pollutant Concentrations by Land Use [3]						
	Area (Acres)	Runoff Factor [1]	Area (Acres)	Runoff Factor [1]	TSS	TP	TN	TCu	TPb	TZn	FC
Agriculture		0.10		0.10	0.45	1.00	1.00	1.00	1.00	0.59	1.00
Commercial	0.69	0.80		0.80	0.13	0.16	0.16	0.56	0.48	1.00	0.87
Education		0.50		0.50	0.13	0.20	0.11	0.14	0.25	0.39	0.13
Industrial		0.90		0.90	0.13	0.19	0.15	0.54	0.68	0.89	0.49
Multi Family Residential		0.60		0.60	0.10	0.13	0.13	0.14	0.15	0.29	0.27
Orchard		0.10		0.10	0.18	0.17	0.67	1.00	1.00	0.59	0.11
Rural Residential		0.30		0.30	1.00	0.51	0.14	0.10	0.71	0.13	0.19
Single Family Residential		0.40		0.40	0.13	0.20	0.15	0.27	0.43	0.35	0.63
Transportation	0.69	0.90	0.46	0.90	0.11	0.26	0.12	0.53	0.31	0.62	0.12
Vacant / Open Space		0.10		0.10	0.16	0.10	0.10	0.12	0.10	0.10	0.10
Water		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.38	-	0.46	-	-	-	-	-	-	-	-
	Relative Pollutant Concentration for ACP Tributary [4]				0.12	0.21	0.14	0.54	0.39	0.80	0.47
	Relative Pollutant Concentration for Reference Tributary [4]				0.11	0.26	0.12	0.53	0.31	0.62	0.12
	Watershed Management Area				San Diego River						
	Hydrologic Unit				San Diego (907.00)						
	Land Use Factor [5]				-	0.82	**1.16**	-	-	-	**3.94**

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K.2.2 Green Streets Guidelines

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Green Streets Guidelines

A Guide to Green Street Implementation in the County of San Diego







January 2019

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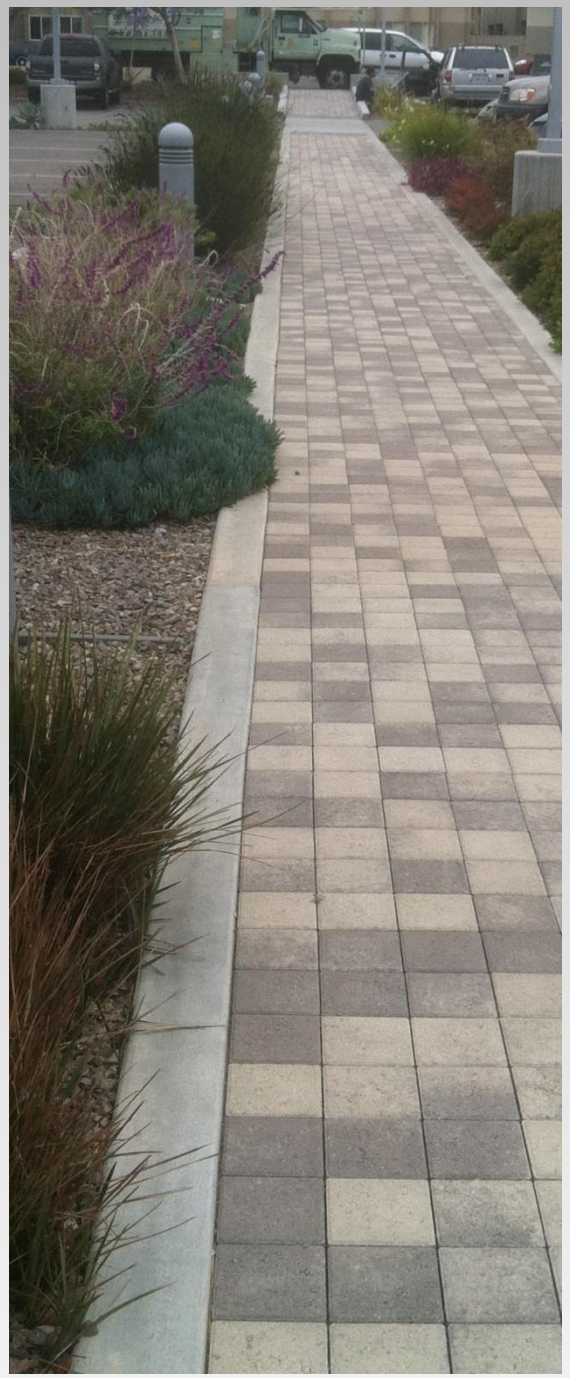

WHAT IS A GREEN STREET?

Pavement on roadways can contribute to excess stormwater runoff and increased levels of pollutants in the County's waterways. Green infrastructure reduces stormwater runoff and improves water quality. The Green Streets program incorporates a wide variety of Green Infrastructure design elements including, but not limited to: tree wells, dispersion areas and biofiltration, and permeable pavement. The use of Green Streets offers the capability of transforming a significant stormwater and pollutant source into an innovative treatment system.

Additionally, the State of California is in the midst of a severe drought, with water years of 2012-14 recording the driest three consecutive years in the state's history, as well as setting new records for statewide average temperatures. On April 1st, 2015 Governor Brown signed executive order B-29-15 setting the first mandatory statewide water restrictions. This order prohibits ornamental turf on public street medians, and requires a reduction in potable water use for irrigation. The Green Streets program promotes water conservation through the use of low water use and drought tolerant plants (xeriscape) and improving groundwater supplies through infiltration.

Green infrastructure, unlike traditional "gray" infrastructure approaches to stormwater management, provides multiple benefits to communities. Planting more trees and landscaping in public spaces cleans the air, cools the land, provides more habitat for wildlife, adds green maintenance jobs, increases property values and promotes a better, healthier quality of life for San Diego County residents and visitors.
Under the Municipal Separate Storm Sewer System (MS4) Permit for San Diego Region (Permit [Order No. R9-2013-0001]), the County may make Priority Development Project (PDP) Exemptions for projects redeveloping or retrofitting existing paved roads, streets, and alleys as "EPA Green Streets." This is accomplished by meeting the criteria set forth in section 1.4.3 of the County of San Diego BMP Design Manual and based in part on the EPA publication "Green Streets: Municipal Handbook, Managing Wet Weather with Green Infrastructure."

This guide is to be used along with the County's BMP Design Manual for meeting stormwater requirements within the County's public right-of-way. These Green Streets measures, when implemented, will ensure the County remains a green community for many years to come.

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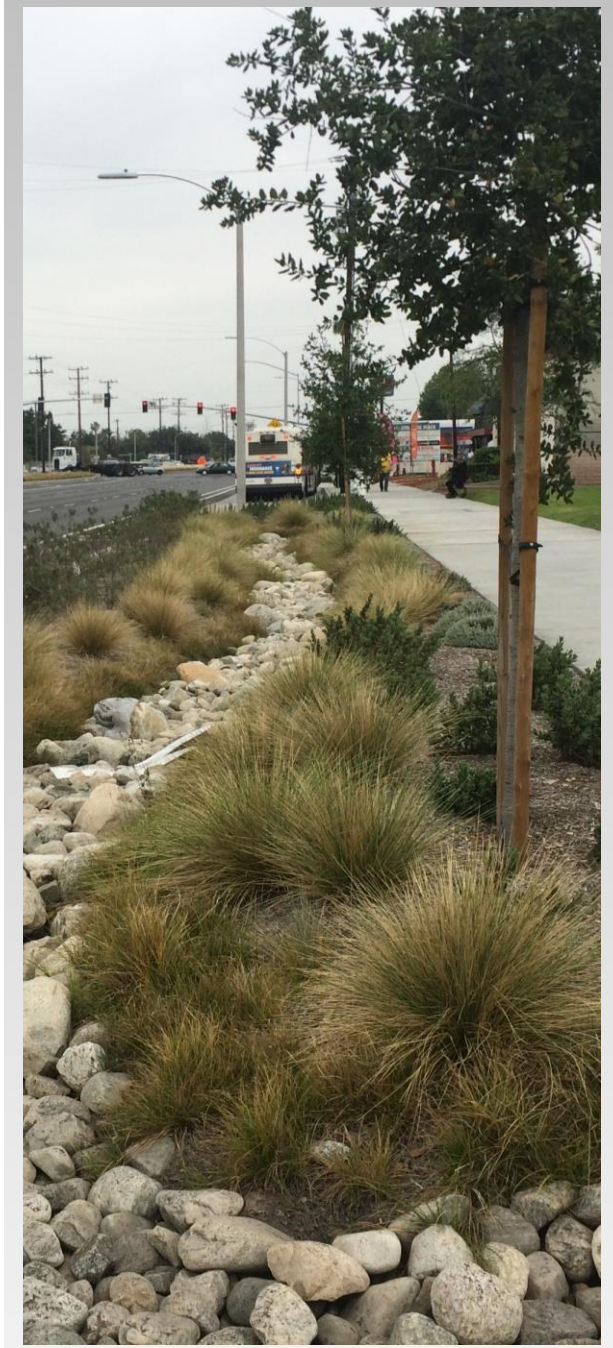
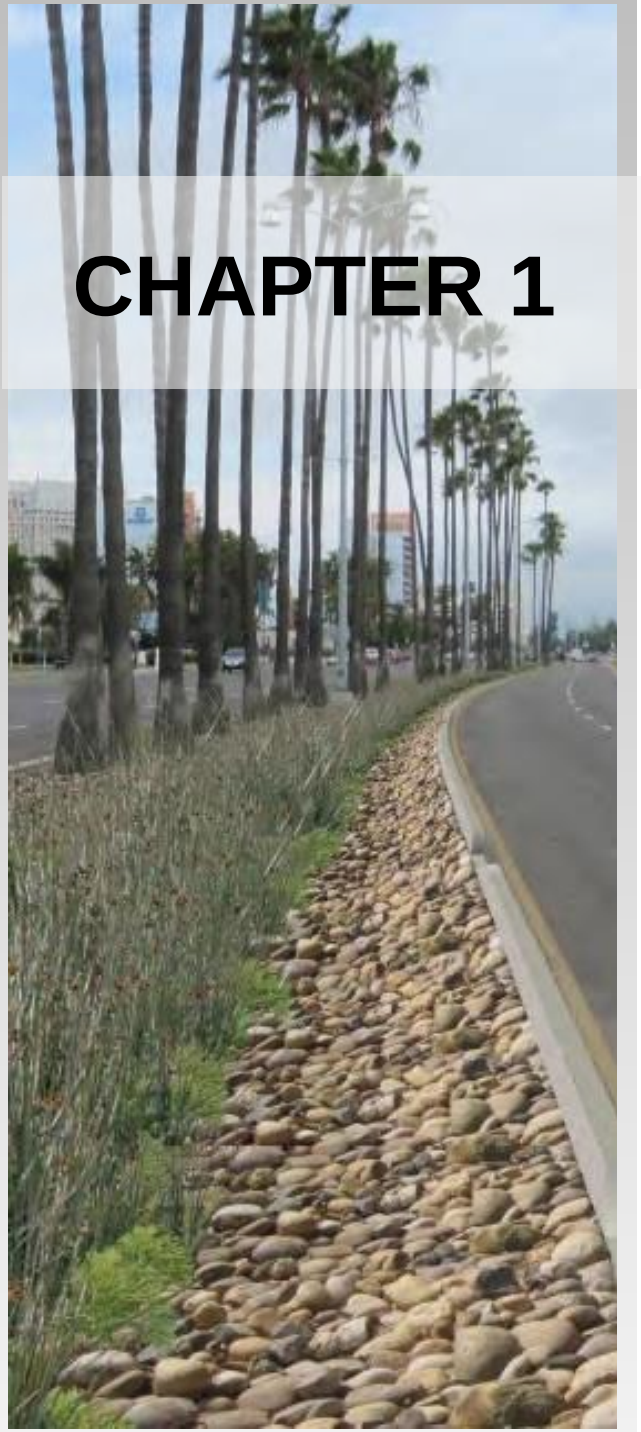




CHAPTER 1 Introduction to Green Streets

1.1 INTRODUCTION

These guidelines have been prepared to assist in the design and construction of projects that retrofit or redevelop existing paved streets and roads. These Guidelines and Standards have been developed in accordance with the United States Environmental Protection Agency Green Streets Guidance "Green Streets: Municipal Handbook, Managing Wet Weather with Green Infrastructure."

These Guidelines may also be used to assist in the design and construction of new or retrofit paved sidewalks, bicycle lanes, or trails.

The functional goals of these guidelines are to:

- Provide source control of stormwater;
- Limit stormwater transport and pollutant conveyance to the collection system;
- Restore predevelopment hydrology to the extent possible by slowing the runoff down and allowing for infiltration; and
- Provide environmentally enhanced roads.

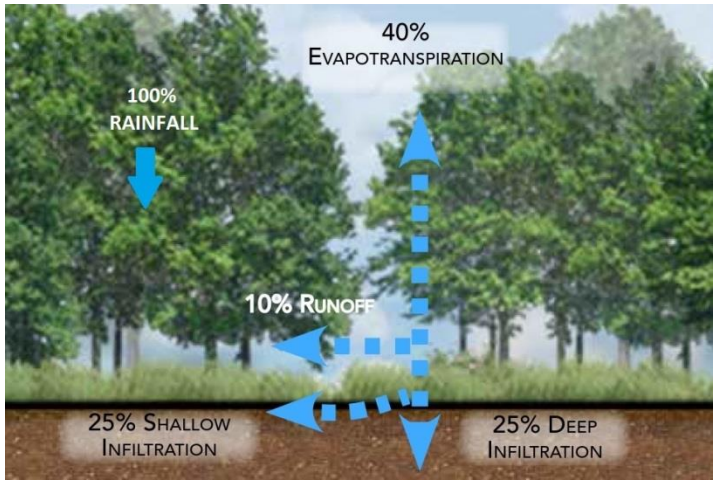
A review of existing County policies has been performed and included in the accompanying Green Streets Standards document that includes an addendum to the Public Road Standards, as well as Green Streets Standard Drawings and Specifications.

Green Streets configurations and locations presented in this guideline are schematic/conceptual in nature. The configurations (or locations) could be modified as long as the design and construction details are in conformance with the Green Streets technical documents (i.e. – Green Streets Supplement to Public Road Standards, Standard Drawings, Specifications, Plant List, and Maintenance Schedule).

1.2 THE NATURAL AND DEVELOPED ENVIRONMENT

NATURAL AREAS

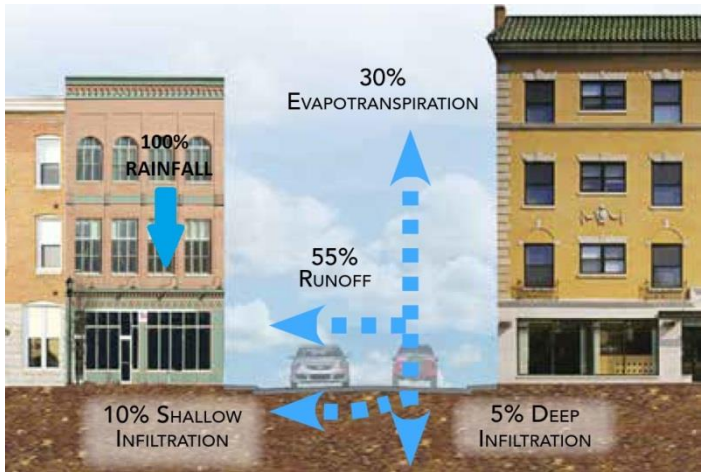
In areas such as meadows, thickets, woodlands, and parks, rain can soak into the ground and be used by plants. Trees and shrubs intercept rainfall and it slowly trickles down to the ground where it is absorbed by mulch and humic soil. Shaded areas are cooler, moister and provide wildlife habitat. Very little rainwater runs off the ground.



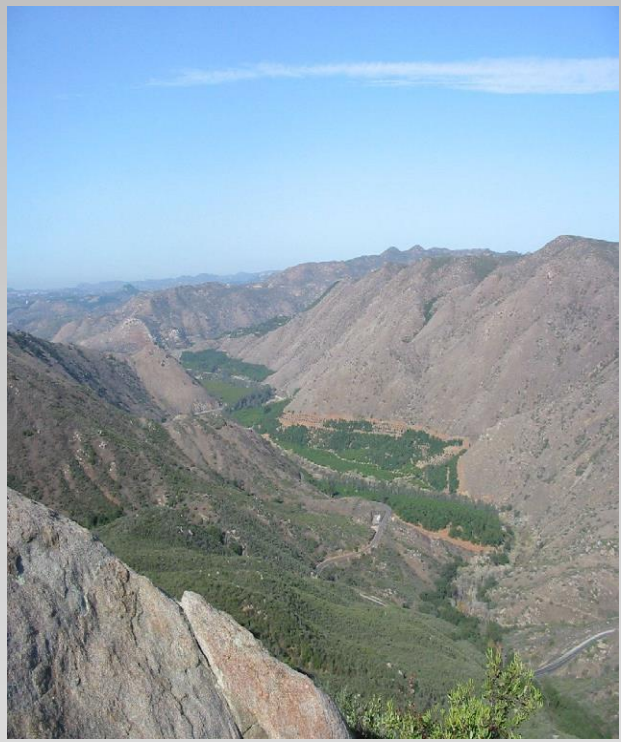
Natural Area Diagram
(Source: DDOT, 2014)

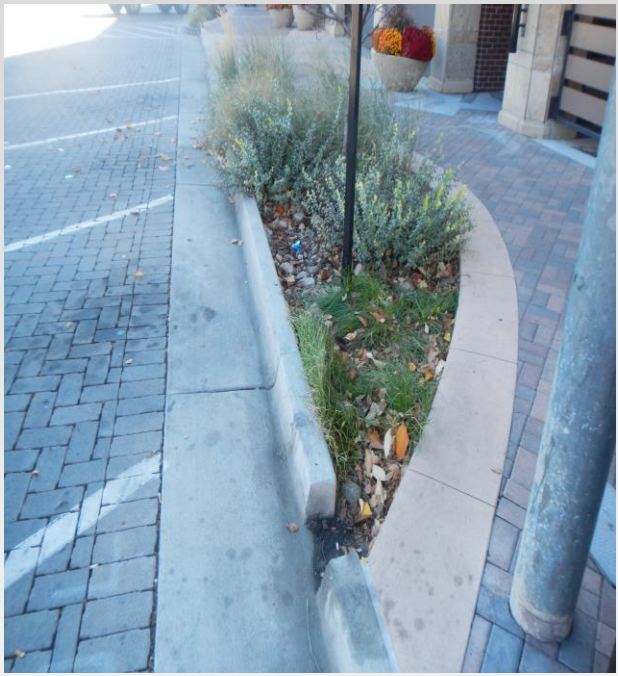
URBAN AREAS

In urban areas, building rooftops, streets, alleys, sidewalks, and other paved surfaces are smooth and mostly impervious. Very little rain has a chance to soak into the ground. These paved urban areas are hotter and offer very little wildlife habitat. Most of the rain that falls in the urban areas quickly runs off impervious surfaces picking up pollutants and carrying them into storm drains. These flows quickly combine to create flash floods that degrade downstream waterways.

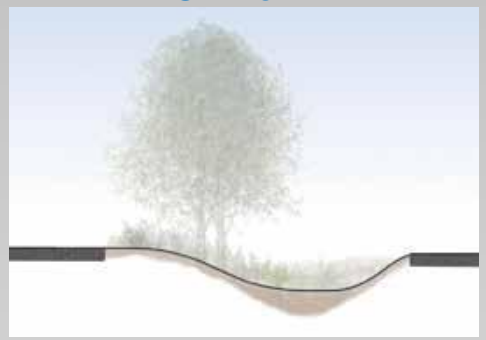


Urban Area Diagram
(Source: DDOT, 2014)



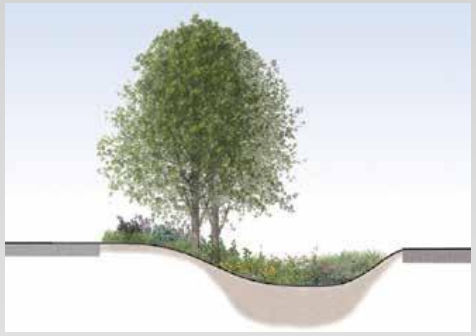


STORMWATER CAPTURE



Runoff from impervious surfacing

STORE



Store and retain captured runoff

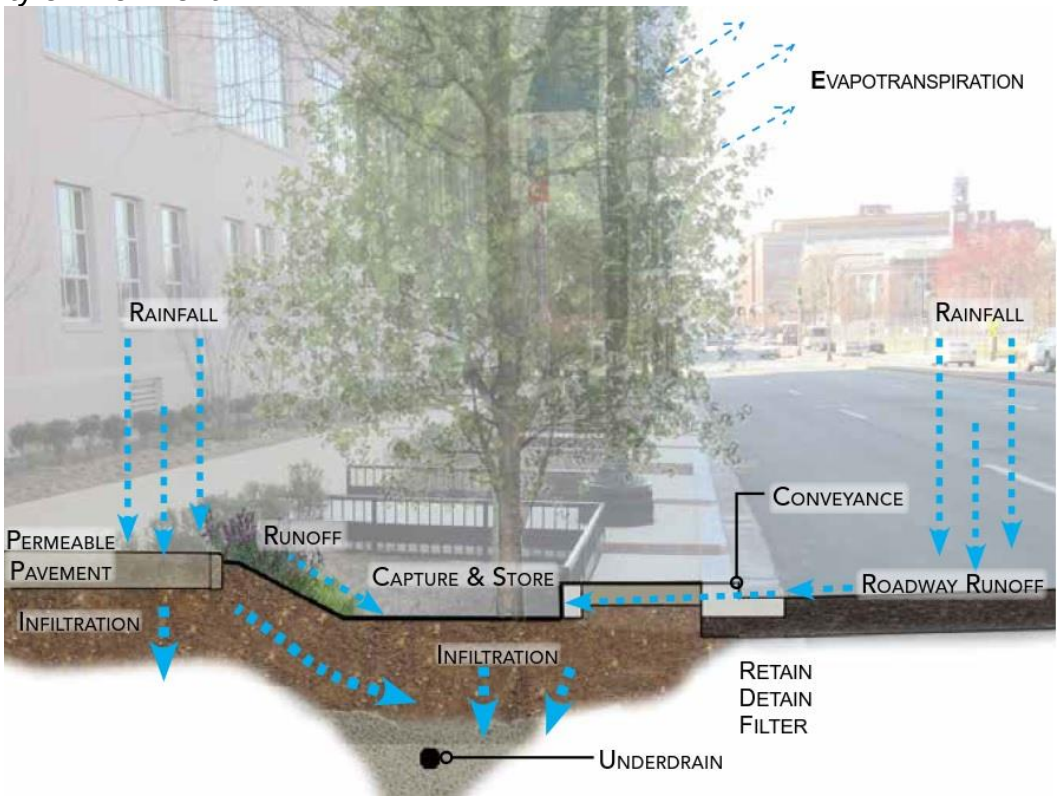
INFILTRATE/EVAPOTRANSPIRE



Water is infiltrated into the ground, evapotranspired by plants or drained

1.3 GREENING THE STREETS

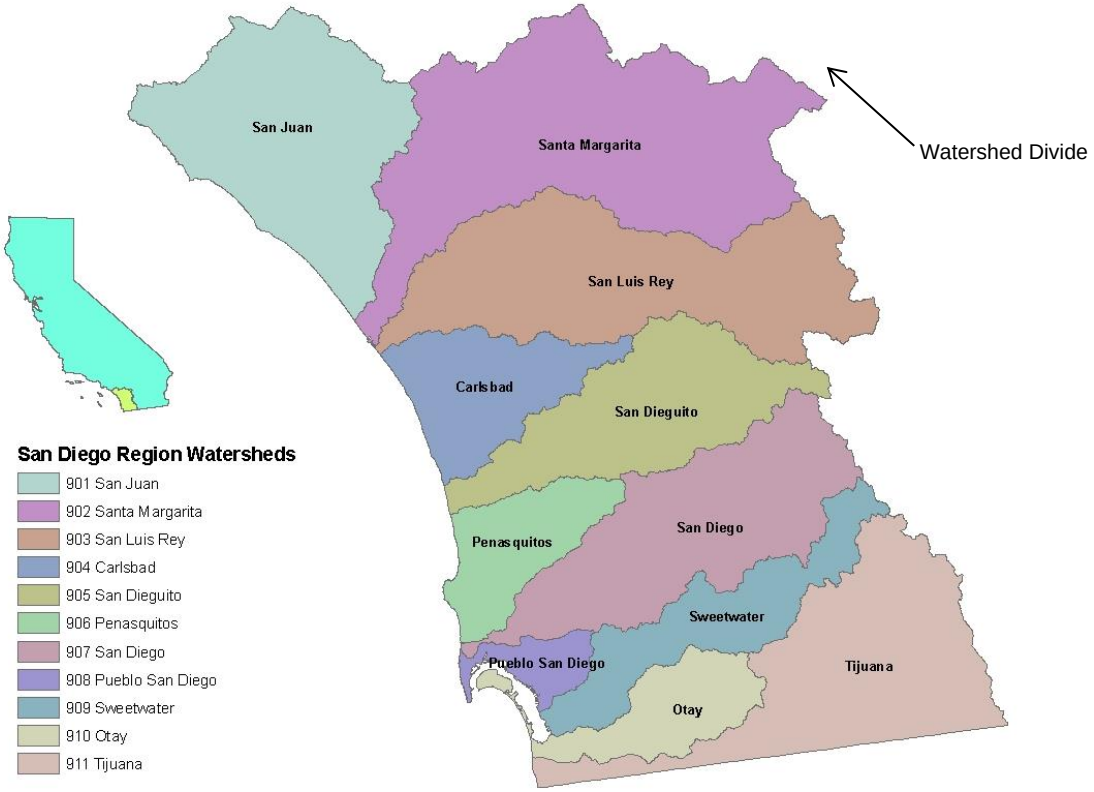
Green Streets, which includes Green Infrastructure (GI), incorporates elements found in natural areas into the County road right of way. GI is the living network that connects impervious areas to landscape areas, natural areas, and waterways. GI captures rainfall; cools buildings and pavement; and creates natural pathways for wildlife. GI includes Low Impact Development (LID) techniques, which mimic nature to capture and treat stormwater as close to the source as possible. When implemented, GI creates living green streets that capture, store, and infiltrate stormwater to treat it as a resource and improve the County environment.

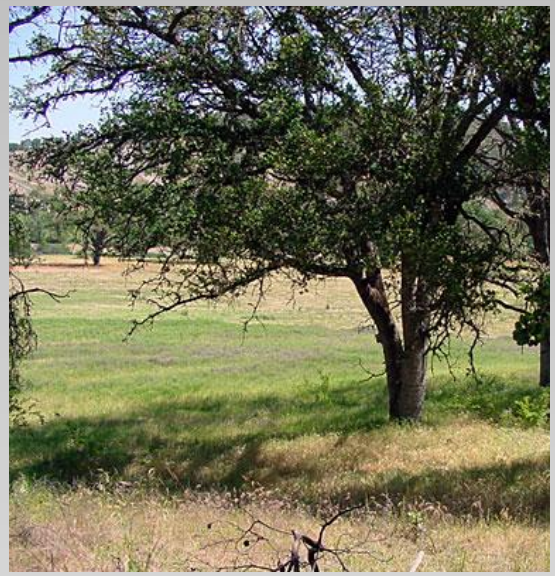


Green Streets Stormwater Diagram
(Source: DDOT, 2014)

1.4 THE COUNTY ENVIRONMENT

The County of San Diego is a unique environment made up of natural, rural, and urban areas. When rain falls in the County and becomes stormwater runoff, it flows through eleven major watersheds. Stormwater carries the pollutants, trash, and warmer temperatures it collects from roads, buildings, and other impervious surfaces and delivers them into our rivers, streams, bays, lagoons, and ocean. Urbanization and other land use changes in the County can modify the natural watershed hydrologic processes and stormwater runoff characteristics resulting in increased stormwater runoff and erosion.





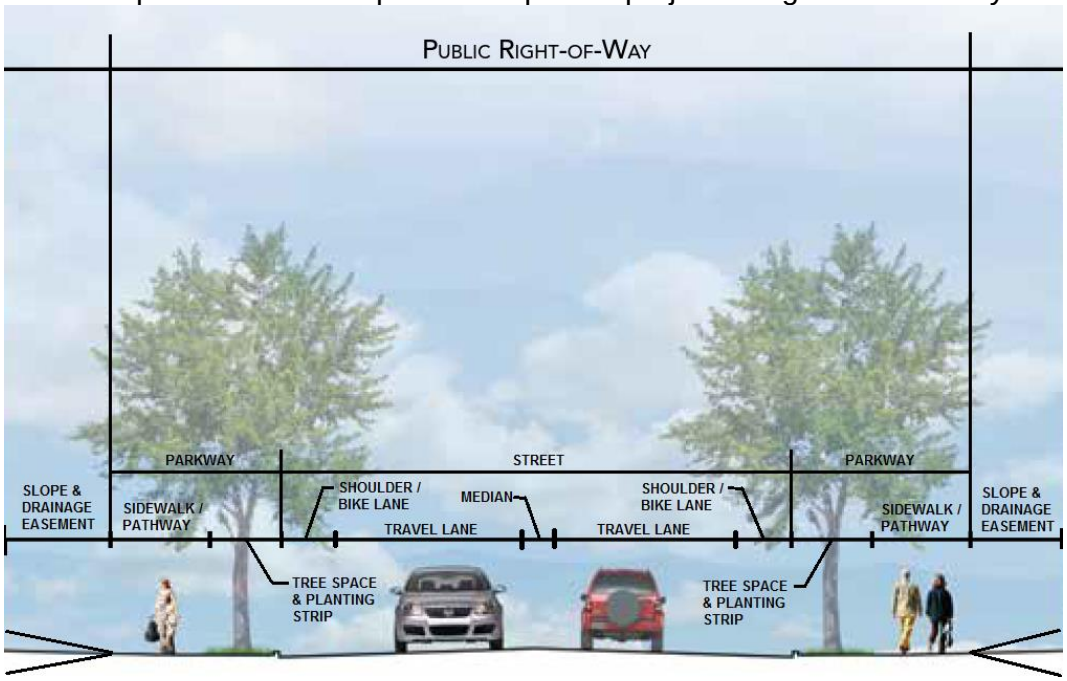






1.5 COUNTY RIGHT-OF-WAY

Land within the road right-of-way (ROW) presents a significant opportunity to reduce runoff and improve the urban environment through Green Streets. This manual introduces techniques to install green infrastructure in the median, street, bike lane, shoulder, parkway, and slope and drainage easements. This guide and the "Green Streets Standards," which includes supplements to the Public Road Standards, Green Streets Standard Drawings, and specifications, should be used the maximum extent practicable for all public and private project design in the County ROW.



ROAD RIGHT-OF-WAY DIAGRAM
(Source: DDOT, 2014)

Early in the green street planning and design process careful consideration should be given to the location of existing and proposed utilities and appurtenances (utility poles, vaults, and pedestals), fire hydrants, traffic signals, signage, mail boxes, bus stops, and their interaction with the proposed green street measures.







CHAPTER 2 Green Streets Strategies

2.1 Introduction

Green Streets, including Green Infrastructure (GI), and Low Impact Development (LID) solutions are intended to be sustainable, attractive, and cost effective. The range of opportunities includes tree wells, landscape areas, dispersion areas, biofiltration, permeable pavement, and removal of impervious pavement. These strategies use natural processes to reduce the volume of runoff, peak flow, and pollutants. This chapter will focus on five (5) areas appropriate for use in the road right-of-way.

Tree Wells

Trees are a powerful green streets tool due to their ability to intercept water on leaves, slowly deliver it to the mulch and soil, absorb it through root systems, and transpire it as water vapor directly back to the atmosphere.

Dispersion Areas

Dispersion areas disconnect impervious areas from directly running to the storm drain system. Dispersion areas use the natural functions of plants, mulch, and soils to remove pollutants and slow stormwater runoff. The strategy uses storage, sediment capture, and biological processes to clean the water. These mimic processes that occur in nature before water reaches waterways.

Biofiltration

Biofiltration facilities are vegetated surface water systems that filter water through vegetation, and soil or biofiltration soil media prior to discharge to the storm drain system. They also utilize shallow depressions to provide storage and evapotranspiration.

Permeable Pavement

Permeable paving systems provide a hard surface, while allowing water to flow through to the underlying soils instead of directly to the drainage system. The areas where this strategy may be used include: sidewalks, pathways, medians, and parking lanes.

Remove Impervious Pavement

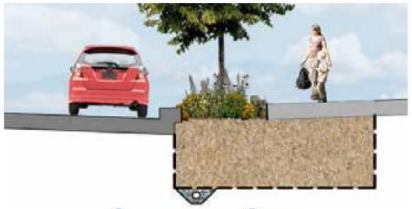
Roadway improvement projects have the opportunity to remove portions of impervious pavement within the right of way and replace it with permeable material.

2.2 TREE WELLS

WHY ARE TREES IMPORTANT?

Trees make a streetscape feel welcoming, help manage stormwater, and reduce the urban heat island effect by providing shade. An urban heat island remains significantly warmer than the surrounding rural areas due to less vegetation. Trees promote air quality, natural habitat, the human environment, and well-being.

Trees in a congested road right-of-way are confined to small planting areas where they struggle to reach a mature size or live a long life. Through the use of Structural Soil, Structural Cell, or Suspended Sidewalk techniques, soil volumes and space for tree roots to grow uninhibited can be greatly increased. These techniques also allow for more water and air to reach the tree roots.



STRUCTURAL SOILS

A specific mix of stone and soil that supports the sidewalk while allowing tree roots to grow normally.



STRUCTURAL CELLS

Manufactured cells support the sidewalk allowing uncompacted soil to promote tree roots to grow below.



SUSPENDED SIDEWALK

Thickened sidewalk with reinforcement and/or footings can be used allowing tree roots to grow below the sidewalk.

(Source: DDOT, 2014)



Soil Volume Sizing

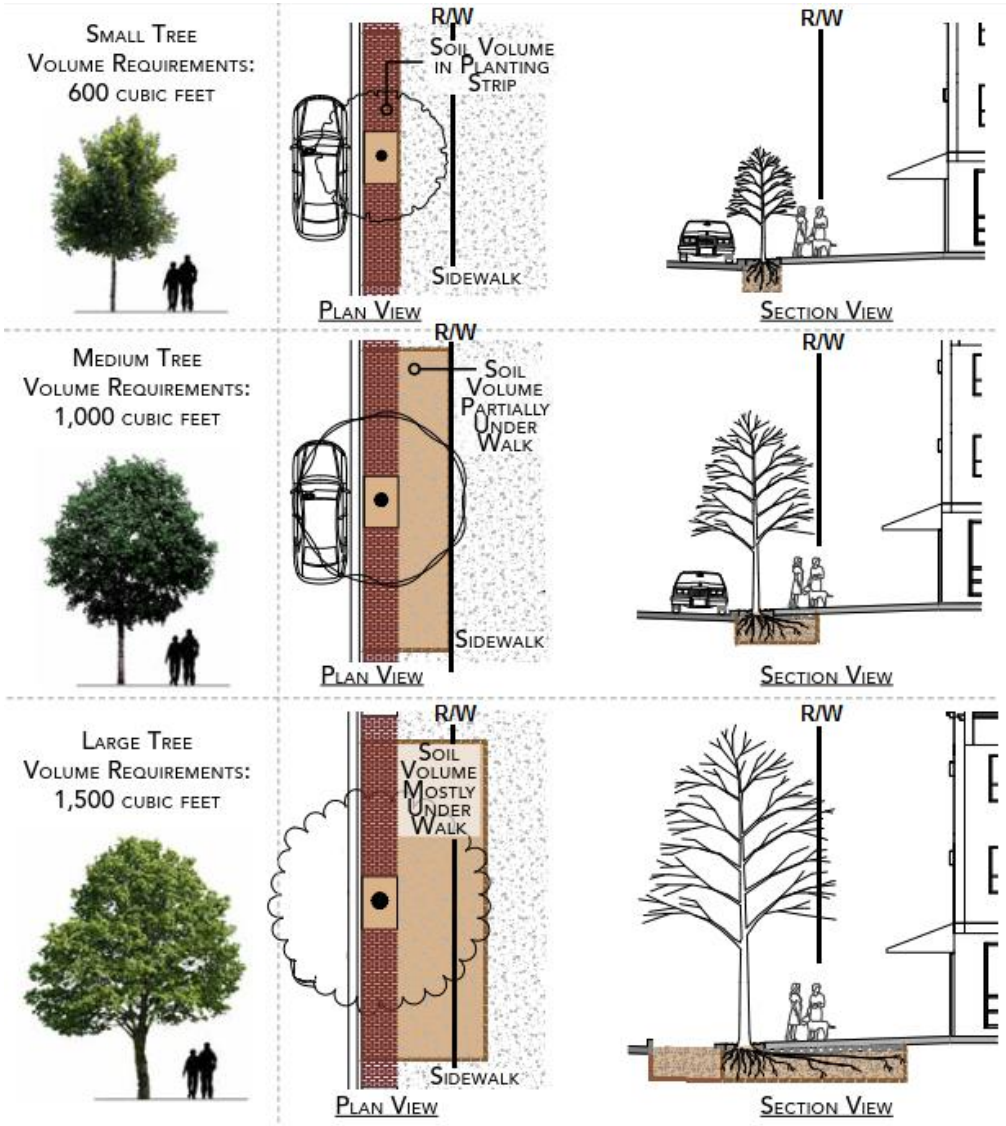
- Adequate planting soil space provides the nutrients, water, air, and root space that trees need to have a long, healthy life.
- The planting soil volume required depends on the fully-grown tree size (generally two cubic feet of soil per one square foot of the tree's mature drip line area).
- Planting soil amendments for trees should be three-feet deep; the length and width must ensure the appropriate volume for the tree species and site.

Other Considerations

- Provide as much open space as possible for the tree to allow the tree to grow and access water.
- Providing structural soils, suspended sidewalks, or structural slabs to edges of paved areas prevents planting soil compaction and encourages tree roots to extend further and into adjacent green areas.
- Evaluate temporary and permanent irrigation needs
- Evaluate utility locations and required clearance.

Design Issues

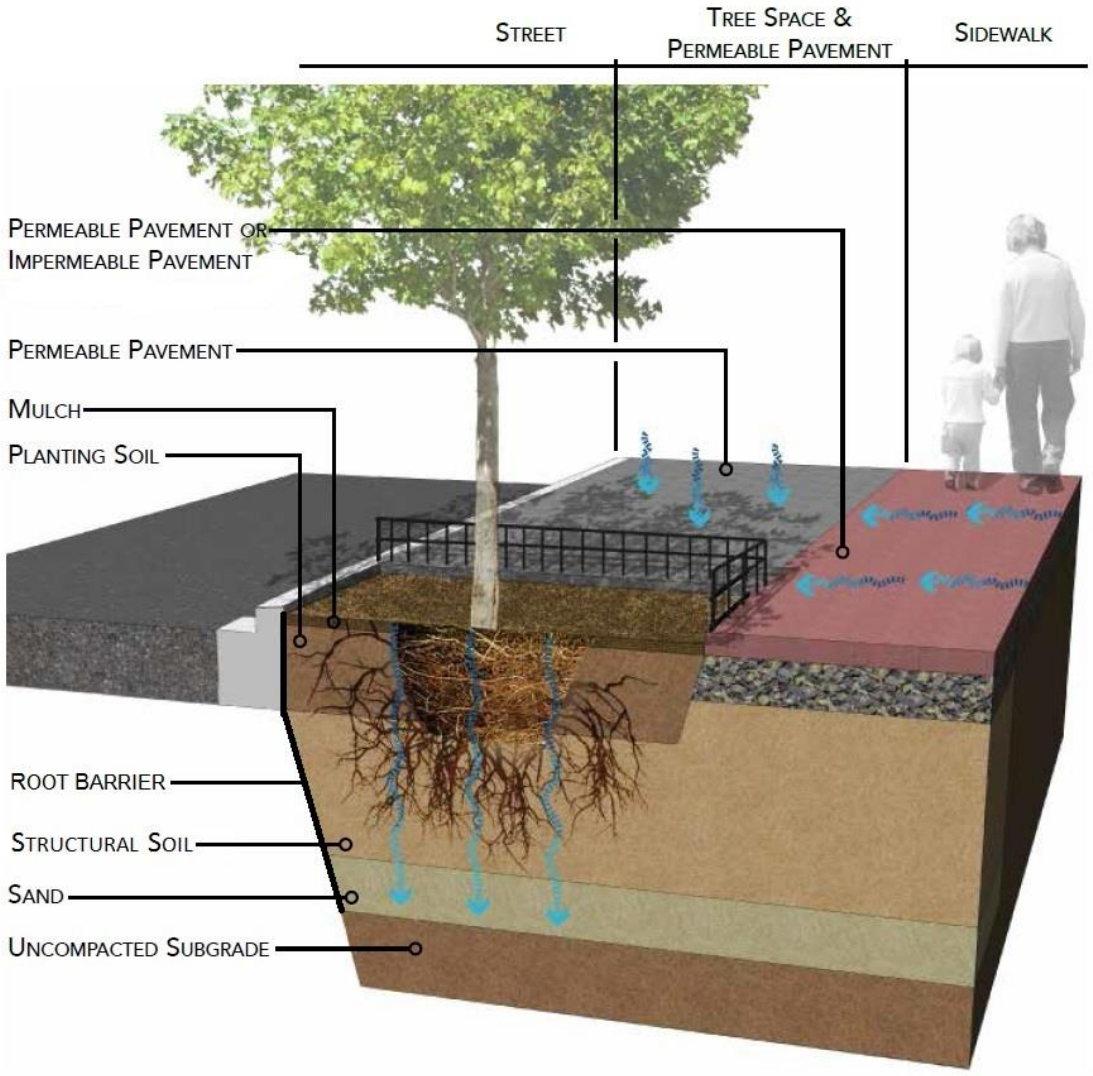
- Maintenance Access: allow for maintenance access from road
- Pedestrian Considerations: allow for 18-inch minimum setback from curb and minimum 48-inch sidewalk width. Comply with ADA requirements.
- Suspended sidewalks and structural slabs/cells: may require evaluation by geotechnical and structural engineers
- Clear Recovery Zone: Consider clear recovery zone requirements and minimum setback requirements.
- Tree Size: Evaluate tree size versus the right of way width.



(Source: DDOT, 2014)

Note: Trees may also be located behind the sidewalk/pathway.

TREE WELLS – WHAT'S UNDERNEATH?



(Source: DDOT, 2014)

Note: Other options include suspended sidewalks and structural cells as shown on page K-30.

PUTTING IT TOGETHER

- Permeable Paver: Permeable pavers allow water to infiltrate into the planting soil to be used by the trees.
- Mulch: A soil topping that may be organic or inorganic material which covers the planting soil to retain water and trap pollutants.
- Planting Soil: Uncompacted and amended soil mix allows root growth when used in open areas, with structural cells, or suspended sidewalks.
- Structural Soil: Supports pavement and allows root growth.
- Sand: Acts as a drainage layer for excess stormwater (when needed).
- Uncompacted Subgrade: Existing soil where stormwater may infiltrate.

WATER TREES WITH STORMWATER

In addition to large planting soil volumes, trees need sufficient water, air, and nutrients to be successful in the road right-of-way environment. Tree space design includes integrating opportunities for directing stormwater into the soil. See the County of San Diego's Water Conservation in Landscaping Ordinance for irrigation requirements.



2.3 Types of Dispersion Areas and Biofiltration

What Are Dispersion Areas and Biofiltration?

Dispersion Areas and Biofiltration are landscape systems that filter pollutants and sediment from runoff. The layers of plant material, mulch, biofiltration soil media (a mix of planting soil, sand, and compost), and stone capture metals, nutrients, and bacteria that would otherwise flow into the surrounding creeks and rivers. The rainwater is held in the planting bed until it infiltrates into the ground or evaporates. The entire system can fit into small spaces, making it adaptable to tree spaces along the road, planter boxes, curb extensions, medians, roundabouts, and open areas.



Planter Boxes

Runoff enters the facility through curb cuts. Excess runoff exits through the same curb cuts or into drains located in the planting area.



Curb Extension

Runoff enters the facility following the existing curb line. Excess runoff flows through the system and returns to the curb and gutter downstream.



Medians

Runoff follows the existing curb line and enters the facility through curb cuts. Excess runoff flows through the system or into drain inlets.



Bulb-out at Intersection

Runoff follows the existing curb line and enters the facility through curb cuts. Excess runoff flows through the system or into drain inlets.



VEGETATED FILTER STRIP

Runoff enters the facility directly via sheet flow. Excess runoff flows through the system to a drain inlet downslope.



SWALES

Runoff enters the facility directly or through curb cuts. Excess runoff flows through the system to a drainage outlet.



TRAFFIC CIRCLE/ROUNDABOUT

Runoff follows the existing curb line and enters the facility through curb cuts. Excess runoff flows through the system or into drains located in the planting area.



OPEN AREAS

Runoff drains into the planting area from the surrounding area. The size and shape can fit the available space.



(Source: County of San Diego, 2014)

Where to Use?

- Street with no adjacent on-street parking.
- Where Tree wells are needed.
- Street where bike lane is adjacent to curb.

Limitations

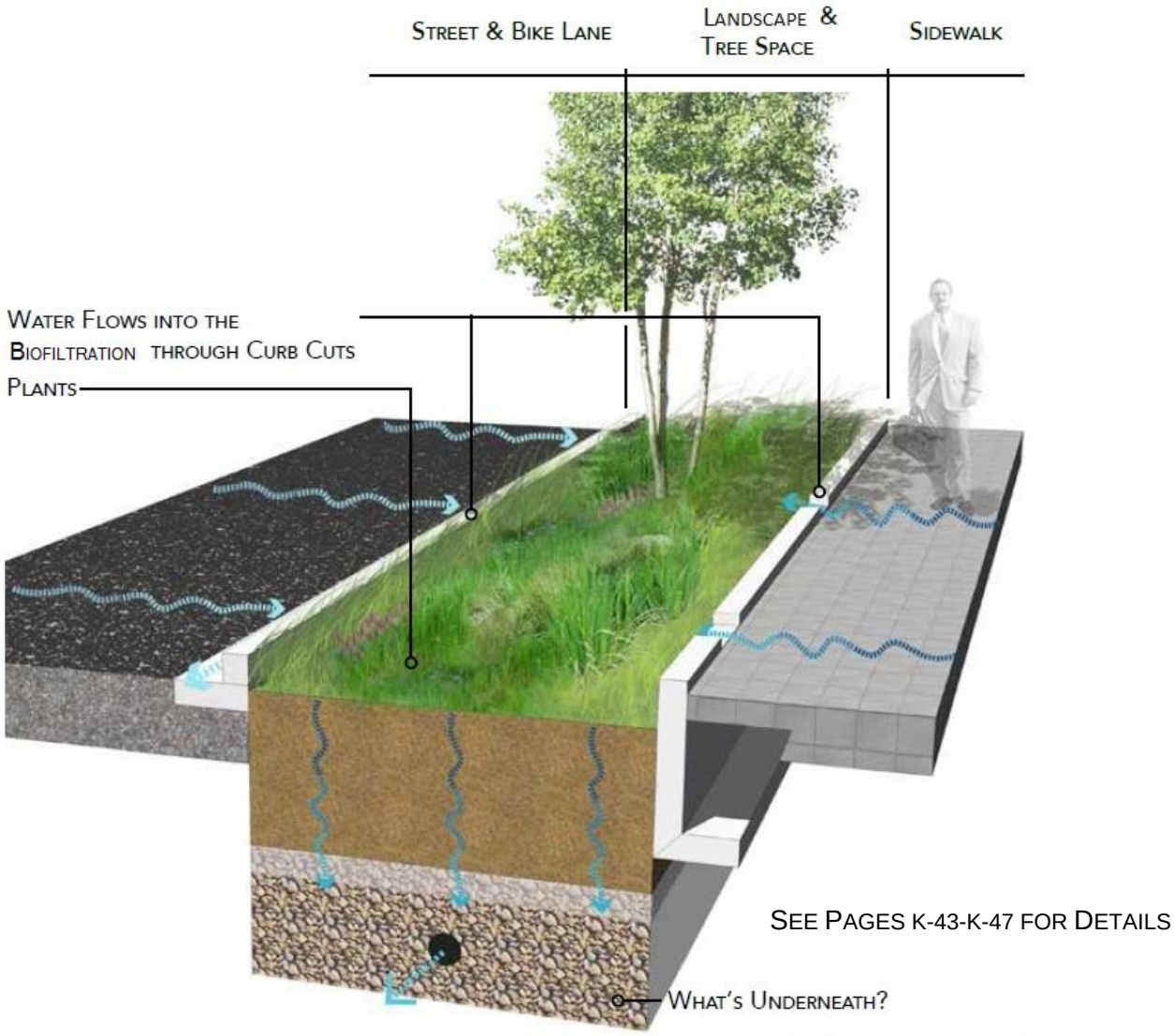
- Not for on-street parking.

Design Issues

Maintenance Access: Allow for adequate maintenance access from road.

Pedestrian Considerations: Allow for minimum allowable sidewalk width. Consider trip hazards and fall protection. Comply with ADA requirements.

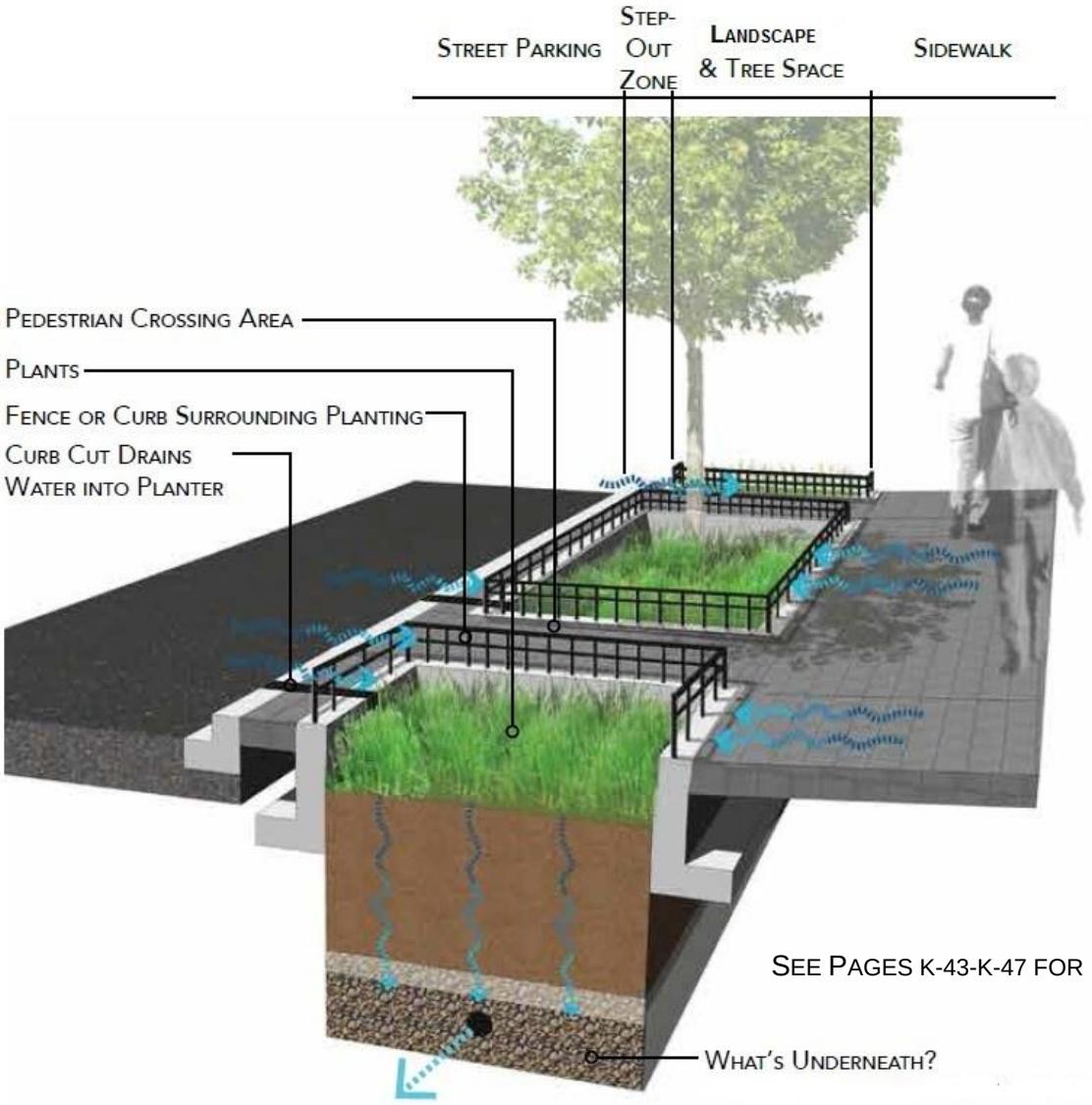
Planter Box Adjacent to Roadway



See Pages K-43-K-47 for Details

(Source: DDOT, 2014)

PLANTER BOX WITH STEP OUT ZONE



SEE PAGES K-43-K-47 FOR DETAILS

(Source: DDOT, 2014)

WHERE TO USE?

- Wide sidewalk area with adjacent on-street parking.
- High-volume pedestrian areas.
- Areas with other streetscape features (lights, bike racks, bus stops, etc.).

LIMITATIONS

- Do not disturb existing, mature trees and root systems.
- Provide low fence or curb for pedestrian safety.

DESIGN ISSUES

Planting Design: Same as for planter box adjacent to roadway.

Maintenance Access: Allow for adequate maintenance access from road.

Pedestrian Considerations: Areas in the streetscape can have dropped or have sloped sides. Short fences or curbs prevent pedestrians from stepping into a recessed area. Planter boxes with side slopes can use a small step-out area in place of a fence or curb. When the planter box is next to street parking areas, a step-out zone must be provided to allow access from the vehicle to the sidewalk. Crossing areas must be provided between street parking and the sidewalk. Comply with ADA requirements.

Where to Use?

- Areas with low on-street parking demand.
- In wide roadways.
- For traffic calming.
- In “no parking areas” on street (excluding loading zones and curb cuts).
- Next to mature trees.

Limitations

- Sufficient street parking or off-street parking must be available to residents.
- Do not disturb existing, mature trees and root systems.
- Ensure sight lines and turning radii are preserved.

Design Issues

Maintenance Access: Allow for adequate maintenance access from road.

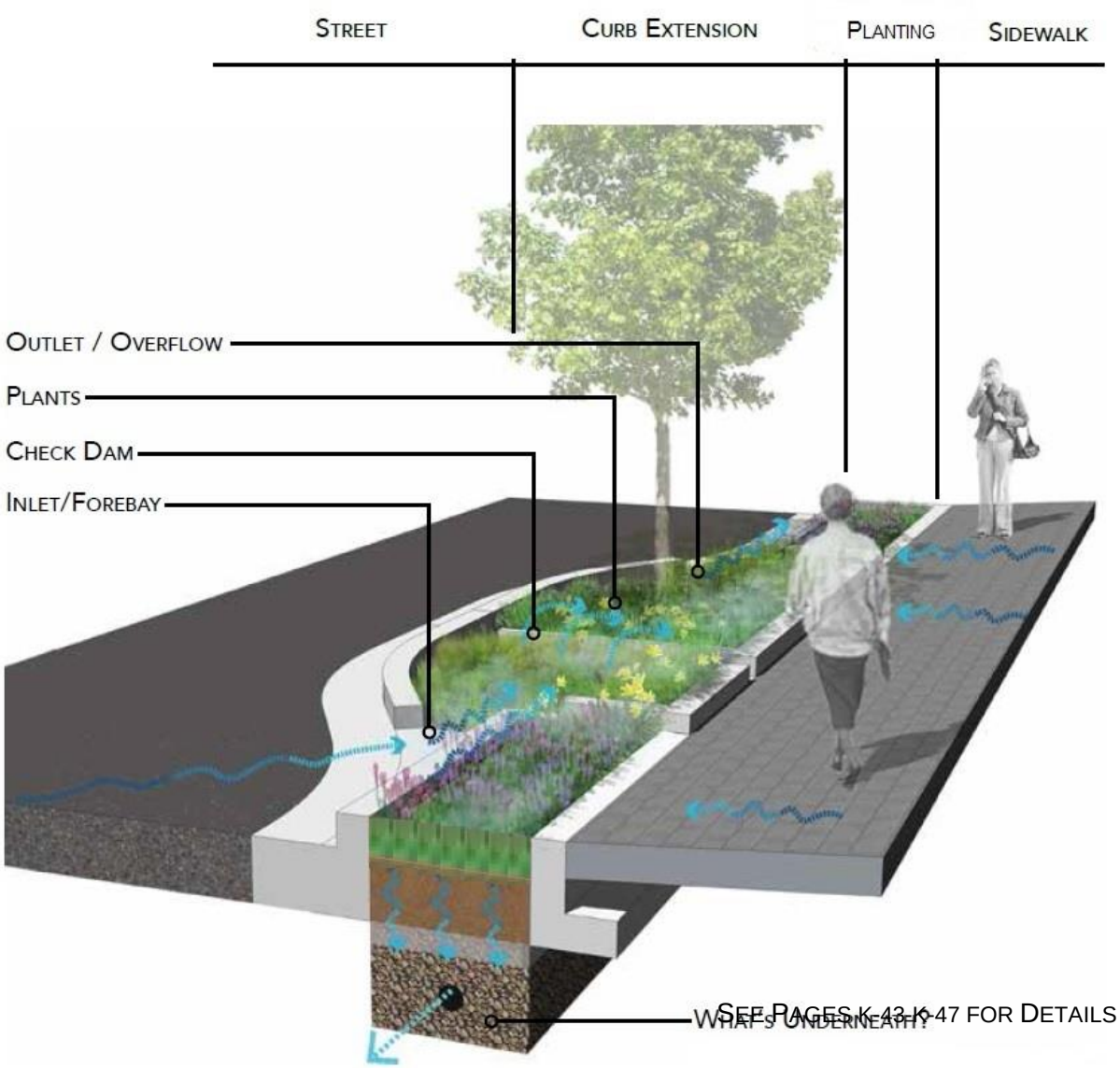
Pedestrian Considerations: Consider trip hazards and fall protection. Short fences or curbs prevent pedestrians from stepping into a recessed area. A 3:1 transition from the sidewalk to planter bottom is an alternative. Comply with ADA requirements.

Parking: Consider trip hazards and adequate spacing in order to park.

Flood Control: Locate so that stormwater can drain away from the roadway and be directed through the curb inlet.

Bike Lanes: Consider bike lane traffic.

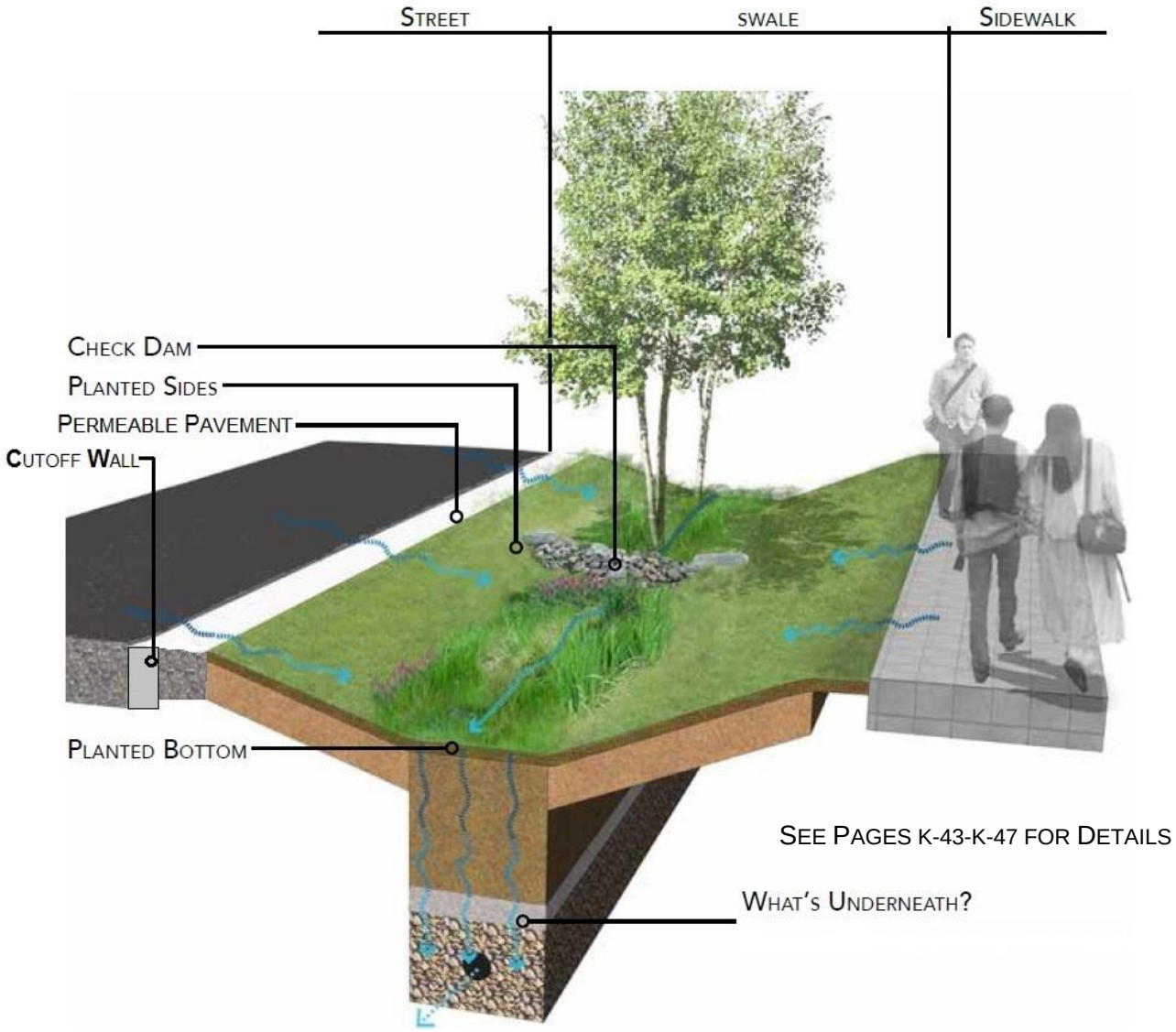
Curb Extension



See Pages K-43 K-47 for Details

(Source: DDOT, 2014)

SWALE ADJACENT TO ROADWAY



(Source: DDOT, 2014)

WHERE TO USE?

- On street with no curb.
- In wide ROW area with or without sidewalk.
- Areas with less pedestrian use.

LIMITATIONS

- Not suitable for narrow sidewalk areas.

DESIGN ISSUES

Slope and Check Dams: Swales are placed where street runoff is flowing and optimally before catch basins that convey water from the street to the drainage system. Swales may be built on moderate slopes with the use of check dams. Rock armoring or turf reinforcement mat may be required in steep areas with erosive velocities between check dams.

Maintenance Access: Allow for adequate maintenance access from road.

Pedestrian Considerations: Limit pedestrian access to swale. Transition swale at intersections for pedestrian facilities. Comply with ADA requirements.

Driveway Crossings: Driveway crossings may limit swale lengths.

VEGETATED FILTER STRIP

WHERE TO USE?

- Where runoff can sheet flow into filter strip area.
- Moderate slopes (less than 5%) adjacent to impervious area of treatment (sidewalk or road).
- Rural areas.

LIMITATIONS

- Not recommended on steep slopes.
- Prone to rill formation.
- Areas with on-street parking.

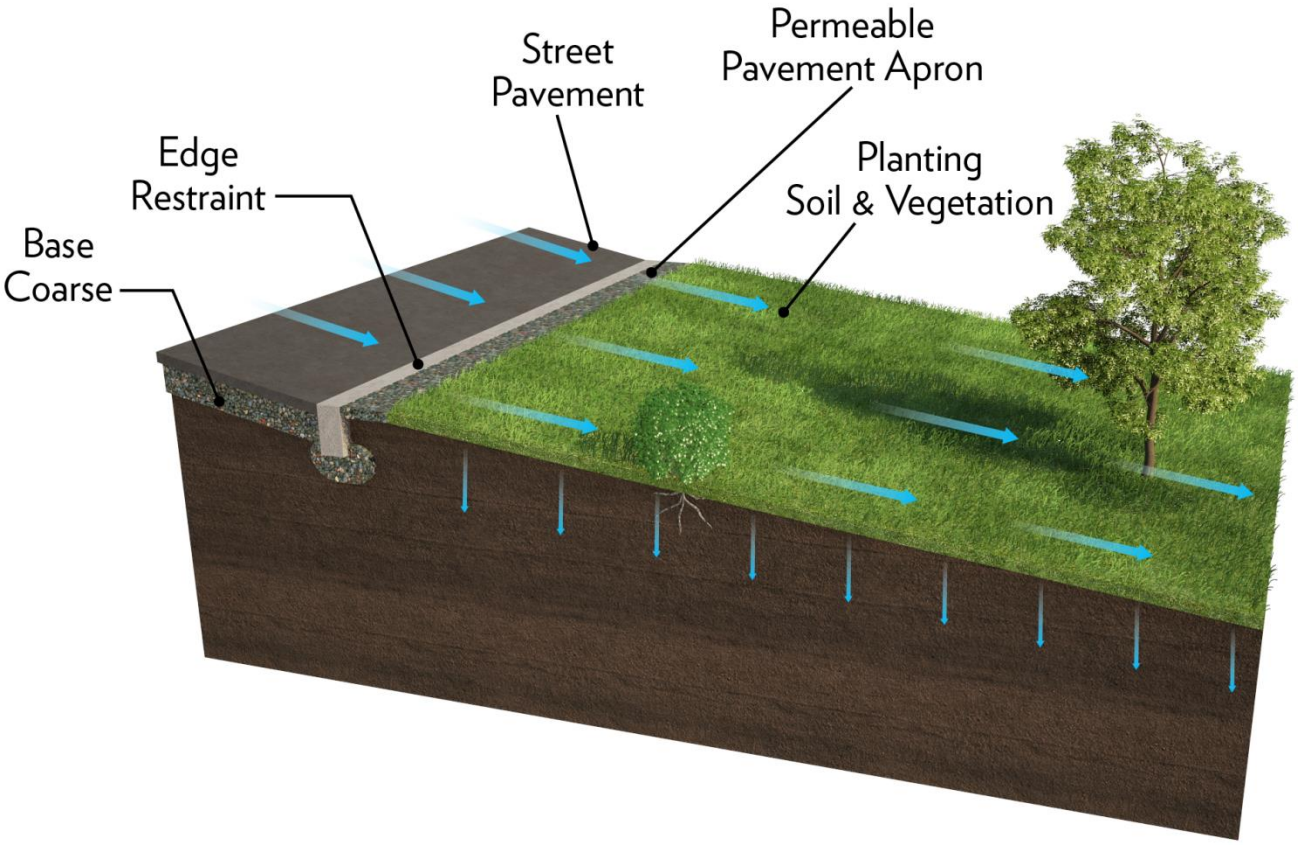
DESIGN ISSUES

Maintenance: Vegetated cover must be maintained to ensure that filter strips do not export sediment due to erosion of exposed ground.

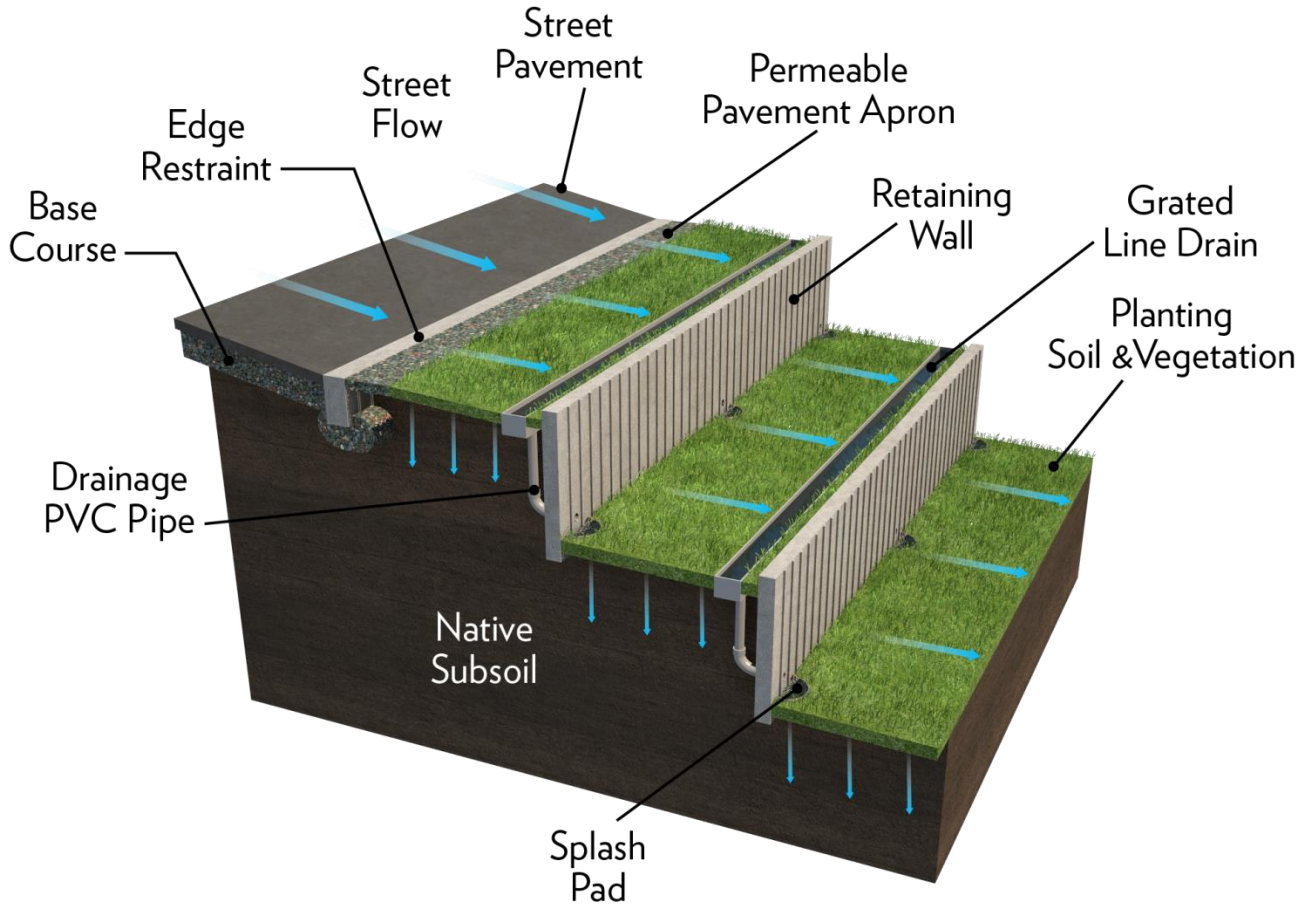
Slope: Maximum slopes in the direction of flow will be based upon drainage area size, soil type, vegetation cover, and slope length to prevent rill formation. Slopes less than 5% are preferred.

Maintenance Access: Allow for adequate maintenance access from road.

Pedestrian Considerations: Limit pedestrian access across filter strip to prevent formation of dirt pathways. Comply with ADA requirements.



VEGETATED TERRACED FILTER STRIP



WHERE TO USE?

- Where runoff can sheet flow into filter strip area.
- Steep slopes (greater than 5%) adjacent to impervious area of treatment (sidewalk or road).
- Rural areas.

LIMITATIONS

- Prone to rill formation.
- Areas with on-street parking.
- Walls over 3 feet tall require structural design.

DESIGN ISSUES

Maintenance: Vegetated cover must be maintained to ensure that filter strips do not export sediment due to erosion of exposed ground.

Slope: Maximum slopes in the direction of flow will be based upon drainage area size, soil type, vegetation cover, and slope length to prevent rill formation. Slopes less than 5% are preferred.

Maintenance Access: Allow for adequate maintenance access from road and bottom of slope.

Pedestrian Considerations: Limit pedestrian access across filter strip to prevent formation of dirt pathways. Comply with ADA requirements.

Where to Use?

- Areas with low on-street parking demand.
- In wide roadways.
- For traffic calming.
- In “no parking areas” on street (excluding loading zones and curb cuts).

Limitations

- Sufficient street parking or off-street parking must be available to residents.
- Ensure sight lines and turning radii are preserved.

Design Issues

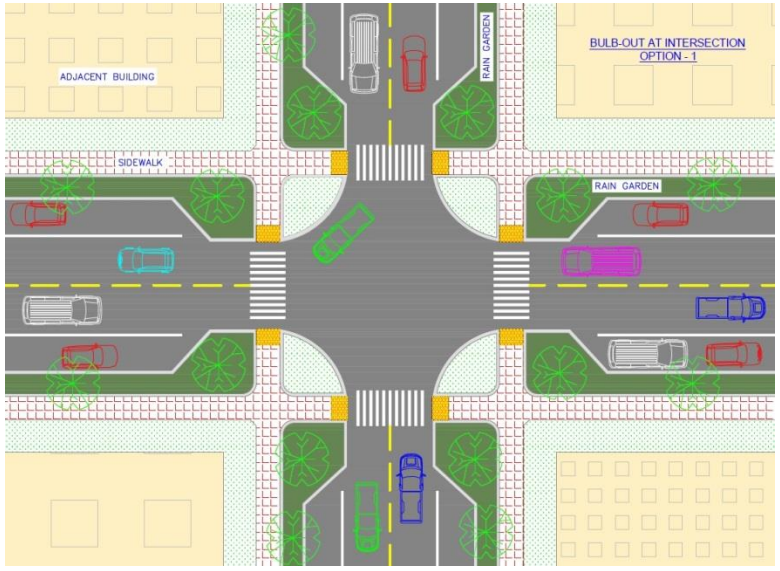
Maintenance access: Allow for adequate maintenance access from road.

Pedestrian considerations: Short fences or curbs prevent pedestrians from stepping into a recessed area. Walkways and ramps may need to be designed through bulb-outs to provide pedestrian access at intersections. Comply with ADA requirements.

Design: Requires County Traffic Engineering Section approval.

Bulb-Out at Intersection





ROUNDABOUT





WHERE TO USE?

- Areas with low on-street parking demand.
- In wide roadways.
- For traffic calming.

LIMITATIONS

- Sufficient street parking or off-street parking must be available to residents.
- Ensure sight lines and turning radii are preserved.

DESIGN ISSUES

Maintenance Access: Allow for adequate maintenance access from road.

Pedestrian Considerations: Short fences or curbs prevent pedestrians from stepping into a recessed area. Comply with ADA requirements.

Design: Requires County Traffic Engineering Section approval.

The NRCS hydrologic soil groups are defined as:

• **Group A** soils have a high rate of percolation and a low runoff potential. The rate of water transmission is high; thus, runoff potential is low. Group A soils are generally referred to as sandy soils.

• **Group B** soils have moderate percolation rates when thoroughly wet. These are chiefly soils that are moderately deep to deep, moderately well-drained to well-drained, and moderately coarse textured. Rate of water transmission is moderate.

• **Group C** soils have a slow percolation rate when thoroughly wet. They are chiefly soils that have a layer impeding the downward movement of water, or they are moderately fine to fine-textured soils that have a slow infiltration rate. The rate of water transmission is slow.

• **Group D** soils have very slow percolation rates when thoroughly wet. They are clays that have a high shrink-swell potential, soils that have a high permanent water table, soils that have a claypan or clay layer at or near the surface, or soils that are shallow over nearly impervious material. The rate of water transmission for group D soils is very slow.

DISPERSION AREAS AND BIOFILTRATION – WHAT'S UNDERNEATH?

SOIL TYPE AND INFILTRATION RATE

Dispersion areas and biofiltration can be located in many areas. However, site constraints will help to determine what goes underneath the dispersion area or biofiltration. Common considerations include soil type, relative soil compaction, required utility setbacks, slope setbacks, and structural setbacks. Depending on the factors at the site, what's underneath the dispersion area or biofiltration is determined by the level of infiltration: high, medium, low, or none.

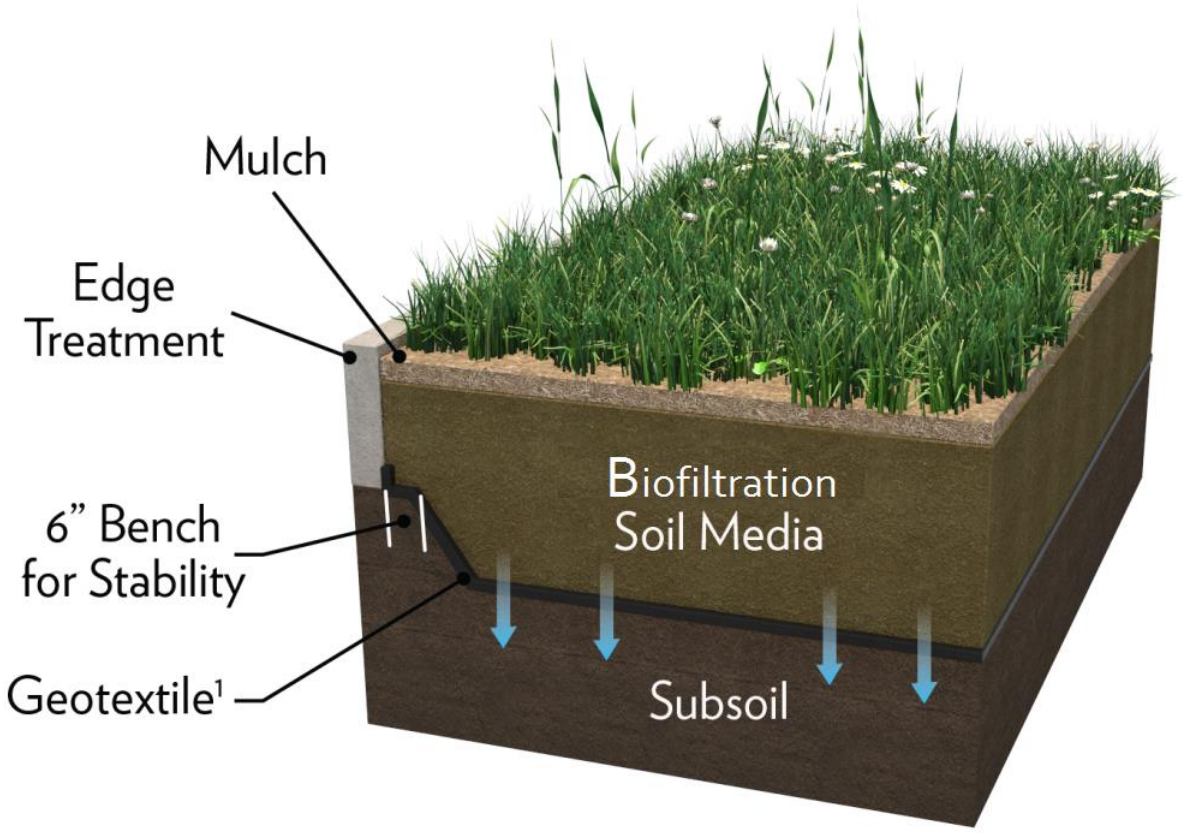
A qualified engineer practicing geotechnical services shall review the proposed stormwater infiltration to provide a professional opinion regarding the potential adverse geotechnical conditions that the implementation of these practices may create. Geotechnical conditions such as slope stability, expansive soils, compressible soils, seepage, groundwater, and loss of foundation or pavement subgrade strength should be considered.

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service, conducted a soil survey of the San Diego area in the early 1970s. The NRCS has classified San Diego area soils with respect to: (1) their ability to accept and absorb water, (2) their tendency to produce runoff, and (3) their erodibility.

The soil survey classified soil runoff potential into four hydrologic soil groups labeled A through D. Group A and B soils exhibit the greatest infiltration rates (unless soils are compacted during construction) and are generally best suited to stormwater percolation. The San Diego area, however, has a relatively high concentration of group C and D soils, which exhibit lower percolation rates that generally limit the use of infiltration-based stormwater management systems. Instead, dispersion areas and biofiltration facilities are often equipped with underdrains. Such a design provides for filtration of the water quality design event through a biofiltration soil media as well as incidental infiltration of low flows.

Retaining a geotechnical engineer and conducting exploratory excavations at the site are highly recommended. Consideration should be given to the effects of urbanization on the natural hydrologic soil group. If heavy equipment can be expected to compact the soil during construction, or if grading will mix the surface and subsurface soils, appropriate changes should be made in the soil group selected.

HIGH INFILTRATION



HIGH INFILTRATION

Notes:
1. Geotextile per Geotechnical Engineer's Recommendations (street side and sidewalk side).

PUTTING IT TOGETHER

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Mulch: A soil topping that may be organic or inorganic material which covers the planting soil to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Geotextile: Prevents existing soil from migrating into the biofiltration soil media.
- Uncompacted Subsoil: Existing soil where stormwater infiltrates.

COMMON DESIGN ISSUES

Utilities: In the County, utility lines are common and necessary components of infrastructure within the right-of-way. Utility lines should be avoided where necessary and allowed to coexist where possible.

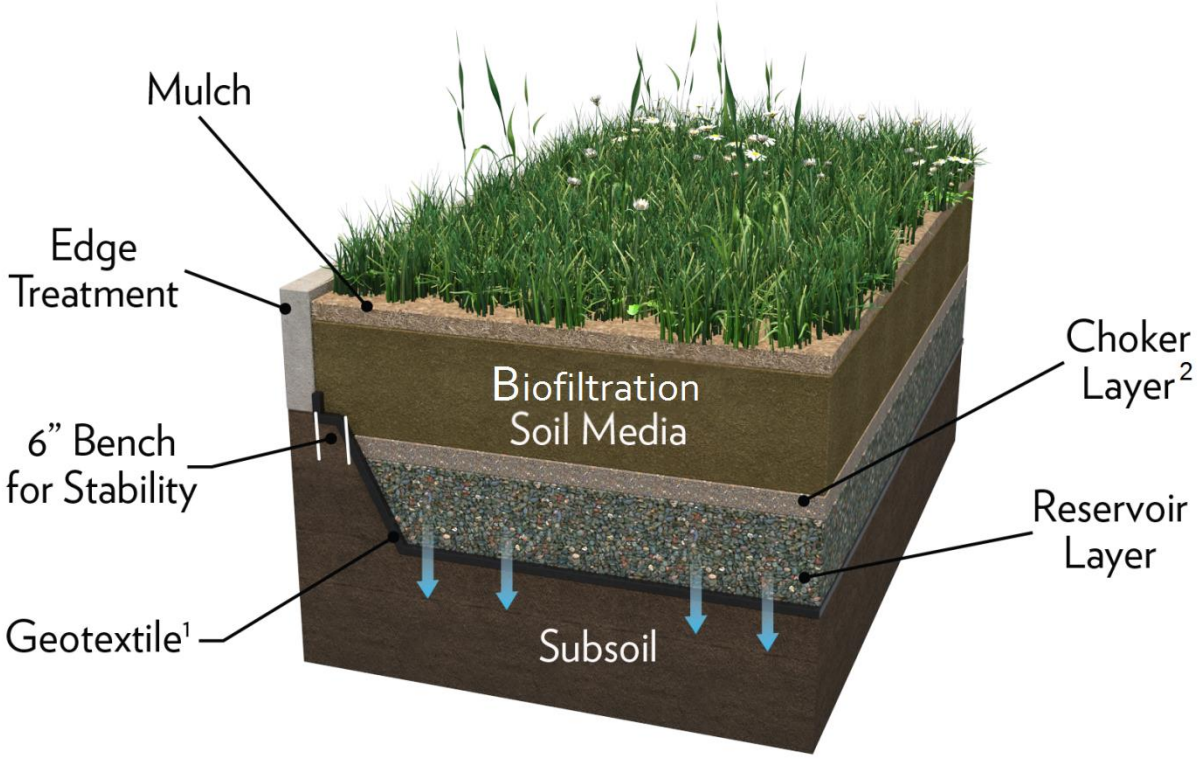
Putting it Together

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Mulch: A soil topping that may be organic or inorganic material which covers the planting soil to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Choker Layer: Sand and gravel to prevent biofiltration soil media from migrating into the reservoir.
- Reservoir Layer: Stone to hold excess water until it infiltrates.
- Geotextile: Prevents existing soil from migrating into the biofiltration soil media and stone reservoir layer.
- Uncompacted Subgrade: Existing soil where stormwater infiltrates.

Common Design Issues

Utilities: In the County, utility lines are common and necessary components of infrastructure within the right-of-way. Utility lines should be avoided where necessary and allowed to coexist where possible.

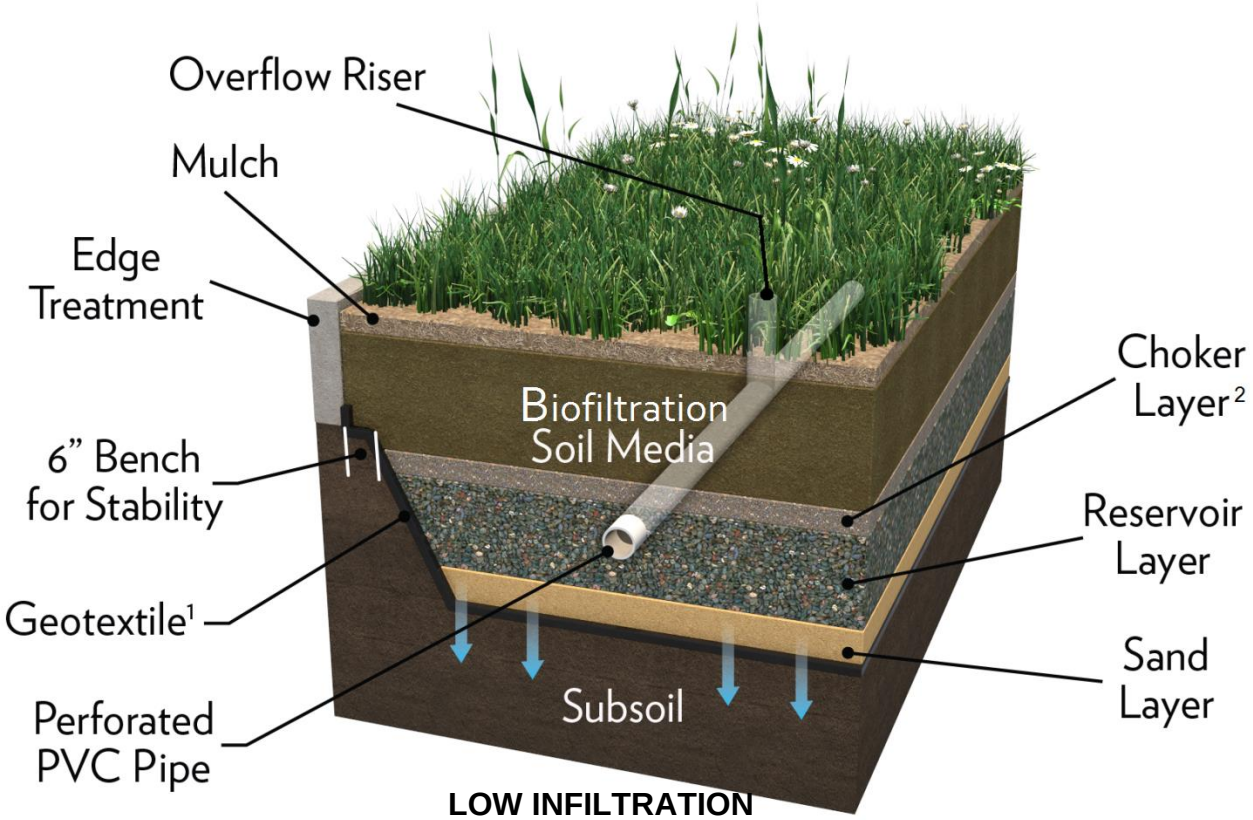
Medium Infiltration



MEDIUM INFILTRATION

Notes:
1. **Geotextile per Geotechnical Engineer's Recommendations (street side and sidewalk side).**
2. **Choker layer may be required depending the type of reservoir layer.**

LOW INFILTRATION



LOW INFILTRATION

Notes:
1. **Geotextile per Geotechnical Engineer's Recommendations (street side and sidewalk side).**
2. **Choker layer may be required depending the type of reservoir layer.**

PUTTING IT TOGETHER

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Overflow Riser: Pipe to capture high water flow.
- Mulch: A soil topping that may be organic or inorganic material which covers the planting soil to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Choker Layer: Sand and gravel to prevent biofiltration soil media from migrating into the reservoir.
- Reservoir Layer: Stone to hold excess water until it infiltrates.
- Underdrain: An underdrain is required.
- Geotextile: Prevents existing soil from migrating into the biofiltration soil media and stone reservoir layer.
- Uncompacted Subgrade: Existing soil where stormwater infiltrates.

COMMON DESIGN ISSUES

Utilities: In the County, utility lines are common and necessary components of infrastructure within the right-of-way. Utility lines should be avoided where necessary and allowed to coexist where possible.

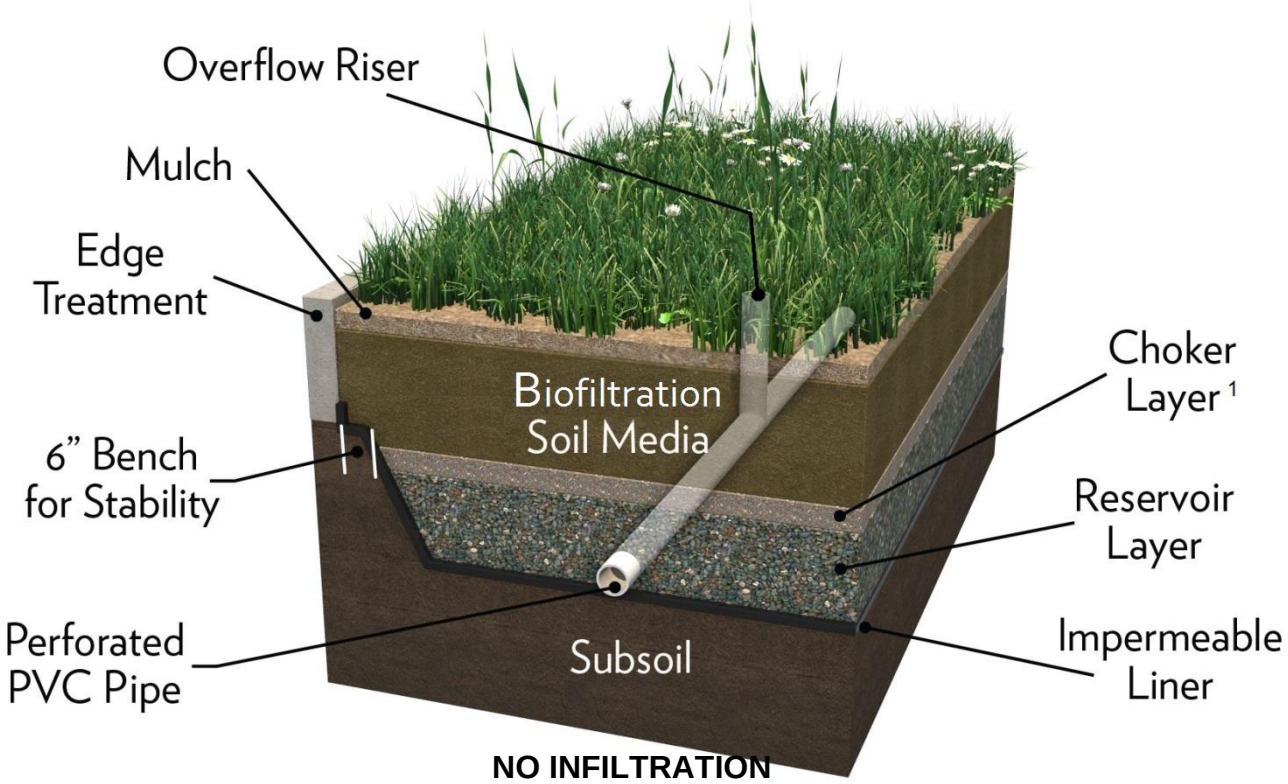
Putting it Together

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Overflow Riser: Pipe to capture high water flow.
- Mulch: A soil topping that may be organic or inorganic material which covers the planting soil to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Choker Layer: Sand and gravel to prevent biofiltration soil media from migrating into the reservoir.
- Reservoir Layer: Stone to hold excess water until it enters the underdrain.
- Underdrain: An underdrain is required.
- Impermeable Liner: Prevents infiltration and prevents existing soil from migrating into the biofiltration soil media and stone reservoir layer.

Common Design Issues

Utilities: In the County, utility lines are common and necessary components of infrastructure within the right-of-way. Utility lines should be avoided where necessary and allowed to coexist where possible.

NO INFILTRATION

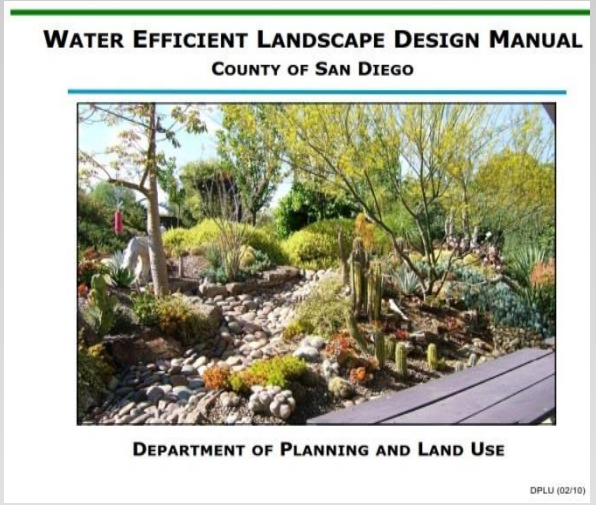


NO INFILTRATION

Notes:
1. Choker layer may be required depending the type of reservoir layer.

2.4 Planting & Irrigation of Dispersion Areas, Biofiltration, Tree Wells, and Other Areas







Planting Design

Tree wells, dispersion areas, and biofiltration add a landscape amenity to the street-scape. Trees, shrubs, grasses and perennials are used to create a diverse landscape suitable for the site conditions and neighborhood. Plants should be chosen based on the level of care expected at the facility. Planting design must be done to ensure sight lines are preserved for pedestrians, cyclists, and vehicles on the street.

Existing trees are an important component of the green street. Mature trees capture stormwater, provide shade, and cool pavement. Existing trees should be protected when implementing green streets and not disturbed during construction.

Refer to the County of San Diego's Water Efficient Landscape Design Manual and Low Impact Development Handbook for suitable plant species to use in dispersion areas and biofiltration. Also refer to the community right of way development standards for suitable plants within specific communities.

Irrigation Design

Irrigation design should comply with the County of San Diego's Water Efficient Landscape Design Manual.

Planting Zones (Hydrozones)

Grouping plants into hydrozones is an approach to irrigation and planting design where plants with similar water needs are grouped together. Ideally, each zone of the irrigation system will supply plants with the same water needs with the appropriate amount of water.

Water Conservation

State executive order B-29-15 requires mandatory statewide water restrictions. This order prohibits ornamental turf on public street medians, and requires a reduction in potable water use for irrigation. Low water use, drought tolerant, native plants should be used for Green Streets applications. The use of reclaimed water is recommended to reduce the amount of potable water used for irrigation.

2.5 Types of Permeable Pavement

What is Permeable Pavement

Permeable pavement is an engineered top layer and base layer that allows water to move through it. The goal is to take rainwater as it falls and quickly move it to the lower layers of the system. Stormwater is stored in an underlying stone layer until it infiltrates into the soil below, aiding in groundwater recharge, or releases slowly to the storm drain system. Pollutants are filtered through the pavement and base layers. The terms 'Permeable Concrete Pavers', 'Pervious Concrete', 'Porous Asphalt', and 'Porous Rubber' are industry standard names, but all surfaces are 'permeable' and provide sufficient openings at the surface to allow stormwater to infiltrate.



Permeable Concrete Pavers

Unlike traditional pavers, there are gaps between each paver to allow water to flow between the pavers and into the base layer.



Pervious Concrete

Sands and "fines" are reduced in the concrete mix to allow water to flow through the pavement into a stone bed and eventually the ground.









TYPES OF PERMEABLE PAVEMENT (CONTINUED)



POROUS ASPHALT

Porous asphalt is very similar to traditional asphalt except that the sands or "fines" are reduced in the mix so water can move through the pavement.



POROUS RUBBER

Made from recycled rubber and small stones, porous rubber works like pervious concrete, but can be installed over tree roots.



DECOMPOSED GRANITE (DG) PATHWAY

Decomposed granite can be used for pathways. It can be installed and compacted to meet ADA handicapped accessibility specifications and criteria. Although highly compacted, the surface has some infiltration capacity.



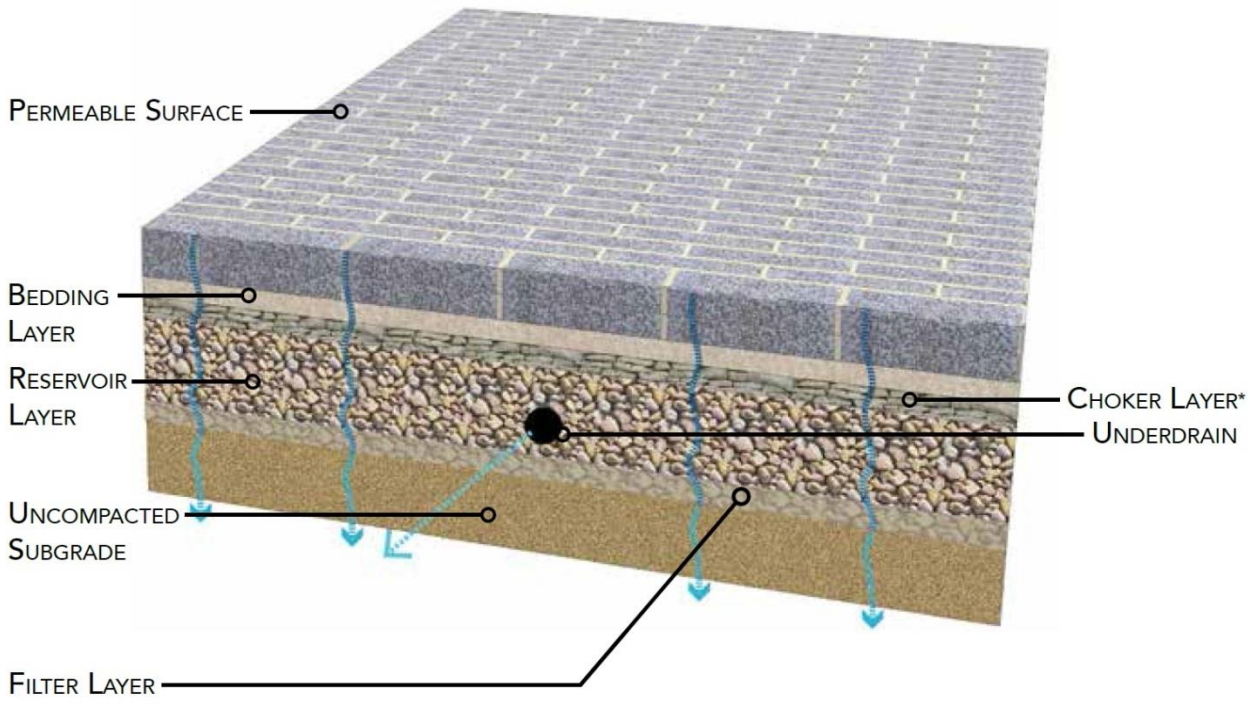
BOARDWALK

Made from wood or composite, boardwalks may be used for pathways. Rain easily passes through the spaces between the boards to the earth below.

PUTTING IT TOGETHER

- Permeable Surface: Permeable concrete pavers, pervious concrete, porous asphalt, porous rubber, DG, or boardwalk.
- Bedding Layer: Used for pavers so they can be laid flat.
- Choker Layer: A layer of small rock to prevent fine material from migrating into the reservoir layer.
- Reservoir Layer: Stone to hold excess water until it infiltrates.
- Underdrain: Conveys excess water into drainage system when the reservoir fills.
- Filter Layer/Geotextile: A layer of stone or permeable geotextile to separate the reservoir layer from the soil below and prevent migration of fines into the reservoir layer.
- Impermeable Liner: Prevents infiltration into subgrade or adjacent roadway structural section.
- Uncompacted Subgrade: Existing soil into which stormwater infiltrates.

PERMEABLE PAVEMENT – WHAT'S UNDERNEATH?

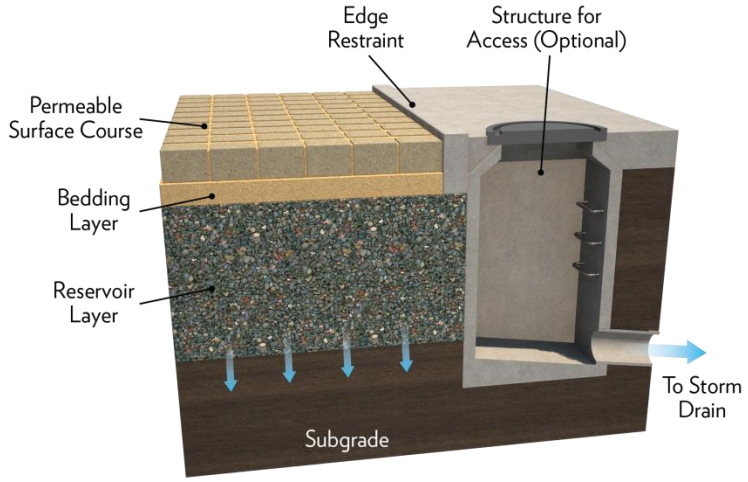


(Source: DDOT, 2014)

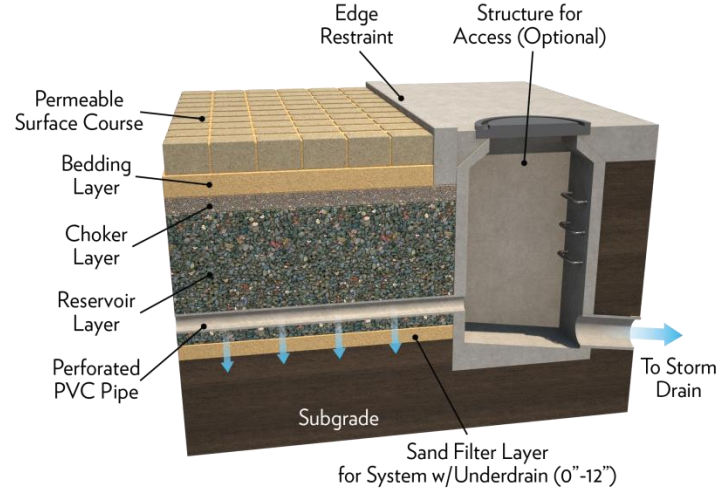
As with dispersion areas and biofiltration, there are multiple options for the subsurface components for permeable pavement including:

- Reservoir layer only with no underdrain
- Reservoir layer with underdrain (shown)
- Reservoir layer with underdrain and impermeable liner

PERMEABLE PAVEMENT SUBSURFACE DESIGN OPTIONS



Reservoir layer only with no underdrain



Reservoir layer with underdrain

WHERE TO USE?

- Pedestrian areas
- Pathways
- Parking lanes

LIMITATIONS

- Use is limited to areas curb-separated from the traveled way.
- Use in areas with little to no sediment production.

DESIGN ISSUES

Soil Infiltration and Drainage: Soil infiltration tests must be completed to determine if an underdrain system is required.

Structural Section: A qualified and licensed professional should complete a pavement structural analysis.

Edge Restraints: Provide a concrete transition strip between any permeable and impermeable surface and around the perimeter of paver installations.

Pedestrian Considerations: Provide signage to indicate prohibited activities that cause premature clogging.

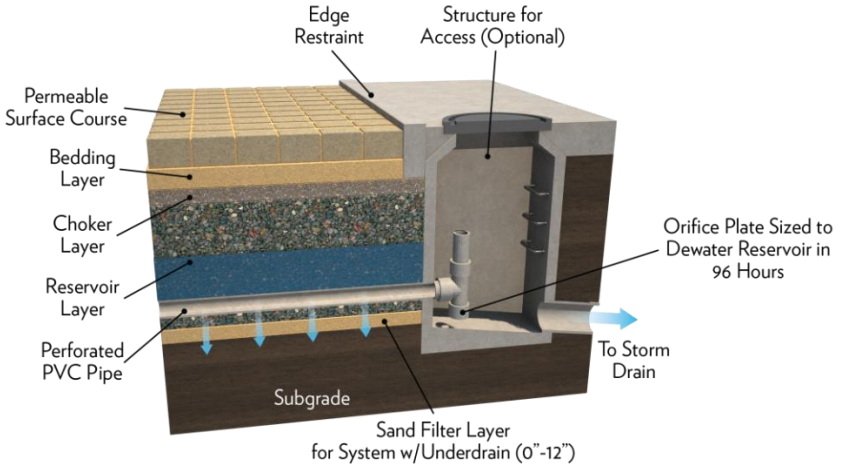
Maintenance Access: Provide adequate access for sweeping and/or vacuuming of surface.



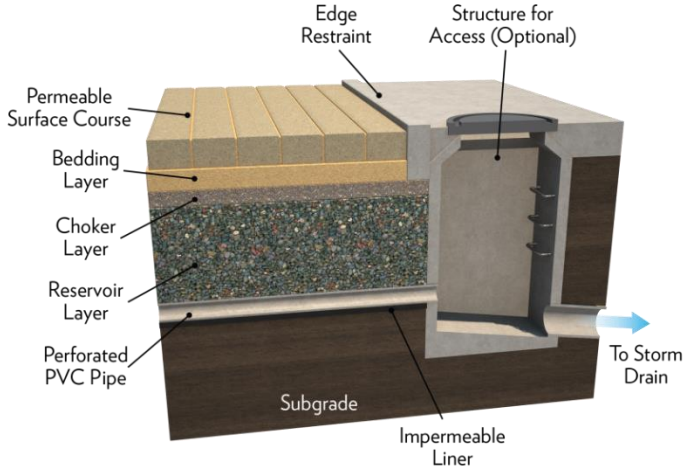




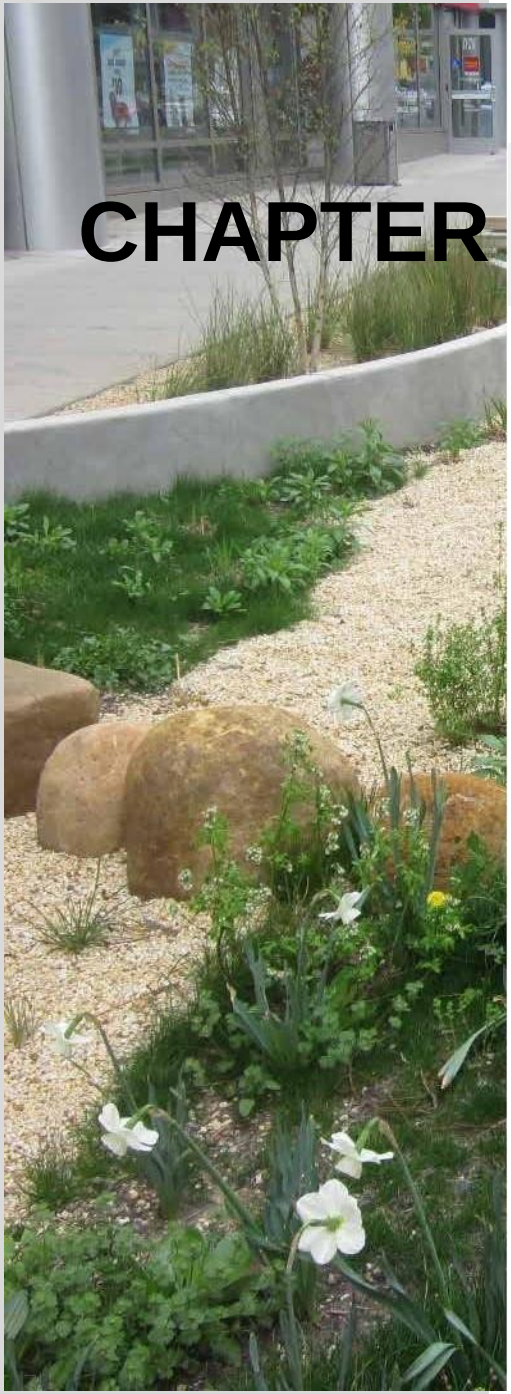
PERMEABLE PAVEMENT SUBSURFACE DESIGN OPTIONS (CONTINUED)



Reservoir layer with upturned underdrain



Reservoir layer with underdrain and impermeable liner



CHAPTER 3 Procedures and Design Examples

3.1 INTRODUCTION

Implementing Green Infrastructure (GI) and Low Impact Development (LID) within the road right-of-way requires a number of considerations to create an amenity that is attractive while treating stormwater from the surrounding streets and sidewalks.

Implementation of Green Streets features can be approached from evaluating the opportunities within each zone of the right-of-way: median, traveled lane, bike lane, shoulder, parkway, sidewalk/pathway, slopes and drainage easements. Each zone presents different opportunities, benefits, risks and technical design factors for GI and LID implementation to enhance stormwater quality within the right-of-way.

Conducting a comprehensive inventory and assessment of site conditions is the crucial initial step for implementing GI and LID. The County LID Handbook inventory check list can be used to assist with identifying and evaluating a potential site for LID and to produce a list of opportunities and constraints.

The LID concept from the EPA of “slow it down, spread it out, and soak it in” should be at the forefront in the planning stages of project evaluating the implementation of Green Streets design practices to control runoff and enhance water quality.







The following site design principles should be evaluated and implemented to "slow it down, spread it out, and soak it in":

- Minimize the impervious footprint of the site by constructing streets and sidewalks to the minimum required widths.
- Minimize soil compaction in landscaped areas. Landscape with native or drought-tolerant species.
- Disconnect impervious surfaces by dispersing runoff from impervious surfaces to pervious areas. To be considered 'disconnected' impervious areas should be designed to drain to a pervious area at least one-half their size.
- Design and construct tree wells, dispersion areas, biofiltration, and permeable pavements to effectively receive and infiltrate or retain runoff from impervious areas before it discharges to the storm drain or exits the right of way.

When green street design principles are employed over street design techniques that utilize conventional stormwater quality treatment techniques they have the potential to significantly reduce impervious areas and provide potential project cost savings.



Conventional Design Approach

- Impervious median and parking lane
- Biofiltration and stormwater vault in parkway



Green Street Design Approach

- Permeable median and parking lane
- Tree wells and biofiltration in parkway

(Source: DDOT, 2014)

GREEN STREET APPROACH

Direct stormwater runoff from impervious roadway elements to:

- Tree wells, dispersion areas, and biofiltration in the median or parkway.
- Permeable pavement surfaces located in the median or parking lane.

Construct sidewalks and trails with permeable pavement or direct runoff to adjacent landscaped area.

CONSTRAINTS

In no way shall green streets LID features be designed to block sight distance for motorists from adjacent streets and driveways, create obstacles for pedestrians, impede the visibility and maintenance of traffic control devices and signs, and reduce or eliminate clear recovery area and minimum horizontal clearances from fixed objects.





3.2 DESIGN PROCEDURE

QUALIFICATION

Under the Municipal Separate Storm Sewer System (MS4) Permit for San Diego Region (Permit [Order No. R9-2013-0001]), the County may make Priority Development Project (PDP) Exemptions for projects redeveloping or retrofitting existing paved roads, streets, and alleys as "EPA Green Streets." This is accomplished under an adopted Green Streets program by the County of San Diego and based in part on the EPA publication "Green Streets: Municipal Handbook, Managing Wet Weather with Green Infrastructure."

OPPORTUNITIES AND CONSTRAINTS

- Conduct a comprehensive inventory and assessment of site conditions.
- Evaluate each zone of the right-of-way for Green Street implementation opportunities: median, traveled lane, shoulder, parkway, sidewalk/pathway, slopes and drainage easements.
- Evaluate constraints including, but not limited to: right-of-way width, utilities, roadway geometry and slope, site distance, proximity to storm drain, maintenance access, pedestrian and vehicle safety, bike and parking lanes, etc.

DESIGN CAPTURE VOLUME/FLOW RATE

- For volume based features () use the 24-hour, 85th percentile volume. For flow based features (swales) utilize the 24-hour, 85th percentile rainfall intensity (use CASQA method within Caltrans Basin Sizer).

TREATMENT TRAIN

- Utilize a treatment train approach that connects and combines features to maximize water quality treatment within the Green Street. An example Green Street treatment train approach is provided in Section 3.6.

DOCUMENTATION

- Document the design criteria, methodology, drainage areas/treatment areas, calculated volumes/flows, BMP selection, and maintenance requirements in the project Stormwater Management Plan and/or Drainage Report.

3.3 MEDIANS

The median presents an opportunity to implement green streets principles by use of Tree wells, biofiltration, or permeable pavements. The graphics below illustrate various green streets design concepts that can be utilized within the median.



Roadway before Green Streets



Roadway with depressed median and bulb out planter at intersection



Conventional raised median curb, impermeable surfacing and trees



Green street depressed median with curb cuts and planter/swale

DESIGN ELEMENTS

- Raised median:
  - Plant low water use/drought tolerant trees and landscaping.
  - Install permeable pavement.

- Depressed median: Utilize roadway cross slope to direct stormwater runoff from impervious roadway elements to:
  - Tree wells
  - Planter boxes
  - Vegetated swale

DESIGN CONSIDERATIONS

- Vehicle safety
- Median width and length
- Roadway longitudinal and cross slope
- Structural integrity of adjacent traveled way (design to prevent subsurface infiltration or ponding under traveled way)
- Underdrain and overflow devices
- Proximity of storm drain
- Maintenance access
- 'Mid-block' pedestrian crossing potential

Design Elements

- Raised section:
  - Plant low water use/drought tolerant trees and landscaping.
  - Install permeable pavement.

- Depressed section: Utilize roadway cross slope to direct stormwater runoff from impervious roadway elements to:
  - Tree wells
  - Planter boxes
  - Vegetated swale

Design Considerations

- Roadway geometrics
- Structural integrity of adjacent traveled way to prevent subsurface infiltration or ponding under traveled way
- Underdrain and overflow devices
- Proximity of storm drain
- Maintenance access

3.4 Intersections

Roundabouts

The design elements and design considerations for roundabouts are similar to medians.



Aerial view of rural intersection before roundabout



Aerial view of constructed roundabout with permeable pavement and biofiltration with connection to storm drain



Closeup view of same roundabout



Street view of same roundabout

BULB-OUT AT INTERSECTION

The design elements and design considerations for bulb-outs are similar to curb extensions. Bulb-outs provide traffic calming at intersections, increase pedestrian visibility, and decrease cross-walk lengths. Bulb-outs at intersections prevent motorists from parking too close to a cross-walk or from blocking a curb ramp. Motor vehicles parked too close to corners present a safety concern, since they block sight lines, obscure visibility of pedestrians and other vehicles, and make turning difficult for emergency vehicles and trucks. Bulb-outs are only appropriate where there is an on-street parking lane or shoulder and must not extend into bike lanes or travel lanes. The turning requirements of larger vehicles such as fire trucks and school buses require consideration in design.



Bulb-out planter box at intersection



Bulb-out at intersection

DESIGN ELEMENTS

- <u>Raised section:</u>
  - Plant low water use/drought tolerant Tree wells and landscaping
  - Install permeable pavement.

- <u>Depressed section:</u> Utilize roadway cross slope to direct stormwater runoff from impervious roadway elements to:
  - Tree wells
  - Planter boxes
  - Vegetated swale

DESIGN CONSIDERATIONS

- Appropriate only where there is on-street parking or shoulder
- Roadway geometrics
- Structural integrity of adjacent traveled way to prevent subsurface infiltration or ponding under traveled way
- Underdrain and overflow devices
- Proximity of storm drain
- Maintenance access
- Turning requirements for large vehicles
- Bike lanes

Design Elements

- Traveled Way and Bike Lane:
  - Design lane widths to minimum allowable.
- Shoulder/Parking Lane:
  - Utilize permeable pavement with edge restraint at interface with traveled way

Design Considerations

- Permeable pavement not acceptable in traveled way, bike lane, and parkway
- Structural section design to handle vehicle loading
- Shoulder utilization (with or without parking, temporary use during lane closures)
- Roadway geometrics
- Hydrologic design requirements (stone reservoir depth and underdrain requirements)
- Design to maintain structural integrity of adjacent traveled way with edge restraints and prevention of infiltration beneath traveled way section
- Interrupt permeable pavement at intersections
- Surrounding land use and sediment sources
- Long term maintenance
- Pedestrian safety
- Maintenance access

3.5 Traveled Way, Bike Lane, and Shoulder Permeable Pavement

The use of permeable pavements within the traveled way and bike lanes of County maintained roads is not currently permitted. However, their use may be considered for low volume driving lanes in parking lots, private streets, alleys, and fire access roads. The use of permeable pavement in the shoulder/parking lane should be evaluated based upon the following design considerations listed to the left.



Conventional street with bike lane and shoulder



Green street with permeable pavement in parking lane

CURB EXTENSIONS

Curb extensions reduce overall street dimensions and provide traffic calming. Among other benefits, curb extensions provide added space for biofiltration.

Curb extensions shall never encroach upon the traveled way or bike lanes. When existing tree roots are damaging adjacent curb, gutter, or pavement curb extensions provide an excellent opportunity to preserve the tree and provide green infrastructure.

Careful survey of street parking impacts should be considered when locating curb extensions.



Curb extension with planter box



Curb extenstion with planter box

DESIGN ELEMENTS

- Low water use/drought tolerant trees and landscaping
- Permeable pavement
- Planter boxes

DESIGN CONSIDERATIONS

- Roadway geometrics
- Structural integrity of adjacent traveled way to prevent subsurface infiltration or ponding under traveled way
- Underdrain and overflow devices
- Sight distance at intersection
- Proximity of storm drain
- Utility conflicts
- Pedestrian mobility aspects
- Maintenance access
- Parking requirements

PARKWAY DESIGN ELEMENTS

- Landscape area:
  - Tree wells
  - Planter boxes
  - Curb extensions
  - Bulb outs at intersections
  - Swales
- Sidewalk or trail:
  - Drain to adjacent landscaping
  - Drain to green street LID practice
  - Permeable pavement
- Other areas:
  - Filter Strip
  - Dispersion Area

3.6 PARKWAY

The parkway including the tree space, planting strip, sidewalk, pathway, and other areas has numerous opportunities for Green Street implementation.

TREE WELLS



Existing Road



Conceptual desgin with Tree wells, and permeable sidewalk



Existing Road



Reconstructed Road with Trees and planter boxes

PLANTER BOXES



Before and After Concept



Road retrofit with planter boxes and trees



Planter Box with step out zone



Planter box with step out zone

PARKWAY DESIGN CONSIDERATIONS

- Roadway classification and parkway width
- Location (urban or rural setting)
- Tree type and spacing requirements
- Sidewalk or trail width requirements
- Streetside parking requirements
- Roadway and parkway horizontal and vertical geometrics (curves and longitudinal slope)
- Pedestrian mobility and safety
- Maintenance access
- Interface with driveways
- Utilities and appurtenant structure locations
- Hydrologic design requirements
- Proximity of storm drain systems
- Structural integrity of adjacent traveled way (utilize edge restraints and prevent infiltration beneath roadway section)
- Low water use/drought tolerant Trees and landscaping

Design Elements

- Low water use/drought tolerant landscaping
- Rock
- Curb cuts and outlet design
- Energy dissipation
- Check dams

Design Considerations

- Roadway geometrics
- Structural integrity of adjacent traveled way to prevent subsurface infiltration or ponding under traveled way
- Underdrain and overflow devices
- Proximity of storm drain
- Pedestrian mobility aspects
- Maintenance access

SWALES



Swale adjacent to road



Rock swale adjacent to road



Rock swale adjacent to road



Swale adjacent to road

SIDEWALKS AND PATHWAYS



Permeable pavement sidewalk with biofiltration planter in curb extension



DG pathway with rock swale



Pervious concrete sidewalk



Porous asphalt pathway

DESIGN ELEMENTS

a. Drain to adjacent landscaping or adjacent LID facility
b. Permeable pavement

DESIGN CONSIDERATIONS

- Sidewalk width and ADA requirements
- Public safety
- Pedestrian mobility aspects
- Maintenance access

OTHER PARKWAY AREAS

DESIGN ELEMENTS

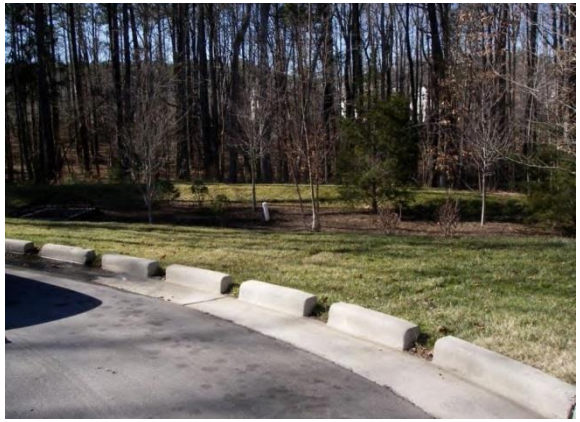
- Low water use/drought tolerant landscaping
- Swales
- Dispersion areas
- Vegetated filter strips

DESIGN CONSIDERATIONS

- Available space
- Vehicle and public safety
- Structural integrity of adjacent traveled way to prevent subsurface infiltration or ponding under traveled way
- Underdrain and overflow devices
- Proximity of storm drain
- Maintenance access



Swale outside of sidewalk and road



Curb cuts with filter strip



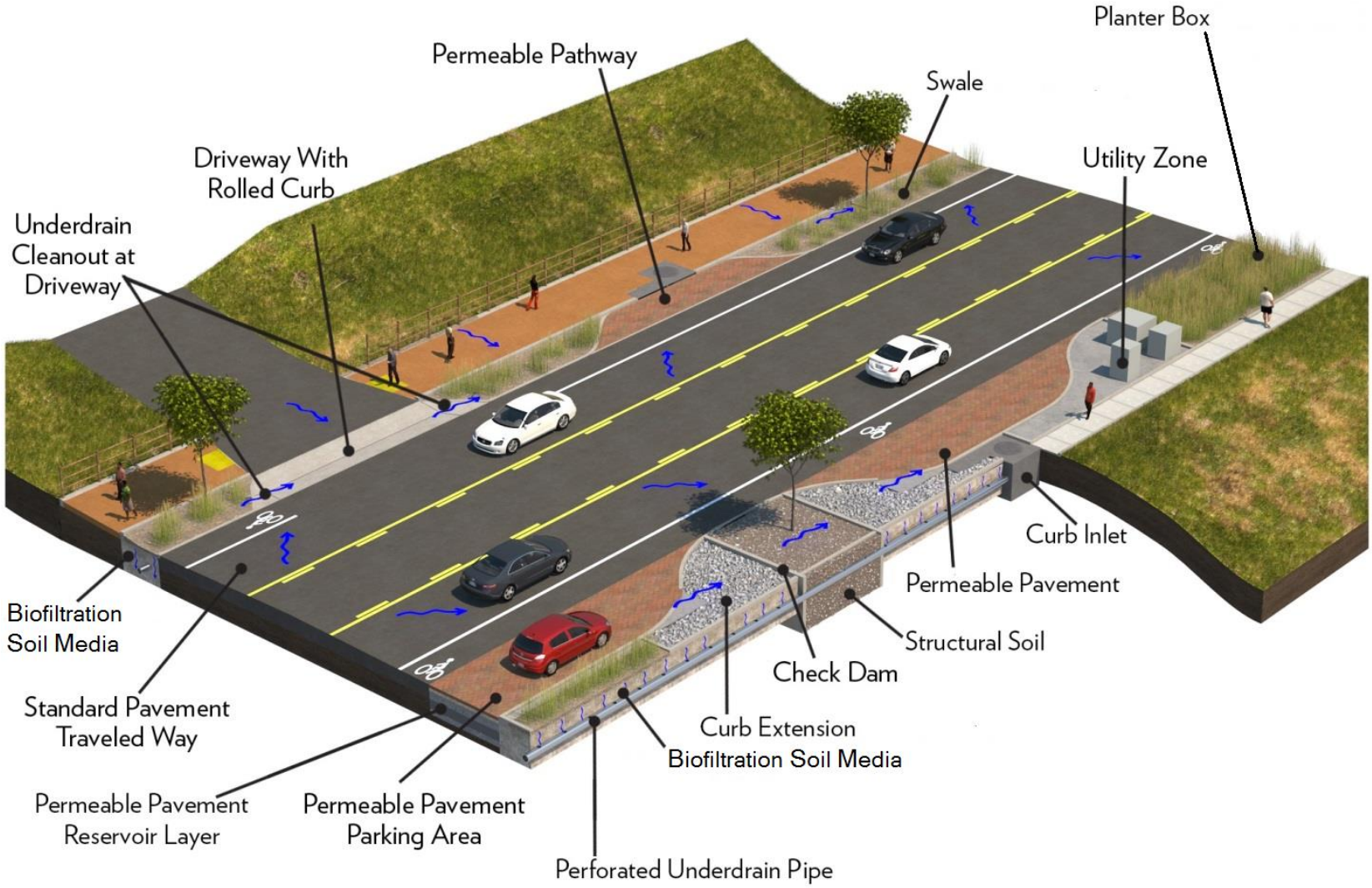
Dispersion Area

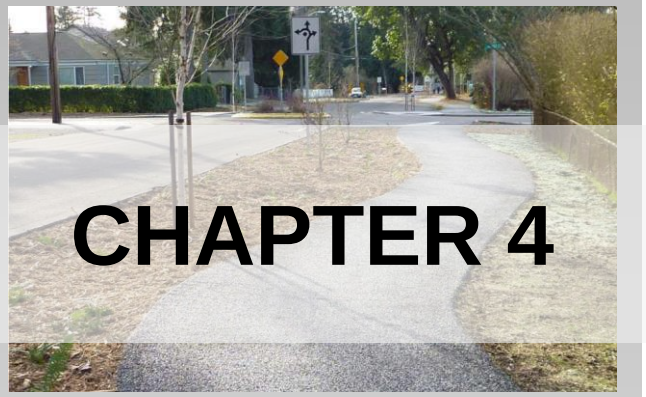


Rock swale

3.7 PUTTING IT ALL TOGETHER

This graphic shows a treatment train concept as an example of how several different techniques may be combined for Green Street implementation.





CHAPTER 4 Implementing Green Streets



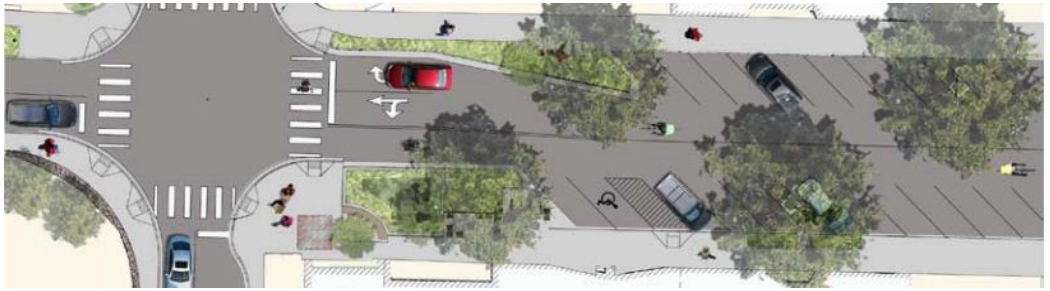


4.1 Design and Construction

The goal of the County of San Diego (the County) Low Impact Development (LID) Program is to protect stormwater quality by preserving and simulating natural hydrologic functions through the use of stormwater planning and management techniques on a project site. Both public and private projects constructing in the ROW are required to retain stormwater to the maximum extent practicable. Designers must examine all uses of public space and place stormwater management where space and use allows.

DPW is installing green infrastructure as part of regulated construction projects and retrofit projects to reduce stormwater runoff in more areas of the County. Green Street projects utilize green infrastructure techniques and may be constructed independently to improve watershed health, or as a part of other infrastructure improvement projects.

These Green Street Guidelines are a planning tool intended to assist project engineers with identifying and selecting suitable Best Management Practices (BMPs) for their respective Green Infrastructure projects. Technical standards, including drawings, specifications, maintenance schedule, and plant list, can be found in the Green Street Standards document.



4.2 MAINTENANCE

Implementing green infrastructure and Low Impact Development (LID) practices requires maintenance to keep them attractive and functioning. Maintenance levels of care should be considered during the design phase and plants selected from the Green Streets Plant List according to the following levels:

- Low level of care: Annual maintenance; no irrigation
- Medium level of care: Quarterly maintenance; some water available
- High level of care: Monthly maintenance; site is potentially irrigated

San Diego County DPW is typically responsible for maintaining publicly-installed green infrastructure and LID facilities within their right-of-way. The final determination of maintenance responsibility is determined during project review. Private installations must have a maintenance covenant from the owner. Residents can help with maintenance by removing trash and weeds. Refer to the Green Streets Maintenance Schedule for frequency and detail of maintenance.

Type of Maintenance	Dispersion Areas and Biofiltration	Permeable Pavement	Tree Space
Inspect after storms	•	•	
Remove trash/sediment/leaves	•	•	•
Clean inlets/outlets	•		
Adjust mulch and/or stone	•		
Water for establishment	•		•
Weed/remove invasive species	•		•
Prune (as needed)	•		•
Replace mulch (3” depth)	•		•
Street sweeper/vacuum (as needed)		•	







4.3 FUNDING

Funding mechanisms for Green Streets maintenance may include:

- Community Service Districts
- Home Owner’s Associations or other private sources



REFERENCES

Central Coast Low Impact Development Initiative, 2015:
http://www.centralcoastlidi.org/resources.php

City of Los Angeles – Green Streets and Green Alleys Design Guidelines Standards, 2009:
nacto.org/docs/usdg/green_streets_and_green_alleys_la.pdf

County of San Diego – Low Impact Development Handbook, 2014:
sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid

County of San Diego – Standard Urban Stormwater Mitigation Plan Requirements for Development Applications,
2012: sandiegocounty.gov/dpw/watersheds/susmp/susmp

DDOT – Greening DC Streets, 2014:
ddot.dc.gov/GreenInfrastructure

Low Impact Development Center, Inc. - Low Impact Development Manual for Southern California, 2010:
https://www.casqa.org/resources/lid/socal-lid-manual

Montgomery County, MD - Environmental Site Design Implementation in Montgomery County, Maryland: Image Library,2011:
http://www.montgomeryplanning.org/environment/documents/esd_implementation_graphics_201108.pdf

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K.3 Green Parking Lots

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K.3.1 Green Parking Lots Guidelines

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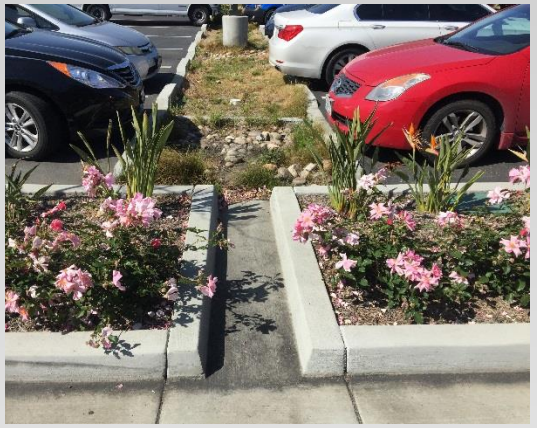



Green Parking Lots Guidelines

A Guide to Green Parking Lots Implementation in the County of San Diego

January 2019



WHAT IS A GREEN PARKING LOT?

Pavement on parking lots can contribute to excess stormwater runoff and increased levels of pollutants in the County's waterways. Green infrastructure reduces stormwater runoff and improves water quality. Green Parking Lots incorporate a wide variety of Green Infrastructure design elements including, but not limited to: trees, dispersion areas and biofiltration, and permeable pavement. The use of Green Parking Lots offers the capability of transforming a significant stormwater and pollutant source into an innovative treatment system.

On April 1st, 2015 Governor Brown signed executive order B-29-15 setting the first mandatory statewide water restrictions. This order prohibits ornamental turf on public street medians, and requires a reduction in potable water use for irrigation. Green Parking Lots promote water conservation through the use of low water use and drought tolerant plants (xeriscape) and improving groundwater supplies through infiltration.

Green infrastructure, unlike traditional "gray" infrastructure approaches to stormwater management, provides multiple benefits to communities. Planting more trees and landscaping in public spaces cleans the air, cools the land, provides more habitat for wildlife, adds green maintenance jobs, increases property values and promotes a better, healthier quality of life for County residents and visitors.

This guide is to be used along with the County's Green Parking Lots Standards. These Green Parking Lots measures, when implemented, will ensure the County remains a green community for many years to come.

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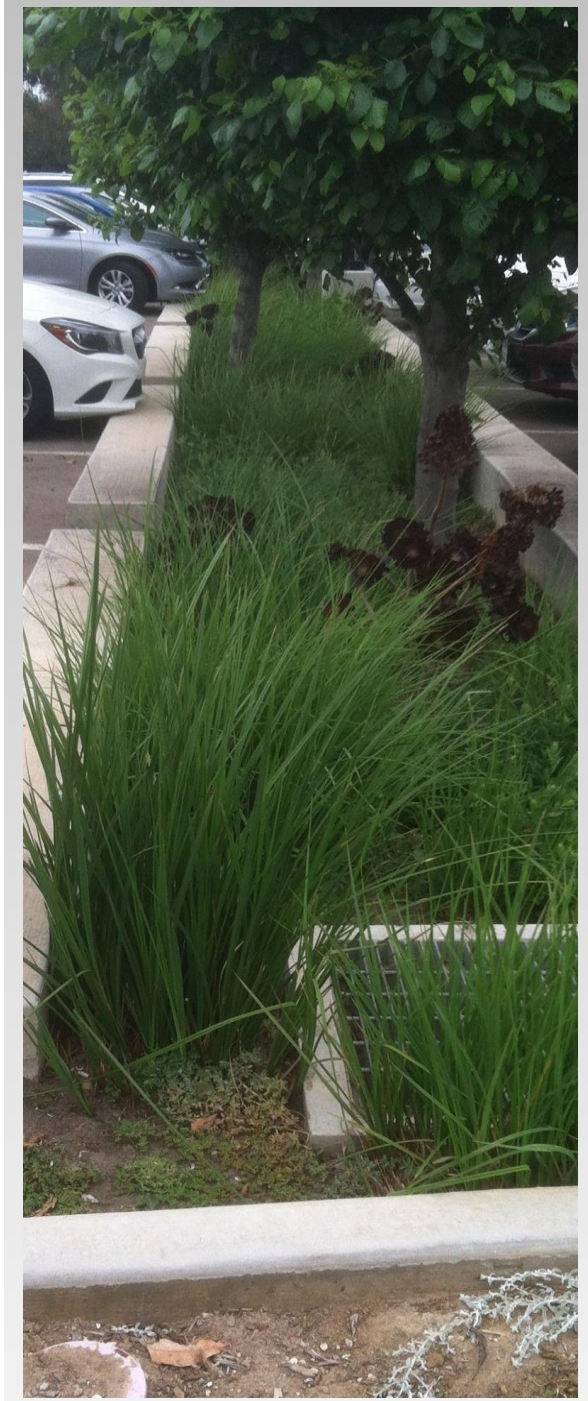
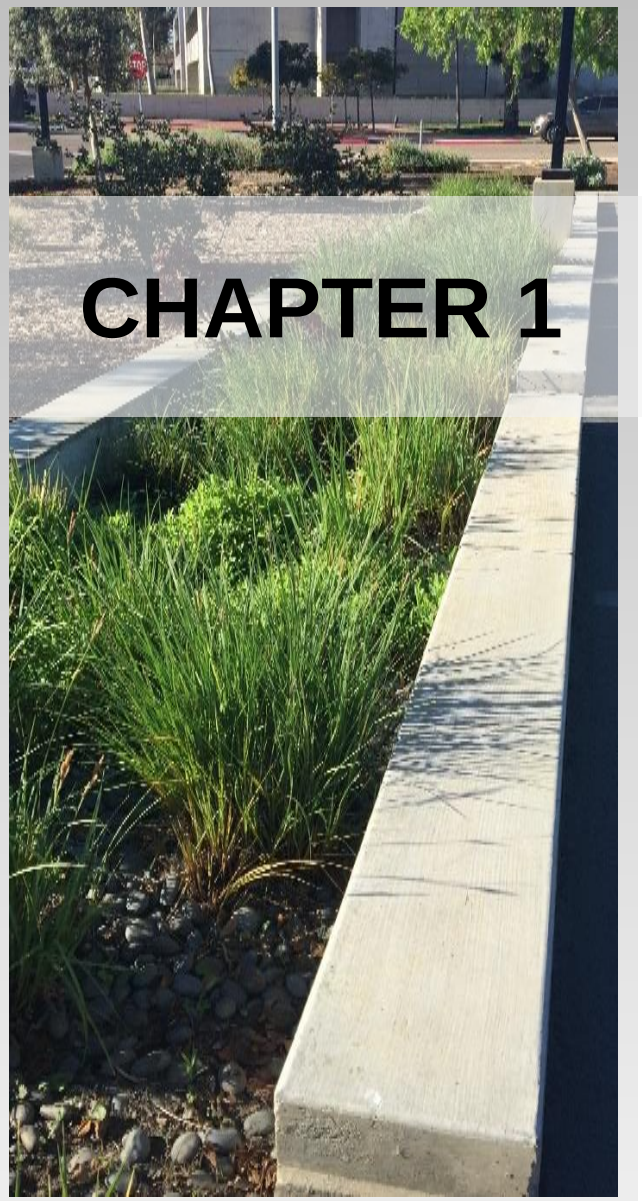




CHAPTER 1 Introduction to Parking Lots

1.1 INTRODUCTION

These guidelines have been prepared to assist in the design and construction of parking lots projects for new or redeveloped parking lots. These Guidelines may also be used to assist in the design and construction of new or retrofit paved sidewalks, bicycle lanes, or trails.

The functional goals of these guidelines are to:

- Provide source control of stormwater;
- Limit stormwater transport and pollutant conveyance to the collection system;
- Restore predevelopment hydrology to the extent possible by slowing the runoff down and allowing for infiltration; and
- Provide environmentally enhanced parking lots.

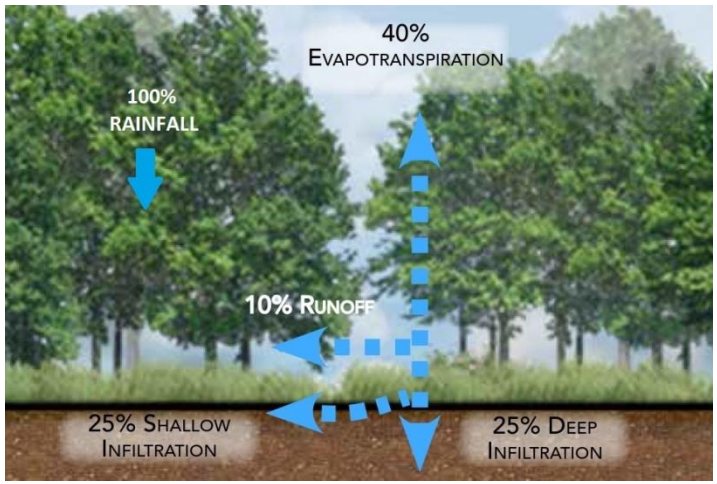
A review of existing County policies has been performed and included in the accompanying Green Parking Lots Standards document that includes an addendum to the 2016 County of San Diego BMP Design Manual. The Green Parking Lots Standards publications include an addendum to the 2016 County of San Diego BMP Design Manual. The intent is to utilize the current standard drawings with suggested modifications where appropriate.

Green Parking Lot configurations and locations presented in this guideline are schematic/conceptual in nature. The configurations (or locations) could be modified as long as the design and construction details are in conformance with the Green Parking Lots technical documents (i.e. – Green Parking Lots Supplement to the BMP Design Manual, Standard Drawings, Specifications, and Maintenance Schedule).

1.2 The Natural and Developed Environment

Natural Areas

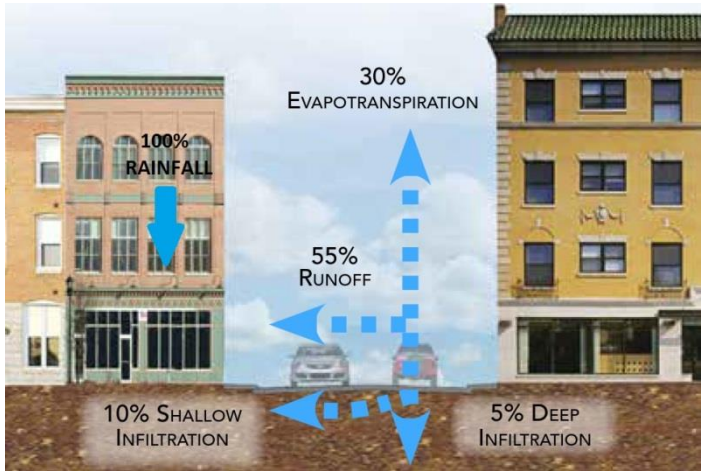
In areas such as meadows, thickets, woodlands, and parks, rain can soak into the ground and be used by plants. Trees and shrubs intercept rainfall and it slowly trickles down to the ground where it is absorbed by mulch and humus soil. Shaded areas are cooler, moister and provide wildlife habitat. Very little rainwater runs off the ground.



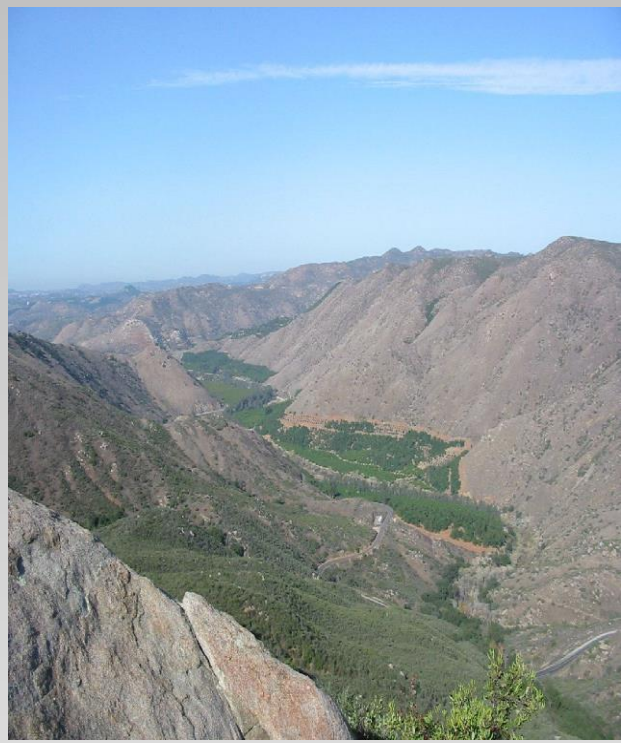
Natural Area Diagram
(Source: DDOT, 2014)

Urban Areas

In urban areas, building rooftops, streets, alleys, sidewalks, and other paved surfaces are smooth and mostly impervious. Very little rain has a chance to soak into the ground. These paved urban areas are hotter and offer very little wildlife habitat. Most of the rain that falls in the urban areas quickly runs off impervious surfaces picking up pollutants and carrying them into storm drains. These flows quickly combine to create flash floods that degrade downstream waterways.

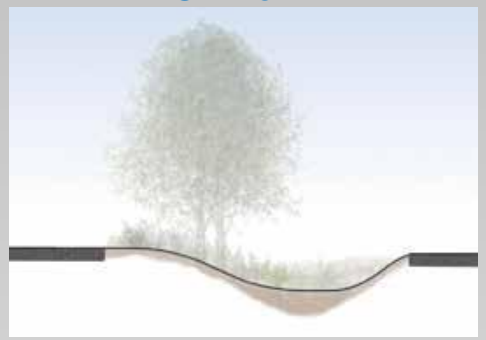


Urban Area Diagram



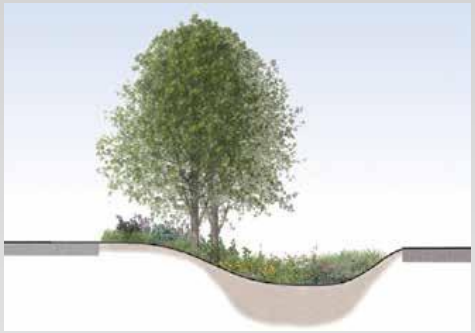


STORMWATER CAPTURE



Runoff from impervious surfacing

STORE



Store and retain captured runoff

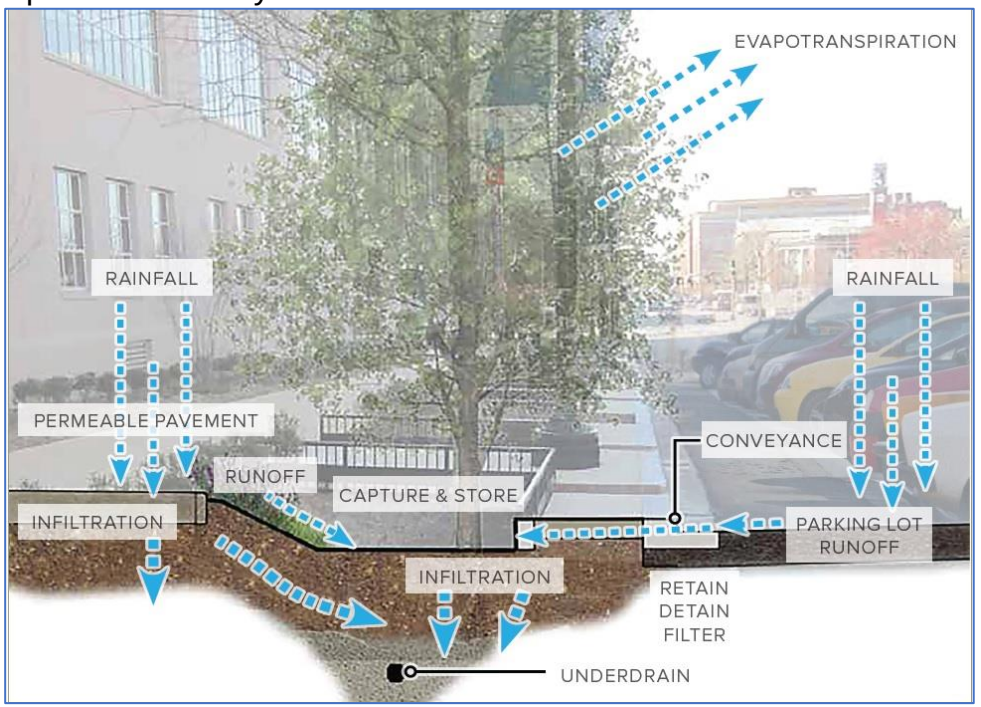
INFILTRATE/EVAPOTRANSPIRE



Water is infiltrated into the ground, evapotranspired by plants or drained

1.3 GREENING PARKING LOTS

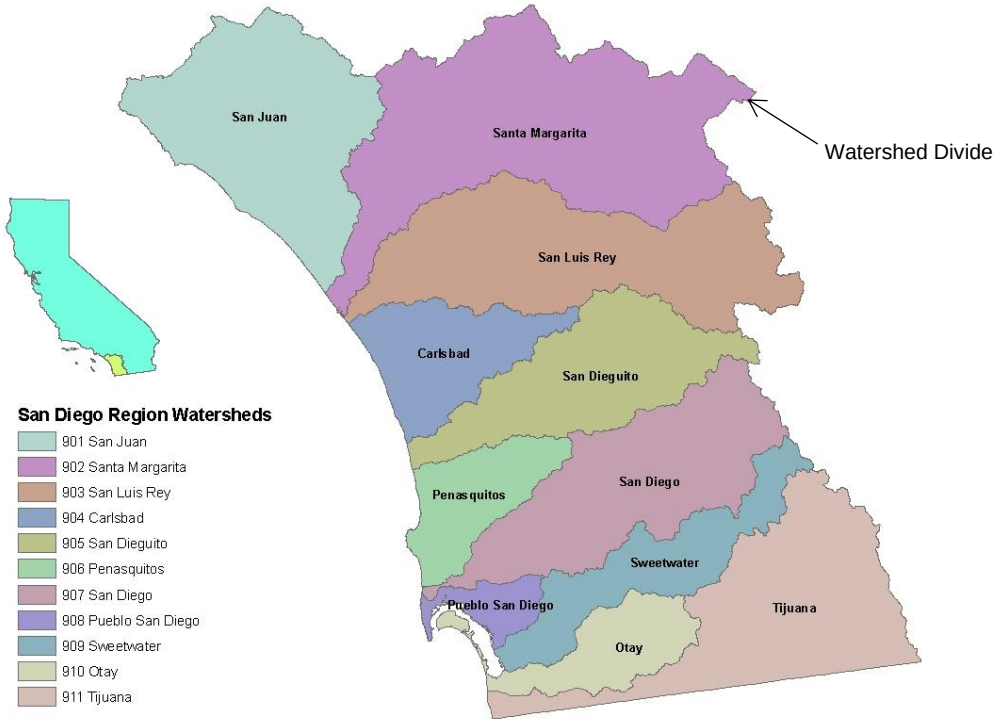
A Green Parking Lot includes Green Infrastructure (GI), incorporating elements found in natural areas into a parking lot area. GI is the living network that connects impervious areas to landscape areas, natural areas, and waterways. GI captures rainfall; cools buildings and pavement; and creates natural pathways for wildlife. GI includes Low Impact Development (LID) techniques, which mimic nature to capture and treat stormwater as close to the source as possible. When implemented, GI creates living green parking lots that capture, store, and infiltrate stormwater to treat it as a resource and improve the County environment.



Stormwater Diagram
(Source: DDOT, 2014)

1.4 THE COUNTY ENVIRONMENT

The County of San Diego is a unique environment made up of natural, rural, and urban areas. When rain falls in the County and becomes stormwater runoff, it flows through eleven major watersheds. Stormwater carries the pollutants, trash, and warmer temperatures it collects from roads, buildings, and other impervious surfaces and delivers them into our rivers, streams, bays, lagoons, and ocean. Urbanization and other land use changes in the County can modify the natural watershed hydrologic processes and stormwater runoff characteristics resulting in increased stormwater runoff and erosion.





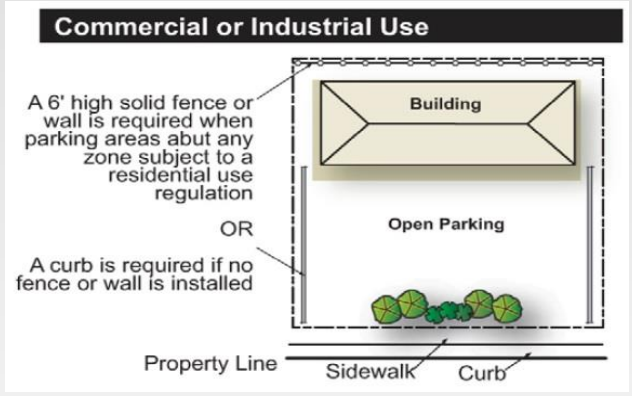




(Source: DDOT, 2014)

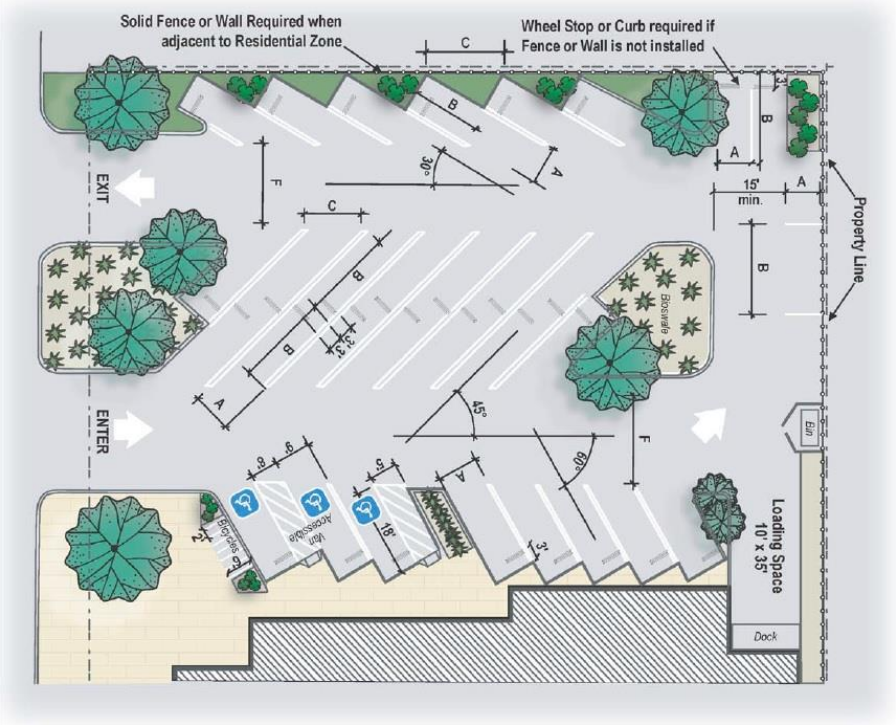






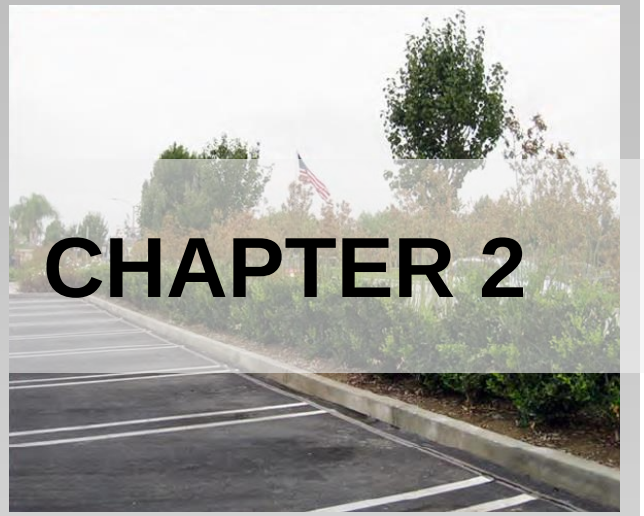
(Source: County of San Diego Parking Design Manual)

Land within parking lots present a significant opportunity to reduce runoff and improve the urban environment through Green Infrastructure. This manual introduces techniques to install green infrastructure in areas within and around parking lots. This guide includes supplements to the BMP Design Manual, Standard Drawings, and specifications, and should be used to the maximum extent practicable for all public and private project design of parking lots.



CONCEPTUAL PARKING LOT DIAGRAM
(Source: County of San Diego, Parking Design Manual)

Early in the planning and design process careful consideration should be given to the location of existing and proposed utilities and appurtenances in the parking lot and their interaction with the proposed green parking lot measures.







CHAPTER 2

Green Parking Lots Strategies

2.1 INTRODUCTION

Green Parking Lots, including Green Infrastructure (GI), and Low Impact Development (LID) solutions are intended to be sustainable, attractive, and cost effective. The range of opportunities includes trees, landscape areas, dispersion areas, biofiltration, and permeable pavement. These strategies use natural processes to reduce the volume of runoff, peak flow, and pollutants. This chapter will focus on four (4) areas appropriate for use in the road right-of-way.

TREES

Trees are a powerful tool due to their ability to intercept water on leaves, slowly deliver it to the mulch and soil, absorb it through root systems, and transpire it as water vapor directly back to the atmosphere.

DISPERSION AREAS

Dispersion areas disconnect impervious areas from directly running to the storm drain system. Dispersion areas use the natural functions of plants, mulch, and soils to remove pollutants and slow stormwater runoff. The strategy uses storage, sediment capture, and biological processes to clean the water. These mimic processes that occur in nature before water reaches waterways.

BIOFILTRATION

Biofiltration facilities are vegetated surface water systems that filter water through vegetation, and soil or biofiltration soil media prior to discharge to the storm drain system. They also utilize shallow depressions to provide storage and evapotranspiration.

PERMEABLE PAVEMENT

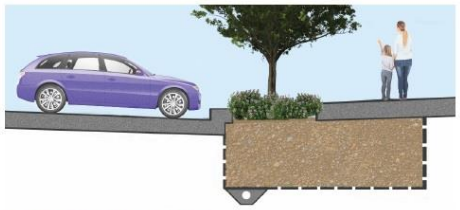
Permeable paving systems provide a hard surface, while allowing water to flow through to the underlying soils instead of directly to the drainage system. The areas where this strategy may be used include: sidewalks, pathways, medians, and parking lanes.

2.2 TREES

WHY ARE TREES IMPORTANT?

Trees make a parking lot feel welcoming, help manage stormwater, and reduce the urban heat island effect by providing shade. An urban heat island remains significantly warmer than the surrounding rural areas due to less vegetation. Trees promote air quality, natural habitat, the human environment, and well-being.

Trees in parking lots are sometimes confined to small planting areas where they struggle to reach a mature size or live a long life. Through the use of Structural Soil, Structural Cell, or Suspended Sidewalk techniques, soil volumes and space for tree roots to grow uninhibited can be greatly increased. These techniques also allow for more water and air to reach the tree roots.



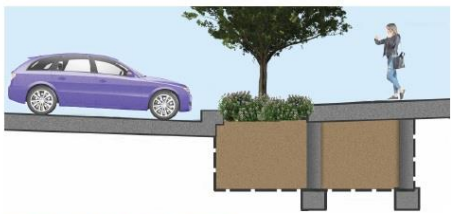
STRUCTURAL SOILS

A specific mix of stone and soil that supports the sidewalk while allowing tree roots to grow normally.



STRUCTURAL CELLS

Manufactured cells support the sidewalk allowing uncompacted soil to promote tree roots to grow below.



SUSPENDED SIDEWALK

Thickened sidewalk with reinforcement and/or footings can be used allowing tree roots to grow below the sidewalk.



Soil Volume Sizing

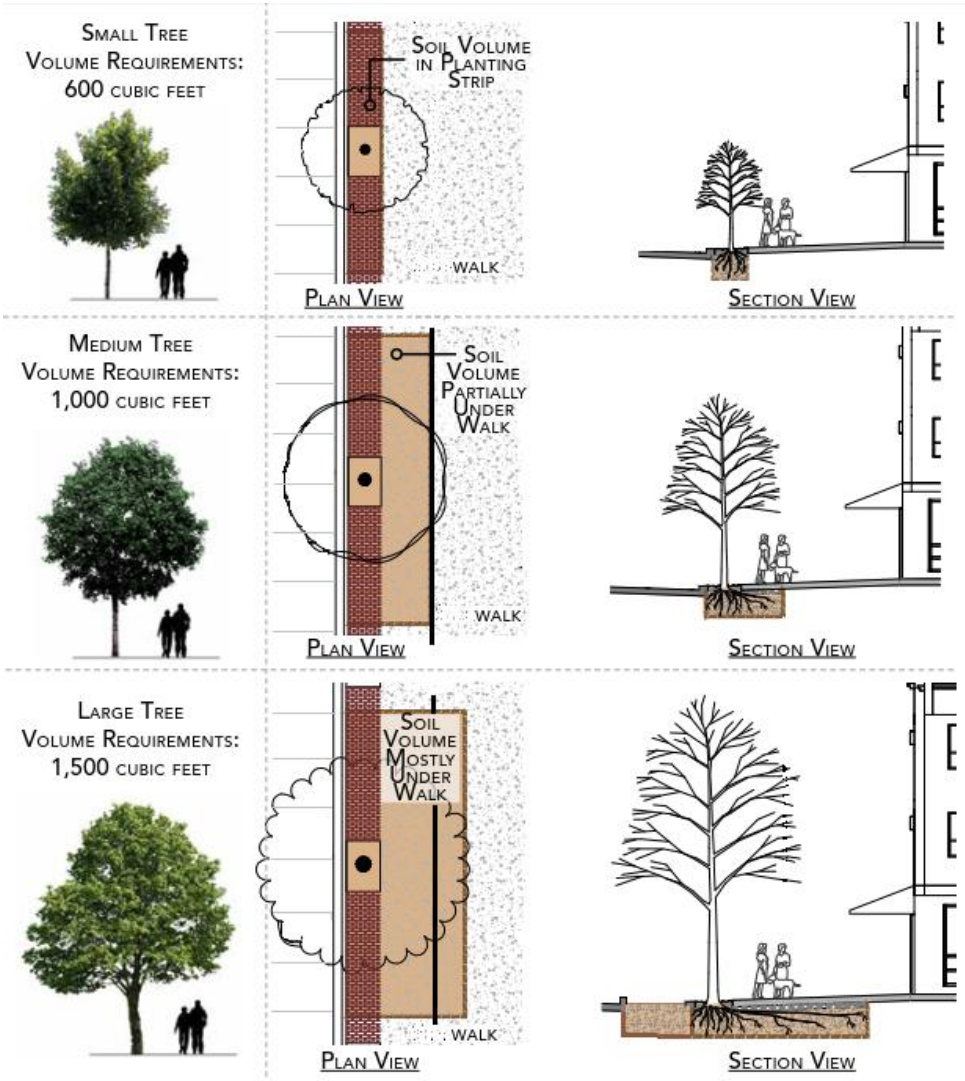
- Adequate soil space provides the nutrients, water, air, and root space that trees need to have a long, healthy life.
- The soil volume required depends on the fully-grown tree size (generally two cubic feet of soil per one square foot of the tree's mature drip line area).
- Soil for trees should be three-feet deep; the length and width must ensure the appropriate volume for the tree species and site.

Other Considerations

- Provide as much open space as possible for the tree to allow the tree to grow and access water.
- Providing structural soils, suspended sidewalks, or structural slabs to edges of paved areas encourages tree roots to extend further and into adjacent green areas.
- Evaluate temporary and permanent irrigation needs
- Evaluate utility locations and required clearance.

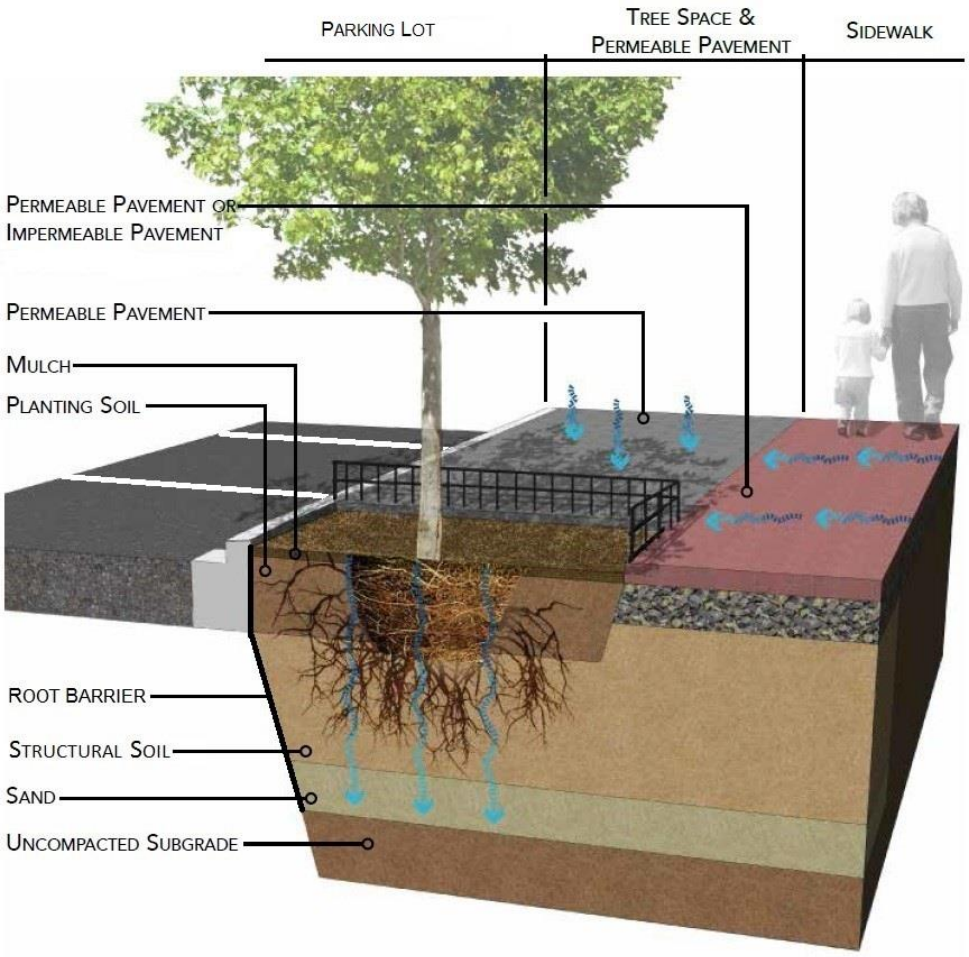
Design Issues

- Maintenance Access: allow for maintenance access
- Pedestrian Considerations: allow for 18-inch minimum setback from curb. Comply with ADA requirements.
- Suspended sidewalks and structural slabs/cells: may require evaluation by geotechnical and structural engineers
- Tree Size: Evaluate tree size versus the required parking lot dimensions.
- Tree Location: Refer to Parking Design Manual for minimum numbers of trees and guidance on tree location.



(Source: DDOT, 2014)

TREES – WHAT'S UNDERNEATH?



(Source: DDOT, 2014)

Note: Other options include suspended sidewalks and structural cells as shown on page 7.

PUTTING IT TOGETHER

- Permeable Paver: Permeable pavers allow water to infiltrate into the soil to be used by the trees.
- Mulch: Shredded hardwood layer to retain water and trap pollutants.
- Planting Soil: Uncompacted soil mix allows root growth when used in open areas, with structural cells, or suspended sidewalks.
- Structural Soil: Supports pavement and allows root growth.
- Sand: Acts as a drainage layer for excess stormwater (when needed).
- Uncompacted Subgrade: Existing soil where stormwater may infiltrate.

WATER TREES WITH STORMWATER

In addition to large soil volumes, trees need sufficient water, air, and nutrients to be successful in the road right-of-way environment. Tree space design includes integrating opportunities for directing stormwater into the soil. See Water Efficient Landscape Design Manual for irrigation requirements.



2.3 Types of Dispersion Areas and Biofiltration

What Are Dispersion Areas and Biofiltration?

Dispersion Areas and Biofiltration are landscape systems that filter pollutants and sediment from runoff. The layers of plant material, mulch, planting media (a mix of soil, sand, and compost), and stone capture metals, nutrients, and bacteria that would otherwise flow into the surrounding creeks and rivers. The rainwater is held in the planting bed until it infiltrates into the ground or evaporates. The entire system can fit into small spaces, making it adaptable to tree spaces, planter boxes, and islands.



Planter Boxes

Runoff follows the existing curb line and enters the facility through curb cuts. Excess runoff exits through the same curb cuts or into drains located in the planting area.



Parking Islands

Runoff follows the existing curb line and enters the facility directly. Excess runoff flows through the system or into drain inlets.



Swales

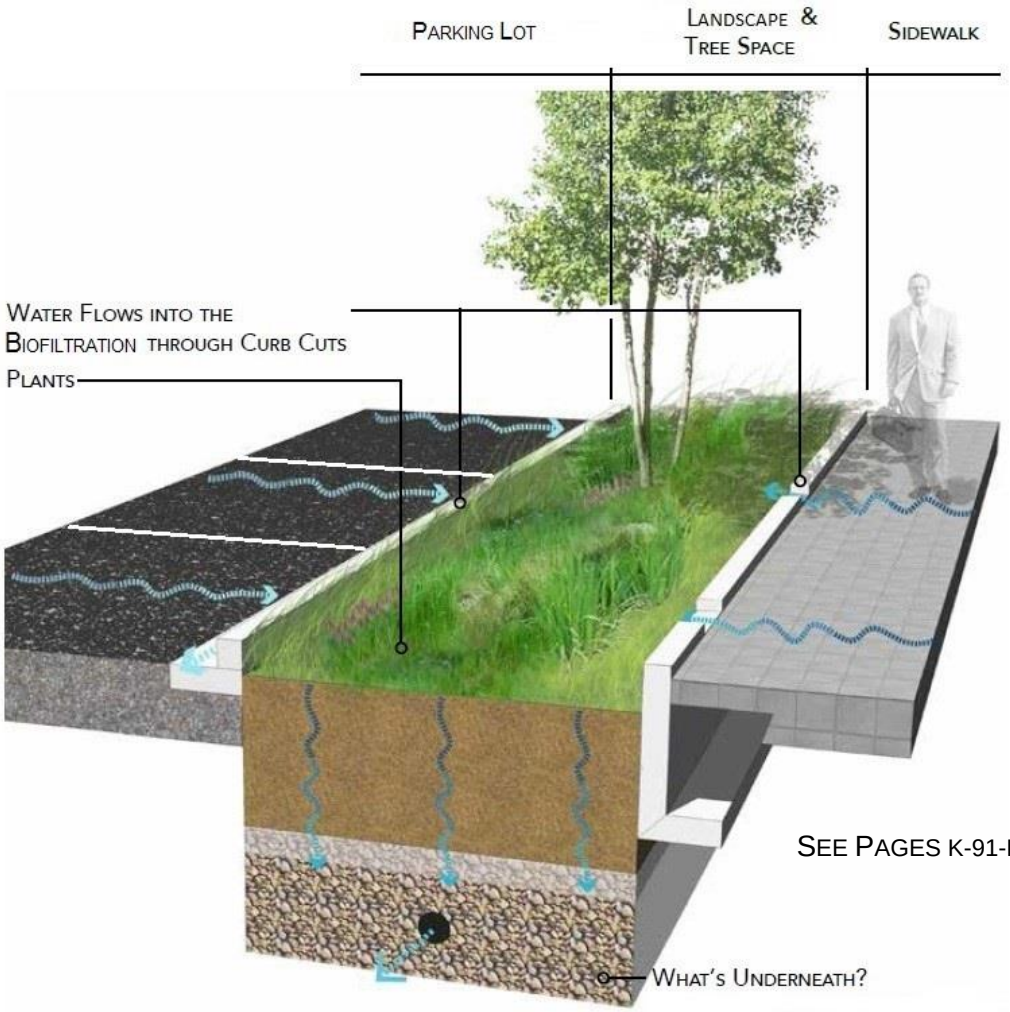
Runoff enters the facility directly or through curb cuts. Excess runoff flows through the system to a drainage outlet.



Filter Strip/Dispersion Area

Runoff enters the facility directly via sheet flow. Excess runoff flows through the system to a drain inlet downslope.

PLANTER BOX



SEE PAGES K-91-K-95 FOR DETAILS

WHERE TO USE?

- Parking lot areas adjacent to sidewalk/walkway/plaza area.
- Where trees and landscaping are needed.

LIMITATIONS

- Limited pedestrian access across planter.

DESIGN ISSUES

Maintenance Access: Allow for adequate maintenance access from parking lot.

Pedestrian Considerations: Allow for minimum allowable sidewalk width. Consider trip hazards and fall protection. Comply with ADA requirements.

Where to Use?

- Parking lots with islands.
- For parking lot traffic calming.
- Next to mature trees.

Limitations

- Do not disturb existing, mature trees and root systems.
- Ensure sight lines and turning radii are preserved.

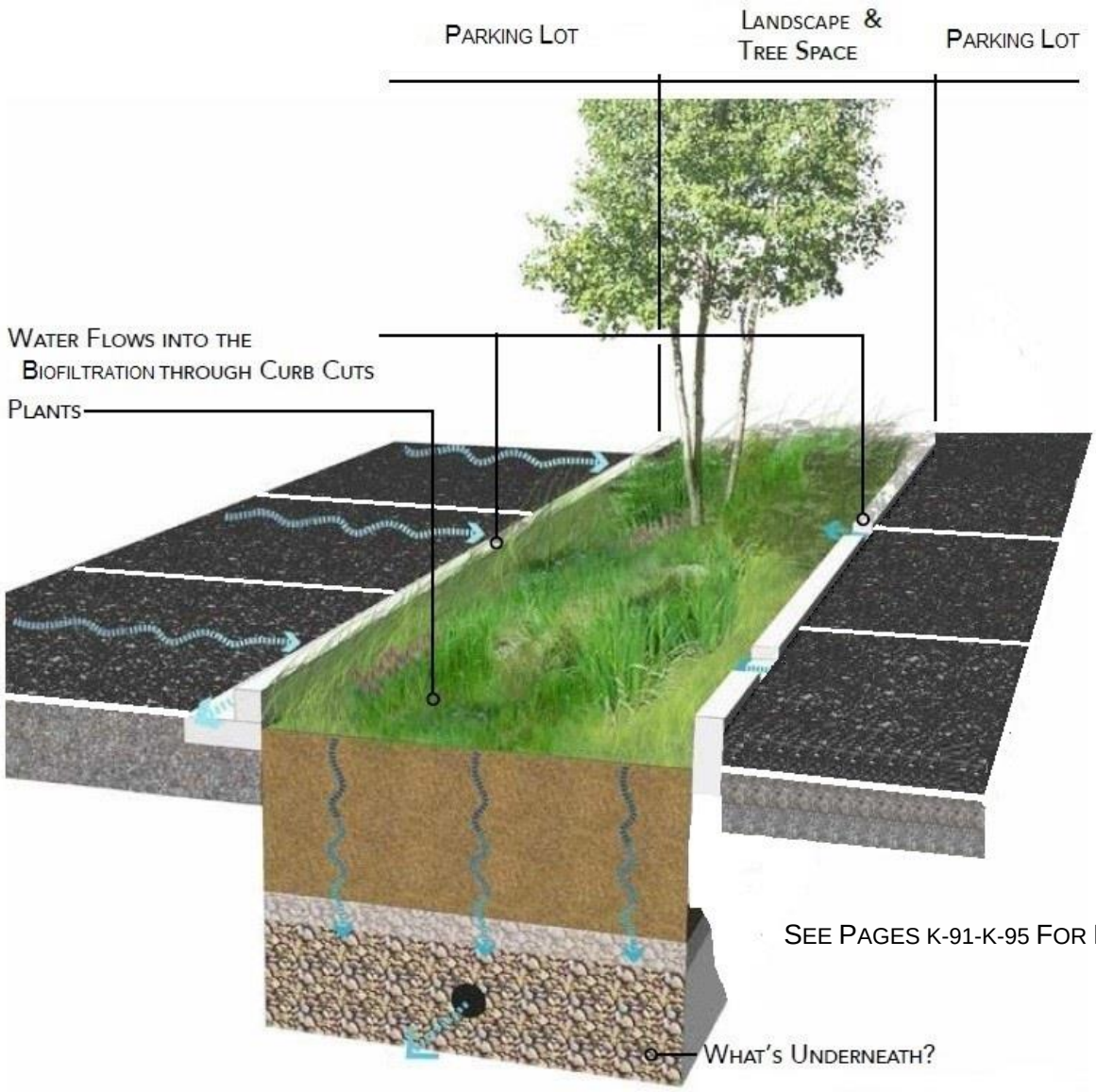
Design Issues

Maintenance Access: Allow for adequate maintenance access from road.

Pedestrian Considerations: Consider trip hazards and fall protection. Short fences or curbs prevent pedestrians from stepping into a recessed area. A 3:1 transition from the sidewalk to planter bottom is an alternative. Comply with ADA requirements.

Parking: Consider trip hazards and adequate spacing in order to park.

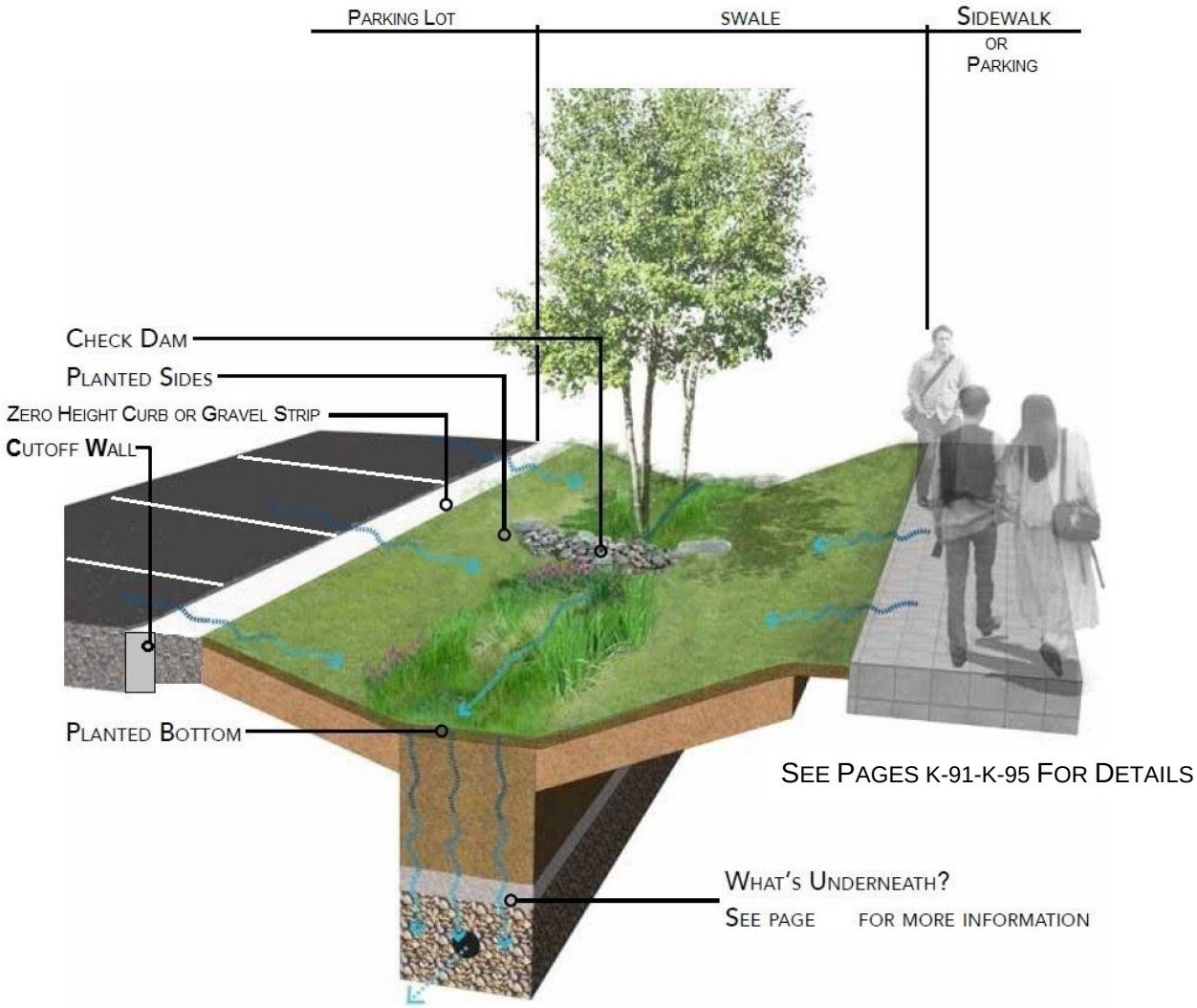
Parking Islands



See Pages K-91-K-95 For Details

(Source: DDOT, 2014)

SWALE ADJACENT TO PARKING



SEE PAGES K-91-K-95 FOR DETAILS

WHERE TO USE?

- In parking lots with zero height curb or curb cuts.
- In parking lot areas with less pedestrian use.

LIMITATIONS

- Not suitable for narrow island areas.

DESIGN ISSUES

Slope and Check Dams: Swales are placed where runoff is flowing and optimally before catch basins that convey water from the parking lot to the drainage system. Swales may be built on moderate slopes with the use of check dams. Rock armoring or turf reinforcement mat may be required in steep areas with erosive velocities between check dams.

Maintenance Access: Allow for adequate maintenance access from parking lot.

Pedestrian Considerations: Limit pedestrian access to swale. Transition swale at intersections for pedestrian facilities. Comply with ADA requirements.

Where to Use?

- Where runoff can sheet flow into filter strip area.
- Moderate slopes (less than 5%) adjacent to impervious area of treatment (parking lot).
- Rural areas.

Limitations

- Not recommended on steep slopes.
- Prone to rill formation.

Design Issues

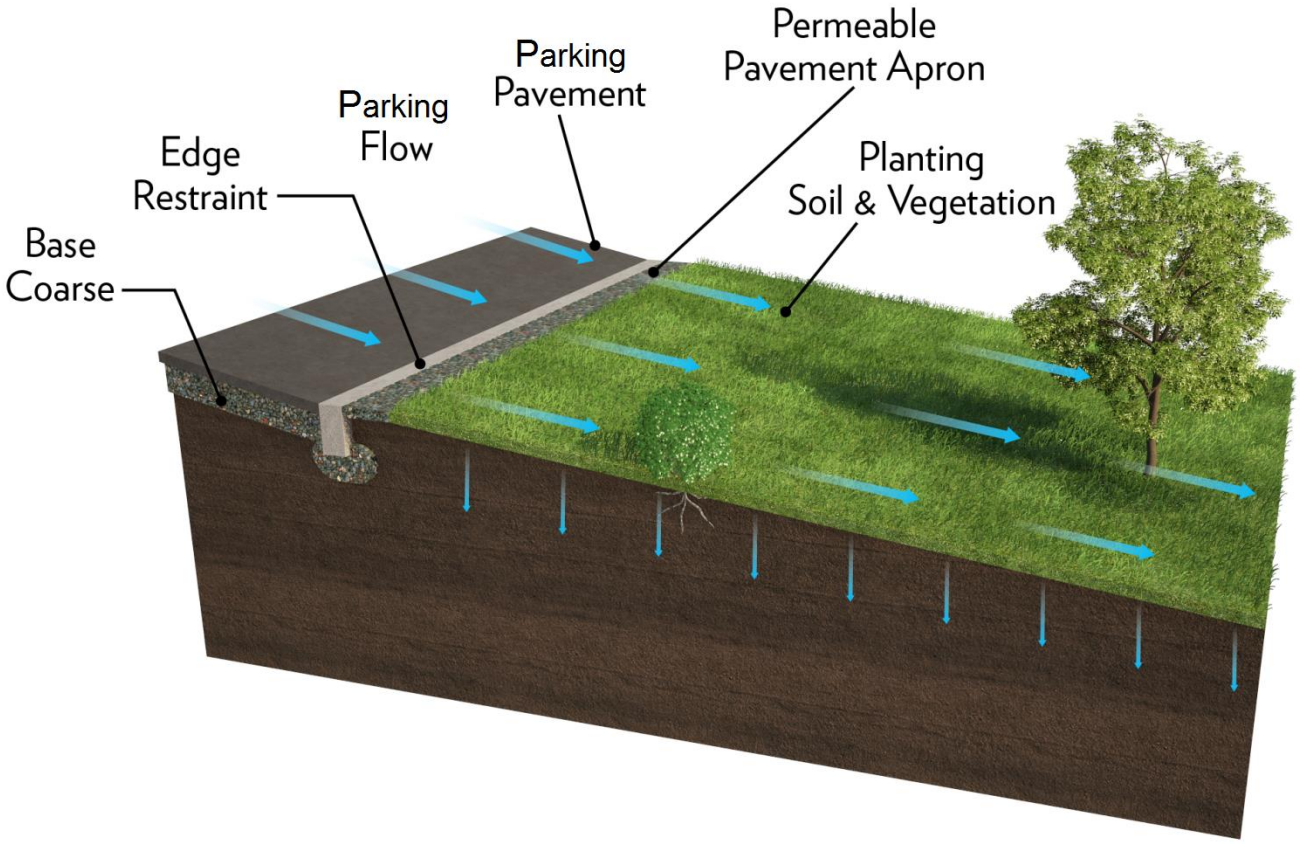
Maintenance: Vegetated cover must be maintained to ensure that filter strips do not export sediment due to erosion of exposed ground.

Slope: Maximum slopes in the direction of flow will be based upon drainage area size, soil type, vegetation cover, and slope length to prevent rill formation. Slopes less than 5% are preferred.

Maintenance Access: Allow for adequate maintenance access from parking area.

Pedestrian Considerations: Limit pedestrian access across filter strip to prevent formation of dirt pathways. Comply with ADA requirements.

Vegetated Filter Strip/Dispersion Area



The NRCS hydrologic soil groups are defined as:

• **Group A** soils have a high rate of percolation and a low runoff potential. The rate of water transmission is high; thus, runoff potential is low. Group A soils are generally referred to as sandy soils.

• **Group B** soils have moderate percolation rates when thoroughly wet. These are chiefly soils that are moderately deep to deep, moderately well-drained to well-drained, and moderately coarse textured. Rate of water transmission is moderate.

• **Group C** soils have a slow percolation rate when thoroughly wet. They are chiefly soils that have a layer impeding the downward movement of water, or they are moderately fine to fine-textured soils that have a slow infiltration rate. The rate of water transmission is slow.

• **Group D** soils have very slow percolation rates when thoroughly wet. They are clays that have a high shrink-swell potential, soils that have a high permanent water table, soils that have a claypan or clay layer at or near the surface, or soils that are shallow over nearly impervious material. The rate of water transmission for group D soils is very slow.

Dispersion Areas and Biofiltration – What's Underneath?

Soil Type and Infiltration Rate

Dispersion areas and biofiltration can be located in many areas. However, site constraints will help to determine what goes underneath the dispersion area or biofiltration. Common considerations include soil type, relative soil compaction, required utility setbacks, slope setbacks, and structural setbacks. Depending on the factors at the site, what's underneath the dispersion area or biofiltration is determined by the level of infiltration: high, medium, low, or none.

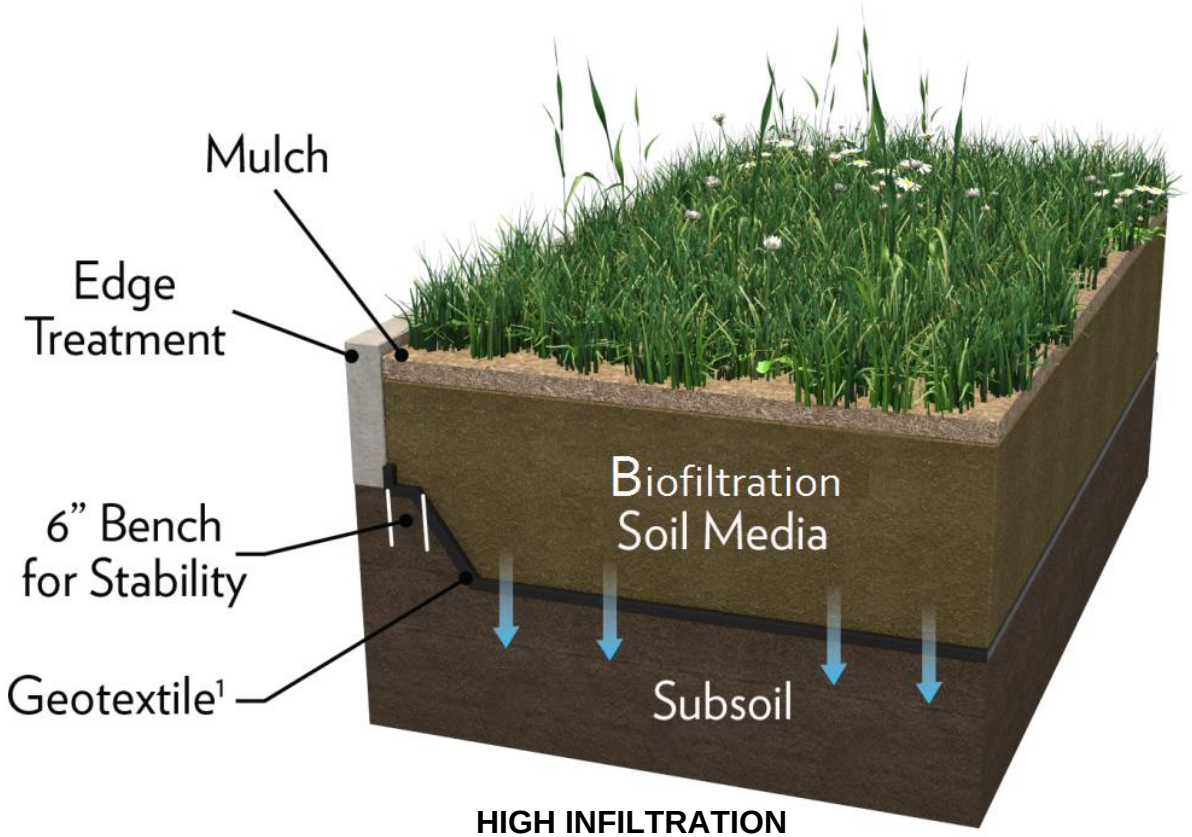
A qualified engineer practicing geotechnical services shall review the proposed stormwater infiltration to provide a professional opinion regarding the potential adverse geotechnical conditions that the implementation of these practices may create. Geotechnical conditions such as slope stability, expansive soils, compressible soils, seepage, groundwater, and loss of foundation or pavement subgrade strength should be considered.

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service, conducted a soil survey of the San Diego area in the early 1970s. The NRCS has classified San Diego area soils with respect to: (1) their ability to accept and absorb water, (2) their tendency to produce runoff, and (3) their erodibility.

The soil survey classified soil runoff potential into four hydrologic soil groups labeled A through D. Group A and B soils exhibit the greatest infiltration rates (unless soils are compacted during construction) and are generally best suited to stormwater percolation. The San Diego area, however, has a relatively high concentration of group C and D soils, which exhibit lower percolation rates that generally limit the use of infiltration-based stormwater management systems. Instead, dispersion areas and biofiltration facilities are often equipped with underdrains. Such a design provides for filtration of the water quality design event through a biofiltration soil media as well as incidental infiltration of low flows.

Retaining a geotechnical engineer and conducting exploratory excavations at the site are highly recommended. Consideration should be given to the effects of urbanization on the natural hydrologic soil group. If heavy equipment can be expected to compact the soil during construction, or if grading will mix the surface and subsurface soils, appropriate changes should be made in the soil group selected.

HIGH INFILTRATION



HIGH INFILTRATION

Notes:
1. Geotextile per Geotechnical Engineer's Recommendations.

PUTTING IT TOGETHER

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Mulch: Shredded hardwood layer to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Geotextile: Prevents existing soil from migrating into the biofiltration soil media.
- Uncompacted Subsoil: Existing soil where stormwater infiltrates.

COMMON DESIGN ISSUES

Utilities: Utility lines should be avoided where necessary and allowed to coexist where possible.

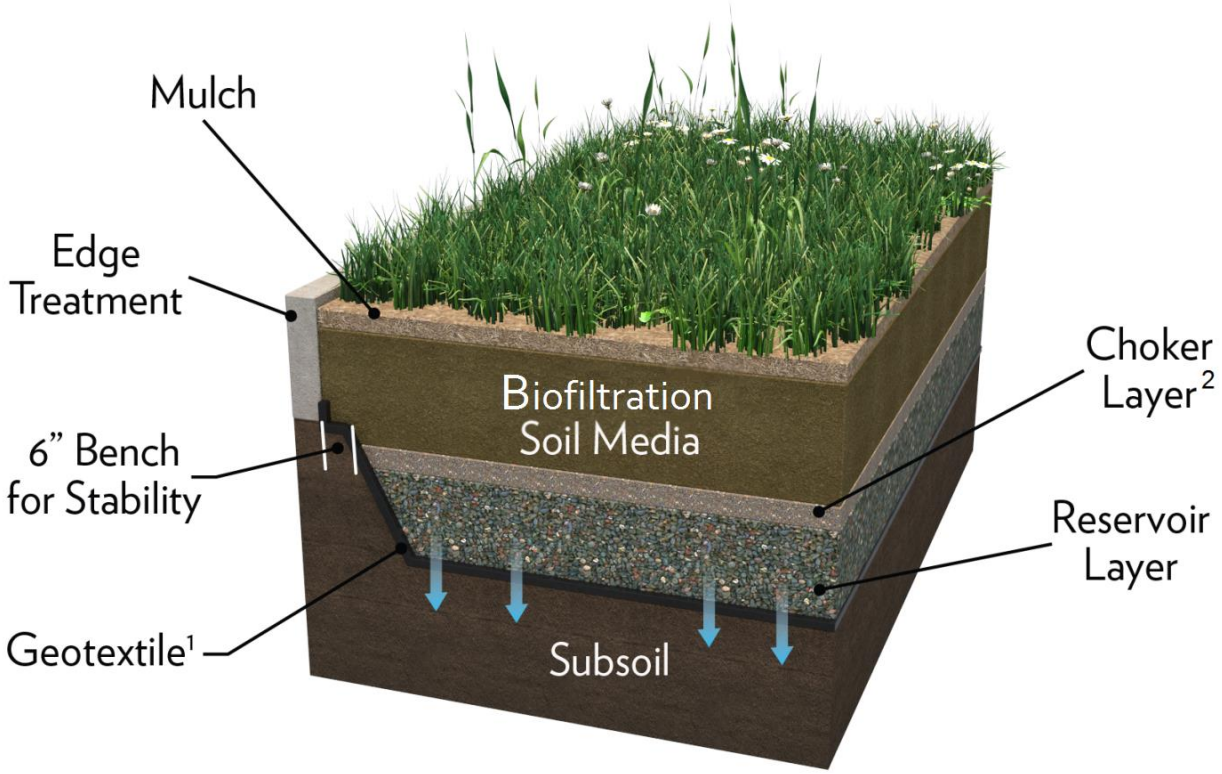
Putting it Together

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Mulch: Shredded hardwood layer to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Choker Layer: Sand and gravel to prevent biofiltration soil media from migrating into the reservoir.
- Reservoir Layer: Stone to hold excess water until it infiltrates.
- Geotextile: Prevents existing soil from migrating into the biofiltration soil media and stone reservoir layer.
- Uncompacted Subgrade: Existing soil where stormwater infiltrates.

Common Design Issues

Utilities: Utility lines should be avoided where necessary and allowed to coexist where possible.

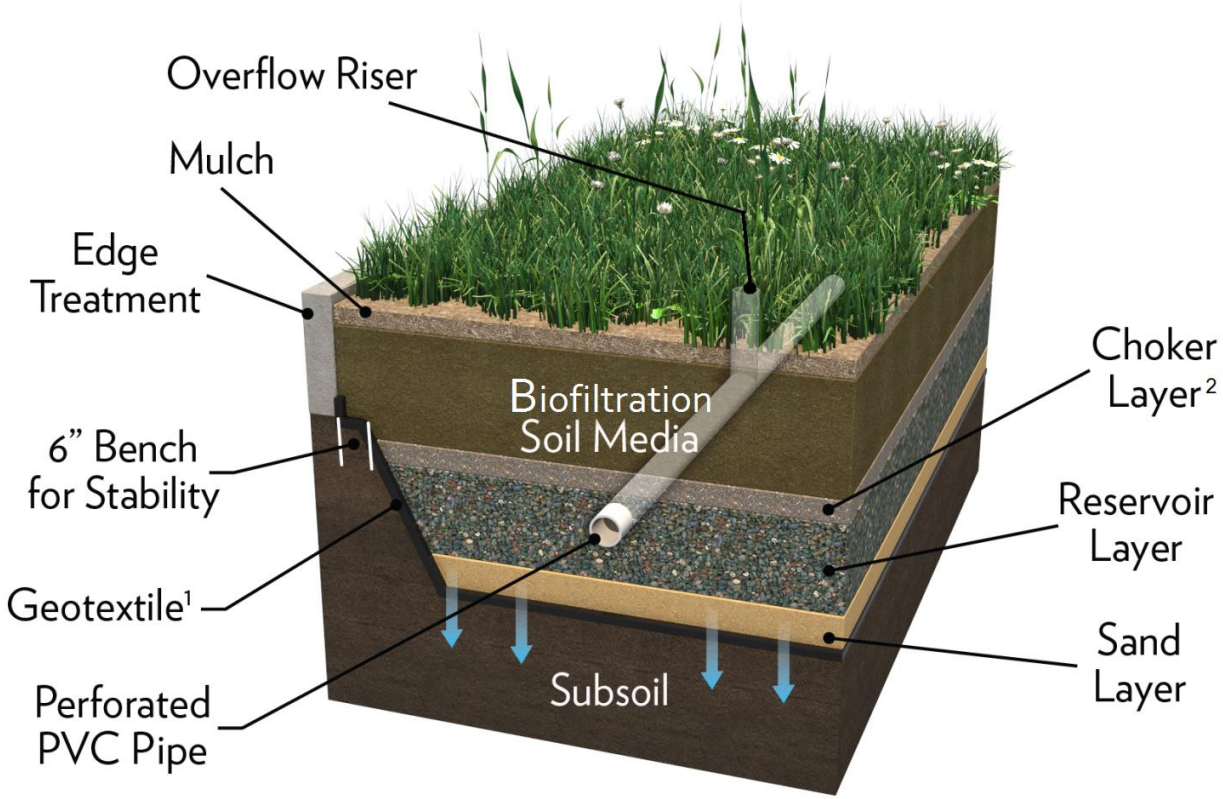
Medium Infiltration



MEDIUM INFILTRATION

Notes:
1. **Geotextile per Geotechnical Engineer's Recommendations.**
2. **Choker layer may be required depending the type of reservoir layer.**

LOW INFILTRATION



LOW INFILTRATION

Notes:

1. Geotextile per Geotechnical Engineer's Recommendations.

2. Choker layer may be required depending the type of reservoir layer.

PUTTING IT TOGETHER

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Overflow Riser: Pipe to capture high water flow.
- Mulch: Shredded hardwood layer to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Choker Layer: Sand and gravel to prevent biofiltration soil media from migrating into the reservoir.
- Reservoir Layer: Stone to hold excess water until it infiltrates.
- Underdrain: An underdrain is required.
- Geotextile: Prevents existing soil from migrating into the biofiltration soil media and stone reservoir layer.
- Uncompacted Subgrade: Existing soil where stormwater infiltrates.

COMMON DESIGN ISSUES

Utilities: Utility lines should be avoided where necessary and allowed to coexist where possible.

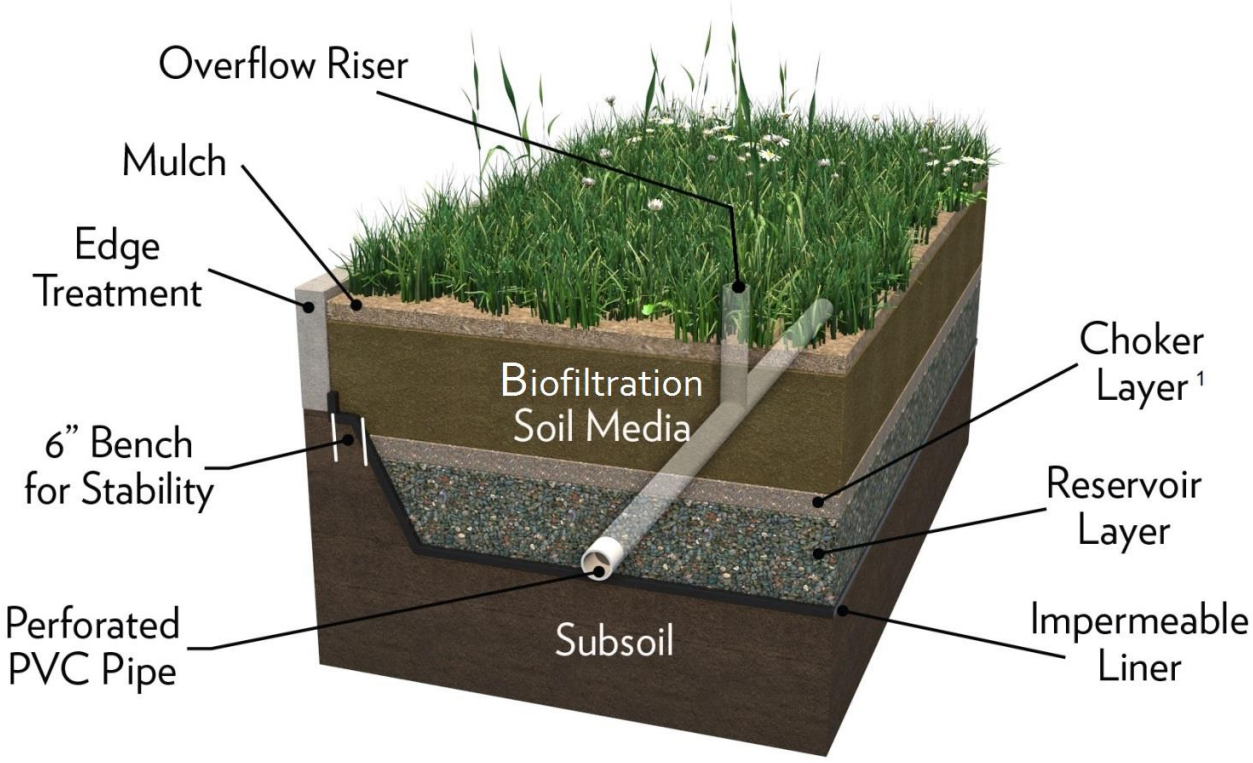
Putting it Together

- Ponding Depth: Stores runoff within the planting area prior to treatment.
- Overflow Riser: Pipe to capture high water flow.
- Mulch: Shredded hardwood layer to retain water and trap pollutants.
- Biofiltration Soil Media: A specific blend of soil, compost, and sand to retain and drain water and support plant growth.
- Choker Layer: Sand and gravel to prevent biofiltration soil media from migrating into the reservoir.
- Reservoir Layer: Stone to hold excess water until it enters the underdrain.
- Underdrain: An underdrain is required.
- Impermeable Liner: Prevents infiltration and prevents existing soil from migrating into the biofiltration soil media and stone reservoir layer.

Common Design Issues

Utilities: Utility lines should be avoided where necessary and allowed to coexist where possible.

No Infiltration



NO INFILTRATION

Notes:
1. Choker layer may be required depending the type of reservoir layer.

2.4 Planting & Irrigation of Dispersion Areas, Biofiltration, Trees, and Other Areas

Planting Design

Trees, dispersion areas, and biofiltration add a landscape amenity to the parking lot. Trees, shrubs, grasses and perennials are used to create a diverse landscape suitable for the site conditions and neighborhood. Plants should be chosen based on the level of care expected at the facility. Planting design must be done to ensure sight lines are preserved for pedestrians, cyclists, and vehicles in the parking lot.

Trees are an important component of a Green Parking Lot. Mature trees capture stormwater, provide shade, and cool pavement. Existing trees should be protected when possible in parking lot retrofit projects.

Refer to the County of San Diego's Water Efficient Landscape Design Manual and Low Impact Development Handbook for suitable plant species to use in dispersion areas and biofiltration. Also refer to the community right of way development standards for suitable plants within specific communities.

Irrigation Design

Irrigation design should comply with the County of San Diego's Water Efficient Landscape Design Manual.

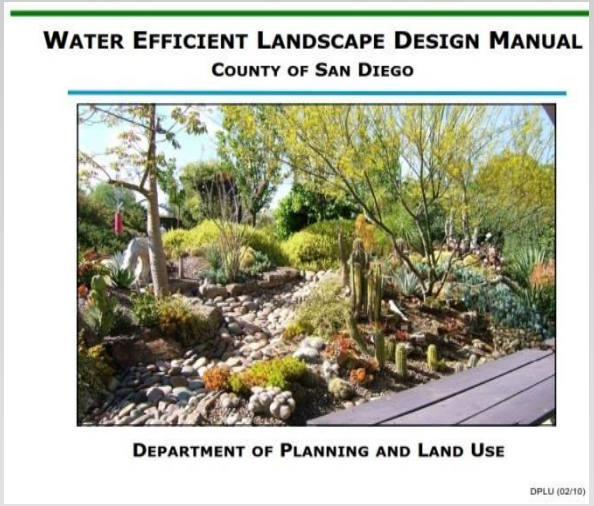
Planting Zones (Hydrozones)

Grouping plants into hydrozones is an approach to irrigation and planting design where plants with similar water needs are grouped together. Ideally, each zone of the irrigation system will supply plants with the same water needs with the appropriate amount of water.

Water Conservation

State executive order B-29-15 requires mandatory statewide water restrictions. This order prohibits ornamental turf on public street medians, and requires a reduction in potable water use for irrigation. Low water use, drought tolerant, native plants should be used for Green Parking Lot applications. The use of reclaimed water is recommended to reduce the amount of potable water used for irrigation.







2.5 TYPES OF PERMEABLE PAVEMENT

WHAT IS PERMEABLE PAVEMENT

Permeable pavement is an engineered top layer and base layer that allows water to move through it. The goal is to take rainwater as it falls and quickly move it to the lower layers of the system. Stormwater is stored in an underlying stone layer until it infiltrates into the soil below, aiding in groundwater recharge, or releases slowly to the storm drain system. Pollutants are filtered through the pavement and base layers. The terms 'Permeable Concrete Pavers', 'Pervious Concrete', 'Porous Asphalt', and 'Porous Rubber' are industry standard names, but all surfaces are 'permeable' and provide sufficient openings at the surface to allow stormwater to infiltrate.



PERMEABLE CONCRETE PAVERS

Unlike traditional pavers, there are gaps between each paver to allow water to flow between the pavers and into the base layer.



PERVIOUS CONCRETE

Sands and "fines" are reduced in the concrete mix to allow water to flow through the pavement into a stone bed and eventually the ground.







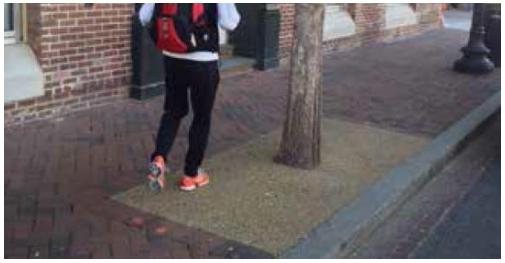


TYPES OF PERMEABLE PAVEMENT (CONTINUED)



POROUS ASPHALT

Porous asphalt is very similar to traditional asphalt except that the sands or “fines” are reduced in the mix so water can move through the pavement.



POROUS RUBBER

Made from recycled rubber and small stones, porous rubber works like pervious concrete, but can be installed over tree roots.



DECOMPOSED GRANITE (DG) PATHWAY

Decomposed granite can be used for pathways. It can be installed and compacted to meet ADA handicapped accessibility specifications and criteria. Although highly compacted, the surface has some infiltration capacity.



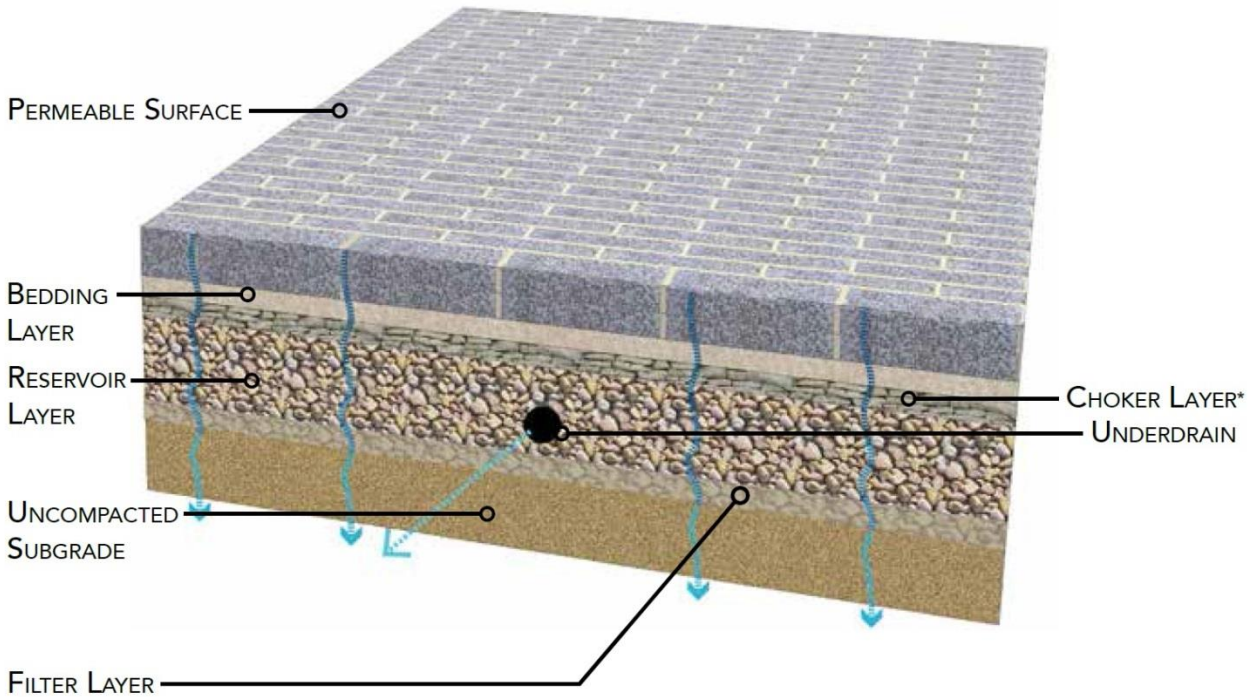
BOARDWALK

Made from wood or composite, boardwalks may be used for pathways. Rain easily passes through the spaces between the boards to the soil below.

Putting it Together

- Permeable Surface: Permeable concrete pavers, pervious concrete, porous asphalt, porous rubber, DG, or boardwalk.
- Bedding Layer: Used for pavers so they can be laid flat.
- Choker Layer: A layer of small rock to prevent fine material from migrating into the reservoir layer.
- Reservoir Layer: Stone to hold excess water until it infiltrates.
- Underdrain: Conveys excess water into drainage system when the reservoir fills.
- Filter Layer/Geotextile: A layer of stone or permeable geotextile to separate the reservoir layer from the soil below and prevent migration of fines into the reservoir layer.
- Impermeable Liner: Prevents infiltration into subgrade or adjacent roadway structural section.
- Uncompacted Subgrade: Existing soil into which stormwater infiltrates.

Permeable Pavement – What's Underneath?



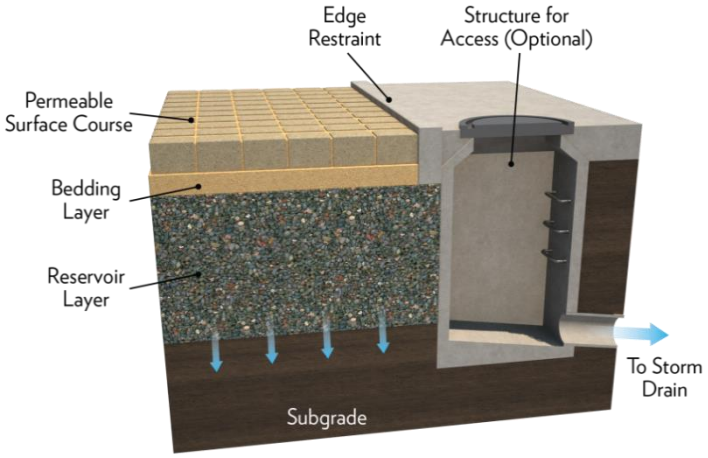
(Source: DDOT, 2014)

*Per Geotechnical Engineer's Recommendations

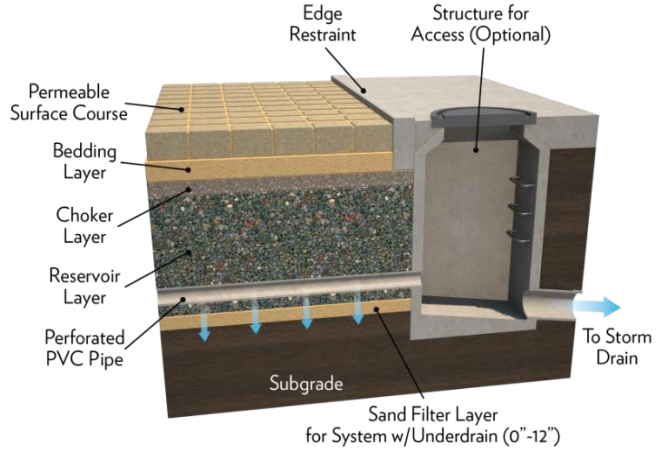
As with dispersion areas and biofiltration, there are multiple options for the subsurface components for permeable pavement including:

- Reservoir layer only with no underdrain
- Reservoir layer with underdrain (shown)
- Reservoir layer with underdrain and impermeable liner

PERMEABLE PAVEMENT SUBSURFACE DESIGN OPTIONS



Reservoir layer only with no underdrain



Reservoir layer with underdrain

WHERE TO USE?

- Pedestrian areas
- Parking areas/stalls

LIMITATIONS

- Use in areas with little to no sediment production.

DESIGN ISSUES

Soil Infiltration and Drainage: Soil infiltration tests must be completed to determine if an underdrain system is required.

Structural Section: A qualified and licensed professional should complete a pavement structural analysis.

Edge Restraints: Provide a concrete transition strip between any permeable and impermeable surface and around the perimeter of paver installations.

Pedestrian Considerations: Provide signage to indicate prohibited activities that cause premature clogging.

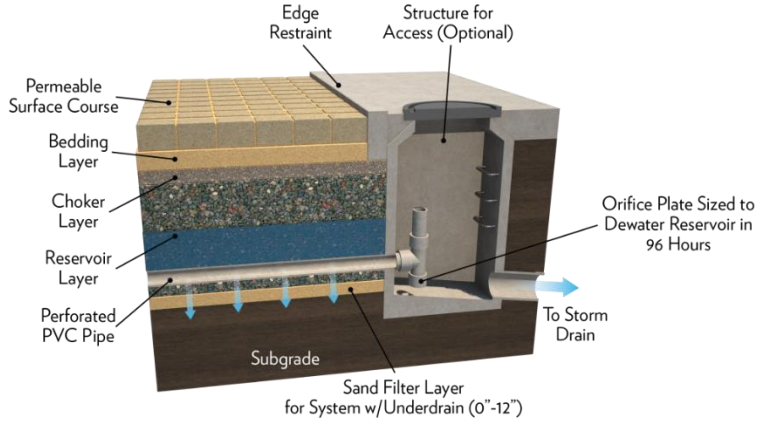
Maintenance Access: Provide adequate access for sweeping and/or vacuuming of surface.



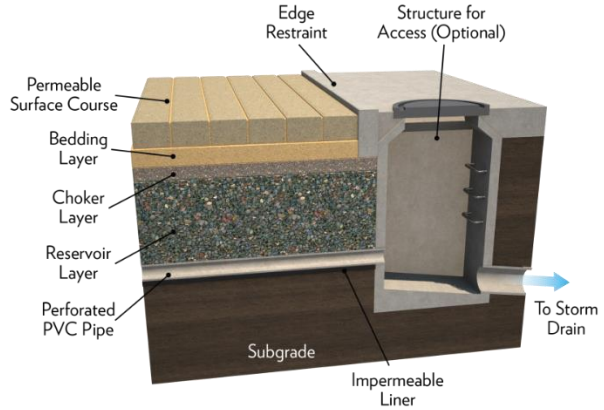




PERMEABLE PAVEMENT SUBSURFACE DESIGN OPTIONS (CONTINUED)



Reservoir layer with upturned underdrain



Reservoir layer with underdrain and impermeable liner



CHAPTER 3 Procedures and Design

Examples

3.1 INTRODUCTION

Implementing Green Infrastructure (GI) and Low Impact Development (LID) within a parking lot requires a number of considerations to create an amenity that is attractive while treating stormwater from the surrounding streets and sidewalks.

Implementation of Green Parking Lots features can be approached from evaluating the opportunities within each zone of the parking lot: traveled lane, parking stalls, islands, sidewalk/pathway, slopes and drainage easements. Each zone presents different opportunities, benefits, risks and technical design factors for GI and LID implementation to enhance stormwater quality.

Conducting a comprehensive inventory and assessment of site conditions is the crucial initial step for implementing GI and LID. The County LID Handbook inventory check list can be used to assist with identifying and evaluating a potential site for LID and to produce a list of opportunities and constraints.

The LID concept from the EPA of “slow it down, spread it out, and soak it in” should be at the forefront in the planning stages of project evaluating the implementation of Green Parking Lots design practices to control runoff and enhance water quality.







3.2 Site Design Principles

The following site design principles should be evaluated and implemented to "slow it down, spread it out, and soak it in":

- Minimize the impervious footprint of the site.
- Minimize soil compaction in landscaped areas. Landscape with native or drought-tolerant species.
- Disconnect impervious surfaces by dispersing runoff from impervious surfaces to pervious areas. To be considered 'disconnected' impervious areas should be designed to drain to a pervious area at least one-half their size.
- Design and construct trees, dispersion areas, biofiltration, and permeable pavements to effectively receive and infiltrate or retain runoff from impervious areas before it discharges to the storm drain or exits the right of way.

When Green Parking Lot design principles are employed over typical design techniques that utilize conventional stormwater quality treatment techniques they have the potential to significantly reduce impervious areas and provide potential project cost savings.



Conventional Design Approach
- Conventional storm drain
- Conventional pavement



Green Design Approach
- Dispersion areas and biofiltration
- Pervious pavement

Green Parking Lot Site Design Approach

Direct stormwater runoff from impervious parking lot elements to:

- Trees, dispersion areas and biofiltration in islands or on perimeter of parking lot.
- Permeable pavement surfaces located in walkways or parking stalls.
- Adjacent landscaped area

Constraints

In no way shall green parking lots LID features be designed to block sight distance for motorists from adjacent streets and driveways, create obstacles for pedestrians, impede the visibility and maintenance of traffic control devices and signs, and reduce or eliminate clear recovery area and minimum horizontal clearances from fixed objects.

GREEN PARKING LOTS SITE DESIGN APPROACH

Grading and Drainage

Direct runoff to trees, biofiltration, swales, permeable pavement:

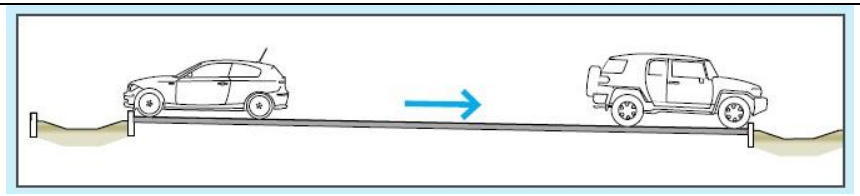
- When designing large parking lots, break up and direct flows to multiple LID features.
- Avoid compaction in biofiltration areas during construction.

Inlets and Outlets

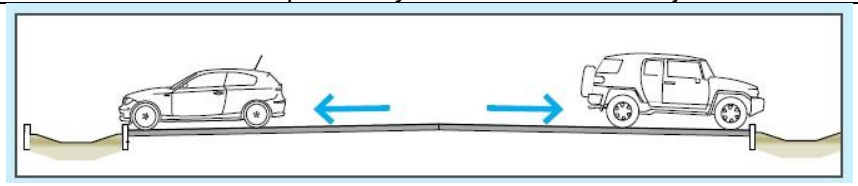
2 Direct runoff into, and out of biofiltration areas. Proper placement of inlets helps to spread runoff over the biofiltration planting areas, which slows the flow and reduces erosion.

3 Outlet, including overflow structures, direct excess runoff to the storm drain system.

4 Avoid placing overflow structures flush with soil to allow stormwater retention.



Continuous cross slope conveys the full aisle to an adjacent swale



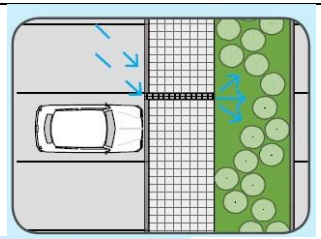
Crowned slope conveys half of each aisle to adjacent swale



A curb inlet directs runoff into a biofiltration planter



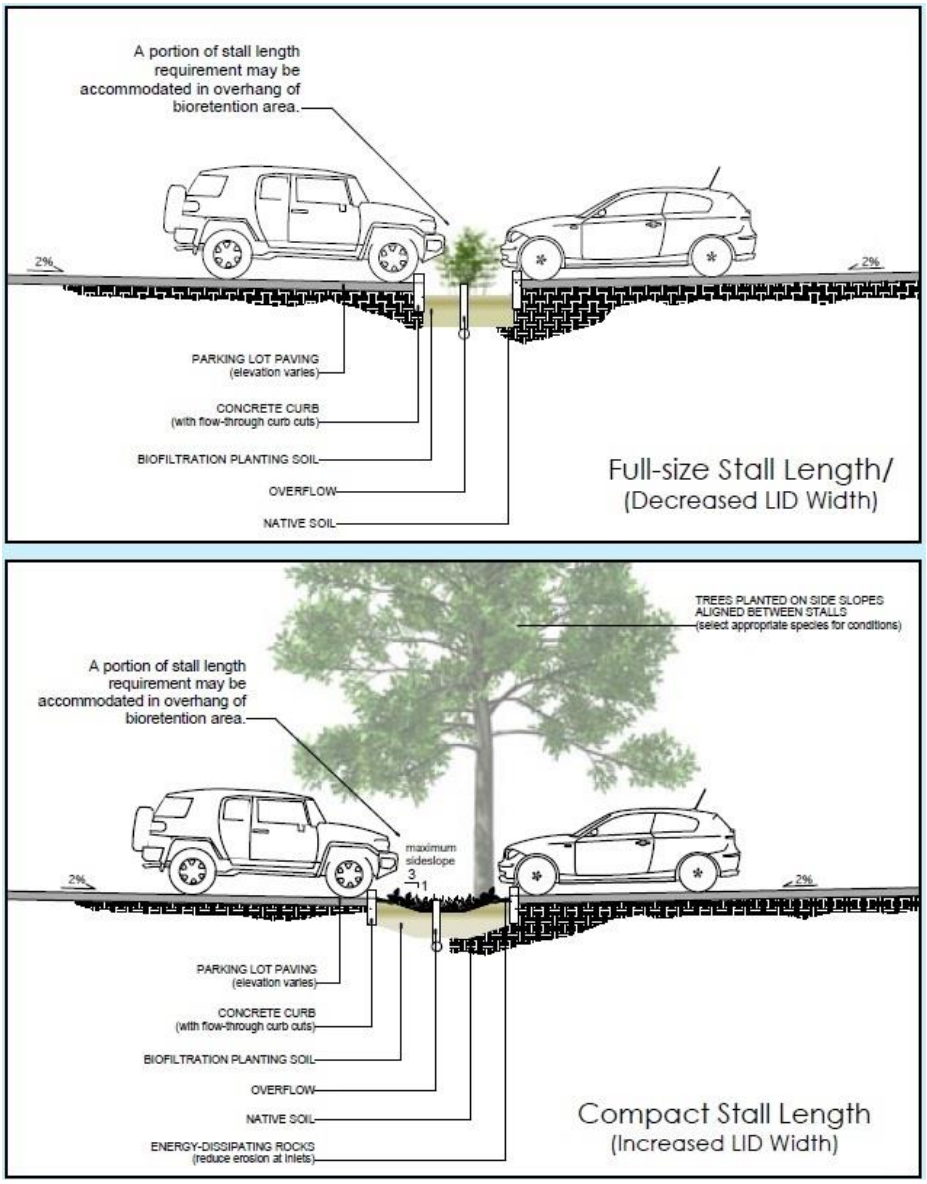
An overflow outlet conveys runoff that exceeds the biofiltration area capacity





A patterned steel grate inlet conveys flow under a pedestrian walkway

Source: Central California Coast, Technical Assistance Memo, LID Parking Lots



Source: Central California Coast, Technical Assistance Memo, LID Parking Lots

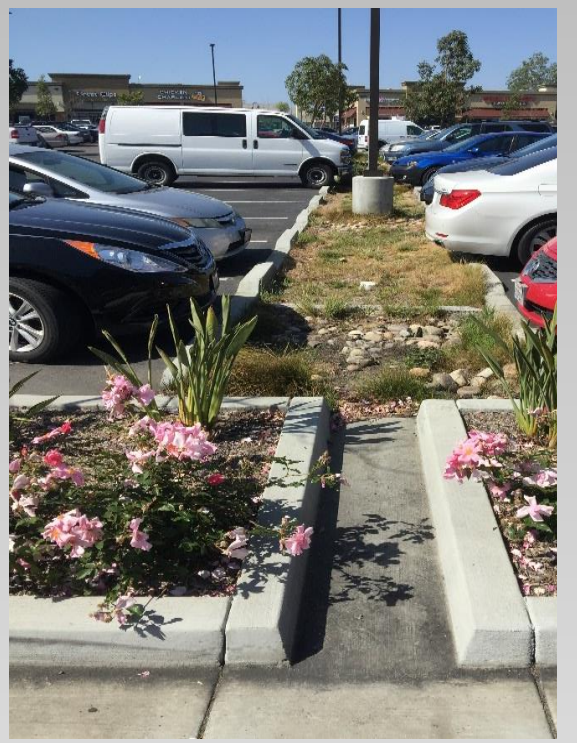
GREEN PARKING LOTS SITE DESIGN APPROACH

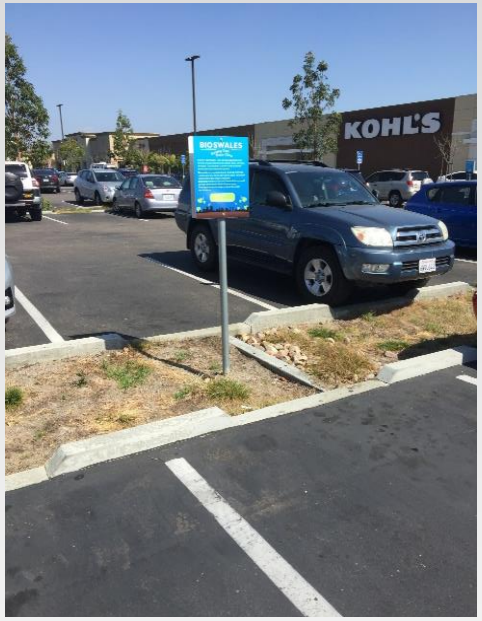
Parking Configuration

Parking configurations can be adapted to meet both parking and stormwater management needs by sizing biofiltration areas to fit compact and full sized parking stalls.

Tree Considerations

- Locate trees on side slope, above areas that pond
- Select trees that will tolerate seasonally wet soils
- Do not specify trees with invasive roots.





3.3 Design Procedure

General Requirements

- Green Parking Lots features will meet the requirements set forth in Section E.3.b.(3)(a)(iii) and (b) of the 2013 MS4 Permit.
- Many of the low impact development (LID) requirements for site design that were applicable only to Priority Development Projects under the 2007 MS4 Permit are applicable to all projects (Standard Projects and PDPs) under the MS4 Permit.

Opportunities and Constraints

- Conduct a comprehensive inventory and assessment of site conditions.
- Evaluate each zone of the parking lot for implementation opportunities: traveled way, parking stalls, islands, sidewalk/pathway, slopes and drainage easements.
- Evaluate constraints including, but not limited to: utilities, parking lot geometry and slope, site distance, proximity to storm drain, maintenance access, pedestrian and vehicle safety, etc.

Design Capture Volume/Flow Rate for Priority Development Projects

- The standard for storm water pollutant control (formerly treatment control) is retention of the 24-hour 85th percentile storm volume, defined as the event that has a precipitation total greater than or equal to 85 percent of all daily storm events larger than 0.01 inches over a given period of record in a specific area or location.
- For situations where onsite retention of the 85th percentile storm volume is technically not feasible, biofiltration must be provided to satisfy specific “biofiltration standards”. These standards consist of a set of siting, selection, sizing, design and maintenance criteria that must be met for a BMP to be considered a “biofiltration BMP” – see Section 2.2.1 and Appendix F of the County BMP Design Manual.

Treatment Train

- Utilize a treatment train approach that connects and combines features to maximize water quality treatment within the Green Parking Lot. An example Green Parking Lot treatment train approach is provided in Section 3.6.

Documentation

- Document the design criteria, methodology, drainage areas/treatment areas, calculated volumes/flows, BMP selection, and maintenance requirements in the project Stormwater Management Plan and/or Drainage Report.

Parking Islands

The parking island presents an opportunity to implement GI principles by use of street trees, dispersion areas, biofiltration, or permeable pavements. The graphics below illustrate various design concepts that can be utilized within parking lot islands.



Conventional parking lot



Green Parking Lot



Conventional parking lot



Green Parking Lot Swale

Design Elements

- Raised Island:
  - Plant low water use/drought tolerant street trees and landscaping.
  - Install permeable pavement.

- Depressed Island: Utilize roadway cross slope to direct stormwater runoff from impervious roadway elements to:
  - Trees
  - Planter Boxes
  - Vegetated Swale

Design Considerations

- Vehicle safety
- Island width and length
- Parking lot longitudinal and cross slope
- Structural integrity of adjacent traveled way (design to prevent subsurface infiltration or ponding under traveled way)
- Underdrain and overflow devices
- Proximity of storm drain
- Maintenance access
- Pedestrian crossing potential

Design Elements

- Traveled Way:
  - Design lane widths to minimum allowable.
- Shoulder/Parking Lane:
  - Utilize permeable pavement with edge restraint at interface with traveled way

Design Considerations

- Structural section design to handle vehicle loading
- Parking space utilization (with or without parking, temporary use during lane closures)
- Parking lot geometrics
- Hydrologic design requirements (stone reservoir depth and underdrain requirements)
- Design to maintain structural integrity of adjacent traveled way with edge restraints and prevention of infiltration beneath traveled way section
- Interrupt permeable pavement at intersections
- Surrounding land use and sediment sources
- Long term maintenance
- Pedestrian safety
- Maintenance access

Permeable Pavement

The use of permeable pavements may be considered for walkways, low volume driving lanes in parking lots, driveways, and fire access roads.



Conventional parking lot with Asphalt Concrete in stall



Green parking lot with permeable pavement in parking stall

PLANTER BOXES



Planter Box with trees



Planter Box with trees



Biofiltration Planter



Biofiltration with trees in Island

DESIGN CONSIDERATIONS

- Parking Lot layout
- Location (urban or rural setting)
- Parking Lot tree type and spacing requirements
- Sidewalk or path width requirements
- Parking requirements
- Parkway horizontal and vertical geometrics (curves and longitudinal slope)
- Pedestrian mobility and safety
- Maintenance access
- Interface with driveways
- Utilities and appurtenant structure locations
- Hydrologic design requirements
- Proximity of storm drain systems
- Structural integrity of adjacent traveled way (utilize edge restraints and prevent infiltration beneath roadway section)
- Low water use/drought tolerant street trees and landscaping

SWALES

DESIGN ELEMENTS

- Low water use/drought tolerant landscaping
- Rock
- Curb cuts and outlet design
- Energy dissipation
- Check dams
-

DESIGN CONSIDERATIONS

- Parking Lot geometrics
- Structural integrity of adjacent traveled way to prevent subsurface infiltration or ponding under traveled way
- Underdrain and overflow devices
- Proximity of storm drain
- Pedestrian mobility aspects
- Maintenance access



Swale with trees



Swale with trees between parking



Bioswale adjacent to parking and sidewalk



Swale in Island

SIDEWALKS/PATHWAYS/DRIVEWAYS



Permeable pavement sidewalk with biofiltration



DG pathway with rock swale



Pervious concrete sidewalk



Permeable pavement driveway

DESIGN ELEMENTS

- Drain to adjacent landscaping or adjacent LID facility
- Permeable pavement

SIDEWALK DESIGN CONSIDERATIONS

- Sidewalk width and ADA requirements
- Public safety
- Pedestrian mobility aspects
- Maintenance access

DRIVEWAY CONSIDERATIONS

- Permeable pavement may require underdrain or overflow storm drain system
- Not appropriate for use in areas of high sediment loading (e.g. debris/soil from adjacent landscaping)

Design Elements

- Low water use/drought tolerant landscaping
- Swales
- Vegetated filter strips

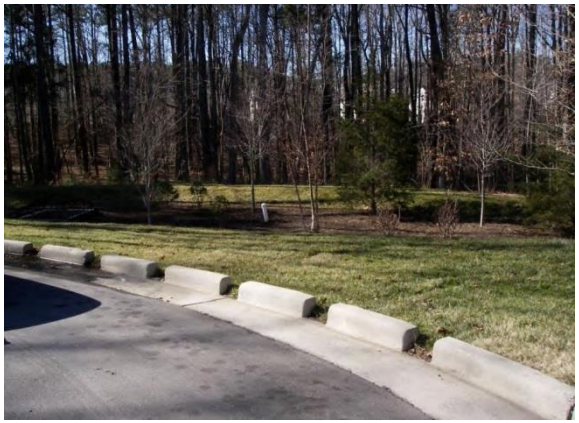
Design Considerations

- Available space
- Vehicle and public safety
- Structural integrity of adjacent traveled way to prevent subsurface infiltration or ponding under traveled way
- Underdrain and overflow devices
- Proximity of storm drain
- Maintenance access

Outside of Parking Areas



Swale outside of parking lot



Curb cuts with filter strip/dispersion area

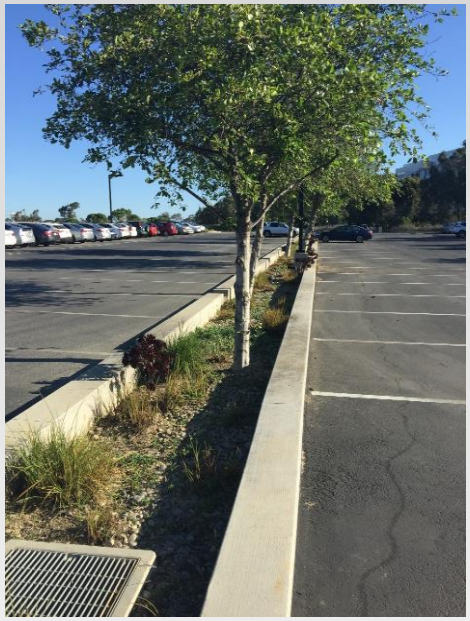
3.4 PUTTING IT ALL TOGETHER

This graphic provides an example of how several different techniques may be combined for Green Parking Lot implementation.





CHAPTER 4 Implementing Green Parking Lots



4.1 Design and Construction

The goal of the County of San Diego (the County) Low Impact Development (LID) Program is to protect stormwater quality by preserving and simulating natural hydrologic functions through the use of stormwater planning and management techniques on a project site. Both public and private projects constructing parking lots are required to retain stormwater to the maximum extent practicable. Designers must examine all uses of available space and place stormwater management where space and use allows.

DPW is installing green infrastructure as part of regulated construction projects and retrofit projects to reduce stormwater runoff in more areas of the County. Green Parking Lots projects utilize green infrastructure techniques and may be constructed independently to improve watershed health, or as a part of other infrastructure improvement projects.

These Green Parking Lots Guidelines are a planning tool intended to assist project engineers with identifying and selecting suitable Best Management Practices (BMPs) for their respective Green Infrastructure projects. Technical standards, including drawings, specifications, maintenance schedule, and plant list, can be found in the Green Parking Lots document.

4.2 MAINTENANCE

Implementing Green Infrastructure and Low Impact Development (LID) practices requires maintenance to keep them attractive and functioning. Maintenance levels of care should be considered during the design phase and plants selected from the County LID Manual or Water Efficient Landscape Design Manual according to the following levels:

- Low level of care: Annual maintenance; no irrigation
- Medium level of care: Quarterly maintenance; some water available
- High level of care: Monthly maintenance; site is potentially irrigated

San Diego County DPW is typically responsible for maintaining publicly-installed green infrastructure and LID facilities within their right-of-way. The final determination of maintenance responsibility is determined during project review. Private installations must have a maintenance covenant from the owner. Residents can help with maintenance by removing trash and weeds. Refer to the Green Parking Lots Maintenance Schedule for frequency and detail of maintenance.

Type of Maintenance	Dispersion Areas and Biofiltration	Permeable Pavement	Tree Space
Inspect after storms	•	•	
Remove trash/sediment/leaves	•	•	•
Clean inlets/outlets	•		
Adjust mulch and/or stone	•		
Water for establishment	•		•
Weed/remove invasive species	•		•
Prune (as needed)	•		•
Replace mulch (3” depth)	•		•
Street sweeper/vacuum (as needed)		•	









REFERENCES

Central California Coast Technical Assistance Memo, LID Parking Lots
http://centralcoastlidi.org/uploads/LID%20Parking%20TAM_WEB_1.pdf

County of San Diego – Best Management Practice Design Manual, 2016
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/DevelopmentandConstruction/BMP_Design_Manual.html

County of San Diego – Low Impact Development Handbook, 2014:
sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid

County of San Diego – Standard Urban Stormwater Mitigation Plan Requirements for Development Applications, 2012:
sandiegocounty.gov/dpw/watersheds/susmp/susmp

DDOT – Greening DC Streets, 2014:
ddot.dc.gov/GreenInfrastructure

City of Los Angeles – Green Streets and Green Alleys Design Guidelines Standards, 2009:
nacto.org/docs/usdg/green_streets_and_green_alleys_la.pdf

Montgomery County, MD - Environmental Site Design Implementation in Montgomery County, Maryland: Image Library,2011:
http://www.montgomeryplanning.org/environment/documents/esd_implementation_graphics_201108.pdf

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Appendix

L

Prior Lawful Approval Requirements and Guidance

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Appendix L Prior Lawful Approval Requirements and Guidance

The effective date of the updated requirements of the Municipal Separate Storm Sewer System Permit (Order No. R9-2013-0001; hereinafter "2013 MS4 Permit") in the unincorporated County of San Diego is **February 26, 2016**. Any development or redevelopment project[16,17] that has not obtained a Prior Lawful Approval (PLA) to proceed under earlier MS4 Permit provisions before that date must fully comply with the 2013 MS4 Permit, and therefore with the applicable requirements of Watershed Protection Ordinance (WPO) Sections 67.811 and 67.812. Under specified conditions, a project may be vested or excepted under WPO Section 67.811(c)(1) or (2). To qualify to proceed under any earlier MS4 Permit provision, a PLA must be obtained prior to its effective date.

L.1 Applicability of MS4 Permit Provisions

The effective dates of specific MS4 Permits and provisions are summarized in Table L.1-1. Options and conditions for obtaining PLAs to proceed under earlier MS4 Permit provisions are described in **Sections 2 and 3** below. The left-hand column of Table L.1-1 lists the effective dates of all land development requirements, beginning with their initial imposition under the 2001 MS4 Permit. The column on the right indicates the applicable MS4 Permit standards for a project obtaining a PLA before each of the effective dates on the left. In any instance where an applicant has established a PLA before the effective date of a newer provision, the project (or portion or phase of the project) may be considered provisionally covered under the earlier standard. So long as all applicable conditions on the PLA have been, and continue to be met (see **Sections 3 and 4** below), the earliest applicable date in Table L.1-1 (i.e., the earliest date after which a PLA is obtained) will normally apply. However, the County may as it determines necessary impose additional conditions that are more restrictive than the minimum requirements of any applicable MS4 Permit provision.

Per WPO Section 67.811(c)(2), the requirements of WPO Sections 67.811(a) and (b) fully apply to all development projects unless a PLA to proceed under the provisions of an earlier MS4 Permit has

[16] **Development** means construction, rehabilitation, redevelopment, or reconstruction of any public or private projects. **Redevelopment** is a subset of development that applies specifically to the creation and/or replacement of impervious surface on an already developed site. Examples of redevelopment include the expansion of a building footprint, road widening, the addition to or replacement of a structure. Replacement of impervious surfaces includes any activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include routine maintenance activities, such as trenching and resurfacing associated with utility work; pavement grinding; resurfacing existing roadways, sidewalks, pedestrian ramps, or bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair.

[17] For the purposes of this document, further references to development projects are inclusive of both development and redevelopment projects unless a distinction between the two is specifically noted.

been obtained from the County. The County may partially or wholly waive these requirements for any project meeting the conditions of either WPO Section 67.811(c)(1) or (2). As described further below, this may occur either because a project applicant[18] has obtained a **vested right** to proceed as a result of the operation of law (PLA Option 1), or because the project is excepted by satisfying specific conditions of the 2013 MS4 Permit (PLA Option 2).

Table L.1-1: Effective Dates of Land Development-Related MS4 Permit Provisions

Permit Provision Effective Dates	Applicable Standard for Projects Excepted Prior to Effective Date
2001 MS4 Permit (Order No. 2001-001)	
• **February 10, 2003** **Initial SUSMP effective date**	• Order No. 90-42 (adopted July 16, 1990) did not contain explicit requirements for land development projects (discuss on a case basis)
2007 MS4 Permit (Order No. 2007-0001)	
• **January 24, 2008** **All requirements of Order No. 2007-0001 except interim and final hydromodification**	• February 2003 SUSMP
• **March 24, 2008** **Interim hydromodification requirements (for sites disturbing 50 acres or more)**	• Land development requirements of 2007 MS4 Permit minus hydromodification
• **January 8, 2011** **Final hydromodification requirements**	• Land development requirements of 2007 MS4 Permit minus hydromodification
2013 MS4 Permit (Order No. R9-2013-0001 as amended by Order. No. R9-2015-0001 and R9-2015-0100)	
• **February 26, 2016** **All requirements of Provision E.3**	• 2007 MS4 Permit land development standards effective on January 24, 2008 (except interim and final hydromodification) • Hydromodification requirements apply after March 24, 2008 and January 8, 2011 effective dates

[18] "Applicant" may either mean the original project applicant or any successor(s) in interest to all or any portion of a PDP or Standard Project.

Applicants should note the following regarding the use of both PLA options:

- The two options are mutually exclusive. An applicant may utilize either PLA Option 1 or PLA Option 2, but not both at the same time. However, in some cases, it may make sense to document compliance with both options in case a change in approach is needed.
- Projects utilizing PLA Option 1 may potentially establish coverage under the requirements of any earlier MS4 Permit; however, PLA Option 2 establishes a "floor" of full compliance with the 2007 MS4 Permit.
- PLA Option 1 may be utilized both for Standard Projects and PDPs. Because the requirements for Standard Projects have changed very little since they were initially imposed under the 2001 MS4 Permit, there is normally little reason to consider the applicability of vested rights to these projects. However, some projects which were previously classified as Standard Projects under the 2007 MS4 Permit may need to be reclassified as PDPs under the 2013 MS4 Permit if they have not established a vested right to proceed under the earlier MS4 Permit. As such, these "newly designated" PDPs would be required to comply with the PDP requirements of the 2013 MS4 Permit.

L.2 Applicant Responsibilities

While documentation related to vesting rights (PLA Option 1) and exception (PLA Option 2) determinations will be maintained by the County as part of the project record, the applicant ultimately bears the responsibility for demonstrating that a PLA has been granted or continues to exist. Failure to do so may result in the revocation of that right, in which case a project may be required to partially or wholly meet updated MS4 Permit requirements. Applicants must document the basis for their assertion in a written proposal to County staff that includes a detailed explanation and rationale, including supporting calculations and information requested by the County if applicable. Staff will review the proposal and make a determination as to whether or not a vested right exists, or whether additional analysis is required. The adequacy of submitted documentation will be determined on a case-by-case basis.

Applicants must submit proposals and other required documentation in a timely manner (i.e., allowing sufficient time for County review and comment, resubmittal, and approval prior to applicable deadlines), and to demonstrate and maintain documentation of ongoing compliance with the conditions of a vested right initially recognized by the County.

L.3 PLA Option 1 (Vested Rights; WPO Section 67.811(c)(1))

In accordance with the 2013 MS4 Permit, WPO Section 67.811(c)(1) provides that: *"Previous land development requirements may be allowed to apply to any portion or phase of a development project for which the Authorized Enforcement Official determines the County lacks the land use authority or legal authority to require the project to implement the requirements of Sections 67.811(a) and/or (b)."*

This means that any project that has obtained a legally vested right to proceed under an existing permit or approval may continue under the MS4 Permit standard applicable at the time that the permit or approval was issued. In most cases, this will mean compliance with the 2007 MS4 Permit (these requirements are described in the *January 2011 Standard Urban Stormwater Mitigation Plan*, or SUSMP[19]). However, under limited circumstances a project may qualify for coverage under the provisions of an earlier MS4 Permit.

Vested rights may initially be established in a number of ways under California law, including the following:

- An applicant substantially relies on an issued permit, but then may be limited to work within the scope of that permit (See, for example, *Avco Community Developers v. South Coast Reg'l Comm'n (1976) 17 Cal.3'd 785*.).
- An applicant has entered into a development agreement restricting the application of new requirements (See, *Gov't Code S 65964 et seq.*).
- The *Subdivision Map Act, Gov't Code Sec. 66410 et seq.* sets forth circumstances whereby applicants can obtain a vested right to proceed under requirements in effect at the time a tentative map application is deemed complete. (See, for example, *Gov't Code SS 66474.2 & 66498.1-66498.9.*) Vested rights obtained in connection with a tentative map application do not always extend to subsequent discretionary permits or approvals needed to develop the subdivision.
- The County otherwise determines that it lacks the land use authority or legal authority to require the project to implement the requirements of a newer MS4 Permit.

The recognition of vested rights by the County is provisional, and remains valid only so long as all applicable conditions of the applicable PLA(s) continue to be satisfied. Under no circumstances does the mere issuance of a permit or approval guarantee that a vested right will continue to be recognized.

Vested rights granted under any County approval are limited to the conditions of that approval, including the scope and temporal extent of the work authorized under the approval. Applicants are responsible for understanding the specific conditions and limitations of any vested right granted by the County, as well the circumstances under which that right might be modified or revoked. PLA determinations will be periodically reviewed, and updated MS4 provisions applied where necessary.

Per WPO Section 67.803(a) the County may in some instances be required to impose newer requirements at the time that a subsequent permit or approval such as a building or grading permit is sought if it is legally feasible to do so at that time. This may apply in instances where applicable

[19] Approved January 2011 and updated September 2012; Available at http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/susmp.html.

stormwater compliance obligations have either been partially or fully satisfied under the earlier approval.[20]

As noted, applicants must demonstrate, and maintain documentation of, ongoing compliance with the conditions of any vested right initially recognized by the County, including the following:

- Proof of establishment of use and reliance on construction permits. Examples of information that may be acceptable to the County, either as primary or supporting documentation, include:
    - Inspection records,
    - Supervised grading reports
    - Condition satisfaction,
    - Payroll records,
    - Contractor or vendor invoices or payments,
    - Aerial photographs, and
    - Any other form of documentation deemed acceptable by the County.

  The adequacy of submitted documentation will be determined on a case-by-case basis. In general, acceptable forms of documentation include only those that are independently verifiable by County staff. Statements by applicants or contractors (even if written or sworn) are not considered sufficient.

- Satisfaction of all applicable MS4 Permit and other County requirements prior to expiration of the permit(s) under which a right is initially deemed to be vested.
- Other documentation as requested by the County.

L.4 PLA Option 2 (Exception Under the 2013 MS4 Permit; WPO Section 67.811(c) (2))

Provision E.3.e.(1)(a) of the 2013 MS4 Permit allows projects that meet specified criteria to be excepted under the requirements of the 2007 MS4 Permit. Under this option, compliance with the 2007 MS4 Permit (e.g., general, source control, low impact development, structural treatment control, and hydromodification management BMP requirements) is established as a minimum compliance standard. Per WPO Section 67.811(c)(2), this option is as follows:

[20] For example, if treatment control best management practices (TCBMPs) are installed to treat runoff from streets under a grading permit, but treatment has not been provided under that permit for the individual lots in a development, updated treatment standards applicable at the time of building permit issuance for the lots may be applied. In such case, if any BMPs necessary to comply with the newer requirements cannot be accommodated within the confines of existing lots, the applicant may be compelled to remap the subdivision.

"(2) At its discretion, the Authorized Enforcement Official may allow the requirements of the immediately prior [2007] MS4 Permit to apply to any portion or phase of a Priority Development Project for which all of the conditions below have been satisfied.

(A) Initial Approvals. Prior to the effective date of the current MS4 Permit provisions [i.e., February 26, 2016], the applicant must have:

i. Obtained an approval of a design that incorporates the storm water drainage system for the Priority Development Project in its entirety, including all applicable structural and hydromodification management BMPs consistent with the requirements of the prior [2007] MS4 permit. For public projects, a design stamped by the County Engineer or engineer of record for the project is considered an approved design; and

ii. Been issued a project permit or approval that authorizes the commencement of construction activities based on the design approved in Section 67.811(c)(2)(A)i;

For purpose of Section 67.811(c), the effective date of the 2013 MS4 Permit provisions is February 26, 2016.

(B) Demonstrated to the County's satisfaction that construction activities have commenced on any portion of the Priority Development Project site within 365 days prior to [i.e., February 16, 2015], or 180 days after [i.e., August 14, 2016], the effective date of the current [2013] MS4 Permit provisions, where construction activities are undertaken in reliance on the permit or approval.

(C) Subsequent Approvals. Within five years of the effective date of the current MS4 Permit provisions [i.e., prior to February 16, 2021], the applicant must have obtained all subsequent project permits or approvals that are needed to implement the design initially approved in conformance with WPO Section 67.811(c)(2)(A)i. After that time, any portion or phase of a Priority Development Project for which subsequent approvals have not been obtained is required to meet the updated requirements of WPO Section 67.811(a) and (b).

(D) *Substantial Conformity. The storm water drainage system for the Priority Development Project in its entirety, including all applicable structural pollutant treatment control and hydromodification management BMPs, must remain in substantial conformity with the design initially approved in conformance with WPO Section 67.811(c)(2)(A)i. Any portion or phase of a Priority Development Project not maintaining substantial conformity with this design is required to meet the updated requirements of WPO Sections 67.811(a) and (b)."*

Applicants should note that the use of this option requires continued compliance with all of the conditions listed above (i.e., Conditions (A)i through (D)) throughout project completion. **Figure L-1** summarizes the dates and ranges applicable to each condition. General guidance for complying with them is also provided below. Applicants should work closely with County staff to assess their specific requirements, including checking for the development of updated or more detailed guidance. As noted, applicants must demonstrate, and maintain documentation of, ongoing compliance with the conditions of any exception right initially recognized by the County.

Condition (A)i: Initial Design Approvals

Applicants must initially obtain a County approval that incorporates the design of the storm water drainage system for the PDP in its entirety. Initial designs used to satisfy this requirement will normally be documented in the PDP Stormwater Quality Management Plan (SWQMP), drainage reports, and associated exhibits and plans. These documents may be submitted in support of any of the following types of approvals:

- Major Use Permits,
- Tentative Maps,
- Site Plans,
- Grading or Improvement Plans,
- Tentative Parcel Maps,
- Building Permits, and
- Any other approval deemed acceptable by the County.

The purpose of this provision is to require applicants to obtain early approval of a design that fully satisfies the requirements of the 2007 MS4 Permit for all areas and phases of the project. At a minimum, this includes the following design features:

- Delineation of Drainage Management Areas (DMAs) for the entire PDP,
- Identification of all applicable TCBMPs,
- Identification of all applicable hydromodification BMPs,
- Identification of all site design BMPs that affect the design or performance requirements of TCBMPs and/or hydromodification BMPs, and
- Supporting calculations and assumptions that demonstrate the ability of the PDP to fully meet all applicable treatment and hydromodification requirements for each identified DMA.

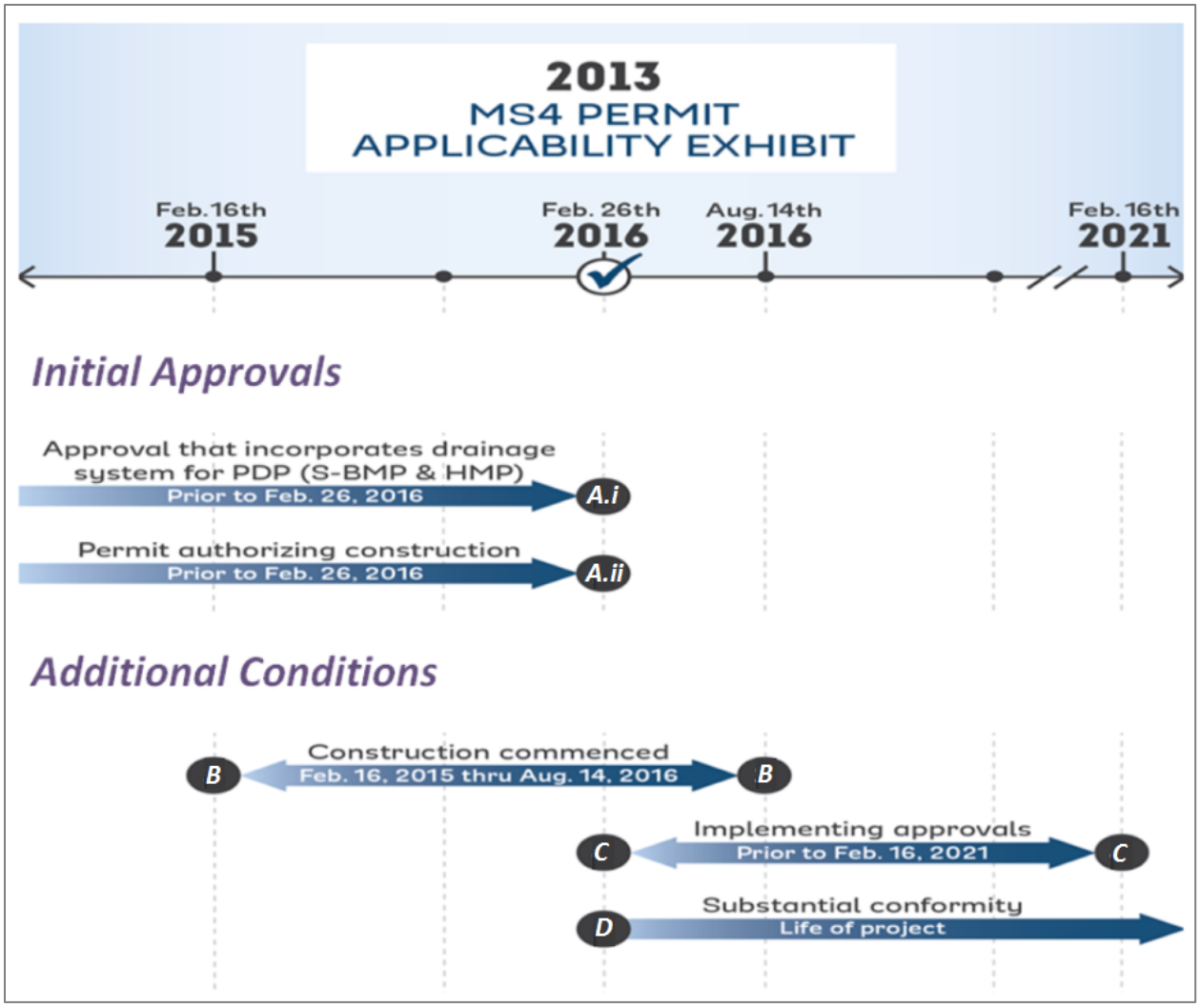

Figure L.4-1: Summary of Deadlines for Complying with 2013 MS4 Permit Exception Provisions (PLA Option 2). Note: Lettering of provisions refers to subsections of WPO Section 67.811(c)(2).

This requirement must be satisfied for the PDP in its entirety; however, at the County's discretion it may be met by multiple approvals that collectively address the entire storm water drainage system, so long as all approvals are obtained prior to February 26, 2016. BMPs and other proposed design features must be identified and located with sufficient specificity to allow reviewers to fully evaluate the PDP's compliance with all applicable performance standards for the projected final buildout.

For projects such as business parks or phased residential developments, where the final design details are not initially known, it is acceptable to propose BMPs and delineate DMAs based on documented assumptions about final build-out (e.g., % imperviousness of individual lots or areas, site drainage patterns, and BMP types, locations, performance, etc.). However, as described under **Condition (D),** below, substantial conformance with these initial assumptions must be maintained throughout the life of the project. Failure to do so may result in the imposition of updated standards during later stages of development.

Condition (A)ii: Issuance of Construction Permits or Approvals

Prior to February 26, 2016, the applicant must also have *"been issued a project permit or approval that authorizes the commencement of construction activities[21]"* based on the design approved under **Condition (A)ii** above. Permits and approvals that may be used to satisfy this requirement include:

- Grading permits,
- Building permits,
- Improvement plan permits,
- Clearing and grubbing permits,
- Well permits,
- Construction right of way permits, and
- Any other permit or approval recognized by the County as authorizing the applicant to commence construction activities on the PDP.

This condition is considered satisfied on issuance of a construction permit or approval for any portion or phase of the PDP prior to February 26, 2016. Once satisfied, this one-time condition is not subject to further County review.

Applicants are advised to consult with County staff as early as possible to ensure that a qualifying approval is issued before the effective date.

Condition (B): Commencement of Construction

Not more than 365 days before or 180 days after the BMPDM Effective Date, applicants must commence construction activities under a permit issued per **Condition (A)ii,** above. This is also a one-time condition that, once satisfied, is not subject to further review. Its purpose is twofold: (i) it prevents older inactive projects from being excepted under the 2007 MS4 Permit, and (ii) it ensures that newer projects are excepted only if they conduct work within six months of the effective date of the 2013 MS4 Permit. Together, they ensure that the exception provisions of the 2013 MS4 Permit are extended only to active projects.

To satisfy this requirement, construction activities on the project site must have commenced between February 16, 2015 and August 14, 2016 under an open construction permit or approval (including modifications and renewals) issued by the County. Applicants are responsible for

[21] Attachment C of the 2013 MS4 Permit defines Construction Activities as "Actions implemented during construction of development or redevelopment projects during the Preliminary Task (including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading), Grading or Land Development (including topography and slope reconfiguration, alluvium removals, canyon cleanouts, rock undercuts, keyway excavations, land form grading, and stockpiling of select material for capping operations), Streets and Utility Installation (including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer systems and/or other drainage improvements), or Vertical Construction (including the build out of structures from foundations to roofing, including rough landscaping)."

providing documentation of the commencement of these activities. Examples of information that may be acceptable to the County, either as primary or supporting documentation, include:

- Inspection records,
- Supervised grading reports
- Condition satisfaction,
- Payroll records,
- Contractor or vendor invoices or payments,
- Aerial photographs, and
- Any other form of documentation deemed acceptable by the County.

The adequacy of submitted documentation will be determined on a case-by-case basis. In general, acceptable forms of documentation include only those that are independently verifiable by County staff. Statements by applicants or contractors (even if written or sworn) are not considered sufficient.

Conditions (A)i through **(B),** above, provide a means for a PDP to initially be excepted under the provisions of the 2007 MS4 Permit. However, as noted, these determinations should always be considered provisional. **Conditions (C)** and **(D),** below, describe additional requirements that must be met for a project to maintain its exception status. Failure to meet either of these conditions may result in the revocation of an excepted right, in which case a project may be required to partially or wholly meet updated MS4 Permit requirements. Exception determinations will be periodically reviewed, and updated MS4 provisions applied where necessary.

Exception rights granted under any County approval are limited to the conditions of that approval, including the scope and temporal extent of the work authorized under the approval. Applicants are responsible for understanding the specific conditions and limitations of any vested right granted by the County, as well the circumstances under which that right might be modified or revoked.

Condition C: Issuance of Implementing Approvals

This provision establishes a "shelf life" on exception decisions by limiting the time allowed to obtain the approvals needed to fully implement the approved design. To maintain the exception status of a PDP, applicants must also have been issued, by February 16, 2021, all subsequent project permits or approvals needed to implement the design initially approved under **Condition (A)i** above. In essence, only work authorized under permits or approvals issued prior to February 16, 2021 may be excepted under the 2007 MS4 Permit. Note that this requirement applies to issuance of permits or other approvals, rather than completion of work under them. As such, work may continue to be conducted under 2007 MS4 Permit standards for the duration of the term of that permit or approval, including allowable modifications and extensions. Depending on the approval type this may be multiple years.

Implementing approvals obtained after February 16, 2021 will be subject to the MS4 Permit provisions applicable at the time that each approval is obtained. In instances where applicable stormwater compliance obligations have only been partially satisfied under earlier approvals, the

County may be legally obligated to impose updated MS4 Permit requirements upon subsequent permit issuance[22].

The County will review the exception status of PDPs at the time new permits or approvals are issued. All portions or phases of PDPs for which applicable permits or approvals have not been obtained prior to the February 16, 2021 deadline will be reviewed for the applicability of updated MS4 Permit provisions. At that time, applicants may be required to wholly or partially comply with updated MS4 Permit provisions, even where required BMPs cannot be accommodated within the confines of the existing design.

Condition D: Maintaining Substantial Conformity

The storm water drainage system for the PDP in its entirety, including all applicable structural pollutant treatment control and hydromodification management BMPs, must remain in substantial conformity with the design initially approved under **Condition (A)i** above. The intent of this provision is to allow reasonable modifications in the design of a project plan while preserving compliance with the performance standards initially applied to the PDP.

PDPs must always fully comply with the provisions of the 2007 MS4 Permit; however, some changes within the overall project design may be accommodated so long as all applicable narrative and numeric performance standards continue to be met for all portions and phases of the development. As noted above, for projects where initial design parameters were established based on assumptions about final buildout, it is expected that some parameters will be modified as more specific project design details emerge. This is acceptable so long as substantial conformity with all applicable performance standards is maintained over the life of the project. Failure to do so may result in the imposition of updated MS4 Permit standards during later stages of the development.

Proposed design modifications should be presented to and discussed with County staff as early as possible so that feedback and necessary approvals can be provided prior to their implementation. While each proposed change must be evaluated individually, the following will generally be applied to determinations of substantial conformity[23]:

- Ministerial non-substantive changes such as a name change, engineer change, text update, or security/bond change are not considered substantial.
- Changes in the selection, location, or design of individual BMPs or site features that will result in equal or better ability to achieve all applicable narrative and numeric treatment and hydromodification performance standards for the PDP as a whole (including applicable portions of the PDP, such as individual lots or DMAs) may be allowed. However, compliance with all applicable standards must be maintained at all times. That is, a "lesser" standard cannot be

[22] For example, see footnote 5.

[23] Allowable design changes, even if not determined to be substantial, may require a SWQMP Addendum to be processed for the PDP.

approved for one portion of a project unless a corresponding change to offset any potential compliance deficits is also approved at the same time.

- Design changes, including the delineation of DMAs, that increase the overall amount of impervious surface within, or increase the overall footprint of, the PDP may be considered substantial, and will be evaluated on a case-by-case basis.

In instances where a PDP has fallen out of compliance with the requirements of **Condition (D)**, County staff will work with the applicant to determine whether the exception status can be restored, or if updated MS4 Permit requirements must be applied.

Glossary of Key Terms

50% Rule	Refers to an MS4 Permit standard for redevelopment PDPs (PDPs on previously developed sites) that defines whether the redevelopment PDP must meet storm water management requirements for the entire development or only for the newly created or replaced impervious surface. Refer to **Section 1.7**.
Aggregate	Hard, durable material of mineral origin typically consisting of gravel, crushed stone, crushed quarry or mine rock. Gradation varies depending on application within a BMP as bedding, filter course, or storage.
Aggregate Storage Layer	Layer within a BMP that serves to provide a conduit for conveyance, detention storage, infiltration storage, saturated storage, or a combination thereof.
Alternative Compliance Project (ACP)	An offsite mitigation project in lieu of implementing the onsite structural BMP performance requirements required under the MS4 Permit. Refer to **Section 1.8** for more information on alternative compliance project requirements.
Baseline BMPs	Baseline BMP means any BMP that is required where applicable and feasible on all development projects. Baseline BMPs include both Site Design and Source Control BMPs. Some baseline BMPs can be sized to qualify for Design Capture Volume (DCV) reductions on priority development projects. Baseline BMPs are not required to be sized to qualify for DCV reductions and shall be implemented where applicable and feasible on all development projects even if they do not meet the criteria to qualify for DCV reduction.
Bed Sediment	The part of the sediment load in channel flow that moves along the bed by sliding or saltation, and part of the suspended sediment load, that principally constitutes the channel bed.
Bedding	Aggregate used to establish a foundation for structures such as pipes, manholes, and pavement.
Best Management Practice (BMP)	A procedure or device designed to minimize the quantity of runoff pollutants and / or volumes that flow to downstream receiving water bodies. Refer to **Section 2.2.2.1**.

Biodegradation	Decomposition of pollutants by biological means.
Biofiltration BMPs	Biofiltration BMPs are practices that use vegetation and Biofiltration Soil Media to detain and treat runoff from impervious areas. Treatment is achieved through filtration, sedimentation, sorption, biochemical processes and/or vegetative uptake. These BMPs must be sized to:[a] Treat 1.5 times the DCV not reliably retained onsite, OR[b] Treat the DCV not reliably retained onsite with a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the DCV not reliably retained onsite. (See **Section 5.3** and **Appendix B** for illustration and additional information).
Biofiltration Soil Media (BSM)	Biofiltration Soil Media (BSM) is intended to filter stormwater and support plant growth while minimizing the leaching of potential pollutants. BSM used in stormwater treatment BMPs, including biofiltration and bioretention, is required to meet certain specifications (See **Appendix F**). Biofiltration Soil Media is also referred to as Engineered soil Media and Bioretention Soil Media.
Biofiltration Treatment	Treatment from a BMP meeting the biofiltration standard.
Biofiltration with Partial Retention BMPs	Biofiltration with partial retention BMPs are practices that use vegetation and Biofiltration Soil Media to detain and treat runoff from impervious areas. Partial retention is characterized by a subsurface stone infiltration storage zone in the bottom of the BMP below the elevation of the discharge from the underdrains. The discharge of biofiltered water from the underdrain occurs when the water level in the infiltration storage zone exceeds the elevation of the underdrain outlet. (See **Section 5.3** for illustration and additional information).
Bioretention BMPs	Vegetated surface water systems that filter water through vegetation and soil, or engineered media prior to infiltrating into native soils. Bioretention BMPs in this manual retain the entire DCV prior to overflow to the downstream conveyance system. (See **Section 5.3** for illustration and additional information).
BMP Sizing Calculator	An on-line tool that was developed under the 2007 MS4 Permit to facilitate the sizing factor method for designing flow control BMPs for hydromodification management. The BMP Sizing Calculator has been discontinued as of June 30, 2014.

Cistern	A vessel for storing water. In this manual, a cistern is typically a rain barrel, tank, vault, or other artificial reservoir.
Coarse Sediment Yield Area	A GLU with coarse-grained geologic material (material that is expected to produce greater than 50% sand when weathered). See the following terms modifying coarse sediment yield area: critical, potential critical.
Compact Biofiltration BMP	A biofiltration BMP, either proprietary or non-proprietary in origin, that is designed to provide storm water pollutant control within a smaller footprint than a typical biofiltration BMP, usually through use of specialized media that is able to efficiently treat high storm water inflow rates.
Conditions of Approval	Requirements a jurisdiction may adopt for a project in connection with a discretionary action (e.g., issuance of a use permit). COAs may include features to be incorporated into the final plans for the project and may also specify uses, activities, and operational measures that must be observed over the life of the project.
Contemporary Design Standards	This term refers to design standards that are reasonably consistent with the current state of practice and are based on desired outcomes that are reasonably consistent with the context of the MS4 Permit and Model BMP Design Manual. For example, a detention basin that is designed solely to mitigate peak flow rates would not be considered a contemporary water quality BMP design because it is not consistent with the goal of water quality improvement. Current state of the practice recognizes that a drawdown time of 24 to 72 hour is typically needed to promote settling. For practical purposes, design standards can be considered "contemporary" if they have been published within the last 10 years, preferably in California or Washington State, and are specifically intended for storm water quality management.
Continuous Simulation Modeling	A method of hydrological analysis in which a set of rainfall data (typically hourly for 30 years or more) is used as input, and a continuous runoff hydrograph is calculated over the same time period. Continuous simulation models typical track dynamic soil and storage conditions during and between storm events. The output is then analyzed statistically for the purposes of comparing runoff patterns under different conditions (for example, pre- and post-development-project).
Copermittees	See Jurisdiction.

Critical Channel Flow (Qc)	The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.
Critical Coarse Sediment Yield Area (CCSYA)	A GLU with coarse-grained geologic material and high relative sediment production, where the sediment produced is critical to the receiving stream (a source of bed material to the receiving stream). See also: potential critical coarse sediment yield area.
Critical Shear Stress	The shear stress that initiates channel bed movement or that erodes the toe of channel banks. See also critical channel flow.
De Minimis DMA	De minimis DMAs are very small areas that are not considered to be significant contributors of pollutants, and are considered not practicable to drain to a BMP. See **Section 5.2.2**.
Depth	The distance from the top, or surface, to the bottom of a BMP component.
Design Capture Volume (DCV)	A volume of stormwater runoff produced from the 85th percentile, 24-hour storm event. See **Section 2.2.2.2.**
Detention	Temporarily holding back storm water runoff via a designed outlet (e.g., underdrain, orifice) to provide flow rate and duration control.
Detention Storage	Storage that provides detention as the outflow mechanism.
Development Footprint	The limits of all grading and ground disturbance, including landscaping, associated with a project.
Development Project	Construction, rehabilitation, redevelopment, or reconstruction of any public or private projects. Includes both new development and redevelopment. Also includes whole of the action as defined by CEQA. See **Section 1.3.**
Direct Discharge	The connection of project site runoff to an exempt receiving water body, which could include an exempt river reach, reservoir or lagoon. To qualify as a direct discharge, the discharge elevation from the project site outfall must be at or below either the normal operating water surface elevation or the reservoir spillway elevation, and properly designed energy dissipation must be provided. "Direct discharge" may be more specifically defined by each municipality.

Direct Infiltration	Infiltration via methods or devices, such as dry wells or infiltration trenches, designed to bypass the mantle of surface soils that is unsaturated and more organically active and transmit runoff directly to deeper subsurface soils.
Drainage Management Area (DMA)	See **Section 3.3.2**.
Drawdown Time	The time required for a storm water detention or infiltration facility to drain and return to the dry-weather condition. For detention facilities, drawdown time is a function of basin volume and outlet orifice size. For infiltration facilities, drawdown time is a function of basin volume and infiltration rate.
Enclosed Embayments (Enclosed Bays)	Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost bay works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters. In San Diego: Mission Bay and San Diego Bay.
Enhanced Site Design BMPs	Enhanced Site Design BMPs are Site Design BMPs that are sized for crediting toward reductions in the Design Capture Volume (DCV) for a Drainage Management Area (DMA). Enhanced Site Design BMPs are credited in Worksheet B-1.1 of the BMP Design Manual to ***partially*** satisfy the Design Capture Volume (DCV) reductions and/or HMP reductions in a DMA. Examples of Enhanced Site Design BMPs are tree wells and impervious area dispersion.
Environmentally Sensitive Areas (ESAs)	Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and SDRWQCB; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and SDRWQCB; and any other equivalent environmentally sensitive areas which have been identified by the County.
Filter Course	Aggregate used to prevent particle migration between two different materials when storm water runoff passes through.

Filter Fabric	A permeable textile material, also termed a non-woven geotextile, that prevents particle migration between two different materials when storm water runoff passes through.
Filtration	Controlled seepage of storm water runoff through media, vegetation, or aggregate to reduce pollutants via physical separation.
Flow Control	Control of runoff rates and durations as required by the HMP.
Flow Control BMP	A structural BMP designed to provide control of post-project runoff flow rates and durations for the purpose of hydromodification management.
Flow-Thru Treatment	Treatment from a BMP meeting the flow-thru treatment control standard.
Flow-Thru Treatment BMPs	Flow-thru treatment control BMPs are structural, engineered facilities that are designed to remove pollutants from storm water runoff using treatment processes that do not incorporate significant biological methods. Flow-thru BMPs include vegetated swales, media filters, sand filters, and dry extended detention basins. (See **Section 5.3** for illustration and additional information).
Forebay	An initial storage area at the entrance to a structural BMP designed to trap and settle out solid pollutants such as sediment in a concentrated location, to provide pre-treatment within the structural BMP and facilitate removal of solid pollutants during maintenance operations.
Full Infiltration	Infiltration of a storm water runoff volume equal to the DCV.
Geomorphic Assessment	A quantification or measure of the changing properties of a stream channel.
Geomorphically Significant Flows	Flows that have the potential to cause, or accelerate, stream channel erosion or other adverse impacts to beneficial stream uses. The range of geomorphically significant flows was determined as part of the development of the March 2011 Final HMP, and has not changed under the 2013 MS4 Permit. However, under the 2013 MS4 Permit, Q2 and Q10 must be based on the pre-development condition rather than the pre-project condition, meaning that no pre-project impervious area may be considered in the computation of pre-development Q2 and Q10.

Geomorphic Landscape Unit (GLU)	Classifications that provide an estimate of sediment yield based upon three factors: geology, hillslope, and land cover. GLUs are developed based on the methodology presented in the SCCWRP Technical Report 605 titled "Hydromodification Screening Tools: GIS-Based Catchment Analyses of Potential Changes in Runoff and Sediment Discharge" (SCCWRP, 2010).
Gross Pollutants	In storm water, generally litter (trash), organic debris (leaves, branches, seeds, twigs, grass clippings), and coarse sediments (inorganic breakdown products from soils, pavement, or building materials).
Harvest and Use BMP	Harvest and use (aka rainwater harvesting) BMPs capture and store storm water runoff for later use. These BMPs are engineered to store a specified volume of water and have no design surface discharge until this volume is exceeded. (See **Section 5.3** for illustration and additional information).
Hungry Water	Also known as "sediment-starved" water, "hungry" water refers to channel flow that is hungry for sediment from the channel bed or banks because it currently contains less bed material sediment than it is capable of conveying. The "hungry water" phenomenon occurs when the natural sediment load decreases and the erosive force of the runoff increases as a natural counterbalance, as described by Lane's Equation.
Hydraulic Head	Energy represented as a difference in elevation, typically as the difference between the inlet and outlet water surface elevation for a BMP.
Hydraulic Residence Time	The length of time between inflow and outflow that runoff remains in a BMP.
Hydrologic Soil Group	Classification of soils by the Natural Resources Conservation Service (NRCS) into A, B, C, and D groups according to infiltration capacity.
Hydromodification	The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive stream-bank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

Hydromodification Management BMP	A structural BMP for the purpose of hydromodification management, either for protection of critical coarse sediment yield areas or for flow control. See also flow control BMP.
Hydromodification Management Plan (HMP)	A plan implemented by the Copermittees so that post-project runoff must not exceed estimated pre-development rates and/or durations by more than 10%, where increased runoff would result in increased potential for erosion or other adverse impacts to beneficial uses. The March 2011 Final HMP and the updated MS4 Permit are the basis of the flow control requirements of this manual.
Impervious Surface	Any material that prevents or substantially reduces infiltration of water into the soil.
Infeasible	As applied to BMPs, refers to condition in which a BMP approach is not practicable based on technical constraints specific to the site, including by not limited to physical constraints, risks of impacts to environmental resources, risks of harm to human health, or risk of loss or damage to property. Feasibility criteria are provided in this manual.
Infiltration	In the context of LID, infiltration is defined as the percolation of water into the ground. Infiltration is often expressed as a rate (inches per hour), which is determined through an infiltration test. In the context of non-storm water, infiltration is water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow [40 CFR 35.2005(20)].
Infiltration BMP	Infiltration BMPs are structural measures that capture, store and infiltrate storm water runoff. These BMPs are engineered to store a specified volume of water and have no design surface discharge (underdrain or outlet structure) until this volume is exceeded. These types of BMPs may also support evapotranspiration processes, but are characterized by having their most dominant volume losses due to infiltration. (See **Section 5.3** for illustration and additional information).
Jurisdiction	The term "jurisdiction" is used in this manual to refer to individual copermittees who have independent responsibility for implementing the requirements of the MS4 Permit.

Lower Flow Threshold	The lower limit of the range of flows to be controlled for hydromodification management. The lower flow threshold is the flow at which erosion of sediment from the stream bed or banks begins to occur. See also critical channel flow. For the San Diego region, the lower flow threshold must be a fraction (0.1, 0.3, or 0.5) of the pre-development 2-year flow rate based on continuous simulation modeling (0.1Q2, 0.3Q2, or 0.5Q2).
Low Impact Development (LID)	A storm water management and land development strategy that emphasizes conservation and the use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. See **Site Design**.
Maximum Extent Practicable (MEP)	The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. Refer to the MS4 Permit [(Order No R9-2013-001) Appendix C, Definitions, Page C-6] for more details.
Media	A storm water management and land development strategy that emphasizes conservation and the use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. See **Site Design**.

MS4	MS4 stands for Municipal Separate Storm Sewer System. A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the Clean Water Act that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works as defined at 40 CFR 122.26.
MS4 Permit	The Municipal Separate Storm Sewer System (MS4) Permit is a regulatory tool used by the Regional Water Quality Control Board (RWQCB) to regulate stormwater and non-stormwater discharges into MS4s and from MS4s into local water bodies. The MS4 Permit defines the regulatory obligations that agencies must meet to remain in compliance with the permit and avoid enforcement actions. MS4 Permits are issued to municipalities as owners of the MS4 and are renewed approximately every five years.
National Pollutant Discharge Elimination System (NPDES)	The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the Clean Water Act.
New Development	Land disturbing activities; structural development, including construction or installation of a building or structure, the creation of impervious surfaces; and land subdivision. Any development project that will create 10,000 square feet or more of impervious surface (collectively over the entire project site) is considered new development.
Operation and Maintenance (O&M)	Requirements in the MS4 Permit to inspect structural BMPs and verify the implementation of operational practices and preventative and corrective maintenance in perpetuity.

Pacific/Salton Sea Divide	The highest ridge of land in San Diego County which divides run off that drains west to the Pacific Ocean and run off that drain east to the Salton Sea. Also referred to as the Tecate Ridge. The area to the West is governed by Region 9 Water Quality Control Board and the area to the East is governed by Region 7.
Partial Infiltration	Infiltration of a storm water runoff volume less than the DCV.
Partial Retention	Partial retention category is defined by structural measures that incorporate both infiltration (in the lower treatment zone) and biofiltration (in the upper treatment zone).
PDP (Priority Development Project)	As defined by the MS4 Permit provision E.3.b, land development projects that fall under the planning and building authority of the Copermittee for which the Copermittee must impose specific requirements in addition to those required of Standard Projects. Refer to **Section 1.4** to determine if your project is a PDP.
PDPs with only Pollutant Control Requirements	PDPs that need to meet Source Control, Site Design and Pollutant Control Requirements (but are exempt from Hydromodification Management Requirements).
PDPs with Pollutant Control and Hydromodification Management Requirements	PDPs that need to meet Source Control, Site Design, Pollutant Control and Hydromodification Management Requirements.
Point of Compliance (POC)	1. For channel screening and determination of low flow threshold: the point at which collected storm water from a development is delivered from a constructed or modified drainage system into a natural or un-lined channel. POC for channel screening may be located onsite or offsite, depending on where runoff from the project meets a natural or un-lined channel. 2. For flow control: the point at which pre-development and post-development flow rates and durations will be compared. POC for flow control is typically onsite. A project may have a different POC for channel screening vs. POC for flow control if runoff from the project site is conveyed in hardened systems from the project site boundary to the natural or un-lined channel.
Pollutant Control	Control of pollutants via physical, chemical or biological processes

Pollution Prevention	Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, or disposal.
Post-Project Hydrology Flows, Volumes	The peak runoff flows and runoff volume anticipated after the project has been constructed taking into account all permeable and impermeable surfaces, soil and vegetation types and conditions after landscaping is complete, detention or retention basins or other water storage elements incorporated into the site design, and any other site features that would affect runoff volumes and peak flows.
Potential Critical Coarse Sediment Yield Area (PCCSYA)	A GLU with coarse-grained geologic material and high relative sediment production, as defined in the Regional WMAA. The Regional WMAA identified GLUs as potential critical coarse sediment yield areas based on slope, geology, and land cover. GLU analysis does not determine whether the sediment produced is critical to the receiving stream (a source of bed material to the receiving stream) therefore the areas are designated as potential.
Pre-Development Runoff Conditions	Approximate flow rates and durations that exist or existed onsite before land development occurs. For new development projects, this equates to runoff conditions immediately before any new project disturbance or grading. For redevelopment projects, this equates to runoff conditions from the project footprint assuming infiltration characteristics of the underlying soil, and existing grade. Runoff coefficients of concrete or asphalt must not be used. A redevelopment PDP must use available information pertaining to existing underlying soil type and onsite existing grade to estimate pre-development runoff conditions.
Pre-Project Condition	The condition prior to any project work or the existing condition. Note that pre-project condition and pre-development condition will not be the same for redevelopment projects.
Pretreatment	Removal of gross solids, including organic debris and coarse sediment, from runoff to minimize clogging and increase the effectiveness of BMPs.
Project Area	All areas proposed by an applicant to be altered or developed, plus any additional areas that drain on to areas to be altered or developed. Also see **Section 1.3**.

Project Submittal	Documents submitted to a jurisdiction or Copermittee in connection with an application for development approval and demonstrating compliance with MS4 Permit requirements for the project. Specific requirements vary from municipality to municipality.
Proprietary BMP	BMP designed and marketed by private business for treatment of storm water. Check with County staff prior to proposing to use a proprietary BMP.
Receiving Waters	See **Waters of the United States**.
Redevelopment	The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure. Replacement of impervious surfaces includes any activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include routine maintenance activities, such as trenching and resurfacing associated with utility work; pavement grinding; resurfacing existing roadways, sidewalks, pedestrian ramps, or bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair.
Required Retention Volume (RRV)	The Required Retention Volume (RRV) is the volume of rainfall that must be retained by tree wells in a DMA to meet flow control requirements. It is calculated by multiplying the Design Capture Volume (DCV) by a DCV multiplier.
Retrofitting	Storm Water management practice put into place after development has occurred in watersheds where the practices previously did not exist or are ineffective. Retrofitting of developed areas is intended to improve water quality, protect downstream channels, reduce flooding, or meet other specific objectives. Retrofitting developed areas may include, but is not limited to replacing roofs with green roofs, disconnecting downspouts or impervious surfaces to drain to pervious surfaces, replacing impervious surfaces with pervious surfaces, installing rain barrels, installing rain gardens, and trash area enclosures.
Retention (Retention BMPs)	A category of BMP that does not have any service outlets that discharge to surface water or to a conveyance system that drains to surface waters for the design event (i.e. 85th percentile 24-hour). Mechanisms used for storm water retention include infiltration, evapotranspiration, and use of retained water for non-potable or potable purposes.

Saturated Storage	Storage that provides a permanent volume of water at the bottom of the BMP as an anaerobic zone to promote denitrification and/or thermal pollution control. Also known as internal water storage or a saturation zone.
Self-mitigating Areas	A natural, landscaped, or turf area that does not generate significant pollutants and drains directly offsite or to the public storm drain system without being treated by a structural BMP. See **Section 5.2.1**.
Self-retaining DMA via Qualifying Site Design BMPs	An area designed to retain runoff to fully eliminate storm water runoff from the 85th percentile 24 hours storm event; See **Section 5.2.3**.
Significant Redevelopment	Redevelopment that meets the definition of a "PDP" in this manual. See **Section 1.4**.
Significant Site Design BMPs (SSD-BMPs)	Significant Site Design BMPs (SSD-BMPs) are Site Design BMPs that are sized and constructed to satisfy Structural Performance Standards for a Drainage Management Area (DMA). Examples of SSD-BMPs are tree wells and impervious area dispersion. SSD-BMPs may be credited in Worksheet B-1.1 of the BMP Design Manual to ***fully*** satisfy the Design Capture Volume (DCV) reductions and/or HMP reductions in a DMA.
Site Design BMPs	A storm water management and land development strategy that emphasizes conservation of natural features and the use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. Site Design BMPs can be sized for Design Capture Volume (DCV) reductions using Worksheet B-1.1 of the BMP Design Manual for PDP projects (See Enhanced Site Design BMPs and Significant Site Design BMPs).
Sizing Factor Method	A method for designing flow control BMPs for hydromodification management using sizing factors developed from unit area continuous simulation models.
Sorption	Physical and/or chemical process where pollutants are taken out of runoff through attachment to another substance.

Source Control BMPs	Land use or site planning practices, or structures that aim to prevent runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimizes the contact between pollutants and storm water runoff. Examples include roof structures over trash or material storage areas, and berms around fuel dispensing areas. Source control BMPs are described within this manual.
Standard Industrial Classification (SIC)	A Federal government system for classifying industries by 4-digit code. It is being supplanted by the North American Industrial Classification System but SIC codes are still referenced by the Regional Water Board in identifying development sites subject to regulation under the National Pollutant Discharge Elimination System permit. Information and an SIC search function are available at https://www.osha.gov/pls/imis/sicsearch.html.
Standard Project	Any development project that is not defined as a PDP by the MS4 Permit.
Storm Water Pollutant Control BMP	A category of storm water management requirements that includes treatment of storm water to remove pollutants by measures such as retention, biofiltration, and/or flow-thru treatment control, as specified in this manual. Also called a Pollutant Control BMP.
Structural BMP	Throughout the manual, the term "structural BMP" is a general term that encompasses the pollutant control BMPs and hydromodification BMPs required for PDPs under the MS4 Permit. A structural BMP may be a pollutant control BMP, a hydromodification management BMP, or an integrated pollutant control and hydromodification management BMP. Structural BMPs as defined in the MS4 Permit are: a subset of BMPs which detains, retains, filters, removes, or prevents the release of pollutants to surface waters from development projects in perpetuity, after construction of a project is completed.

Structural Performance Standards	Structural Performance Standards are numeric design standards for managing stormwater flows from Priority Development Project sites. Projects that are exempt from hydromodification management requirements must only satisfy the Pollutant Control Structural Performance Standard. All other projects must satisfy both the Pollutant Control Structural Performance Standard and the Hydromodification Management Structural Performance Standard. Both standards may be satisfied through a variety of design approaches, including Structural BMPs and Significant Site Design BMPs.
Subgrade	In-situ soil that lies underneath a BMP.
Tributary Area	The total surface area of land or hardscape that contributes runoff to the BMP; including any offsite or onsite areas that comingles with project runoff and drains to the BMP. Refer to **Section 3.3.2** for additional guidance. Also termed the drainage area or catchment area.
Unified BMP Design Approach	This term refers to the standardized process for site and watershed investigation, BMP selection, BMP sizing, and BMP design that is outlined and described in this manual with associated appendices and templates. This approach is considered to be "unified" because it represents a pathway for compliance with MS4 Permit requirements that is anticipated to be reasonably consistent across the local jurisdictions in San Diego County. In contrast, applicants may choose to take an alternative approach where they demonstrate to the satisfaction of the Copermittee, in their submittal, compliance with applicable performance standards without necessarily following the process identified in this manual.
Upper Flow Threshold	The upper limit of the range of flows to be controlled for hydromodification management. For the San Diego region, the upper flow threshold must be the pre-development 10-year flow rate (Q10) based on continuous simulation modeling.
Vactor	Refers to a sewer or storm drain cleaning truck equipped to remove materials from sewer or storm drain pipes or structures, including some storm water BMPs.
Vector	An animal or insect capable of transmitting the causative agent of human disease. An example of a vector in San Diego County that is of concern in storm water management is a mosquito.

Water Quality Improvement Plan (WQIP)	Copermittees are required to develop a Water Quality Improvement Plan (WQIP) for each Watershed Management Area in the San Diego Region. The purpose of the Water Quality Improvement Plans is to guide the Copermittees' jurisdictional runoff management programs towards achieving the outcome of improved water quality in MS4 discharges and receiving waters. WQIPs requirements are defined in the MS4 Permit provision B.
Waters of the United States	Surface bodies of water, including naturally occurring wetlands, streams (perennial, intermittent, and ephemeral (exhibiting bed, bank, and ordinary high water mark)), creeks, rivers, reservoirs, lakes, lagoons, estuaries, harbors, bays and the Pacific Ocean which directly or indirectly receive discharges from storm water conveyance systems. The Copermittee must determine the definition for wetlands and the limits thereof for the purposes of this definition, which must be as protective as the Federal definition utilized by the United States Army Corps of Engineers and the United States Environmental Protection Agency. Constructed wetlands are not considered wetlands under this definition, unless the wetlands were constructed as mitigation for habitat loss. Other constructed BMPs are not considered receiving waters under this definition, unless the BMP was originally constructed within the boundaries of the receiving waters. Also see MS4 permit definition.
Watershed Management Area	The ten areas defined by the SDRWQCB in Regional MS4 Permit provision B.1, Table B-1. Each Watershed Management Area is defined by one or more Hydrologic Unit, major surface water body, and responsible Copermittee.
Watershed Management Area Analysis	For each Watershed Management Area, the Copermittees have the option to perform a WMAA for the purpose of developing watershed-specific requirements for structural BMP implementation. Each WMAA includes: GIS layers developed to provide physical characteristics of the watershed management area, a list of potential offsite alternative compliance projects, and areas exempt from hydromodification management requirements.

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APPENDIX G
NOISE TECHNICAL MEMORANDUM

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September 2020

Michael Baker International, Inc.
Mr. Steve Wragg
9755 Clairemont Mesa Boulevard, Suite 100
San Diego, CA 92124

Subject: Casa De Oro Branch Library – Noise Technical Memorandum

INTRODUCTION

The purpose of this technical memorandum is to assess the project's potential noise impacts within the project area. The memorandum will compare project-generated noise and vibration to the County of San Diego for construction and operations.

PROJECT DESCRIPTION

The Casa de Oro Branch Library Project (proposed project) would result in replacement of the existing County of San Diego (County) Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The proposed project consists of an approximately 13,000 square-foot (SF) library facility that aims to achieve "zero net energy," with access off Campo Road, 52 parking spaces, landscaping, and fencing. The existing library is currently located at 9805 Campo Road within an existing retail commercial shopping center, just to the southeast of the proposed project site. The proposed project is intended to enhance the County's regional library system and provide expanded services to its patrons within the Spring Valley community and surrounding areas. The proposed project would be processed through the County's Department of General Services (DGS).

PROJECT LOCATION

The proposed project site is located in the community of Spring Valley in southeastern unincorporated San Diego County, California. The site is within the Valle de Oro Community Plan Area. The affected County Assessor Parcel Numbers (APNs) include portions of APNs 500-170-10, -11, and -41.

Regional access to the project vicinity is provided via State Route (SR) 94 located approximately 480 feet to the south/southwest of the site at its closest point; refer to Figure 1. Direct access to the project site would be provided from Campo Road, between Conrad Drive and Rodgers Road.

PROJECT SETTING AND EXISTING CONDITIONS

The proposed project site is located in a highly urbanized area, adjacent to the commercial corridor of Campo Road. The area surrounding the project site is highly developed with a variety of land uses including commercial, general office, and multi-family and (limited) single-family residential uses.

The land where the library would be constructed is currently disturbed and/or developed. The majority of the property is surfaced with asphaltic pavement. Limited vegetation is present on-site and consists of turf grass associated with the sports fields and slope along the western boundary, as well as along the existing drainage in the southwestern portion of the property.

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The site is relatively flat, gently sloping from north to south. On-site elevations range from approximately 422 feet above mean sea level (amsl) in the southern portion of the site near Campo Road to approximately 443 feet amsl in the northwestern portion of the site.



Location: N:\2020\2020-137.01 Casa de Oro Library\MAPS\location_vicinity\CDO_Location.mxd (TR)-trotellini 9/16/2020

Map Date: 9/16/2020

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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Location and Vicinity

2020-137.01 Casa de Oro Library

PROJECT CHARACTERISTICS

The library building would total approximately 13,000 SF in size and would house a number of rooms in order to accommodate internal library operations, as well as to provide a variety of services to the public. The proposed library would consist of the components identified in Table 1.

Table 1. Project Components	
Proposed Use	
Entry plaza	Entry lobby
Restroom facilities (including staff-only)	Circulation desk
Public multi-media room (computers/copy machines)	Manager's office/work room/ sorter/storage/break room/staff restroom
Adult (study rooms/seating/book stacks)	Great room (reading area and magazine stacks)
Children (story-time area/discovery zone/book stacks/reading room/study area/crafts and children's restrooms)	Teens (study rooms/seating/book stacks)
Community room	Conference room
Audio/visual storage	Marketplace (popular books/ holds and self-checkouts)
Homework center	Friends of Library bookstore
Outdoor patio	

Project implementation would require acquisition of Real Property from an adjoining private party to the south. The County would lease the affected property from the La Mesa Spring Valley School District; no lands would be purchased from the school.

Access

Direct access to the project site would be from Campo Drive. It is anticipated that a minimum 24-foot wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.

PROJECT CONSTRUCTION

Schedule

It is anticipated that project construction would occur over a period of approximately 12 to 14 months from the onset of demolition through final construction.

Demolition

An existing modular building located on the La Mesa Spring Valley School District property would be removed to accommodate the parking lot for the library. Additionally, an existing restaurant fronting onto Campo Road would be demolished to allow for site access. The existing asphaltic surface in the southern

portion of the site would also be broken up and removed. Removal of a portion of the existing sports fields abutting the site to the north would also occur with project grading.

Grading and Site Preparation

The site would anticipate minor grading, 4,000 cubic yards (import), to accommodate the proposed library pad, surface parking area, and driveway. This includes preparation of and/or back filling of the site's retaining walls and driveway ramping (American Disability Act compliant), plus removal and recompaction (12-inch) for the foundation and parking areas. Existing on-site vegetation (i.e., on the sports fields) would be removed. Grading would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment.

PROJECT OPERATIONS

Hours of Operation and Staffing

It is anticipated that the library would be staffed by a maximum of 6 to 8 part- and/or full-time employees on a daily basis. Consistent with current operating hours for other libraries within the County's system, it is anticipated that the Casa de Oro library would operate during the following hours:

Monday and Wednesday: 9:30 a.m. to 6:00 p.m.
Tuesday and Thursday: 9:30 a.m. to 8:00 p.m.
Friday and Saturday: 9:30 a.m. to 5:00 p.m.
Sunday: Closed

NOISE ANALYSIS

Fundamentals of Sound and Environmental Noise

Addition of Decibels

The decibel (dB) scale is logarithmic, not linear; therefore, sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Under the dB scale, three sources of equal loudness together would produce an increase of 5 dB.

Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB (dBA) for each doubling of distance from a stationary or point

source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA (FHWA 2008), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction of 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend length-wise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the line of sight between the source and the receiver.

The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (California Department of Transportation [Caltrans] 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006).

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 p.m. to 10:00 p.m. and a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA), or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA noise levels, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The project site is surrounded by numerous noise-sensitive land uses including a middle school to the north, the Crown Inn and Lugar De Encuentro Church to the south

and across Campo Road, and multi-family residential uses to the west. The nearest noise-sensitive land use to the project site is the multi-family residences located adjacent to the southwestern project site boundary.

Vibration Fundamentals

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

Existing Noise Environment

Spring Valley is impacted by various noise sources. It is subject to typical urban noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities as well as noise generated from the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the community that generate stationary source noise. Mobile sources of noise, especially cars and trucks, are the most common source of noise. The major noise sources in the vicinity of the project site includes roadway noise traffic from Campo Road and State Route 94 to the south, as well as typical noise sources associated with the various land uses that surround the project site such as parking lot noise, mechanical equipment (e.g., HVAC), school bells, and crowd noise.

Existing Noise Measurements

As previously mentioned, the land where the library would be constructed is flat and has previously been disturbed. The majority of the property is surfaced with asphalt pavement. It is predominantly surrounded by a mix of residential and commercial land uses. In order to quantify existing ambient noise levels in the project area, ECORP Consulting, Inc. conducted five short-term noise measurements on August 26, 2020. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site (see Attachment A for a visual depiction of the Noise Measurement Locations). The 15-minute measurements were taken between 9:17 a.m. and 11:45 a.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in Table 2.

Table 2. Existing (Baseline) Noise Measurements					
Location Number	**Location**	**L_{eq} dBA**	**L_{min} dBA**	**L_{max} dBA**	**Time**
1	956 Campo Road	62.7	52.2	74.6	10:57 a.m.-11:13 a.m.
2	Edge of asphalt/baseball field north of the project site	51.6	46.6	55.9	10:12 a.m.-10:27 a.m.
3	Behind the Casa De Oro Senior Apartments	50.6	42.7	59.8	11:30 a.m.-11:45 a.m.
4	Grocery Outlet parking lot off Campo Road	55.2	47.6	62.1	9:17 a.m.-9:32 a.m.
5	Behind Grocery Outlet	53.2	48.4	60.4	9:43 a.m.-9:58 a.m.

Source: Measurements were taken by ECORP with an Ex Tech SDL 600 precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. See Attachment A for noise measurement outputs.

As shown in Table 2, the ambient recorded noise levels range from 50.6 to 62.7 dBA near the project site. The most common noise in the project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles). Traffic moving along a roadway produces a sound level that remains relatively constant and is part of the project area's minimum ambient noise level. Vehicular noise varies with the volume, speed and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, trains, garbage and construction vehicle activity and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the project vicinity. This task was accomplished using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see Attachment B) and traffic volumes from the Transportation Impact Study prepared for the project (Michael Baker 2020). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in Table 3.

Table 3. Existing (Baseline) Traffic Noise Levels		
Roadway Segment	**Surround Uses**	**CNEL at 100 feet from Centerline of Roadway**
Campo Road		
West of the project driveway	Residential and Lodging	54.8
Between the project driveway and Kenwood Drive	Church and Commercial	52.9
Kenwood Drive		
South of Campo Road	Church and Commercial	56.1
Conrad Drive		
North of Campo Road	Residential and Commercial	51.0

Source: Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by Michael Baker International (2020). Refer to Attachment B for traffic noise modeling assumptions and results.

Note: A total of 3 intersections were analyzed in the Transportation Impact Study; however, only roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown, the existing traffic-generated noise level on project-vicinity roadways currently ranges from 51.0 to 56.1 dBA CNEL. As previously described, CNEL is 24-hour average noise level with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. It should be noted that the modeled noise levels depicted in Table 3 may differ from measured levels in Table 2 because the measurements represent noise levels at different locations around the project site and are also reported in different noise metrics (e.g., noise measurements are the L_{eq} values and traffic noise levels are reported in CNEL).

Regulatory Setting

San Diego County Code

San Diego County's regulations with respect to noise are included in Chapter 4, *Noise Abatement and Control*, of the County Code. Section 36.404, *General Sound Level Limits*, limits stationary-source noise at any location on a residential property at a maximum 50 dBA L_{eq} from 7:00 a.m. to 10:00 p.m. and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. Additionally, Section 36.409, *Sound Level Limitations on Construction Equipment*, states that noise sources associated with construction are limited to an average sound level of 75 dBA for an eight-hour period, between 7:00 a.m. and 7:00 p.m., when measured at any occupied property where the noise is being received. Construction is prohibited between the nighttime hours of 7:00 p.m. and 7:00 a.m. as well as on Sundays and all major holidays.

Noise Impacts

Methodology

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. Predicted construction noise levels were calculated utilizing the FHWA's Roadway

Construction Model (2006). Transportation-source noise levels in the Project vicinity were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108) for exiting and existing plus project traffic volumes. Operational noise levels are addressed qualitatively. Groundborne vibration levels associated with construction-related activities for the project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from Caltrans. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby land uses.

IMPACT DISCUSSION

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The significance criteria promulgated by the County Code may be relied upon to make impact determinations.

Would the Project Result in the Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of other Agencies?

Construction Noise Impacts

Construction noise associated with the proposed project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., grading, excavation, trenching, paving). Noise generated by construction equipment, including excavators, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site. The nearest noise sensitive land uses to the project site are residences located adjacent to the southwestern project site boundary.

Section 36.409, *Sound Level Limitations on Construction Equipment*, of the County Code states that noise sources associated with construction are limited to an average sound level of 75 dBA for an eight-hour period, between 7:00 a.m. and 7:00 p.m., when measured at any occupied property where the noise is being received. Construction is prohibited between the nighttime hours of 7:00 p.m. and 7:00 a.m. as well as on Sundays and all major holidays.

The anticipated short-term construction noise levels generated for the necessary equipment is presented in Table 4**.** Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the project site (FTA 2018).

Table 4. Onsite Construction Average (dBA) Noise Levels by Receptor Distance and Construction Equipment			
Equipment	**Estimated Exterior Construction Noise Level @ Closest Residence**	**Construction Noise Standard (dBA L_{eq})**	**Exceeds Standards?**
Demolition			
Concrete/Industrial Saws (1)	74.8	*75*	**No**
Rubber Tired Dozers (1)	69.9	*75*	**No**
Tractors/Loaders/Backhoes (1)	72.3	*75*	**No**
Combined Demolition Equipment	**79.6**	*75*	**Yes**
Site Preparation			
Water Truck (1)	77.4	*75*	**Yes**
Graders (1)	73.3	*75*	**No**
Tractors/Loaders/Backhoes (1)	72.3	*75*	**No**
Rubber Tired Dozers (1)	69.9	*75*	**No**
Combined Site Preparation Equipment	**80.1**	*75*	**Yes**
Grading			
Water Truck (1)	77.4	*75*	**Yes**
Rubber Tired Dozers (2)	69.9 (each)	*75*	**No**
Tractors/Loaders/Backhoes (1)	72.3	*75*	**No**
Graders (2)	73.3 (each)	*75*	**No**
Scrapers (2)	71.9 (each)	*75*	**No**
Plate Compactors (1)	68.5	*75*	**No**
Rollers (1)	65.3	*75*	**No**
Combined Grading Equipment	**82.4**	*75*	**Yes**
Building Construction			
Generator Sets (1)	69.9	*75*	**No**
Cranes (1)	64.8	*75*	**No**
Forklifts (1)	71.7	*75*	**No**
Tractors/Loaders/Backhoes (1)	72.3	*75*	**No**

Table 4. Onsite Construction Average (dBA) Noise Levels by Receptor Distance and Construction Equipment			
Equipment	**Estimated Exterior Construction Noise Level @ Closest Residence**	**Construction Noise Standard (dBA L_{eq})**	**Exceeds Standards?**
Welders (3)	62.3	*75*	**No**
Combined Building Construction Equipment	**76.9**	*75*	**Yes**
Paving			
Cement and Mortar Mixers (1)	67.1	*75*	**No**
Pavers (1)	66.5	*75*	**No**
Rollers (1)	65.3	*75*	**No**
Tractors/Loaders/Backhoes (1)	72.3	*75*	**No**
Paving Equipment (1)	74.8	*75*	**No**
Combined Paving Equipment	**77.8**	*75*	**Yes**
Architectural Coating			
Air Compressors (1)	65.9	*75*	**No**
Combined Architectural Coating Equipment	**65.9**	*75*	**No**

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment C for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. Distance to the nearest residence is approximately 122 feet measured from the center of the project site.

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 4, a majority of the cumulative construction equipment and multiple individual pieces of construction equipment would exceed the County's 75 dBA construction noise standard at the nearest sensitive receptor. Mitigation is required to reduce construction noise to levels below this threshold. Noise barriers or enclosures can provide a sound reduction of 35 dBA or greater (WEAL 2000). To be effective, a noise enclosure/barrier must physically fit in the available space, must completely break the line of sight between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In the case of project construction, an enclosure/barrier would only be necessary at the area of the construction site where noise producing activities are being performed. It is noted that a wall currently exists between the nearest residence and the project site that could offer some noise reduction. However, an inspection of this wall was not conducted to assess its physical condition.

As such, the following mitigation is recommended.

NOI-1: In order to reduce construction noise during the demolition, site preparation, grading, building construction and paving phases, a temporary noise barrier or enclosure shall be positioned between the construction site and the neighboring residences to the southwest of the site in a manner that breaks the line of sight between the construction equipment and these residences. The temporary noise barrier shall have a sound transmission class (STC) of 10 or greater in accordance with American Society for Testing and Materials Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. The temporary noise barrier can consist of a solid plywood fence at least 7/16-inch in thickness and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket, attached to chain link fencing. The length, height, and location of the temporary noise barrier shall be adequate to assure proper acoustical performance. Specifically, the barrier must completely break the line of sight between the construction site and the residences to the southwest, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. The temporary noise barrier must span the entire length of the western boundary of the Project site. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion.

OR

In the case that a retaining wall (or walls) is constructed along the southern and western property boundaries, is constructed to a height that breaks the line of sight between the construction site and neighboring residences to the southwest, and is constructed prior to any other construction taking place, no temporary construction noise barrier shall be required along these site perimeters. Otherwise, provision of temporary noise barriers as described above in NOI-1 shall be required, prior to commencement of any project construction activities.

NOI-2: The project improvement and building plans will include the following requirements for construction activities:

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices.

- A sign, legible at a distance of 50 feet, shall be posted at the project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the County within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the County. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator.

- Identification of construction noise reduction methods. These reduction methods may include shutting off idling equipment (5 minutes), installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and using electric air compressors and similar power tools.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- Per Section 36.409 of the County code, construction shall be prohibited between the hours of 7:00 p.m. to 7:00 a.m. as well as on Sundays and all major holidays.

Implementation of mitigation measures **NOI-1** and **NOI-2** would substantially reduce construction-generated noise levels. As previously described, noise barriers or enclosures such as that recommended in mitigation measure **NOI-1** can provide a sound reduction 35 dBA or greater (WEAL 2000), which would be a reduction robust enough to maintain construction noise levels less than 75 dBA. Temporary noise barriers can consist of a solid plywood fence and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket attached to chain link fencing. Therefore, project construction activities would not expose persons to and generate noise levels in excess of County standards with implementation of **NOI-1** and **NOI-2**.

Operational Noise Impacts

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise sensitive and may warrant unique measures for protection from intruding noise. The nearest noise-sensitive land uses to the project site are residences adjacent to the site to the southwest. Additionally, a middle school campus lies just north of the project site. Operational noise sources associated with the proposed project include mobile and stationary (i.e., mechanical equipment, onsite activity) sources.

Operational Traffic Noise

Future traffic noise levels throughout the project vicinity (i.e., vicinity roadway segments that traverse noise sensitive land uses) were modeled based on the traffic volumes identified by Michael Baker International (2020) to determine the noise levels along project vicinity roadways. Table 5 shows the calculated offsite roadway noise levels under existing traffic levels compared to future buildout of the project. The calculated noise levels as a result of the project at affected sensitive land uses are compared to an increase of 3 dB over existing conditions. As previously stated, outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.

Table 5. Existing Plus Project Conditions- Predicted Traffic Noise Levels					
Roadway Segment	Surround Uses	CNEL at 100 feet from Centerline of Roadway		Noise Standard (dBA CNEL)	Exceed Standard/ Significant Impact?
		Existing Conditions	Existing Plus Project Conditions		
Campo Road					
West of the project driveway	Residential and Lodging	54.8	54.9	>3	**No**
Between the project driveway and Kenwood Drive	Church and Commercial	52.9	53.4	>3	**No**
Kenwood Drive					
South of Campo Road	Church and Commercial	56.1	56.5	>3	**No**
Conrad Drive					
North of Campo Road	Residential and Commercial	51.0	51.1	>3	**No**

Source: Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by Michael Baker International (2020). Refer to Attachment B for traffic noise modeling assumptions and results.
Note: A total of 3 intersections were analyzed in the Transportation Impact Study; however, only roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown in Table 5, the predicted increase in traffic noise levels associated with the project would be less than 3 dBA. The noise increase, as a result of increased traffic from the proposed project, would not be perceivable.

Operational Stationary Noise

By their very nature, libraries are considered relatively quiet places. They do not attract large, noise-intensive gatherings, use amplified sound or accommodate heavy-duty vehicles. The main stationary noise associated with library operations would be parking lot activity (i.e. car doors opening and closing, people talking, stereo music) and internal vehicle circulation in the parking lot located on the northern end of the project site. Previous noise measurements taken by ECORP Consulting, Inc., using a Larson Davis SoundExpert LxT precision sound level meter, at the edge of a parking lot of a large shopping center recorded a noise level of 61.1 dBA at approximately 5 feet distant. (The proposed library would not be expected to generate noise levels at the same intensity as a large grocery store and therefore this reference noise applied to the project is conservative.) The nearest sensitive noise receptor, the residence adjacent to the southwestern property line, is located approximately 55 feet distance from potential parking lot activity and internal circulation. As previously mentioned, sound spreads uniformly outward in a spherical pattern, and the sound level attenuates at a rate of approximately 6 dBA for each doubling of distance from a stationary or point source (FHWA 2011). This would result in a noise level of approximately 40.8 dBA at the nearby residences. The County Code Section 36.404 limits stationary-

source noise at any location on a residential property at a maximum 50 dBA L_{eq} from 7:00 a.m. to 10:00 p.m. and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. Thus, the parking lot activity as a result of the proposed project would not exceed the daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.) County noise standards.

Additionally, as previously mentioned, the project may result in the construction of on-site retaining walls in support of the proposed development or to expand the existing building pad. Depending on the height of any retaining walls, they may offer an additional reduction in noise levels. Depending on the height of this retaining wall, it could offer an additional reduction in noise. It is further noted that, as shown in Table 2, the area located directly west of the nearest residence (Location 3 in Table 2) experiences an ambient recorded noise level of 50.6 dBA. Thus, the noise levels in the area surrounding the nearest noise-sensitive residential receptors currently experience noise at levels greater than what would be produced by the project.

Would the Project Result the Generation of Excessive Groundborne Vibration or Groundborne Noise Levels?

Construction Vibration Impacts

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is not anticipated that pile drivers would be necessary during project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in Table 6.

Table 6. Typical Construction Equipment Vibration Levels	
Equipment Type	**Peak Particle Velocity at 25 Feet (inches per second)**
Impact Pile Driver	0.644
Sonic Pile Driver	0.17
Vibratory Roller	0.21
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2018

San Diego County's regulation pertaining to vibration is included in Policy N-3.1 of the General Plan Noise Element. Policy N-3.1 recommends the use of the FTA guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to groundborne vibration from construction equipment. As such, this analysis will use a conservative threshold of 0.2 inches per second peak particle velocity (PPV), which is the vibration level that is considered by the FTA to be acceptable for "non-engineered timber and masonry buildings" (FTA 2018). It is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure. Consistent with FTA recommendations for calculating construction vibration, construction vibration was measured from the center of the project site (FTA 2018). The nearest structures of concern to the construction site is located approximately 122 feet from the center of the project site.

Based on the representative vibration levels presented for various construction equipment types in Table 6 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential project construction vibration levels. The FTA provides the following equation: [PPVequip = PPVref x $(25/D)^{1.5}$]. Table 7 presents the expected project related vibration levels at a distance of 122 feet.

Table 7. Specific Plan Construction Vibration Levels at 122 Feet							
Receiver PPV Levels (in/sec)[1]					**Peak Vibration**	**Threshold**	**Exceed Threshold**
Small Bulldozer	**Jackhammer**	**Loaded Trucks**	**Large Bulldozer**	**Vibratory Roller**			
0.002	0.003	0.007	0.008	0.019	**0.019**	*0.2*	**No**

[1]Based on the Vibration Source Levels of Construction Equipment included on Table 6 (FTA 2018).

As shown in Table 7, vibration as a result of construction activities exceed would not exceed 0.2 PPV at the nearest structure. Thus, would not exceed the recommended threshold.

Operational Vibration Impacts

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels. Therefore, the project would result in no groundborne vibration impacts during operations.

Would the Project Expose People Residing or Working in the Project Area to Excessive Airport Noise Levels?

The project site is located approximately 5.5 miles north of the Gillespie Field Airport. The proposed project is not located within an airport land use plan or within two miles of a public airport or public use airport. Implementation of the proposed project would not affect airport operations nor result in increased exposure of people working at or visiting the project site to aircraft noise.

Would the Project Result in a Cumulative Noise Impact?

Cumulative Construction Noise

Construction activities associated with the proposed project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the proposed project would be less than significant following compliance with mitigation measures **NOI-1** and **NOI-2**. Cumulative development in the vicinity of the project site could result in elevated construction noise levels at sensitive receptors in the project area. However, each project would be required to comply with the applicable limitations on construction. Therefore, the project would not contribute to cumulative impacts during construction.

Cumulative Operational Noise

Cumulative long-term noise sources associated with development at the project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the proposed project and related cumulative projects together could result in higher noise levels than considered separately. The project is proposing the construction of a 13,000 SF library facility in a highly developed area in the County. The contribution to mobile and stationary noise sources would be minimal and would not result in any substantial changes in the noise environment. Noise increase as a result of the project would not exceed County standards. Therefore, the project would not contribute to cumulative impacts during operations.

REFERENCES

Caltrans (California Department of Transportation). 2002. California Airport Land Use Planning Handbook.

____. 2020. Transportation- and Construction-Induced Vibration Guidance Manual.

FHWA (Federal Highway Administration). 2006. Roadway Construction Noise Model.

FTA (Federal Transit Administration). 2018. Transit Noise and Vibration Impact Assessment.

HMMH. 2006. Transit Noise and Vibration Impact Assessment, Final Report.

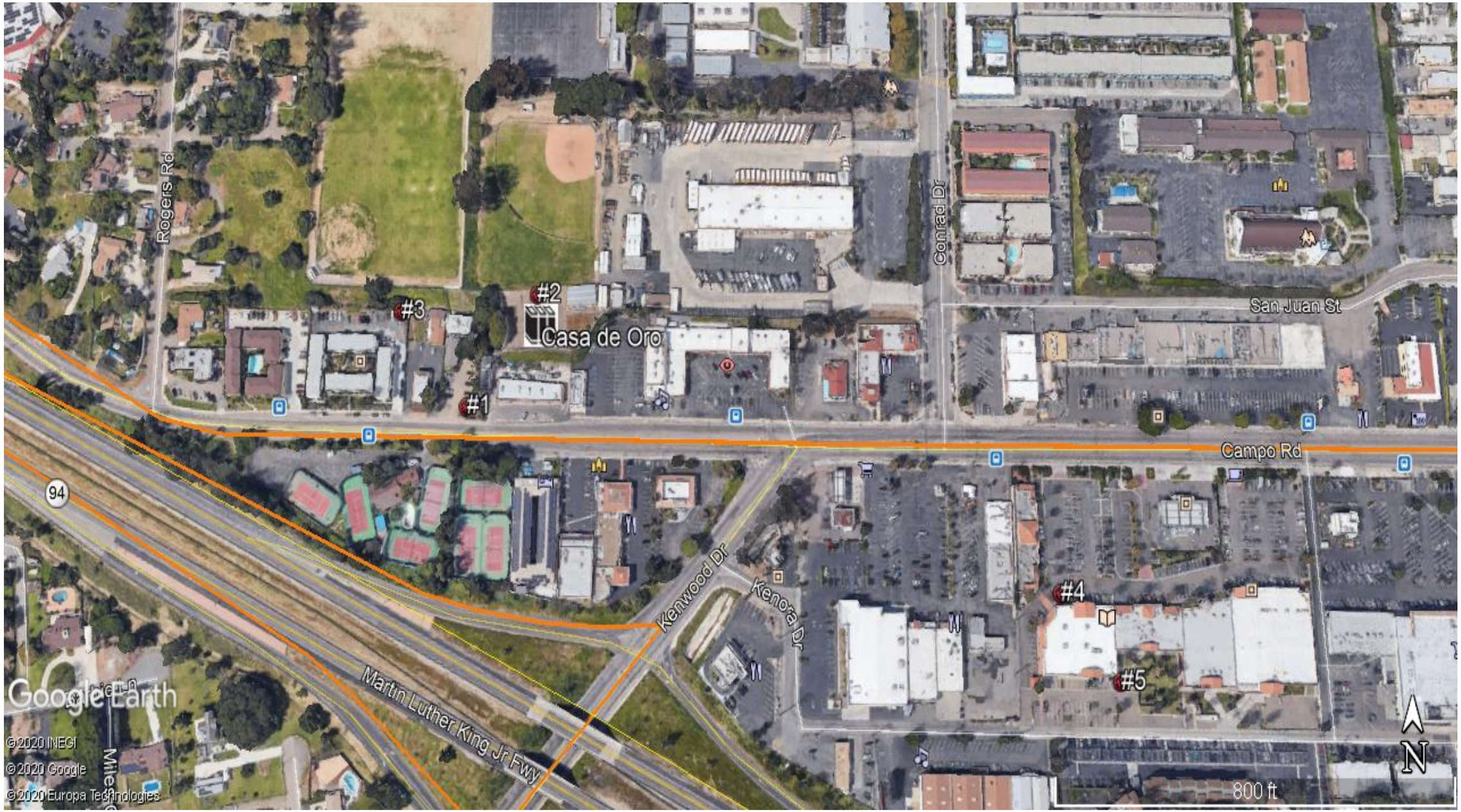
San Diego, County of. 2009. San Diego County Code, Chapter 4, Noise Abatement and Control, Section 36.404, General Sound Level Limits

____. 2011. San Diego County General Plan.

WEAL. 2000. Sound Transmission Sound Test Laboratory Report No. TL 96-186.

ATTACHMENT A

Baseline (Existing) Noise Measurements – Project Site and Vicinity



Map Date: *8/20-2020*
Photo (or Base) Source: *Google Earth*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Baseline Noise Measurement Locations

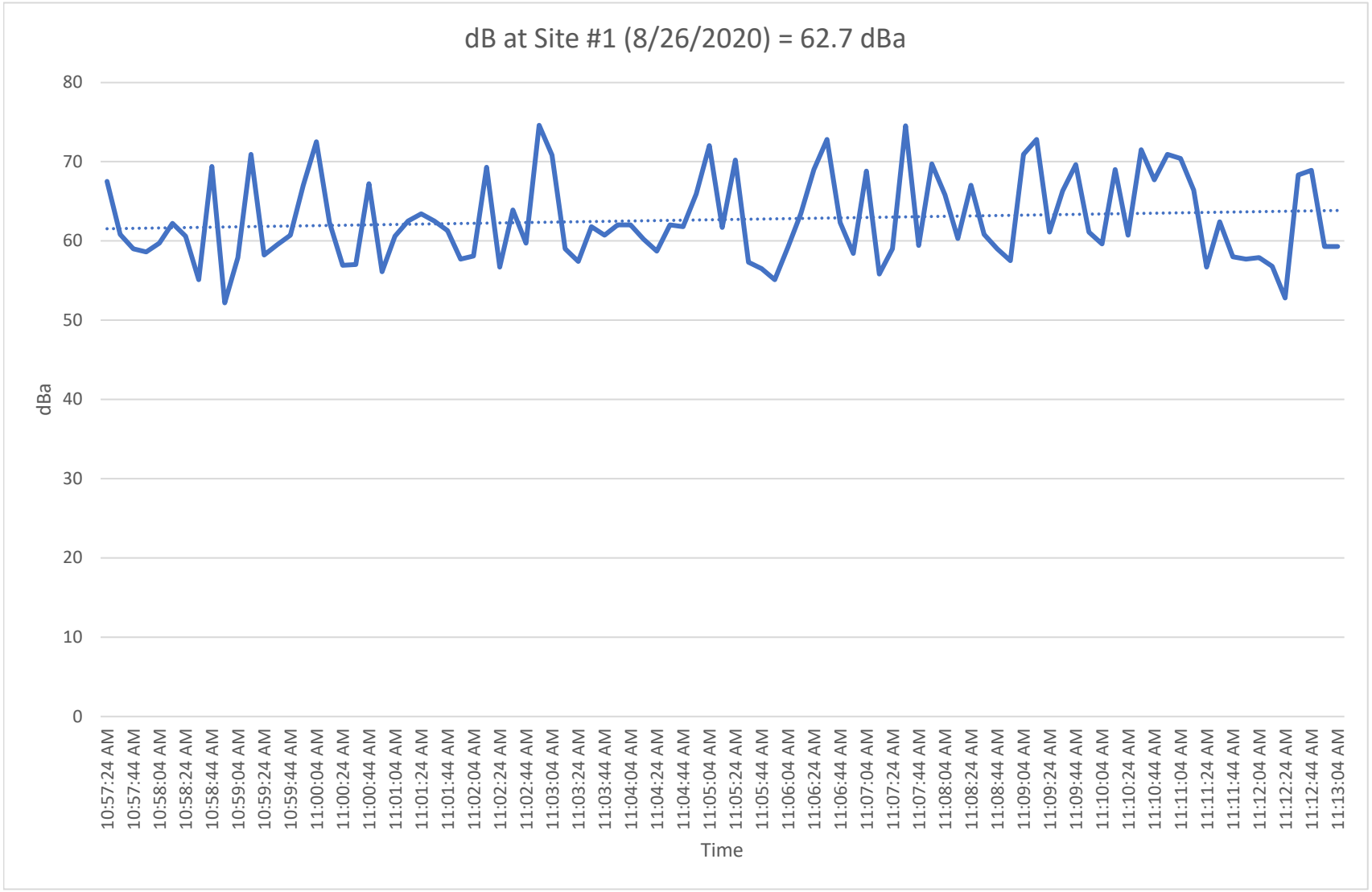
2020-137.01

Site Number: 1			
Recorded By: Jessie Beckman			
Job Number: 2020-137.01			
Date: 8/26/2020			
Time: 10:57 a.m.			
Location: 956 Campo Road			
Source of Peak Noise: Vehicles on adjacent roadways			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
62.7	52.2	74.6	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = 0.01		**Sensor Height (ft):** 3.5 ft
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	0-3	81	29.97

Photo of Measurement Location



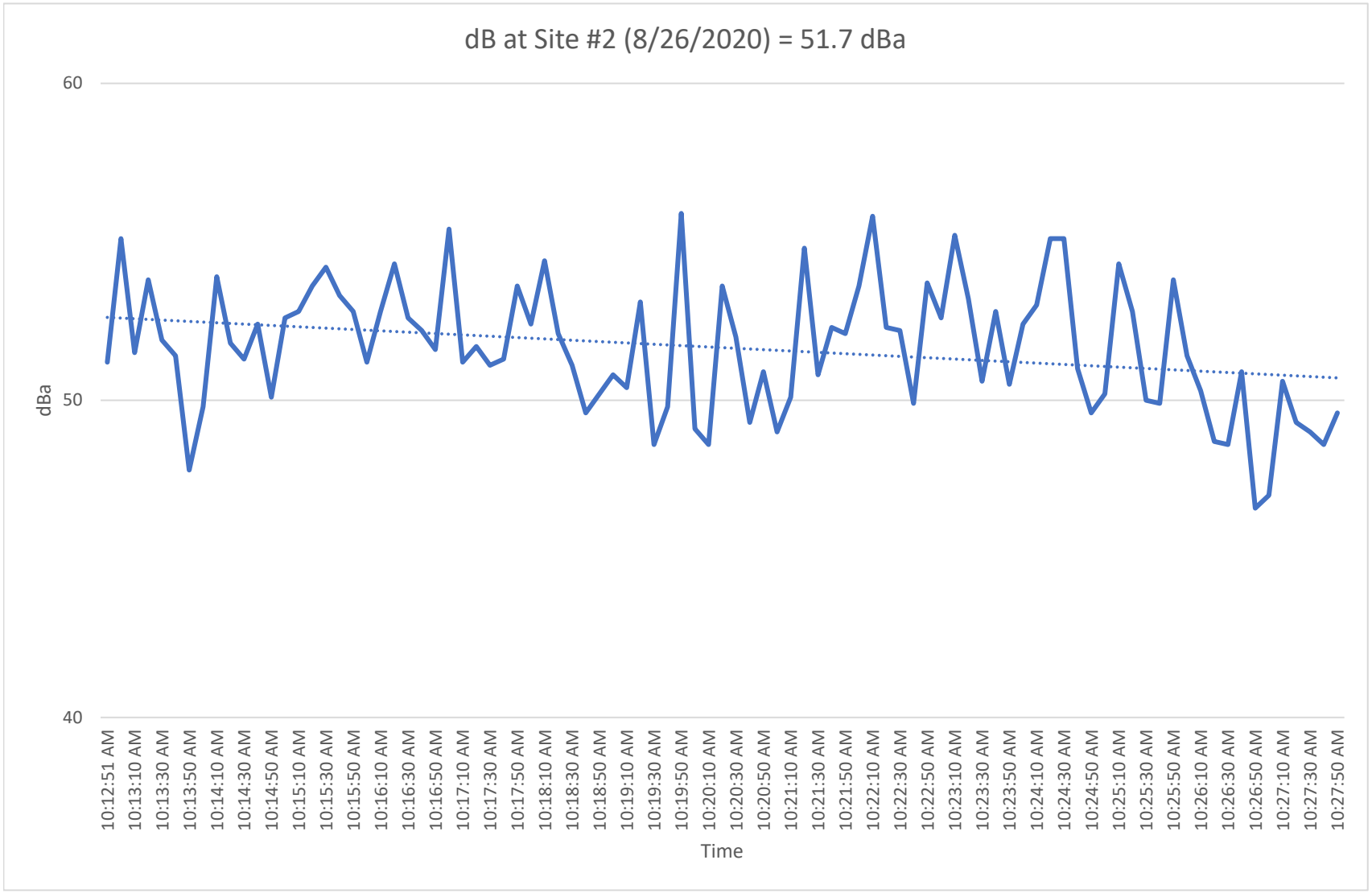

dB at Site #1 (8/26/2020) = 62.7 dBa
80
70
60
50
40
30
20
10
0
dBa
10:57:24 AM
10:57:44 AM
10:58:04 AM
10:58:24 AM
10:58:44 AM
10:59:04 AM
10:59:24 AM
10:59:44 AM
11:00:04 AM
11:00:24 AM
11:00:44 AM
11:01:04 AM
11:01:24 AM
11:01:44 AM
11:02:04 AM
11:02:24 AM
11:02:44 AM
11:03:04 AM
11:03:24 AM
11:03:44 AM
11:04:04 AM
11:04:24 AM
11:04:44 AM
11:05:04 AM
11:05:24 AM
11:05:44 AM
11:06:04 AM
11:06:24 AM
11:06:44 AM
11:07:04 AM
11:07:24 AM
11:07:44 AM
11:08:04 AM
11:08:24 AM
11:08:44 AM
11:09:04 AM
11:09:24 AM
11:09:44 AM
11:10:04 AM
11:10:24 AM
11:10:44 AM
11:11:04 AM
11:11:24 AM
11:11:44 AM
11:12:04 AM
11:12:24 AM
11:12:44 AM
11:13:04 AM
Time

Site Number: 2			
Recorded By: Jessie Beckman			
Job Number: 2020-137.01			
Date: 8/26/2020			
Time: 10:12 a.m.			
Location: Edge of asphalt/baseball field north of the project site			
Source of Peak Noise: Vehicles on surrounding roadways			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
51.6	46.6	55.9	

Weather Data			
Est.	**Duration:** 15 minutes	**Sky:** Clear	
	Note: dBA Offset = 0.01	**Sensor Height (ft):** 3.5 ft	
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	0-3	81	29.97

Photo of Measurement Location



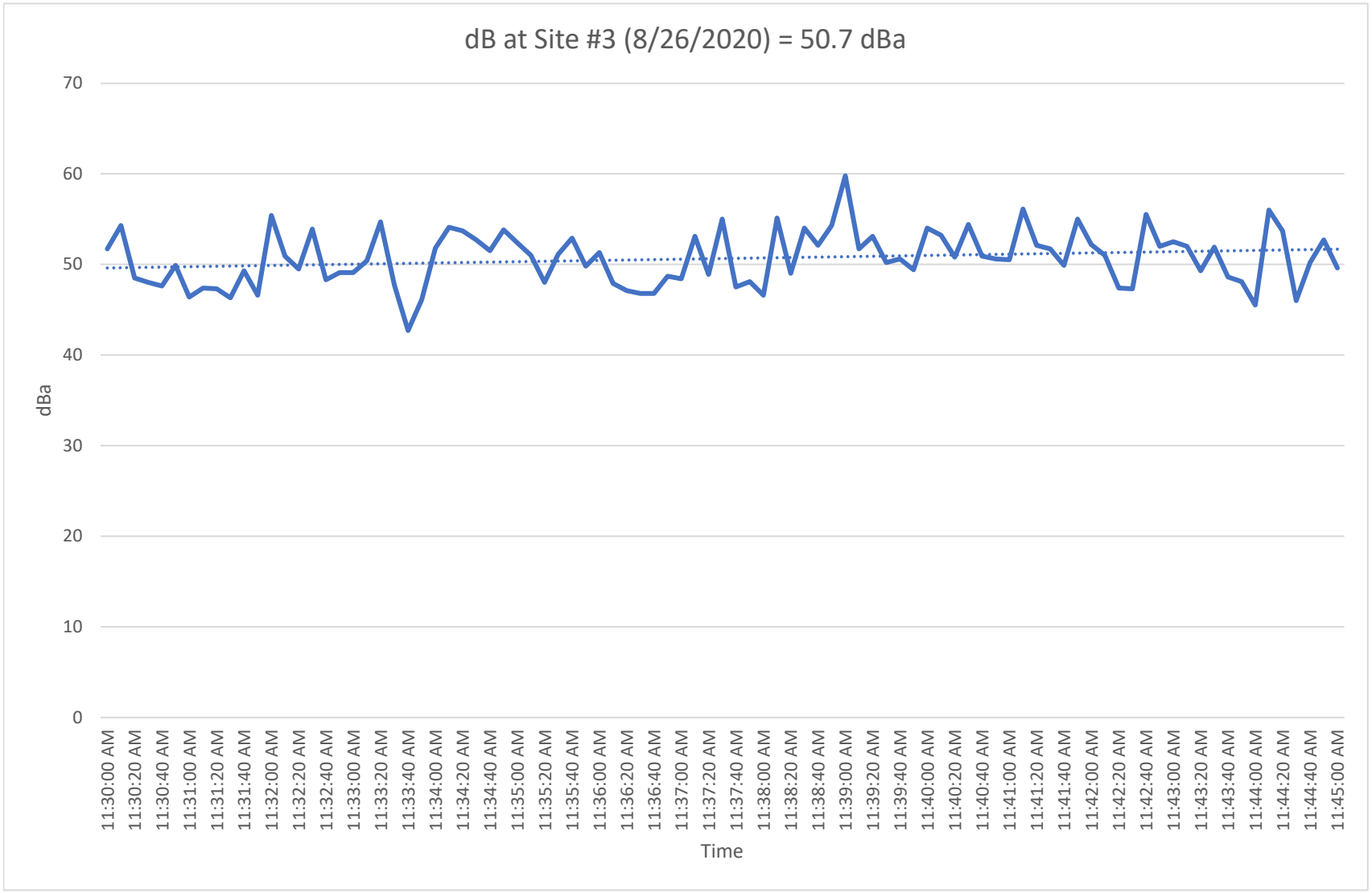

dB at Site #2 (8/26/2020) = 51.7 dBa
60
50
40
dBa
10:12:51 AM
10:13:10 AM
10:13:30 AM
10:13:50 AM
10:14:10 AM
10:14:30 AM
10:14:50 AM
10:15:10 AM
10:15:30 AM
10:15:50 AM
10:16:10 AM
10:16:30 AM
10:16:50 AM
10:17:10 AM
10:17:30 AM
10:17:50 AM
10:18:10 AM
10:18:30 AM
10:18:50 AM
10:19:10 AM
10:19:30 AM
10:19:50 AM
10:20:10 AM
10:20:30 AM
10:20:50 AM
10:21:10 AM
10:21:30 AM
10:21:50 AM
10:22:10 AM
10:22:30 AM
10:22:50 AM
10:23:10 AM
10:23:30 AM
10:23:50 AM
10:24:10 AM
10:24:30 AM
10:24:50 AM
10:25:10 AM
10:25:30 AM
10:25:50 AM
10:26:10 AM
10:26:30 AM
10:26:50 AM
10:27:10 AM
10:27:30 AM
10:27:50 AM
Time

Site Number: 3			
Recorded By: Jessie Beckman			
Job Number: 2020-137.01			
Date: 8/26/2020			
Time: 11:30 a.m.			
Location: Behind the Casa De Oro Senior Apartments			
Source of Peak Noise: Vehicles on surrounding roadways			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
50.6	42.7	59.8	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = 0.01		**Sensor Height (ft):** 3.5 ft
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	0-3	81	29.97

Photo of Measurement Location



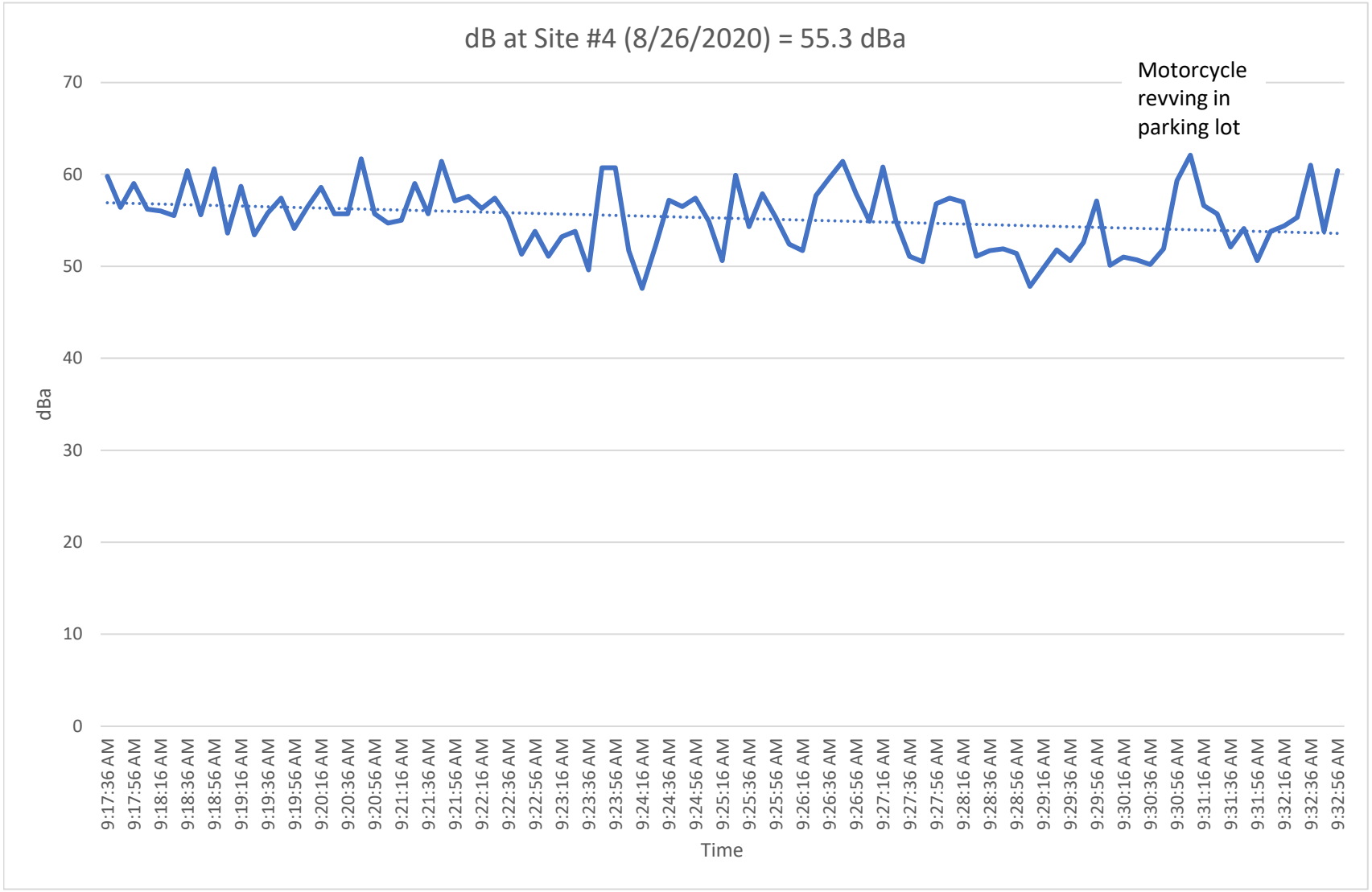

dB at Site #3 (8/26/2020) = 50.7 dBa
70
60
50
40
30
20
10
0
dBa
11:30:00 AM
11:30:20 AM
11:30:40 AM
11:31:00 AM
11:31:20 AM
11:31:40 AM
11:32:00 AM
11:32:20 AM
11:32:40 AM
11:33:00 AM
11:33:20 AM
11:33:40 AM
11:34:00 AM
11:34:20 AM
11:34:40 AM
11:35:00 AM
11:35:20 AM
11:35:40 AM
11:36:00 AM
11:36:20 AM
11:36:40 AM
11:37:00 AM
11:37:20 AM
11:37:40 AM
11:38:00 AM
11:38:20 AM
11:38:40 AM
11:39:00 AM
11:39:20 AM
11:39:40 AM
11:40:00 AM
11:40:20 AM
11:40:40 AM
11:41:00 AM
11:41:20 AM
11:41:40 AM
11:42:00 AM
11:42:20 AM
11:42:40 AM
11:43:00 AM
11:43:20 AM
11:43:40 AM
11:44:00 AM
11:44:20 AM
11:44:40 AM
11:45:00 AM
Time

Site Number: 4			
Recorded By: Jessie Beckman			
Job Number: 2020-137.01			
Date: 8/26/2020			
Time: 9:17 a.m.			
Location: Grocery Outlet parking lot off Campo Road			
Source of Peak Noise: Vehicles on surrounding roadways and cars passing in the parking lot			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
55.2	47.6	62.1	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = 0.01		**Sensor Height (ft):** 3.5 ft
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	0-3	81	29.97

Photo of Measurement Location



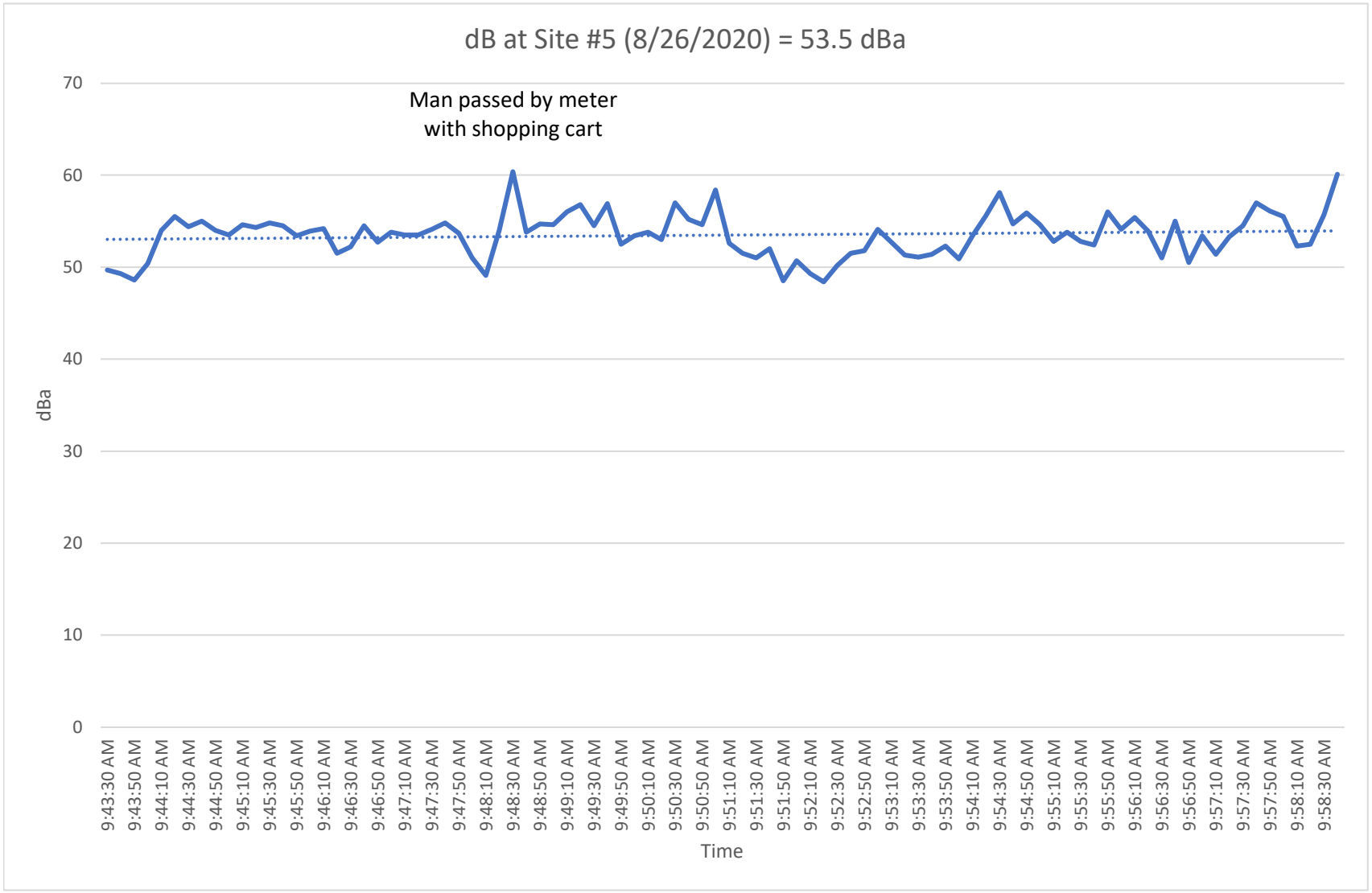

dB at Site #4 (8/26/2020) = 55.3 dBa
Motorcycle revving in parking lot
70
60
50
40
30
20
10
0
dBa
9:17:36 AM
9:17:56 AM
9:18:16 AM
9:18:36 AM
9:18:56 AM
9:19:16 AM
9:19:36 AM
9:19:56 AM
9:20:16 AM
9:20:36 AM
9:20:56 AM
9:21:16 AM
9:21:36 AM
9:21:56 AM
9:22:16 AM
9:22:36 AM
9:22:56 AM
9:23:16 AM
9:23:36 AM
9:23:56 AM
9:24:16 AM
9:24:36 AM
9:24:56 AM
9:25:16 AM
9:25:36 AM
9:25:56 AM
9:26:16 AM
9:26:36 AM
9:26:56 AM
9:27:16 AM
9:27:36 AM
9:27:56 AM
9:28:16 AM
9:28:36 AM
9:28:56 AM
9:29:16 AM
9:29:36 AM
9:29:56 AM
9:30:16 AM
9:30:36 AM
9:30:56 AM
9:31:16 AM
9:31:36 AM
9:31:56 AM
9:32:16 AM
9:32:36 AM
9:32:56 AM
Time

Site Number: 5			
Recorded By: Jessie Beckman			
Job Number: 2020-137.01			
Date: 8/26/2020			
Time: 9:43			
Location: Behind Grocery Outlet			
Source of Peak Noise: Vehicles on surrounding roadways and cars passing in the parking lot			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
53.4	48.4	60.4	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = 0.01		**Sensor Height (ft):** 3.5 ft
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	0-3	81	29.97

Photo of Measurement Location




dB at Site #5 (8/26/2020) = 53.5 dBa
Man passed by meter
with shopping cart
70
60
50
40
30
20
10
0
dBa
9:43:30 AM
9:43:50 AM
9:44:10 AM
9:44:30 AM
9:44:50 AM
9:45:10 AM
9:45:30 AM
9:45:50 AM
9:46:10 AM
9:46:30 AM
9:46:50 AM
9:47:10 AM
9:47:30 AM
9:47:50 AM
9:48:10 AM
9:48:30 AM
9:48:50 AM
9:49:10 AM
9:49:30 AM
9:49:50 AM
9:50:10 AM
9:50:30 AM
9:50:50 AM
9:51:10 AM
9:51:30 AM
9:51:50 AM
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9:54:10 AM
9:54:30 AM
9:54:50 AM
9:55:10 AM
9:55:30 AM
9:55:50 AM
9:56:10 AM
9:56:30 AM
9:56:50 AM
9:57:10 AM
9:57:30 AM
9:57:50 AM
9:58:10 AM
9:58:30 AM
Time

ATTACHMENT B

Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108) Outputs – Project Traffic Noise

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2020-137.01
Project Name: Casa de Oro

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Michael Baker International 2020
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition / Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	CNEL at 100 Feet	Distance from Centerline of Roadway to Contour: 70 CNEL	65 CNEL	60 CNEL	55 CNEL	Traffic Volumes: Calc Dist	Day	Eve	Night
Existing																
Campo Road																
West of the project driveway	2	0	4,113	35	0.5	1.8%	0.7%	**54.8**	-	-	45	97	100	3,196	522	395
Between the project driveway and Kenwood Drive	2	0	2,646	35	0.5	1.8%	0.7%	**52.9**	-	-	34	72	100	2,056	336	254
Kenwood Drive																
South of Campo Road	2	0	5,494	35	0.5	1.8%	0.7%	**56.1**	-	-	55	118	100	4,269	698	527
Conrad Drive																
North of Campo Road	4	0	1,683	35	0.5	1.8%	0.7%	**51.0**	-	-	-	54	100	1,308	214	162

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2020-137.01
Project Name: Casa de Oro

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Michael Baker International
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition / Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	CNEL at 100 Feet	Distance from Centerline of Roadway to Contour: 70 CNEL	65 CNEL	60 CNEL	55 CNEL	Traffic Volumes: Calc Dist	Day	Eve	Night
Existing + Project																
Campo Road																
West of the project driveway	2	0	4,194	35	0.5	1.8%	0.7%	**54.9**	-	-	46	98	100	3,259	533	403
Between the project driveway and Kenwood Drive	2	0	2,956	35	0.5	1.8%	0.7%	**53.4**	-	-	36	78	100	2,297	375	284
Kenwood Drive																
South of Campo Road	2	0	6,075	35	0.5	1.8%	0.7%	**56.5**	-	-	58	126	100	4,720	772	583
Conrad Drive																
North of Campo Road	4	0	1,728	35	0.5	1.8%	0.7%	**51.1**	-	-	-	55	100	1,343	219	166

ATTACHMENT C

Federal Highway Administration Highway Roadway Construction Noise Model – Project Construction Noise

Report date: 9/17/2020
Case Description: Demolition

Description	**Affected Land Use**
Demolition	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Concrete Saw	No	20		89.6	122
Dozer	No	40		81.7	122
Tractor	No	40	84		122
Tractor	No	40	84		122
Tractor	No	40	84		122

	Calculated (dBA)	
Equipment	***Lmax**	**Leq**
Concrete Saw	81.8	74.8
Dozer	73.9	69.9
Tractor	76.3	72.3
Tractor	76.3	72.3
Tractor	76.3	72.3
Total	**81.8**	**79.6**

*Calculated Lmax is the Loudest value.

Report date: 9/17/2020
Case Description: Site Preparation

Description	**Affected Land Use**
Site Preparation	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Water Truck	No	20		92.1	122
Grader	No	40	85		122
Tractor	No	40	84		122
Dozer	No	40		81.7	122

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Water Truck	84.4	77.4
Grader	77.3	73.3
Tractor	76.3	72.3
Dozer	73.9	69.9
Total	**84.4**	**80.1**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/17/2020
Case Description: Grading

Description	**Affected Land Use**
Grading	Residential

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
Water Truck	No	20		92.1	122
Dozer	No	40		81.7	122
Dozer	No	40		81.7	122
Tractor	No	40	84		122
Grader	No	40	85		122
Grader	No	40	85		122
Scraper	No	40		83.6	122
Scraper	No	40		83.6	122
Compactor (ground)	No	20		83.2	122
Roller	No	20		80	122

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Water Truck	84.4	77.4
Dozer	73.9	69.9
Dozer	73.9	69.9
Tractor	76.3	72.3
Grader	77.3	73.3
Grader	77.3	73.3
Scraper	75.8	71.9
Scraper	75.8	71.9
Compactor (ground)	75.5	68.5
Roller	72.3	65.3
Total	**84.4**	**82.4**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/17/2020
Case Description: Paving

Description	**Affected Land Use**
Paving	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Concrete Mixer Truck	**No**	**40**		**78.8**	**122**
Paver	No	50		77.2	122
Roller	No	20		80	122
Tractor	No	40	84		122
Pavement Scarafier	No	20		89.5	122

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Concrete Mixer Truck	71.1	67.1
Paver	69.5	66.5
Roller	72.3	65.3
Tractor	76.3	72.3
Pavement Scarafier	81.8	74.8
Total	**81.8**	**77.8**

*Calculated Lmax is the Loudest value.

Report date: 9/17/2020
Case Description: Building Construction

Description	**Affected Land Use**
Building Construction	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Generator	No	50		80.6	122
Crane	No	16		80.6	122
Gradall	No	40		83.4	122
Tractor	No	40	84		122
Welder / Torch	No	40		74	122
Welder / Torch	No	40		74	122
Welder / Torch	No	40		74	122

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Generator	72.9	69.9
Crane	72.8	64.8
Gradall	75.7	71.7
Tractor	76.3	72.3
Welder / Torch	66.3	62.3
Welder / Torch	66.3	62.3
Welder / Torch	66.3	62.3
Total	**76.3**	**76.9**

*Calculated Lmax is the Loudest value.

Report date: 9/17/2020
Case Description: Architectural Coating

Description	**Affected Land Use**
Architectural Coating	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Compressor (air)	No	40		77.7	122

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Compressor (air)		69.9	65.9
	Total	**69.9**	**65.9**

*Calculated Lmax is the Loudest value.

APPENDIX H
TRANSPORTATION IMPACT STUDY

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TRANSPORTATION IMPACT STUDY

Casa de Oro Library

Prepared for:
County of San Diego
Development of General Services
5560 Overland Avenue, Ste 410
San Diego, CA 92123

October 13, 2020

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1 EXECUTIVE SUMMARY

This transportation impact study analyzes the forecast traffic conditions associated with the Casa de Oro Library (proposed project) located in the Valle de Oro Community Planning Area of San Diego County. The proposed project would result in replacement of the existing County of San Diego (County) Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The proposed project consists of an approximately 13,000 square-foot (SF) library facility with access off Campo Road, 52 parking spaces, landscaping, and fencing. The existing library is currently located at 9805 Campo Road within an existing retail commercial shopping center, just to the southeast of the proposed project site.

CEQA Analysis Summary

In December 2018, new California Environmental Quality Act (CEQA) guidelines were approved that shift traffic analysis from delay and operations to VMT when evaluating Transportation Impacts under CEQA. This change in methodology is a result of Senate Bill 743 (SB743), which was signed into law in September 2013. The County of San Diego developed their own *Transportation Study Guidelines* (TSG) which were adopted by the Board of Supervisors on June 24, 2020 to include VMT analysis procedures and thresholds for significance. The County's TSG includes screening criteria for all land development projects. The proposed Casa de Oro Library is a locally serving public facility and therefore meets the VMT screening criteria outline in the County's TSG. Therefore, a detailed VMT analysis is not required and the Casa de Oro Library is presumed to have a less than significant VMT impact on the environment.

Level of Service Summary

The results of the analysis show that all three study intersections currently operate at acceptable levels of service (LOS D or better). Under Opening Year 2022 Plus Project conditions, study intersections continue to operate at acceptable levels of service. Therefore, no physical improvements to the study intersections are recommended. Although LOS is not required under CEQA, the LOS Summary in this report is consistent with General Plan Policy M-2.1 that requires projects provide associated road improvements necessary to achieve a LOS "D" or better on all Mobility Element roads except for those where a failing LOS (E or F) has been accepted by the County.

Signal Warrant Summary

The 2014 *California Manual on Uniform Traffic Control Devices* (*CA MUTCD*) contains minimum guidelines regarding traffic volumes, collisions, speeds, visibility and other criteria in order to satisfy the requirements for the recommendation of a traffic signal, multi-way stop, or other traffic control device installation. A Peak Hour Warrant (CA MUTCD Warrant #3) was evaluated at the project driveway on Campo Road under Opening Year 2022 Plus Project conditions. The Peak Hour Signal Warrant analysis shows a traffic signal is not warranted at the project driveway on Campo Road under Opening Year 2022 Plus Project conditions.

Recommended Improvements

The project access should be free and clear of any obstructions to provide adequate sight distance ensuring that exiting vehicles from the new driveway can adequately see pedestrians and bicyclists. Any landscaping and signage at the project driveway should not obstruct the drivers view from exiting the project site.

2 INTRODUCTION

This study analyzes the forecast traffic conditions associated with the Casa de Oro Library (proposed project) located in the Valle de Oro Community Planning Area of San Diego County.

2.1 PROJECT DESCRIPTION

The Casa de Oro Branch Library Project (proposed project) would result in replacement of the existing County of San Diego (County) Casa de Oro branch library facility in the community of Spring Valley with a new branch library facility at a different location. The proposed project consists of an approximately 13,000 square-foot (SF) library facility that aims to achieve "zero net energy," with access off Campo Road, 52 parking spaces, landscaping, and fencing. The existing library is currently located at 9805 Campo Road within an existing retail commercial shopping center, just to the southeast of the proposed project site. The proposed project is intended to enhance the County's regional library system and provide expanded services to its patrons within the Spring Valley community and surrounding areas.

An existing modular building located on the La Mesa Spring Valley School District property would be removed to accommodate the parking lot for the library. Additionally, an existing restaurant fronting onto Campo Road would be demolished to allow for site access. The existing asphaltic surface in the southern portion of the site would also be broken up and removed. Removal of a portion of the existing sports fields abutting the site to the north would also occur with project grading. Project implementation would require acquisition of Real Property from an adjoining private party to the south. The County would lease the affected property from the La Mesa Spring Valley School District; no lands would be purchased from the school.

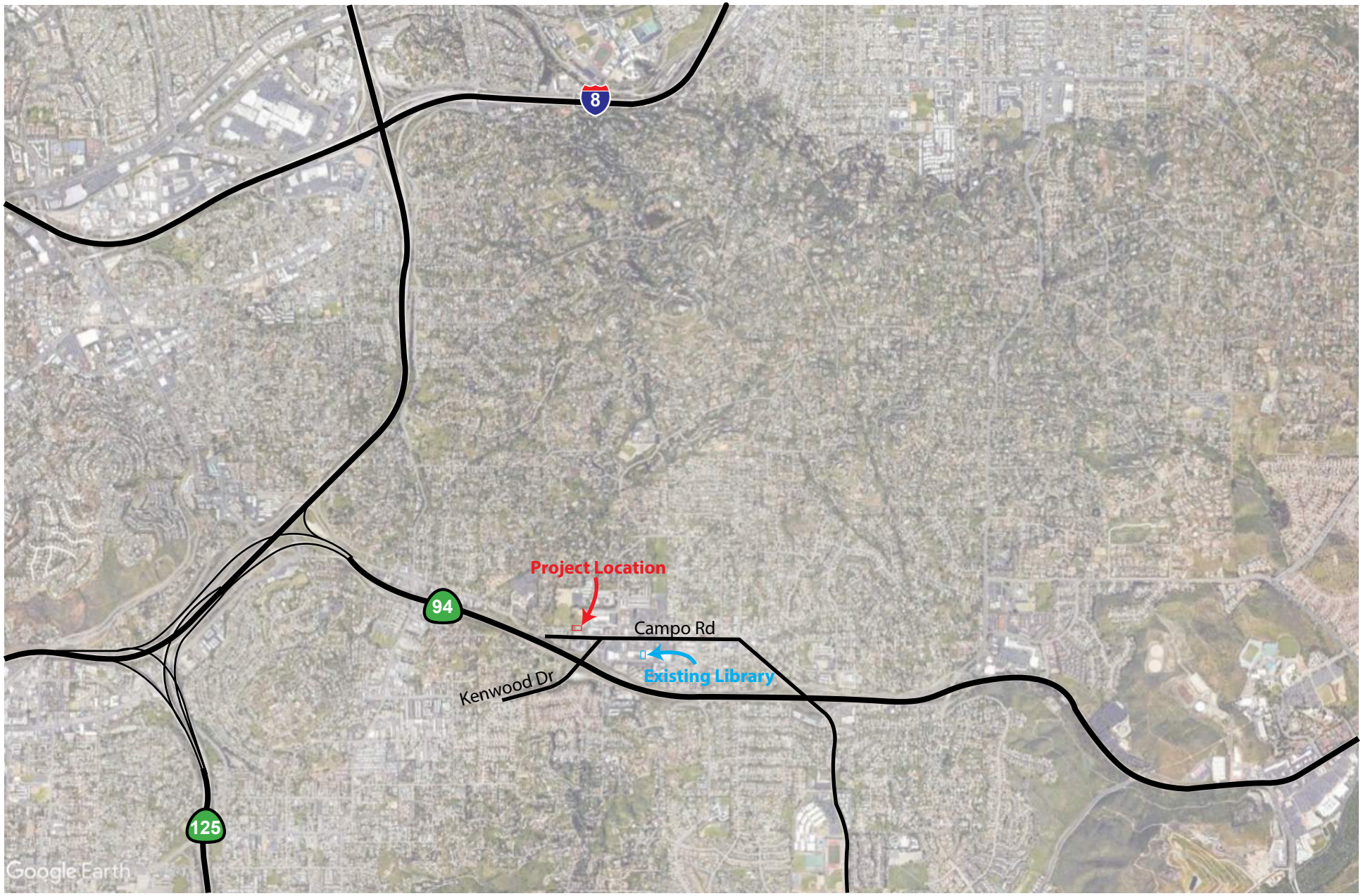
The majority of the new library trips will be trips that are currently travelling to and from the existing library. These trips will be rerouted to the new library site. However, redistribution of these existing trips at the two study intersections would be challenging. Depending on the origins of the existing library trips, some will add traffic to the study area intersections and some origins will subtract trips at the study intersections. For simplicity, the traffic analysis conservatively assumes the library will generate new trips that are added to the study intersections. In addition, the new library may encourage new visitors and therefore the analysis includes all new trips generated by the new library.

2.2 PROJECT LOCATION

The proposed project site is located in the community of Spring Valley in southeastern unincorporated San Diego County, California. The site is within the Valle de Oro Community Plan Area. The affected County Assessor Parcel Numbers (APNs) include APN 500-170-40 and portions of APNs 500-170-10 and -11.

Exhibit 1 shows the location of the new library and the existing library. It may be noted the existing library will be replaced by the new library and most library traffic exists today on nearby streets in the same general study area. **Exhibit 2** provides a site plan of the new library. However, it may be noted the project design has not yet been initiated. This drawing represents the location of the library and anticipated layout of the parking and new driveway.

Direct vehicular access to the project site would be from Campo Drive. It is anticipated that a minimum 24-foot wide access drive would be constructed from the street up to the surface parking area proposed with the project. Construction of this access drive would require a new curb cut within the right-of-way on Campo Road and installation of a commercial driveway.



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Project Location

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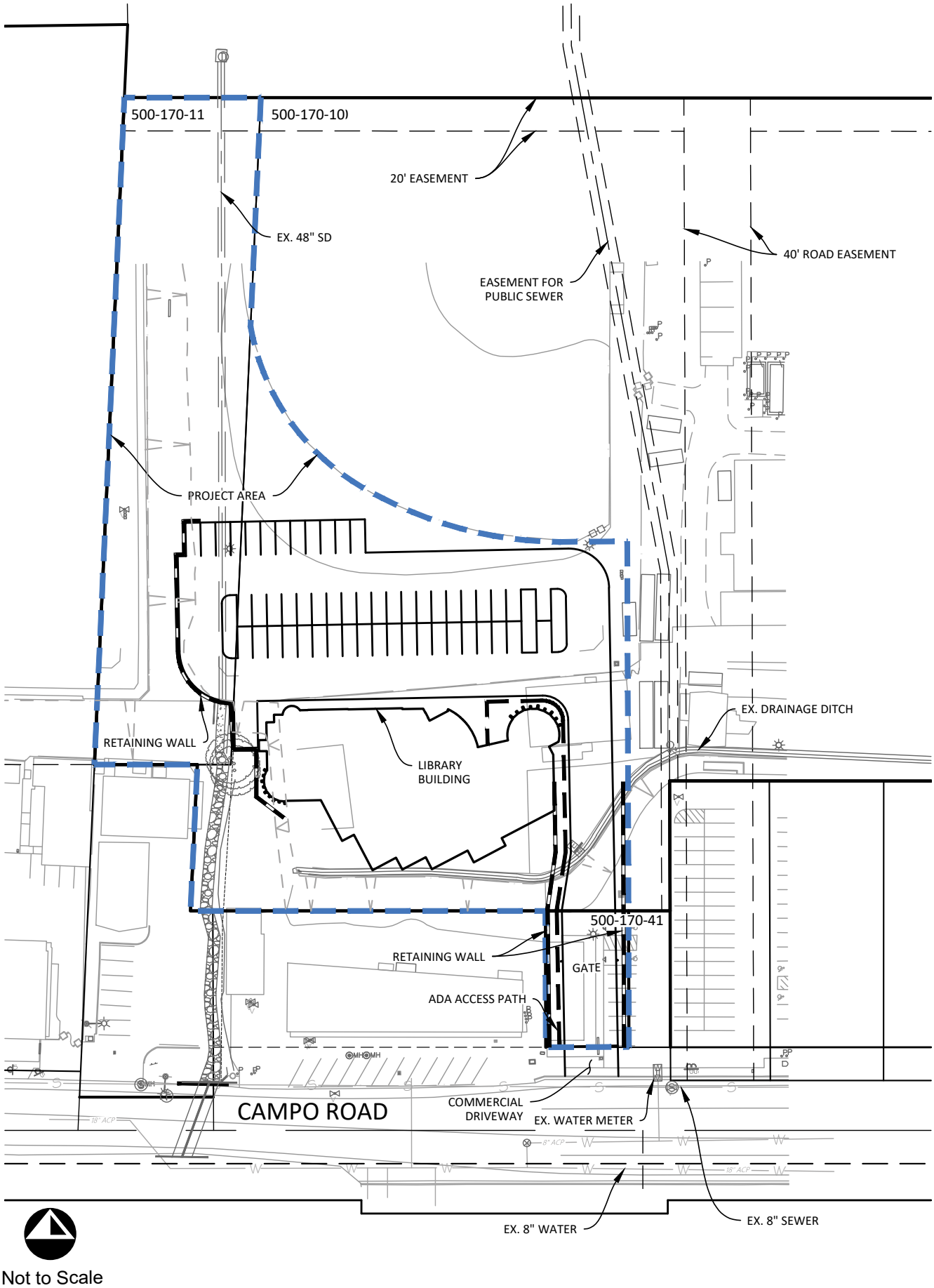
Exhibit 1



Not to Scale

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Site Plan

Exhibit 2

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2.3 CEQA VMT ANALYSIS SCOPE

The CEQA transportation analysis scope is based on the County's *Transportation Study Guidelines (TSG)* which were adopted by the County's Board of Supervisors on June 24th, 2020. According to the County's TSG, a project that meets at least one of the screening criteria would not be required to prepare a detailed VMT analysis and would have a less than significant VMT impact. The proposed project is a library which is considered a public facility serving the surrounding community and thus meets the screening criteria for a CEQA VMT analysis. Therefore, the Casa de Oro Library would **not** be required to prepare a detailed CEQA VMT analysis and would also have a less than significant VMT impact on the environment.

2.4 LOCAL MOBILITY ANALSYIS SCOPE

A Local Mobility Analysis (LMA) has been prepared in accordance with the County's TSG. While not part of the CEQA review, the LMA is required to address localized operational and safety concerns for all transportation modes. The proposed project is consistent with the General Plan and is expected to generate approximately 527 daily trips. According to the County's TSG, projects that generate more than 500 daily trips are required to prepare a full LMA. In accordance with the County's TSG, the study area includes the project access off Campo Road and two signalized intersections east of the project site including Campo Road/Kenwood Drive and Campo Road/Conrad Drive. The study locations will be analyzed under Existing, Opening Year 2022 No Project, and Opening Year 2022 Plus Project conditions.

3 CEQA VMT ANALYSIS

In December 2018 new California Environmental Quality Act (CEQA) guidelines were approved that shift traffic analysis from delay and operations to VMT when evaluating Transportation Impacts under CEQA. This change in methodology is a result of Senate Bill 743 (SB743), which was signed into law in September 2013. SB743 "creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must 'promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.'[1] "[2]

Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." [3] According to SB743, projects should aim to reduce VMT and mitigate potential VMT impacts through the implementation of TDM strategies. As of July 1, 2020, agencies must fully implement the new CEQA guidelines for Transportation.

As part of the development of the new CEQA guidelines, OPR prepared a ***Technical Advisory on Evaluating Transportation Impacts in CEQA*** (Technical Advisory)***.*** The final version of the Technical Advisory is dated December 2018 and provides guidance for local jurisdictions in developing methodologies and thresholds for evaluating VMT. The County of San Diego developed their own *Transportation Study Guidelines* adopted by the Board of Supervisors on June 24, 2020 which generally follows the VMT analysis methodology recommended in OPR's Technical Advisory.

VMT Screening Criteria

The County's TSG includes screening criteria for all land development projects. A project that meets at least one of the screening criteria listed in Section 3.3.1 (Screening Criteria for CEQA VMT Analysis) of the County's TSG would have a less than significant VMT impact due to project characteristics and/or location. Each of the screening criteria have been reviewed to determine if the Casa De Oro Library meets the screening criteria, see **Table 1**.

TABLE 1: VMT SCREENING CRITERIA EVALUATION

ID	VMT Screening Criteria	Description	Criteria Met? (Yes / No)
1	Projects Located in a VMT Efficient Area	Projects that are located within a VMT efficient area (morethan 15% below the Unincorporated Average VMT) according to the County's screening maps.	No
2	Small Residential and Employment Projects	Projects generated less than 110 daily vehicle trips based on ITE trip generation rates.	No
3	Projects Located in a Transit Accessible Area	Projects located within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor.	No

[1] Public Resources Code Section 21099(b)(1)
[2] Office of Planning and Research, http://www.opr.ca.gov/ceqa/updates/sb-743/
[3] Public Resources Code Section 21099(b)(1)

ID	VMT Screening Criteria	Description	Criteria Met? (Yes / No)
4	Locally Serving Retail/Service Projects	Local serving retail/service projects less than 50,000 square feet.	No
5	Locally Serving Public Facilities and Other Uses	Public facilities that serve the surrounding community such as transit centers, schools, libraries, post offices, park-and-ride lots, local health/medical clinics, law enforcement and fire facilities, and local parks and trailheads.	Yes
6	Redevelopment Projects with Greater VMT Efficiency	Total project VMT is less than existing land use's total VMT. In addition, the existing restaurant is being demolished which will further reduce VMT generated by the site.	No
7	Affordable Housing	100% of residential units are affordable.	No

As shown in Table 1, the Casa de Oro Library meets one of the seven VMT screening criteria. The Casa de Oro Library is considered a locally serving public facility and therefore meets the VMT screening criteria. Since at least one of the VMT screening criteria is satisfied, a detailed VMT analysis is not required and the Casa de Oro Library is presumed to have a less than significant VMT impact on transportation.

4 LOCAL MOBILITY ANALYSIS

4.1 LMA ANALYSIS METHODOLOGY

4.1.1 Intersection Analysis Methodology

Level of Service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the travel lanes approaching the intersection, the volume of traffic using the intersection, and the average vehicle delay. The intersection analysis conforms to the operational analysis methodology outlined the *Highway Capacity Manual (HCM 6th Edition)* and performed utilizing *Synchro 10* traffic analysis software.

The *HCM* analysis methodology describes the operation of an intersection using a range of level of service from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle for study intersections as shown in **Table 2**.

For signalized intersections, signal timing data and parameters such as cycle lengths, splits, clearance intervals, etc. were obtained from the current signal timing data sheets provided by City staff and incorporated into the Synchro model. Synchro reports average vehicle delay for a signalized intersection, which correspond to a particular LOS, to describe the overall operation of an intersection.

Unsignalized intersection LOS for all-way stops and roundabouts is based on the average vehicle delay for all approaches. Average vehicle delay for one-way or two-way stop-controlled intersections is influenced by available gaps in traffic flow on the non-controlled approaches and LOS is based on the approach with the worst delay. The County of San Diego has adopted level of service "D" or better as acceptable operating conditions for intersections.

TABLE 2 - LEVEL OF SERVICE & DELAY RANGE

Level of Service	Control Delay (seconds/vehicle)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤ 10.0	≤ 10.0	Operates with very low delay and most vehicles do not stop.
B	> 10.0 to 20.0	> 10.0 to 15.0	Operates with good progression with some restricted movements.
C	> 20.0 to 35.0	>15.1 to 25.0	Operates with significant number of vehicles stopping with some backup and light congestion.
D	> 35.0 to 55.0	> 25.0 to 35.0	Operates with noticeable congestion, longer delays occur, and many vehicles stop.
E	> 55.0 to 80.0	> 35.1 to 50.0	Operates with significant delay, extensive queuing and unfavorable progression.
F	> 80.0	> 50.0	Operates at a level that is unacceptable to most drivers. Arrival rates exceed capacity of the intersection. Extensive queuing occurs.

Source: Highway Capacity Manual (HCM) 6th Edition.

4.2 THRESHOLDS OF IMPROVEMENTS

As stated previously, the County of San Diego has adopted level of service "D" or better as acceptable operating conditions for intersections and roadway segments, with the exception of the segment of Campo Road between Kenwood Drive and Conrad Drive which is acceptable at LOS "F".

According to the County's TSG, an improvement is required at an intersection if:

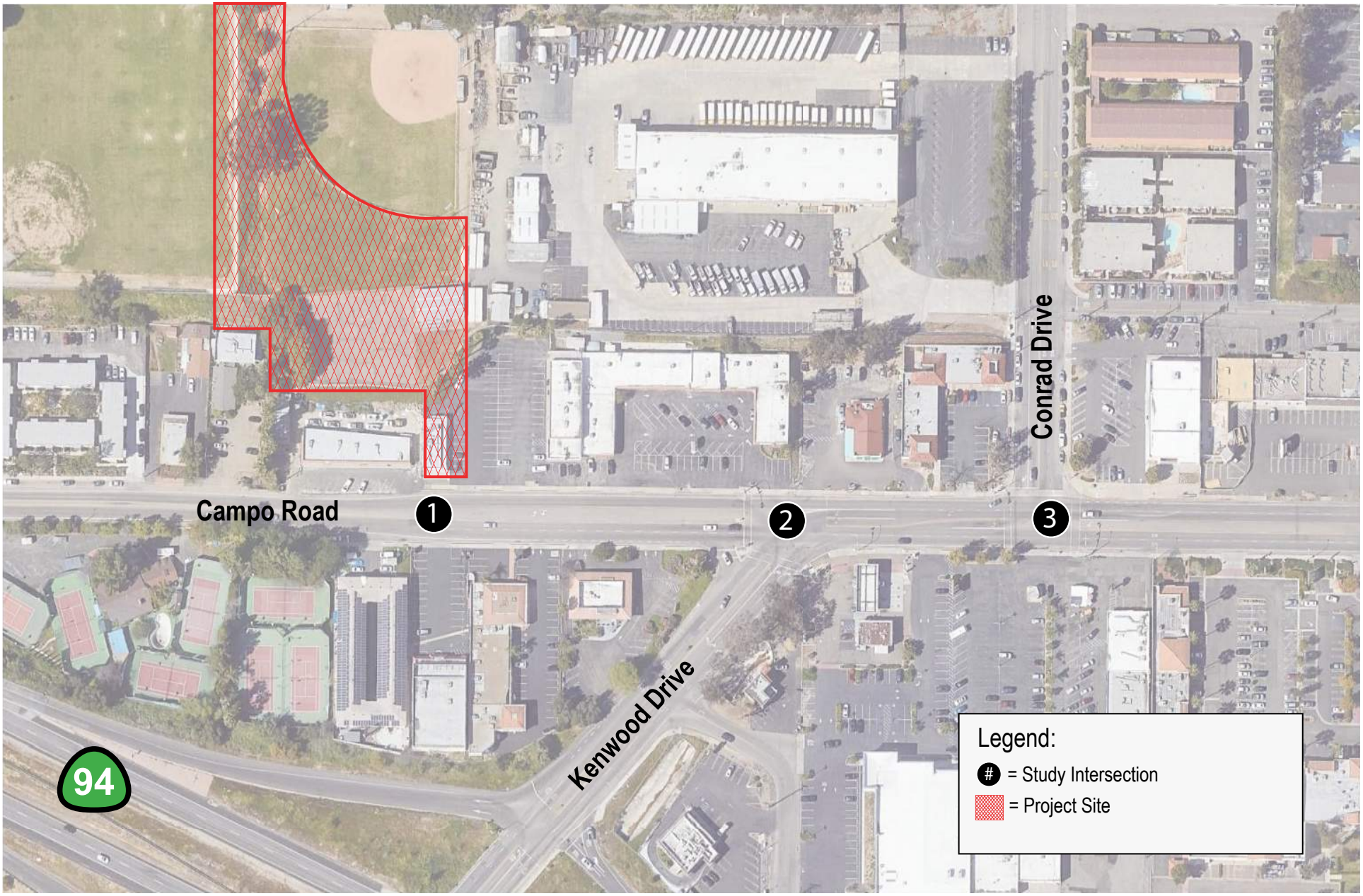
- The addition of project related traffic causes the intersection to degrade to and LOS E or F, improvements are required to improve operations to LOS D or better.
- At any signalized intersection that is operating at LOS E or F without the project, where the addition of project related traffic increases delay by 5 seconds or more, improvements are required to offset the increase in delay.
- At any side-street stop controlled intersection that is operating at LOS E or F without the project, where the addition of project related traffic increases the *overall* intersection delay 5 or more seconds AND the project adds ten (10) or more trips to the worst-case movement or 50 trips to the overall intersection, improvements are required to offset the increase in delay.
- At any all-way stop controlled intersection or roundabout, that is operating at LOS E or F without the project, where the addition of project related traffic increases delay by 5 seconds or more, improvements are required to offset the increase in delay.

4.3 STUDY AREA

The study evaluates the following three (3) intersections during the AM and PM peak hours within the study area:

1. Campo Road / Project Access Road (One-Way Stop)
2. Campo Road / Kenwood Drive (Traffic Signal)
3. Campo Road / Conrad Drive (Traffic Signal)

Exhibit 3 shows the study locations.



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Study Area

Exhibit 3

4.4 EXISTING TRAFFIC CONDITIONS

4.5 SURROUNDING ROADWAY NETWORK

The characteristics of the roadway system in the vicinity of the project site are described below:

Campo Road is oriented in the east-west direction and is classified as a 4-lane Boulevard with Intermittent Turn Lanes (4.2B) per the Valle de Oro Mobility Element. A two-way-left-turn-lane is provided approximately 400 feet west of Kenwood Drive to approximately 230 feet east of Granada Avenue / Casa de Oro Boulevard with left-turn turn lanes at signalized intersections. Within the study area, the posted speed limit is 35 MPH between Kenwood Drive and Granada Avenue / Casa de Oro Boulevard; 40 MPH between Granada Avenue / Casa de Oro Boulevard and Agua Dulce Boulevard and 45 MPH south-east of the SR-94. On-street parallel parking is prohibited in both directions within the study area. Class II bike lanes and sidewalks are provided on both sides of the roadway.

Kenwood Drive is oriented in the northeast-southwest direction and is classified as a 4-lane Major Road with Intermittent Turn Lanes (4.1B) between the SR-94 and Campo Road per the Valle de Oro Mobility Element. On-street parallel parking is prohibited in both directions within the study area. Class II bike lanes are provided on both sides of the roadway. Sidewalks are provided on the east side between the SR-94 eastbound ramps and Kenora Drive only.

Conrad Drive is oriented in the north-south direction and is classified as a 2-lane Light Collector (2.2E) per the Valle de Oro Mobility Element. There are two lanes in the northbound direction immediately north of Campo Road, which taper to a single lane north of San Juan Street (approximately 550') Within the study area, the posted speed limit is 35 MPH. On-street parallel parking is allowed intermittently in both directions between Campo Road and Spring Valley Middle School. There are no bike lanes provided within the study area. Sidewalks are provided on both sides of the roadway between Campo Road and Spring Valley Middle School. There are no sidewalks north of the school.

Exhibit 4 shows the Valle de Oro Community Plan Mobility Element Network. **Appendix A** shows the associated Mobility Element Network Map and Matrix.

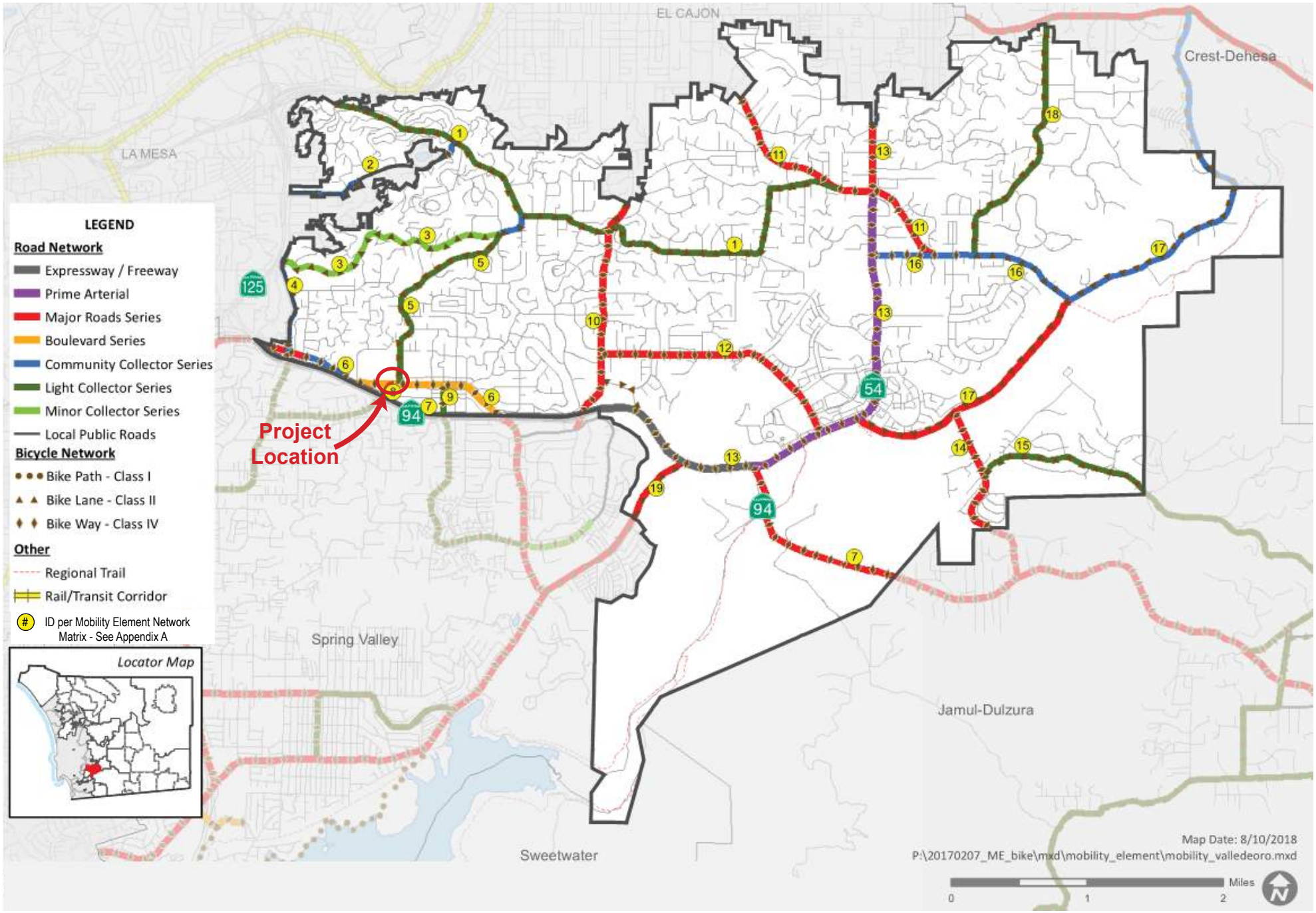
4.6 FIELD WORK AND DATA COLLECTION

A detailed field review was conducted on Tuesday, November 12, 2019 to establish current traffic conditions and included an examination of factors such as lane widths and intersection geometries; intersection traffic control and signal phasing at signalized locations; crosswalk inventory and ADA compliance; posted speed limits; bike and sidewalk facilities and transit facilities

To determine the existing operations of the study intersections, peak hour intersection turn movement counts were collected by National Data Services (NDS).

Morning (AM) peak period counts were generally collected between 7:00 AM to 9:00 AM and evening (PM) peak period counts were generally collected from 4:00 PM to 6:00 PM. The counts used in this analysis represent the highest hour within the peak periods counted for each intersection.

Detailed traffic count data is provided in **Appendix B**.



Valle de Oro Mobility Element Network

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Exhibit 4

4.7 EXISTING PEDESTRIAN FACILITIES

Existing peak hour pedestrian activity was recorded on Tuesday, November 12, 2019. Based on the existing counts, pedestrian activity on Campo Road during the AM peak hour peaks at the Conrad Drive westside crosswalk with 84 pedestrians crossing Campo Road. During the PM Peak hour, pedestrian activity peaks at the Kenwood Drive/ SR-94 Eastbound Ramp intersection where 20 pedestrians cross the on-ramp.

Exhibit 5 illustrate the existing activity as well as the current pedestrian facilities within the study area. The types of facilities shown include the following:

- Sidewalks
- Ped Ramps
- Marked Crosswalks
- Pedestrian Push Buttons (at signalized intersections)
- Pedestrian Signal Heads (at signalized intersections)

Within the study area, there are approximately 18 driveways on the north and south sides of Campo Road between the project driveway and Conrad Drive. The high frequency of driveways along the corridor creates numerous conflict points between motorists, pedestrians, and bicyclists and the excessive curb cuts prevent landscaping, lighting, and parking. All driveways are paved concrete and appear to meet County standards.

In addition to the conflict points caused by the driveways, the existing retaining walls within the shopping centers prevent pedestrian and vehicular connectivity between adjacent properties. These barriers impede access, complicate circulation, and generate additional traffic from the increased turn movements to and from Campo Road.

4.7.1 Sidewalks

Campo Road – Sidewalks are provided on both sides of Campo Road between Kenwood Drive and Casa de Oro Boulevard. On the westerly side of the study area, sidewalks terminate approximately 400' feet west of Kenwood Drive on the north side of Campo Road and approximately 525' west of Kenwood Drive on the south side of Campo Road. To the east, there is a gap in the sidewalk for approximately 0.2 miles between Casa de Oro Boulevard and Agua Dulce Boulevard on the northeast side of Campo Road. On the southwest side of Campo Road, there is a gap in the sidewalk between the SR-94 ramps across the bridge.

Sidewalks are generally 6 feet wide along Campo Road, however they are reduced to as little as 3 feet where transit stops have benches

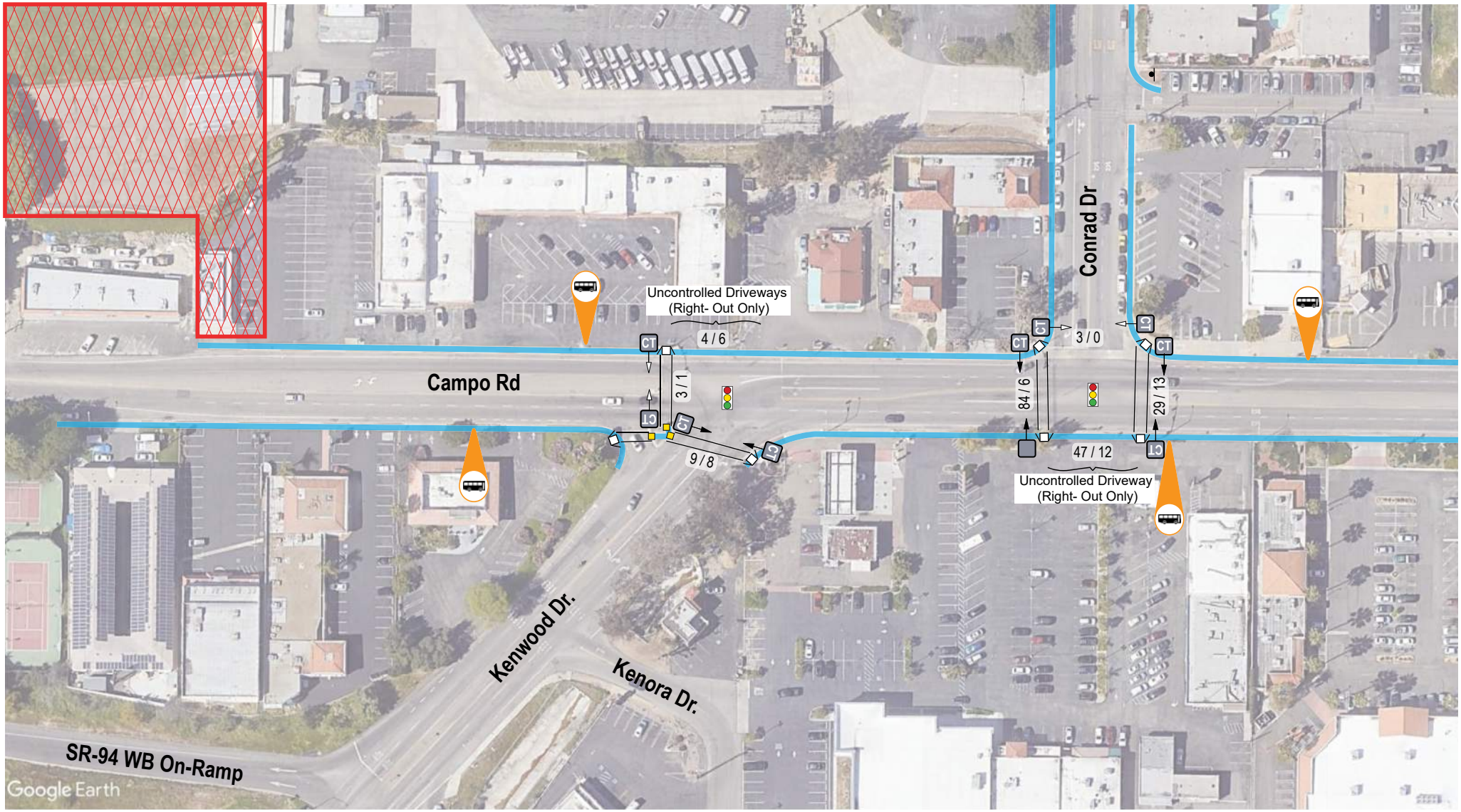
Kenwood Drive – Within the study area, sidewalks are provided on the southeast side of Kenwood Drive. There are no sidewalks on the northwest side of Kenwood Drive.

Conrad Drive – Within the study area, sidewalks are provided on both sides of the street between Campo Road and the north boundary of Spring Valley Middle School. There are no sidewalks on Conrad Drive north of the school.

4.7.2 Crosswalks

Standard marked crosswalks are provided at all signalized intersections. At the intersections of Campo Road at Conrad Drive, marked crosswalks are only provided across Campo Road and do not exist across the minor street. Many of the crosswalk pavement markings are beginning to fade and need to be restriped.

Near Spring Valley Middle School, there are two mid-block, controlled crossings with flashing beacon warnings on Conrad Drive at the north and south limits of the school. These locations are striped as continental crosswalks with pedestrian push buttons that control the overhead flashing beacons as well as ADA compliant ramps with truncated domes.



Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop
- = Project Site
- = Existing Class II Bike Lanes
- #/# = AM / PM Peak Hour Bike Volumes

Not to Scale

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Existing Pedestrian Facilities & AM/PM Peak Hour Volumes

Exhibit 5

September 2020
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4.7.3 ADA Facilities

The majority of the signalized intersections within the study area have controlled crossings as discussed above; however, these crossings are only partially ADA compliant. It should be noted that none of these crossings have audible cues or any other non-visual indicators.

Table 3 lists the following factors that have been considered in evaluating whether a crossing is considered ADA compliant:

TABLE 3 - ADA FACTORS

ADA Facility	Evaluation Factor
Pedestrian Ramp	Presence of Truncated Domes
Pedestrian Push Button	2" Diameter
Pedestrian Signal Head	Presence of Countdown Timer

Along Campo Road, the following study intersections have truncated domes:

- Campo Road / Kenwood Drive – Pedestrian Refuge (southwest corner) only
- Campo Road / Conrad Drive - None

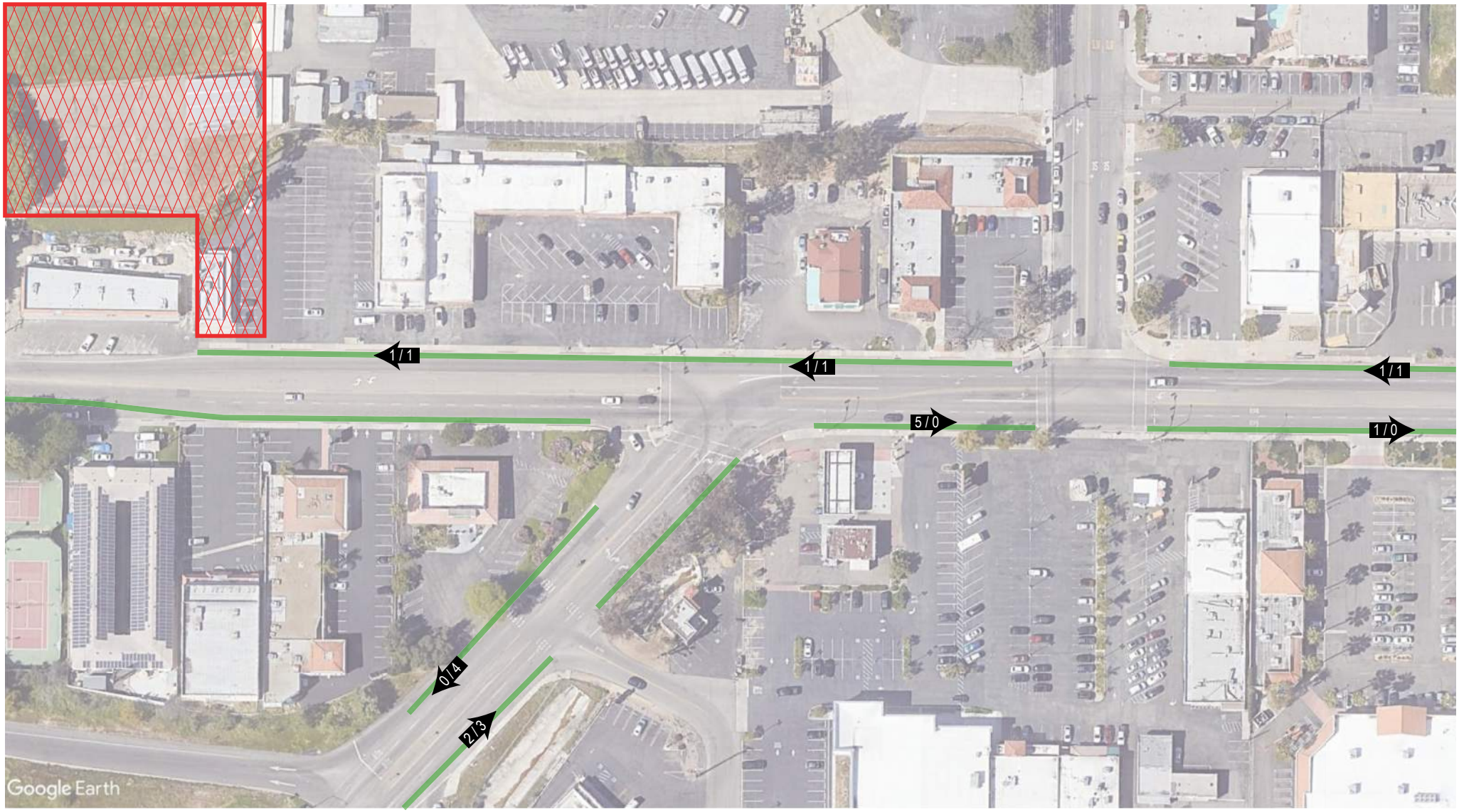
The presence of ADA compliant pedestrian push buttons that are considered "accessible" (2 inches in diameter) are intermittent within the study area. Of the 36 pedestrian push buttons on Campo Road between Kenwood Drive and Granada Avenue / Casa de Oro Boulevard, only 13 buttons are "accessible".

4.8 EXISTING BICYCLE FACILITIES

Existing peak hour bicycle activity was recorded on Tuesday, November 12, 2019. Based on existing counts during the AM peak hour, bicycle activity peaks near the southern extents of study area on Kenwood Drive (5 bicycles northbound). In the PM Peak hour, bicycle activity peaks near Kenora Drive (4 bicycles on westbound Kenora).

Within the study area, Class II bike lanes are provided on Kenwood Drive and on Campo Road on both sides of the street. These bike lanes are consistently 5 feet in width with the exception of a portion of Kenwood Drive between Kenora Drive and Campo Road where the bike lane is reduced to 4 feet on the east side. There are no buffers separating bicyclists from vehicles on Kenwood Drive or Campo Road.

Exhibit 6 shows the existing bicycle facilities as well as the peak hour bicyclist volumes.



Legend

- = Existing Sidewalk
- = Ped. Ramp
- = Ped. Ramp with Truncated Domes
- = Marked Crosswalk
- = Signal Controlled Intersection
- = Stop Controlled Intersection
- = Ped.Push Button (non-ADA)
- = Ped. Push Button (ADA)
- = Ped. Signal Head
- CT = Ped. Signal Head with Countdown
- #/# = AM / PM Peak Hour Ped. Volumes
- = Bus Stop
- = Project Site
- = Existing Class II Bike Lanes
- #/# = AM / PM Peak Hour Bike Volumes

Not to Scale

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Existing Bicycle Facilities & AM/PM Peak Hour Volumes

Exhibit 6

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4.9 EXISTING TRANSIT FACILITIES

The Metropolitan Transit System (MTS) operates the local bus service within the Valle de Oro Community. MTS Route 855 travels along Campo Road as shown in **Exhibit 7** connecting La Mesa, Casa de Oro, Spring Valley, and Rancho San Diego. Destinations on Route 855 include Campo Road, Casa de Oro Plaza, Monte Vista High School, and Sweetwater Springs Boulevard. The bus route travels between the Spring Street Trolley Station (with connections to Route 851 and the Orange Line Trolley), and Rancho San Diego (with connections to Route 856 at Jamacha Boulevard and Lamplighter Village Drive).

Full service is provided Monday through Friday with reduced service on weekends and holidays. According to the MTS website, the average headways on a weekday is approximately 30 minutes between 6:04 AM and 10:51 PM in the eastbound direction. In the westbound direction, the bus operates between 5:02 AM and 9:19 PM with approximately 30-minute headways.

Within the study area, there are 4 bus stops along Campo Road (2 eastbound & 2 westbound). None of the bus stop locations have shelters or maps/wayfinding information. The following amenities are provided:

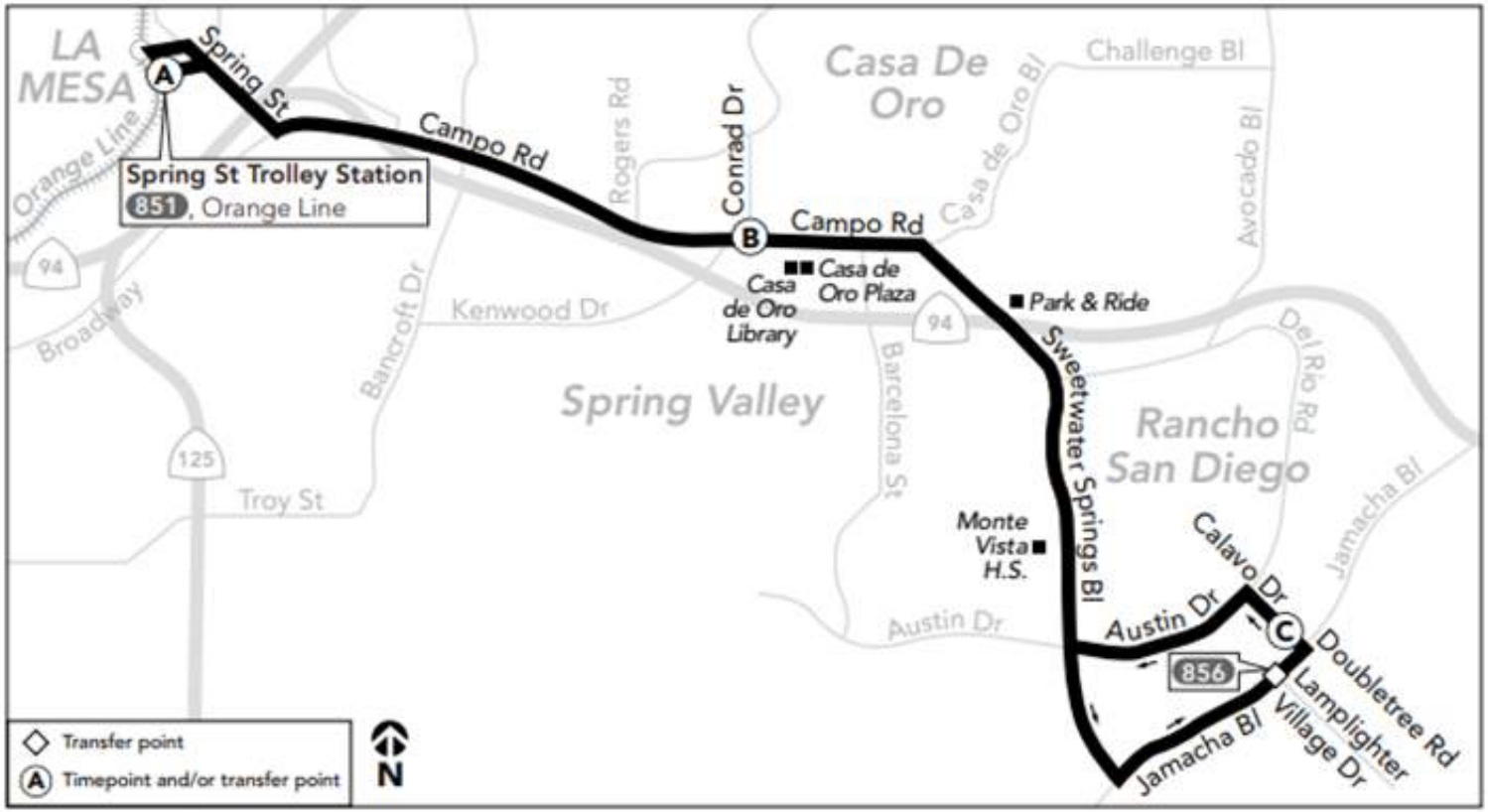
- Trash Receptacle (2 of 4 locations)
- Bench Seating (2 of 4 locations)
- Lighting (1 of 4 locations)

None of the bus stop locations have dedicated lighting, however 1 of the 4 locations have adjacent streetlights or traffic signal poles with a luminaire mast arm.

The available amenities at each bus stop are summarized in **Table 4** and **Exhibit 7**.

TABLE 4 - EXISTING BUS STOP AMENITIES ALONG CAMPO ROAD

ID	Bus Stop	Direction	Available Transit Amenities			
			Sign	Trash Receptacle	Bench	Lighting
1	Kenwood Drive	EB	✓	✓		
2	Kenwood Drive	WB	✓	✓		
3	Conrad Drive	EB	✓		✓	✓
4	Conrad Drive	WB	✓		✓	



MTS Route 855 - Spring St. Trolley to Rancho San Diego

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Exhibit 7

4.9.1 Intersection Evaluation

Exhibit 8 shows the Existing study intersection lane geometry. **Exhibit 9** shows the AM and PM peak hour traffic volumes at the study intersections.

Table 5 summarizes existing conditions AM/PM peak hour level of service for all study intersections. Detailed analysis sheets are contained in **Appendix C**.

TABLE 5 - EXISTING AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Existing Conditions	
		AM	PM
		Delay[1] - LOS	Delay[1] - LOS
1 - Campo Road / Project Access Driveway	OWSC	Does Not Exist	
2 - Campo Road / Kenwood Drive	Signal	25.8 - C	26.1 - C
3 - Campo Road / Conrad Drive	Signal	23.6 - C	17.7 - B

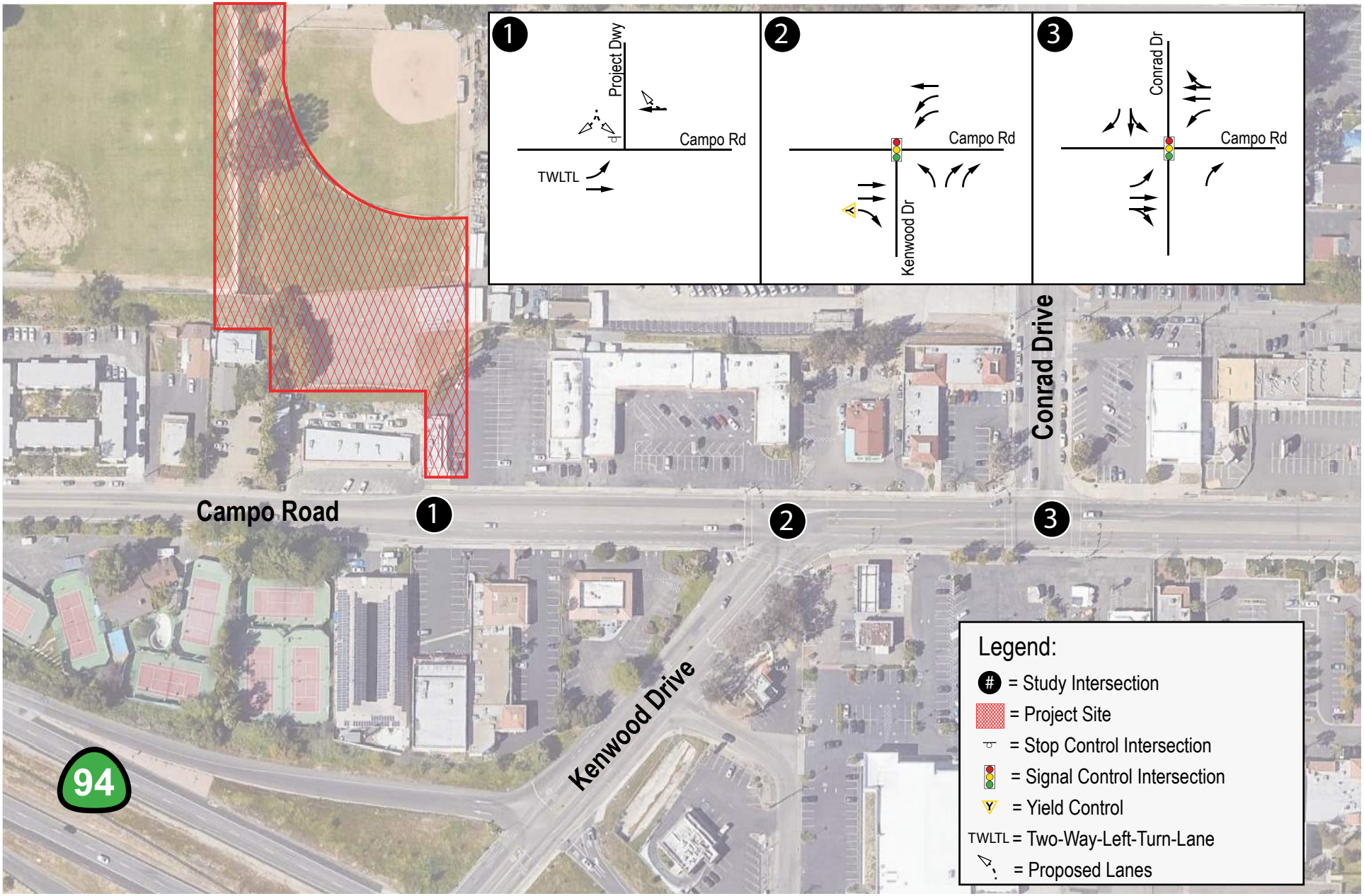
Note: Deficient intersection operation indicated in **bold**.
[1] Average seconds of delay per vehicle.
LOS = level of service.
AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
OWSC = One-Way Stop Control

As shown in **Table 5**, all of the study intersections are currently operating at an acceptable level of service (LOS D or better) for Existing conditions.

While not reflected in the level of service analysis, there are other abnormal intersection features that effect the operations of several intersections as described below.

At the intersection of Campo Road and Kenwood Drive, there are two uncontrolled driveways in the middle of the intersection on the north side. There are no signal heads, crosswalks, or pedestrian signal heads for these driveways, and they are signed as "right-turn only" for exiting vehicles. There are also no turn movements designated into the driveways from the eastbound or northbound directions (i.e. no pavement markings or signal heads). The westbound approach can turn right into these driveways from the through-lane. The existing peak hour counts showed a total 3 vehicles in the AM peak hour and 1 vehicle in the PM peak hour entering the driveways. There were no vehicles exiting the driveways during either peak hour. While these unusual driveway related access features and traffic movements exist, the intersection analysis shows this location operating at acceptable levels of service during the AM and PM peak hours.

Similarly, the intersection of Campo Road at Conrad Drive has an uncontrolled driveway on the south side of the intersection with no signal heads, crosswalks, or pedestrian signal heads. While the driveway is signed as a "right-turn only" for exiting vehicles, existing peak hour counts show 2 vehicles making illegal turn movements (1 through, and 1 left-turn) out of the driveway. There were 562 vehicles in the AM peak hour and 612 vehicles in the PM peak hour turn right out of the driveway. There was a total of 20 vehicles in the AM peak hour and 42 vehicles in the PM peak hour entering the driveway. There are designated turn movements from all approaches to enter the driveway. While these unusual driveway related access features and traffic movements exist, the intersection analysis shows this location operating at acceptable levels of service during the AM and PM peak hours.



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Existing Intersection Lane Geometry

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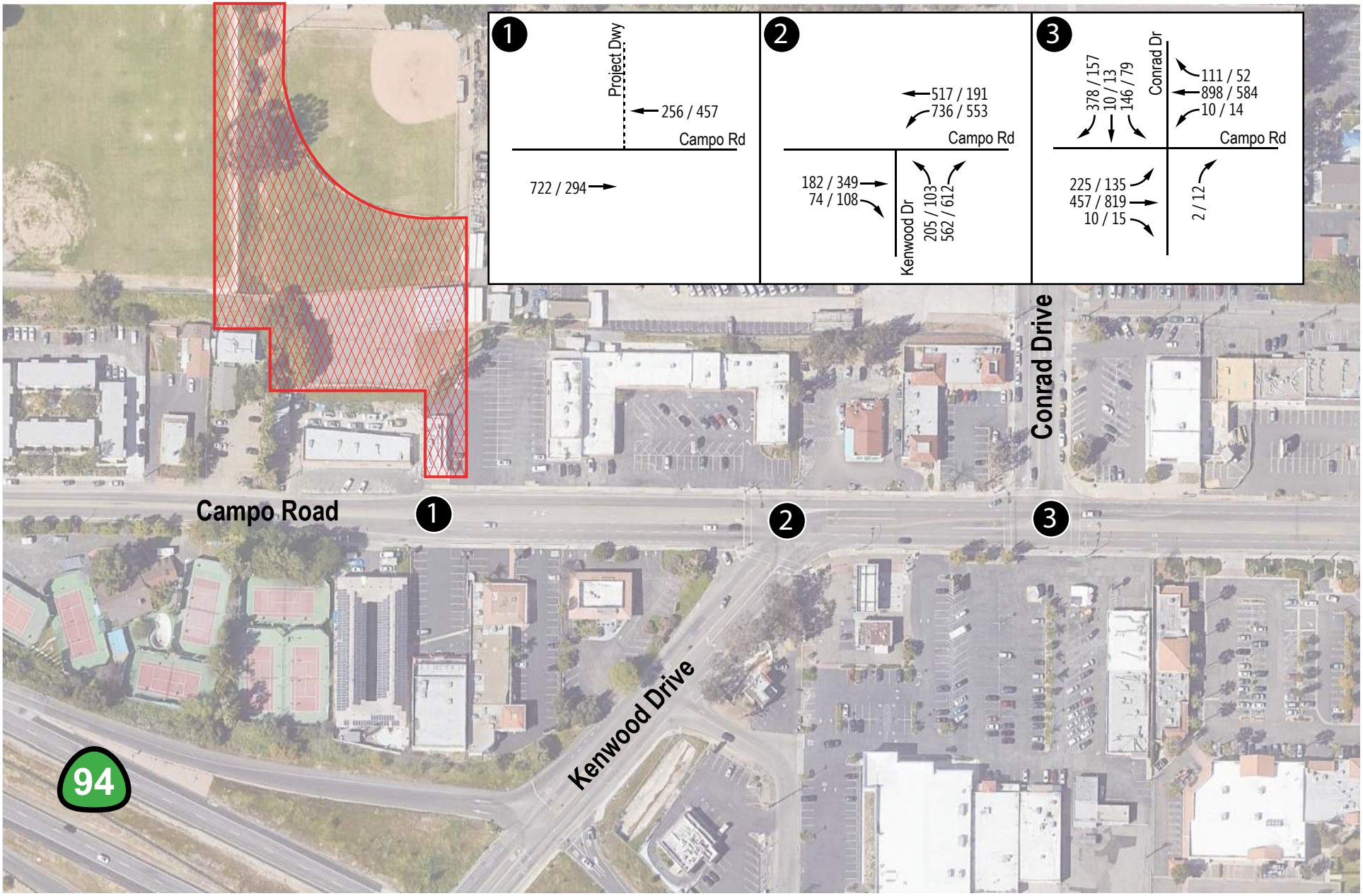
Exhibit 8



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Existing AM/PM Peak Hour Intersection Volumes

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Exhibit 9

4.10 PROPOSED PROJECT

The proposed project consists of approximately 13,000 square-foot library. The majority of the new library trips will be trips that are currently travelling to and from the existing library. These trips will be rerouted to the new library site. However, redistribution of these existing trips at the two study intersections would be challenging. Depending on the origins of the existing library trips, some will add traffic to the study area intersections and some origins will subtract trips at the study intersections. For simplicity, the traffic analysis conservatively assumes the library will generate new trips that are added to the study intersections. In addition, the new library may encourage new visitors and therefore the analysis includes all new trips generated by the new library.

4.10.1 Project Forecast Trip Generation

In order to calculate the vehicle trips forecast to be generated by the proposed project, the *Institute of Transportation Engineers (ITE) 10th Edition Trip Generation Manual* rates were utilized as summarized in **Table 6.**

TABLE 6 – TRIP GENERATION RATES

Land Use	ITE Code	Daily Trip Rate	AM Peak Hour Rate			PM Peak Hour Rate		
			Total	In	Out	Total	In	Out
Library	590 (1)	/KSF	0.62 /KSF	71%	29%	8 /KSF	48%	52%
Fast Casual Restaurant	930 (2)	/KSF	2.31 /KSF	67%	33%	13.8 /KSF	55%	45%

Source: ITE Trip Generation Manual, 10th Edition

(1) Rates shown are based on fitted curve equation.

(2) Rates shown are based on average rates.

Table 7 summarizes the project trip generation using the rates shown in **Table 6**. As shown, the new library is forecast to generate approximately 937 daily trips with 8 PM peak hour trips (6 in / 2 out). The existing Pho & Grill Vietnamese Restaurant will be demolished and therefore, a trip credit has been applied to account for the existing trips on the same site. After taking credits from the existing restaurant, the new library would be generating approximately 527 net new daily trips with 5 net new AM peak hour trips and 86 net new PM peak hour trips.

TABLE 7 – CASA DE ORO LIBRARY TRIP GENERATION

Land Use	Intensity	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			Total	In	Out	Total	In	Out
Proposed								
Library	13.0 KSF	937	8	6	2	104	50	54
Existing								
Fast Casual Restaurant	1.3 KSF	410	3	2	1	18	10	8
Net New Trips (Proposed - Existing)		**527**	**5**	**4**	**1**	**86**	**40**	**46**

Notes:

KSF = 1,000 square feet

4.10.2 Trip Distribution & Trip Assignment of Proposed Project

Project trips were distributed onto the surrounding roadway network based on existing travel patterns using existing traffic count data. **Exhibit 10** shows the forecast trip percent distribution of the proposed project within the study area. At the project driveway, 20% of traffic is estimated to travel west on Campo Road and 80% east on Campo Road. **Exhibit 11** shows the corresponding forecast assignment of AM & PM peak hour project-generated trips assuming the trip percent distribution.

4.11 OPENING YEAR 2022 NO BUILD ANALYSIS

In order to derive Opening Year 2022 No Build traffic volumes, the SANDAG Series 13 model daily traffic volumes available online at the Transportation Forecast Information Center (TFIC) were used to establish a forecast growth trend that was applied to existing traffic volumes. From the SANDAG Series 13 model, a growth rate of 1.11% was calculated from the model baseline year 2016 to model year 2025. These growth rates were applied to existing traffic volumes for 3 years (2019-2022) to develop the Opening Year 2022 No Build AM and PM peak hour volumes.

Exhibit 12 shows the Opening Year 2022 No Build AM and PM peak hour volumes within the study area.

4.11.1 Intersection Evaluation

Peak Hour Intersection Level of Service

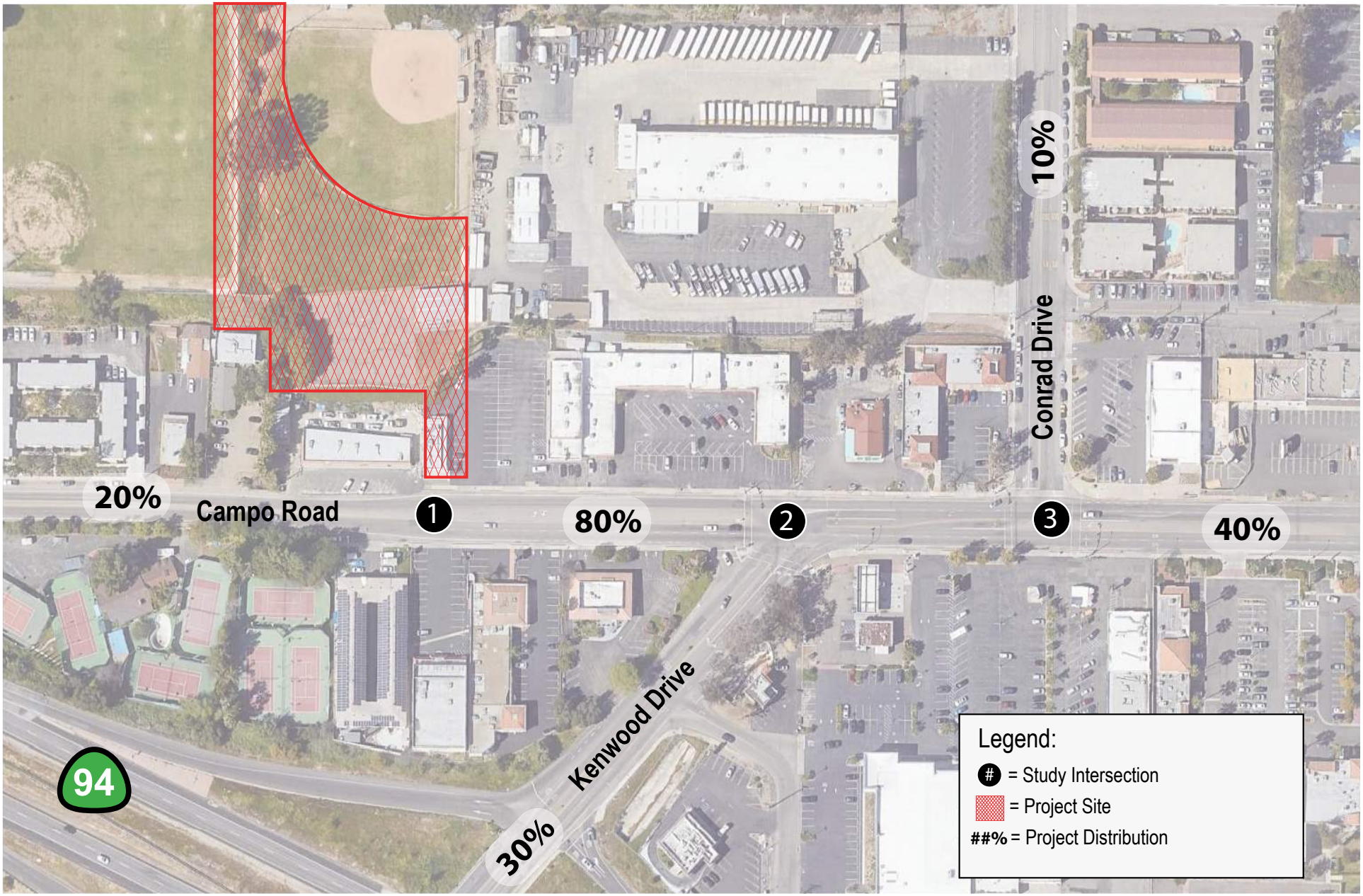
Table 8 summarizes Opening Year 2022 No Build AM and PM peak hour level of service for all study intersections. Detailed analysis sheets are contained in **Appendix D**.

TABLE 8 – OPENING YEAR 2022 NO BUILD AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Opening Year 2022 - No Build	
		AM	PM
		Delay[1] - LOS	Delay[1] - LOS
1 - Campo Road / Project Driveway	OWSC	Does Not Exist	
2 - Campo Road / Kenwood Drive	Signal	28.0 - C	26.5 - C
3 - Campo Road / Conrad Drive	Signal	27.5 - C	19.2 - B

Note: Deficient intersection operation indicated in **bold**.
[1] Average seconds of delay per vehicle.
LOS = level of service.
AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
OWSC = One-Way Stop Control

As shown, all study intersections are forecast to operate at an acceptable level of service (LOS D or better) during the AM and PM peak hours.



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Project Distribution

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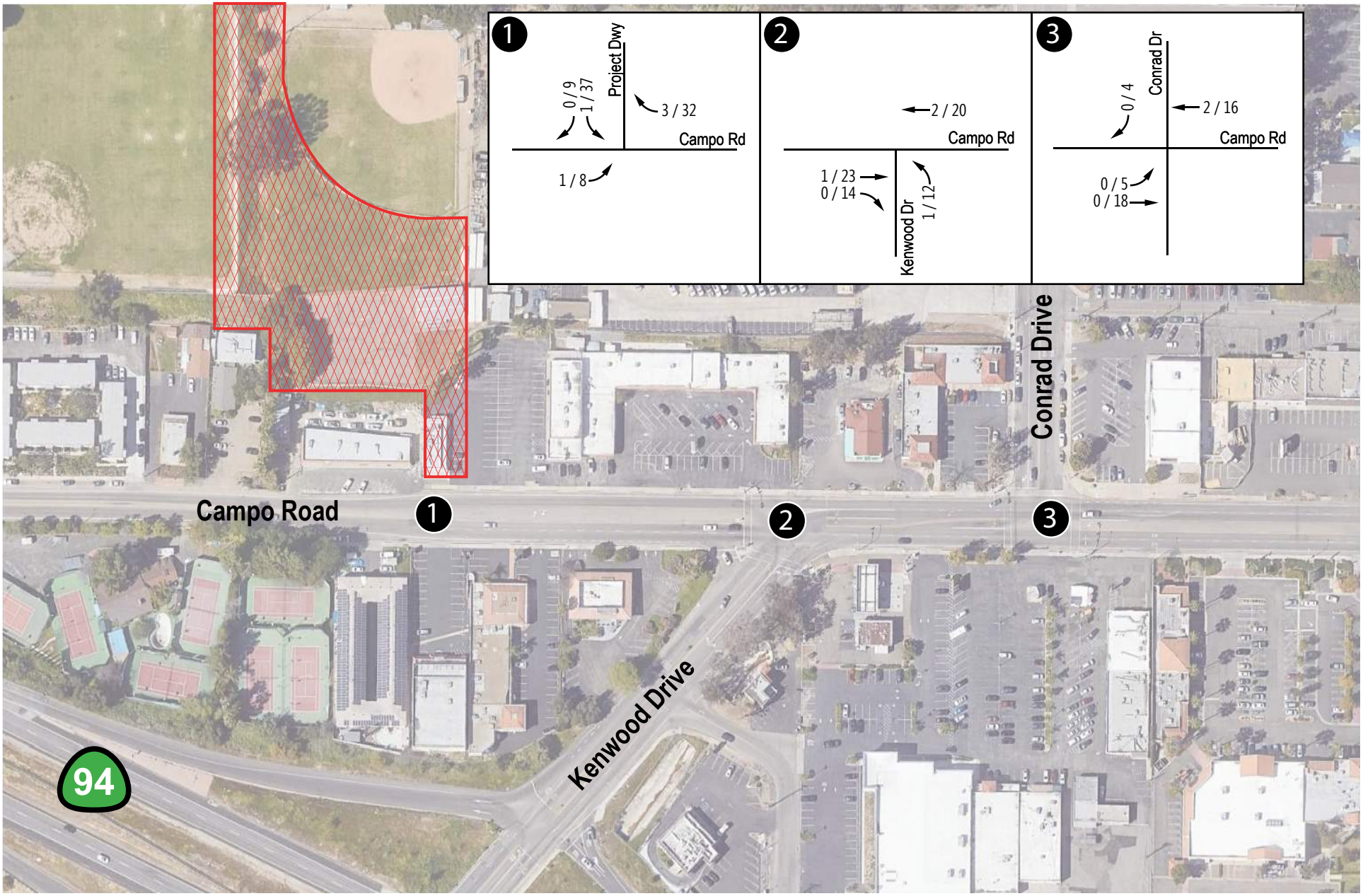
Exhibit 10



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Proposed Casa de Oro Library Trip Assignment

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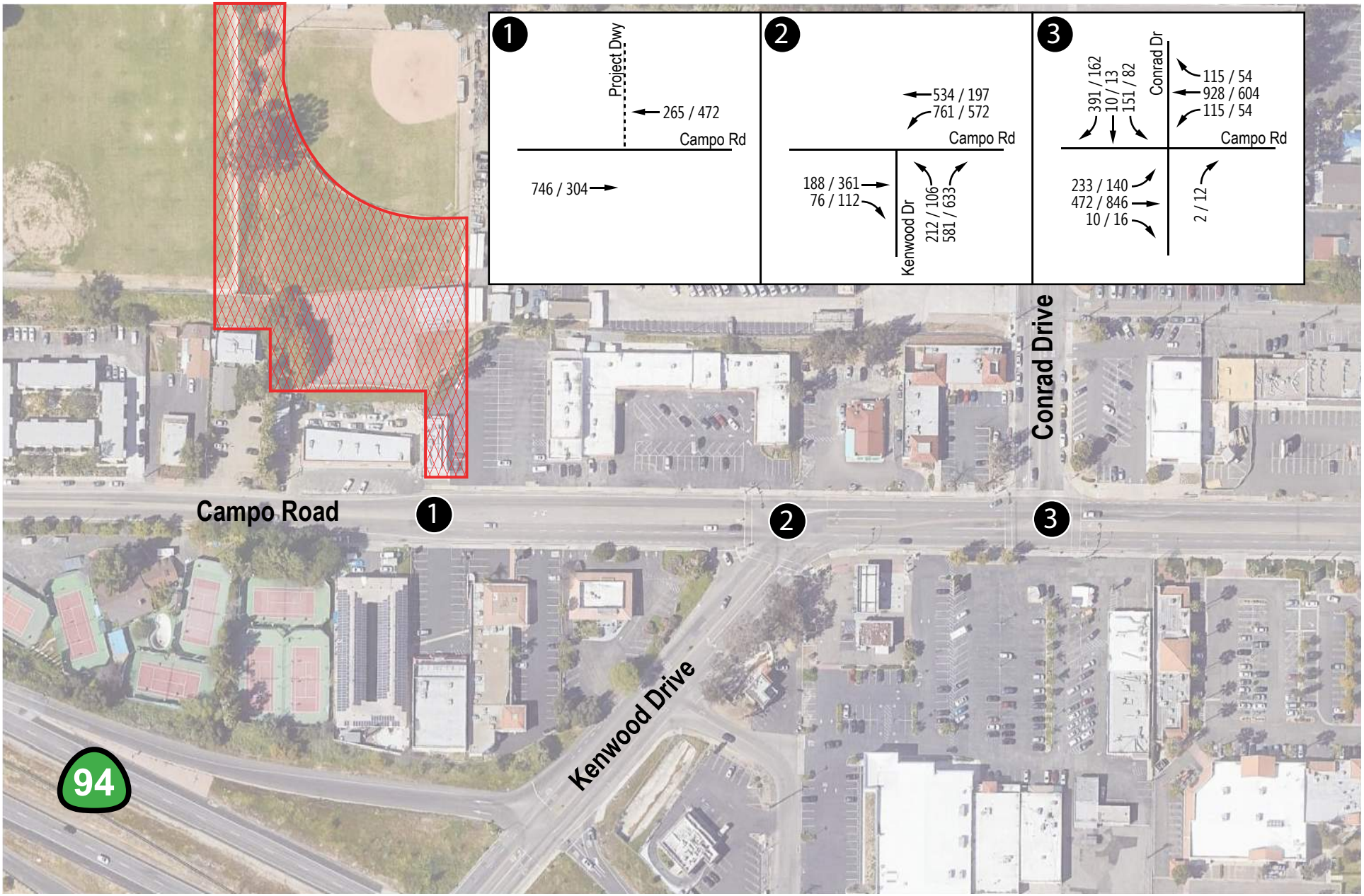
Exhibit 11



Opening Year 2022 AM/PM Peak Hour Intersection Volumes

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Exhibit 12

4.12 OPENING YEAR 2022 PLUS PROJECT ANALYSIS

Opening Year 2022 Plus Project traffic volumes are derived by adding trips forecast to be generated by the proposed project to Opening Year 2022 No Build volumes.

Exhibit 13 shows the Opening Year 2022 Plus Project AM and PM peak hour volumes within the study area.

4.12.1 Intersection Evaluation

Peak Hour Intersection Level of Service

Table 9 summarizes Opening Year 2022 Plus Project AM and PM peak hour level of service for all study intersections. Detailed analysis sheets are contained in **Appendix E**.

TABLE 9 – OPENING YEAR 2022 PLUS PROJECT AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Opening Year 2022 Plus Project	
		AM	PM
		Delay[1] - LOS	Delay[1] - LOS
1 - Campo Road / Project Driveway	OWSC	15.4 - C	13.6 - B
2 - Campo Road / Kenwood Drive	Signal	28.2 - C	27.4 - C
3 - Campo Road / Conrad Drive	Signal	27.5 - C	19.3 - B

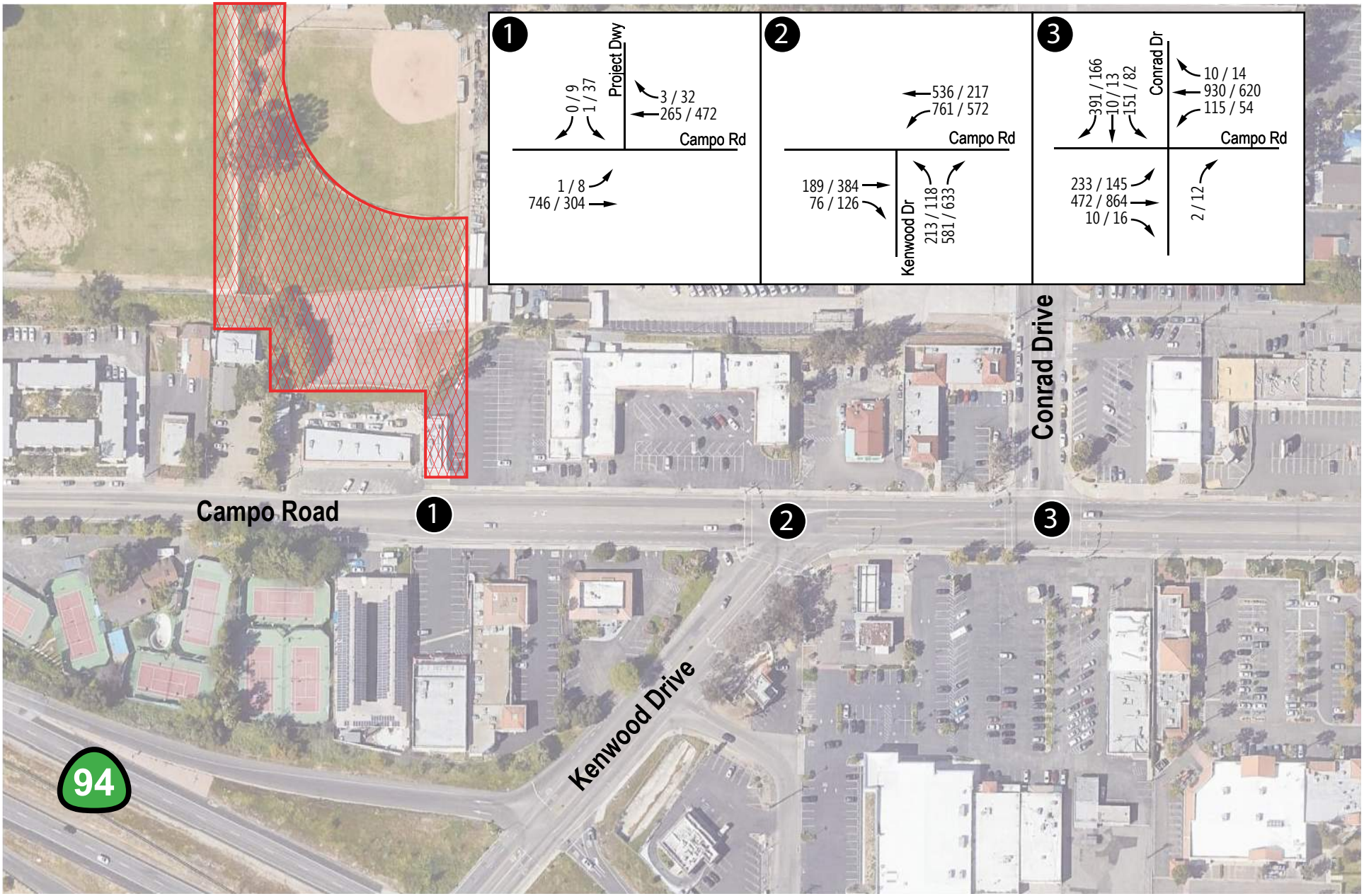
Note: Deficient intersection operation indicated in **bold**. AWSC = All-Way Stop Control
[1] Average seconds of delay per vehicle. TWSC = Two-Way Stop Control
LOS = level of service. OWSC = One-Way Stop Control

As shown, all study intersections are forecast to operate at an acceptable level of service (LOS D or better) during the AM and PM peak hours.

4.13 TRAFFIC SIGNAL WARRANT ANALYSIS

The 2014 *California Manual on Uniform Traffic Control Devices* (*CA MUTCD*) contains minimum guidelines regarding traffic volumes, collisions, speeds, visibility and other criteria in order to satisfy the requirements for the recommendation of a traffic signal, multi-way stop, or other traffic control device installation. A signal warrants analysis was conducted for the one-way or two-way stop-controlled intersections where the addition of project related traffic could potentially result in deficient operating conditions at the intersection.

For purposes of this report, a Peak Hour Warrant (CA MUTCD Warrant #3) was evaluated at the project driveway on Campo Road under Opening Year 2022 Plus Project conditions. The Peak Hour Warrant (Warrant #3) is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major



Opening Year 2022 Plus Project AM/PM Peak Hour Intersection Volumes

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Exhibit 13

street. According to the CA MUTCD Section 4C.04, the need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A.) If all three of the following conditions exist for the same 1 hour of an average day:
   1. The total stopped time delay experienced by the traffic on one minor-street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for one-lane approach or 5-vehicle hours for two-lane approach; and
   2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour (VPH) for one moving lane of traffic or 150 VPH for two moving lanes; and
   3. The total entering volume serviced during the hour equals or exceeds 650 VPH for intersections with three approaches or 800 VPH for intersections with four or more approaches.

B.) The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for one hour of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

The Peak Hour Signal Warrant analysis shows a traffic signal is not warranted at the project driveway on Campo Road under Opening Year 2022 Plus Project conditions. Detailed worksheets can be found in **Appendix F** of this report.

4.14 SITE ACCESS ANALYSIS

Currently, there are two driveways off Campo Road that serve the existing Pho & Grill Vietnamese Restaurant parking lot. The western driveway (closest to the Pho & Grill Vietnamese Restaurant) will be removed and a new 24-foot driveway will be constructed approximately 25 feet to the west of the existing driveway. This new driveway will serve as the primary access to the proposed Casa de Oro Library. As shown in the analysis, this new driveway operates at an acceptable level of service (D or better) under Opening Year 2022 Plus Project conditions.

Sight distance was evaluated at the project driveway on Campo Road. Based on the County's Public Road Standards (Table 5), the minimum corner intersection sight distance at the new driveway is 350 feet in each direction. Although there is a slight vertical curve between the driveway and Kenwood Drive, the available sight distance to the east on Campo Road extends the length of the corridor which is greater than the 350 foot requirement. To the west on Campo Drive, the measured sight distance is approximately 350 feet which meets the minimum sight distance requirements.. Therefore, the available sight distance is equal to or greater than the required sight distance and drivers exiting onto Campo Road have adequate visibility at the project driveway.

4.15 ACTIVE TRANSPORTATION ANALYSIS

Michael Baker is currently contracted with the County of San Diego to develop the Casa de Oro Specific Plan. The study area for the Specific Plan is focused on along an approximately 3/4-mile section of Campo Road in the commercial corridor between Granada Avenue and Rogers Road. As part of the Casa de Oro Specific Plan and revitalization of the Campo Road corridor, transportation improvements such as roundabouts, enhanced pedestrian facilities and protected bikeways are being evaluated and considered. Many of the enhancements to pedestrian and bicycle facilities along Campo Road will be extended from Kenwood Drive to the new library site to improve connectivity throughout the corridor.

4.16 PARKING

Based on the County's Parking Ordinance, 3 parking spaces per 1,000 square feet is the minimum parking requirement for a library use. As such, a total of 39 parking spaces are required for the proposed project. The proposed library would provide a total of 52 surface parking spaces which would exceed the County's minimum parking requirements. This would accommodate daily library parking requirements as well as after-hours use of the community room. All employees would park on-site; off-site parking would not be required to accommodate library staff.

Two dedicated parking spaces would be provided on-site for library delivery vans. These parking spaces would be provided directly adjacent to the library staff service entry for ease of loading/unloading.

On-site bike racks to accommodate 6 bikes (minimum) would also be provided. Additionally, it is anticipated that two electric vehicle (EV) charging stations would be provided on-site within the surface parking lot. The number of EV stations provided would be in conformance with CalGreen standards.

5 SUMMARY & CONCLUSIONS

This study analyzes the forecast traffic conditions associated with the Casa de Oro Library (proposed project) located in the Valle de Oro Community Planning Area of San Diego County. The proposed project includes a new approximate 13,000 square foot library including 52 surface parking spaces.

CEQA Analysis Summary

In December 2018, new California Environmental Quality Act (CEQA) guidelines were approved that shift traffic analysis from delay and operations to VMT when evaluating Transportation Impacts under CEQA. This change in methodology is a result of Senate Bill 743 (SB743), which was signed into law in September 2013. The County of San Diego developed their own *Transportation Study Guidelines* (TSG) which were adopted by the Board of Supervisors on June 24, 2020 to include VMT analysis procedures and thresholds for significance. The County's TSG includes screening criteria for all land development projects. The proposed Casa de Oro Library is a locally serving public facility and therefore meets the VMT screening criteria outline in the County's TSG. Therefore, a detailed VMT analysis is not required and the Casa de Oro Library is presumed to have a less than significant VMT impact on the environment.

Level of Service Summary

The results of the analysis show that all three study intersections currently operate at acceptable levels of service (LOS D or better). Under Opening Year 2022 Plus Project conditions, study intersections continue to operate at acceptable levels of service. Therefore, no physical improvements to the study intersections are recommended. Although LOS is not required under CEQA, the LOS Summary in this report is consistent with General Plan Policy M-2.1 that requires projects provide associated road improvements necessary to achieve a LOS "D" or better on all Mobility Element roads except for those where a failing LOS (E or F) has been accepted by the County.

Signal Warrant Summary

The 2014 *California Manual on Uniform Traffic Control Devices* (*CA MUTCD*) contains minimum guidelines regarding traffic volumes, collisions, speeds, visibility and other criteria in order to satisfy the requirements for the recommendation of a traffic signal, multi-way stop, or other traffic control device installation. A signal warrants analysis was conducted for the one-way or two-way stop-controlled intersections where the addition of project related traffic could potentially result in deficient operating conditions at the intersection. A Peak Hour Warrant (CA MUTCD Warrant #3) was evaluated at the project driveway on Campo Road under Opening Year 2022 Plus Project conditions. The Peak Hour Signal Warrant analysis shows a traffic signal is not warranted at the project driveway on Campo Road under Opening Year 2022 Plus Project conditions.

Recommended Improvements

The project access should be free and clear of any obstructions to provide adequate sight distance ensuring that exiting vehicles from the new driveway can adequately see pedestrians and bicyclists. Any landscaping and signage at the project driveway should not obstruct the drivers view from exiting the project site.

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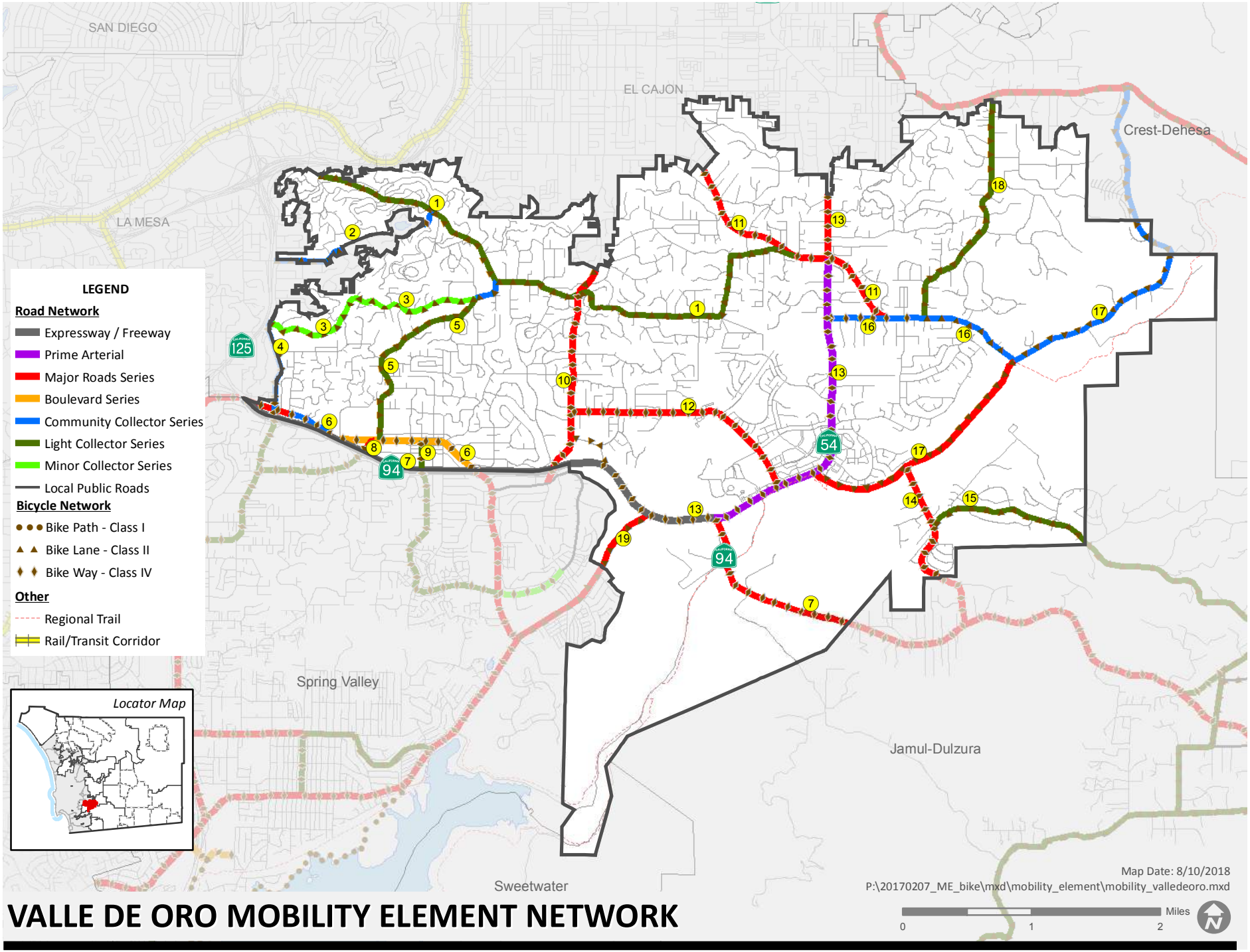
Appendix A: Mobility Element Network & Matrix



VALLE DE ORO MOBILITY ELEMENT NETWORK

Mobility Element Network—Valle de Oro Community Planning Area Matrix			
ID[a]	Road Segment	Designation/Improvement #.#X = [# of lanes].[roadway classification][improvement]	Special Circumstances
1	Fuerte Drive (SC 2111/SA 920/SC 2060) Segment: La Mesa city limits to Chase Avenue	2.2E Light Collector	Accepted at LOS E Segment: Bancroft Drive to Avocado Boulevard
2	Lemon Avenue (SA 930) Segment: SR-125 to Fuerte Drive	2.1E Community Collector	None
3	Edgewood Drive / Grandview Drive (SC 2115) Segment: Bancroft Drive to Fuerte Drive	2.3B Minor Collector Road Intermittent Turn Lanes—Bancroft Drive to Resmar Road 2.1E Community Collector Resmar Road to Fuerte Drive	None
4	Bancroft Drive Segment:SR-94 to Edgewood Drive	2.1C Community Collector Intermittent Turn Lanes	None
5	Conrad Drive /Resmar Road (SC 2125) Segment: Campo Road to Grandview Drive	2.2E Community Collector	None
6	Campo Road (SC 2118) Segment: La Mesa city limits to SR-94	4.1B Major Road Intermittent Turn Lanes—La Mesa city limits to Camino Paz 2.1C Community Collector Intermittent Turn Lanes—Camino Paz to Rodgers Road 4.2B Boulevard Intermittent Turn Lanes—Rodgers Road to SR-94	Accepted at LOS F Segment: Kenwood Drive to Conrad Drive
7	State Route 94/Campo Road Segment: La Mesa city limits to Jamul/Dulzura Subregion boundary	Freeway/6.1 Expressway La Mesa city limits to Jamacha Road 4.1A Major Road and Interchange with Jamacha Road Raised Median—Jamacha Road / SR-54 to Jamul CPA boundary	Caltrans Facilities Programming Improvements to a four-lane conventional highway programmed in the 2030 RTP (Unconstrained Revenue scenario) Recommended Improvement Ramps to Jamacha Road interchange
8	Kenwood Drive (SC 2122) Segment: SR- 94 to Campo Road	4.1B Major Road Intermittent Turn Lanes	None

Mobility Element Network—Valle de Oro Community Planning Area Matrix			
ID[a]	Road Segment	Designation/Improvement #.#X = [# of lanes].[roadway classification][improvement]	Special Circumstances
9	Barcelona Street (SC 2110) Segment: Campo Road to SR- 94	2.2E Light Collector Intersection Improvements	None
10	Avocado Boulevard (SF 1398) Segment: Spring Valley community boundary to El Cajon city limits	4.1B Major Road Intermittent Turn Lanes	None
11	Chase Avenue (SA 910.1) Segment: El Cajon city limits to Hillsdale Road	4.1B Major Road Intermittent Turn Lanes	None
12	Fury Lane (SC 2070/SA 921) Segment: Avocado Boulevard to Jamacha Road	4.1B Major Road Intermittent Turn Lanes—Avocado Boulevard to Wieghorst Way 4.1A Major Road Raised Median—Wieghorst Way to Jamacha Road	None
13	Jamacha Road (SF 1399) Segment: -SR-94 / Campo Road to El Cajon city limits	6.2 Prime Arterial SR 94/Campo Road to Chase Avenue 4.1A Major Road Raised Median—Chase Avenue to El Cajon city limits	Accepted at LOS F Segment: SR-94 / Campo Road to Fury Lane
14	Steele Canyon Road (SC 2050) Segment: Willow Glen Drive to Jamul/Dulzura Subregion boundary	4.1B Major Road Intermittent Turn Lanes	None
15	Jamul Drive (SC 2055) Segment: Steele Canyon Road to Jamul/Dulzura Subregion boundary	2.1C Light Collector Intermittent Turn Lanes	None
16	Hillsdale Road (SC 2030) Segment: Jamacha Road to Willow Glen Drive	2.1C Community Collector Intermittent Turn Lanes	None

Mobility Element Network—Valle de Oro Community Planning Area Matrix			
ID[a]	**Road Segment**	**Designation/Improvement** #.#X = [# of lanes].[roadway classification][improvement]	**Special Circumstances**
17	Willow Glen Drive (SF 1397) Segment: Jamacha Road to Camino de las Piedras	4.1B Major Road Intermittent Turn Lanes—Jamacha Road to Hillsdale Road 2.1D Community Collector Improvement Options [Unspecified Improvements}—Hillsdale Road to Camino de las Piedras	None
18	Vista Grande Road (SC 2030) Segment: Hillsdale Road to Dehesa Road	2.2E Light Collector	None
19	Jamacha Boulevard SF 1397) Segment: Spring Valley CPA boundary to SR-94 / Campo Road	4.1A Major Road Raised Median	Recommended Improvement Grade-separated interchange with SR-94/Campo Road

a. ID = Roadway segment on Figure M-A-22

Michael Baker
INTERNATIONAL

Appendix B:
Traffic Volume Count Data & Signal Timing Worksheets

Prepared by National Data & Surveying Services

Kenwood Dr & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-004
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Kenwood Dr)

AM	0	0	0	1	4	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	2	3	PM

EASTBOUND (Campo Rd)

AM	NOON	PM	
722	0	294	⇦
0	0	0	↶ 0
0	0	0	↱ 0
182	0	349	→ 1.5
74	0	108	↳ 0.5
AM	NOON	PM	

WESTBOUND (Campo Rd)

PM	NOON	AM	
1	0	1	↰ 0
191	0	517	← 1
553	0	736	↰ 2
0	0	0	↰ 0
961	0	744	⇨
PM	NOON	AM	

NORTHBOUND (Kenwood Dr)

PM	661	0	103	0	612	PM
NOON	0	0	0	0	0	NOON
AM	810	0	205	2	562	AM

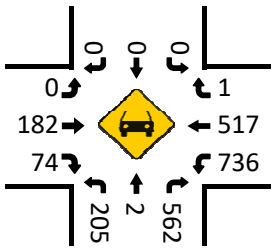
↰ 0	↰ 1	↑ 0	↱ 2

CONTROL

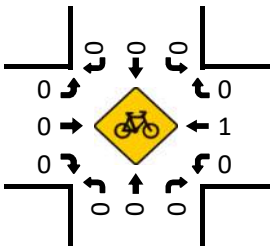
Signalized

TEV	2280	0	1919
	AM	NOON	PM
PHF	0.96		0.99

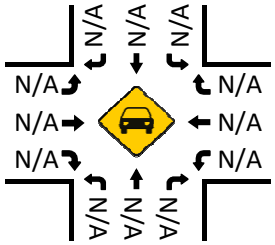
Total Vehicles (AM)



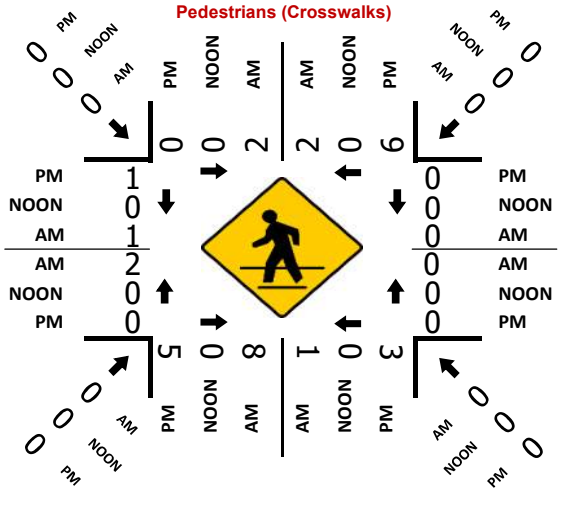
Bikes (AM)



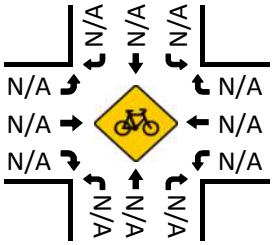
Total Vehicles (Noon)



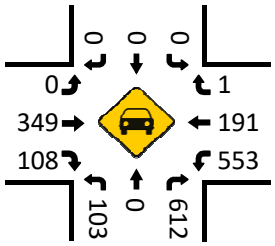
Pedestrians (Crosswalks)



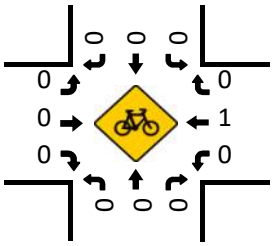
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Conrad Dr & Campo Rd

Peak Hour Turning Movement Count

ID: 19-04442-005
City: Spring Valley

Day: Tuesday
Date: 11/12/2019

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Conrad Dr — SOUTHBOUND

AM	378	10	146	0	337	AM
NOON	0	0	0	0	0	NOON
PM	157	13	79	0	187	PM
	1	0.5	0.5	0		

Campo Rd — EASTBOUND

AM	NOON	PM	
1277	0	741	
0	0	0	0
225	0	135	1
457	0	819	2
10	0	15	0
AM	NOON	PM	

Campo Rd — WESTBOUND

PM	NOON	AM	
52	0	111	0
584	0	898	2
14	0	10	1
0	0	0	0
910	0	605	
PM	NOON	AM	

CONTROL

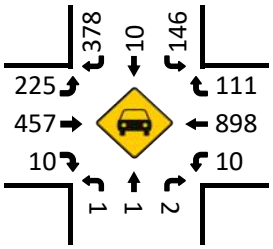
Signalized

TEV	2249 AM	0 NOON	1880 PM
PHF	0.97		0.97

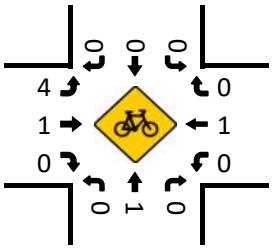
Conrad Dr — NORTHBOUND

	0	0	0	0		
PM	42	0	0	0	12	PM
NOON	0	0	0	0	0	NOON
AM	30	0	1	1	2	AM

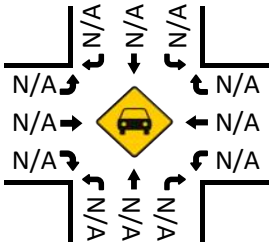
Total Vehicles (AM)



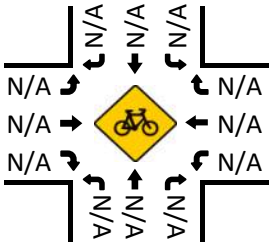
Bikes (AM)



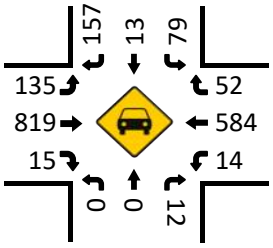
Total Vehicles (Noon)



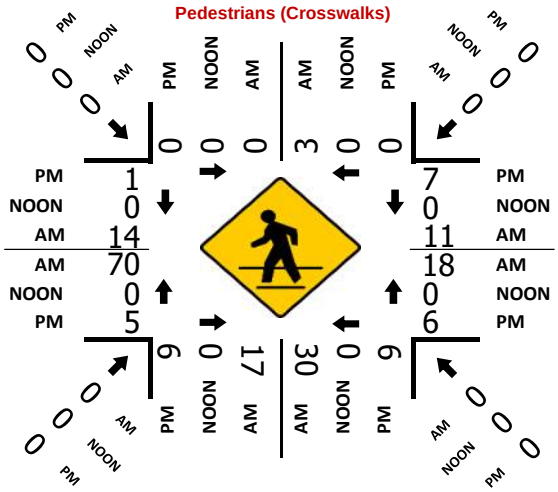
Bikes (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
3
0
0
PM
1
0
14
AM
AM
70
0
NOON
PM
5
7
0
11
18
0
6
6
0
0
0

QuicNet® System	
System ID	**15**
Group	**NONE**
Field Master	**NONE**
N-S Street	**Conrad**
E-W Street	**Campo**
Communications	
Channel	**UDP:8002:10.197.1.11**
Address	**5**
Area Number	**6**
Area Address	**5**
Database	
Last Changed	**3/19/2019 9:24**

QuicNet Timing Notes

Phase Timing - Bank 1								
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	**4**	**6**	**4**	**0**	**6**	**4**	**4**	**0**
Extension	**2.0**	**2.0**	**2.0**	**0.0**	**2.0**	**2.0**	**2.0**	**0.0**
Max	**25**	**40**	**30**	**0**	**40**	**30**	**30**	**0**
Max 2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cond Serve Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Clearance Timing								
Yellow Change	**3.6**	**4.1**	**3.4**	**0.0**	**3.6**	**4.1**	**4.8**	**0.0**
Red Clear	**0.5**	**1.0**	**1.0**	**0.0**	**0.5**	**1.0**	**1.0**	**0.0**
Pedestrian Timing								
Walk	**0**	**7**	**0**	**0**	**0**	**7**	**0**	**0**
Pedestrian Change	**0**	**22**	**15**	**0**	**0**	**29**	**12**	**0**
Advance/Delay Walk	**0**	**0**	**7**	**0**	**0**	**0**	**7**	**0**
PE Min. Ped. Change	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Volume-Density								
Type 3 Disconnect	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Add per Vehicle	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Max Added Initial	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Min Gap	**2.0**	**2.0**	**2.0**	**0.0**	**2.0**	**2.0**	**2.0**	**0.0**
Max Gap	**2.0**	**2.0**	**2.0**	**0.0**	**2.0**	**2.0**	**2.0**	**0.0**
Reduce Every	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Alternate Timing								
Alternate Walk	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Ped. Change	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Minimum	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Alternate Extension	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Phase Timing - Exclusive Pedestrian	
Exclusive Ped Assignment	_____
Exclusive Walk	**0**
Exclusive Pedestrian Change	**0**
Red Clear	**0.0**
Walk Output	**0**
Don't Walk Output	**0**

Phase Functions - Page 1	
Red Lock	_____
Yellow Lock	**__3___7_**
Simultaneous Gap	_____
Rest In Walk	_____
Advance Walk	**__3___7_**
Flashing Walk	_____
Max Extension	_____
Red Rest	_____
Dual Entry	_____
Sequential Timing	_____
Inhibit Ped Reservice	_____
Delay Walk	_____
Guaranteed Passage	_____
Conditional Service	_____

Phase Functions - Page 2	
Minimum Recall	**_2__5___**
Ped Recall	_____
Maximum Recall	_____
Green Flash	_____
Overlap Green Flash	_____
Flashing Yellow Arrow for PPLT	_____
Max2	_____
Soft Recall	_____
External Recall	_____
Manual Control Calls	_____
Fast Green Flash	_____
Fast Overlap Green Flash	_____
Semi-Actuated	_____

Michael Baker
INTERNATIONAL

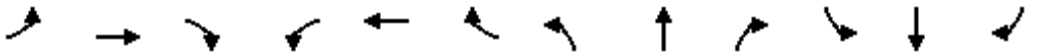
Appendix C:
Existing Conditions
Synchro Worksheets



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	182	74	736	517	205	562
Future Volume (vph)	182	74	736	517	205	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.83	0.83	0.91	0.91	0.89	0.89
Adj. Flow (vph)	219	89	809	568	230	631
RTOR Reduction (vph)	0	0	0	0	0	311
Lane Group Flow (vph)	219	89	809	568	230	320
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	35.7	100.0	33.3	45.9	17.4	50.7
Effective Green, g (s)	35.7	100.0	33.3	45.9	17.4	50.7
Actuated g/C Ratio	0.36	1.00	0.33	0.46	0.17	0.51
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1263	1583	1143	855	307	1413
v/s Ratio Prot	0.06		c0.24	c0.30	c0.13	0.08
v/s Ratio Perm		0.06				0.04
v/c Ratio	0.17	0.06	0.71	0.66	0.75	0.23
Uniform Delay, d1	22.0	0.0	29.1	21.1	39.2	13.7
Progression Factor	1.00	1.00	1.29	0.67	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.3	3.1	8.5	0.0
Delay (s)	22.3	0.1	38.8	17.3	47.7	13.8
Level of Service	C	A	D	B	D	B
Approach Delay (s)	15.9			29.9	22.8	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



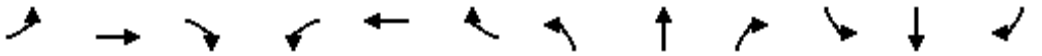
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	457	10	10	898	111	0	0	2	146	10	378
Future Volume (vph)	225	457	10	10	898	111	0	0	2	146	10	378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3526		1770	3476				1611		1780	1583
Flt Permitted	0.95	1.00		0.27	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3526		497	3476				1611		1780	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.92	0.92	0.92	0.50	0.50	0.50	0.86	0.86	0.86
Adj. Flow (vph)	274	557	12	11	976	121	0	0	4	170	12	440
RTOR Reduction (vph)	0	2	0	0	10	0	0	0	2	0	0	38
Lane Group Flow (vph)	274	567	0	11	1087	0	0	0	2	0	182	402
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	23.1	35.7		45.9	45.9				45.9		16.0	39.1
Effective Green, g (s)	23.1	35.7		45.9	45.9				45.9		16.0	39.1
Actuated g/C Ratio	0.23	0.36		0.46	0.46				0.46		0.16	0.39
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	408	1258		228	1595				739		284	618
v/s Ratio Prot	c0.15	0.16			c0.31						0.10	c0.15
v/s Ratio Perm				0.02					0.00			0.10
v/c Ratio	0.67	0.45		0.05	0.68				0.00		0.64	0.65
Uniform Delay, d1	35.0	24.6		15.0	21.3				14.7		39.3	24.9
Progression Factor	1.14	0.83		0.80	0.63				1.00		1.00	1.00
Incremental Delay, d2	3.3	1.1		0.3	2.0				0.0		3.7	1.9
Delay (s)	43.1	21.6		12.4	15.4				14.7		43.0	26.8
Level of Service	D	C		B	B				B		D	C
Approach Delay (s)		28.6			15.4			14.7			31.5	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	349	108	553	191	103	612
Future Volume (vph)	349	108	553	191	103	612
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.96	0.96
Adj. Flow (vph)	367	114	570	197	107	638
RTOR Reduction (vph)	0	0	0	0	0	385
Lane Group Flow (vph)	367	114	570	197	107	253
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	46.8	100.0	26.4	60.7	13.2	39.6
Effective Green, g (s)	46.8	100.0	26.4	60.7	13.2	39.6
Actuated g/C Ratio	0.47	1.00	0.26	0.61	0.13	0.40
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1656	1583	906	1130	233	1103
v/s Ratio Prot	c0.10		c0.17	0.11	c0.06	0.06
v/s Ratio Perm		0.07				0.03
v/c Ratio	0.22	0.07	0.63	0.17	0.46	0.23
Uniform Delay, d1	15.8	0.0	32.5	8.6	40.1	20.1
Progression Factor	1.00	1.00	1.50	0.38	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.0	0.3	0.5	0.0
Delay (s)	16.1	0.1	49.6	3.6	40.6	20.1
Level of Service	B	A	D	A	D	C
Approach Delay (s)	12.3			37.8	23.0	
Approach LOS	B			D	C	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	819	15	14	584	52	0	0	12	79	13	157
Future Volume (vph)	135	819	15	14	584	52	0	0	12	79	13	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3528		1770	3492				1611		1786	1583
Flt Permitted	0.95	1.00		0.17	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3528		321	3492				1611		1786	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96	0.75	0.75	0.75	0.93	0.93	0.93
Adj. Flow (vph)	145	881	16	15	608	54	0	0	16	85	14	169
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	6	0	0	128
Lane Group Flow (vph)	145	896	0	15	657	0	0	0	10	0	99	41
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	12.5	46.8		60.7	60.7				60.7		11.8	24.3
Effective Green, g (s)	12.5	46.8		60.7	60.7				60.7		11.8	24.3
Actuated g/C Ratio	0.12	0.47		0.61	0.61				0.61		0.12	0.24
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	221	1651		194	2119				977		210	384
v/s Ratio Prot	c0.08	c0.25			c0.19						c0.06	0.01
v/s Ratio Perm				0.05					0.01			0.01
v/c Ratio	0.66	0.54		0.08	0.31				0.01		0.47	0.11
Uniform Delay, d1	41.7	19.0		8.1	9.5				7.8		41.2	29.4
Progression Factor	1.11	0.77		0.65	0.67				1.00		1.00	1.00
Incremental Delay, d2	5.1	1.2		0.8	0.4				0.0		0.6	0.0
Delay (s)	51.3	15.9		6.0	6.7				7.8		41.8	29.5
Level of Service	D	B		A	A				A		D	C
Approach Delay (s)		20.9			6.7			7.8			34.0	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Michael Baker
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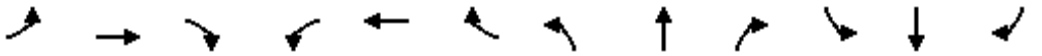
Appendix D: Opening Year 2022 No Build Synchro Worksheets

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	188	76	761	534	212	581
Future Volume (vph)	188	76	761	534	212	581
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.83	0.83	0.91	0.91	0.89	0.89
Adj. Flow (vph)	227	92	836	587	238	653
RTOR Reduction (vph)	0	0	0	0	0	336
Lane Group Flow (vph)	227	92	836	587	238	317
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	37.8	100.0	30.8	44.9	17.8	48.6
Effective Green, g (s)	37.8	100.0	30.8	44.9	17.8	48.6
Actuated g/C Ratio	0.38	1.00	0.31	0.45	0.18	0.49
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1337	1583	1057	836	315	1354
v/s Ratio Prot	0.06		c0.24	c0.32	c0.13	0.07
v/s Ratio Perm		0.06				0.04
v/c Ratio	0.17	0.06	0.79	0.70	0.76	0.23
Uniform Delay, d1	20.7	0.0	31.7	22.2	39.0	14.9
Progression Factor	1.00	1.00	1.35	0.59	1.00	1.00
Incremental Delay, d2	0.3	0.1	2.8	3.6	8.8	0.0
Delay (s)	20.9	0.1	45.6	16.6	47.9	14.9
Level of Service	C	A	D	B	D	B
Approach Delay (s)	14.9			33.7	23.7	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



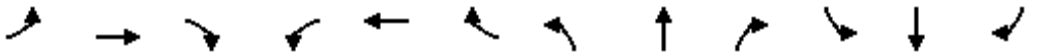
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	472	10	10	928	115	0	0	2	151	10	391
Future Volume (vph)	233	472	10	10	928	115	0	0	2	151	10	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3527		1770	3476				1611		1779	1583
Flt Permitted	0.95	1.00		0.29	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3527		535	3476				1611		1779	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.92	0.92	0.92	0.50	0.50	0.50	0.86	0.86	0.86
Adj. Flow (vph)	284	576	12	11	1009	125	0	0	4	176	12	455
RTOR Reduction (vph)	0	2	0	0	10	0	0	0	2	0	0	34
Lane Group Flow (vph)	284	586	0	11	1124	0	0	0	2	0	188	421
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	23.7	37.8		44.9	44.9				44.9		16.4	40.1
Effective Green, g (s)	23.7	37.8		44.9	44.9				44.9		16.4	40.1
Actuated g/C Ratio	0.24	0.38		0.45	0.45				0.45		0.16	0.40
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	419	1333		240	1560				723		291	634
v/s Ratio Prot	c0.16	0.17			c0.32						0.11	c0.16
v/s Ratio Perm				0.02					0.00			0.11
v/c Ratio	0.68	0.44		0.05	0.72				0.00		0.65	0.66
Uniform Delay, d1	34.7	23.2		15.5	22.4				15.2		39.1	24.5
Progression Factor	1.15	0.83		1.00	1.00				1.00		1.00	1.00
Incremental Delay, d2	3.3	1.0		0.4	2.9				0.0		3.7	2.0
Delay (s)	43.3	20.4		15.9	25.3				15.2		42.8	26.5
Level of Service	D	C		B	C				B		D	C
Approach Delay (s)		27.8			25.3			15.2			31.3	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	361	112	572	197	106	633
Future Volume (vph)	361	112	572	197	106	633
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.96	0.96
Adj. Flow (vph)	380	118	590	203	110	659
RTOR Reduction (vph)	0	0	0	0	0	370
Lane Group Flow (vph)	380	118	590	203	110	289
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	47.1	100.0	26.0	60.3	13.3	39.3
Effective Green, g (s)	47.1	100.0	26.0	60.3	13.3	39.3
Actuated g/C Ratio	0.47	1.00	0.26	0.60	0.13	0.39
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1666	1583	892	1123	235	1095
v/s Ratio Prot	c0.11		c0.17	0.11	c0.06	0.07
v/s Ratio Perm		0.07				0.04
v/c Ratio	0.23	0.07	0.66	0.18	0.47	0.26
Uniform Delay, d1	15.7	0.0	33.1	8.8	40.1	20.6
Progression Factor	1.00	1.00	1.47	0.45	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.4	0.3	0.5	0.0
Delay (s)	16.0	0.1	50.2	4.3	40.6	20.6
Level of Service	B	A	D	A	D	C
Approach Delay (s)	12.2			38.4	23.5	
Approach LOS	B			D	C	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	846	16	14	604	54	0	0	12	82	13	162
Future Volume (vph)	140	846	16	14	604	54	0	0	12	82	13	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3528		1770	3492				1611		1786	1583
Flt Permitted	0.95	1.00		0.17	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3528		310	3492				1611		1786	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96	0.75	0.75	0.75	0.93	0.93	0.93
Adj. Flow (vph)	151	910	17	15	629	56	0	0	16	88	14	174
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	6	0	0	131
Lane Group Flow (vph)	151	926	0	15	680	0	0	0	10	0	102	43
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	12.8	47.1		60.3	60.3				60.3		11.9	24.7
Effective Green, g (s)	12.8	47.1		60.3	60.3				60.3		11.9	24.7
Actuated g/C Ratio	0.13	0.47		0.60	0.60				0.60		0.12	0.25
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	226	1661		186	2105				971		212	391
v/s Ratio Prot	c0.09	c0.26			c0.19						c0.06	0.01
v/s Ratio Perm				0.05					0.01			0.01
v/c Ratio	0.67	0.56		0.08	0.32				0.01		0.48	0.11
Uniform Delay, d1	41.6	19.0		8.3	9.8				7.9		41.2	29.1
Progression Factor	1.10	0.81		1.00	1.00				1.00		1.00	1.00
Incremental Delay, d2	5.5	1.3		0.8	0.4				0.0		0.6	0.0
Delay (s)	51.1	16.6		9.1	10.2				7.9		41.8	29.2
Level of Service	D	B		A	B				A		D	C
Approach Delay (s)		21.5			10.2			7.9			33.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

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Appendix E: Opening Year 2022 + Project Synchro Worksheets

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	265	746	3	1	0
Future Vol, veh/h	1	265	746	3	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	288	811	3	1	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	814	0	-	0	1103	813
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	813	-	-	-	234	378
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	759	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	813	-	-	-	234	378
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	759	-

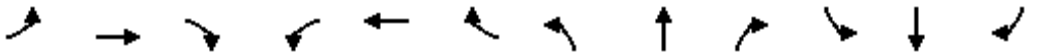
Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	813	-	-	-	347
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Control Delay (s)	9.4	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	189	76	761	536	213	581
Future Volume (vph)	189	76	761	536	213	581
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.83	0.83	0.91	0.91	0.89	0.89
Adj. Flow (vph)	228	92	836	589	239	653
RTOR Reduction (vph)	0	0	0	0	0	336
Lane Group Flow (vph)	228	92	836	589	239	317
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	37.9	100.0	30.6	44.8	17.9	48.5
Effective Green, g (s)	37.9	100.0	30.6	44.8	17.9	48.5
Actuated g/C Ratio	0.38	1.00	0.31	0.45	0.18	0.48
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1341	1583	1050	834	316	1351
v/s Ratio Prot	0.06		c0.24	c0.32	c0.14	0.07
v/s Ratio Perm		0.06				0.04
v/c Ratio	0.17	0.06	0.80	0.71	0.76	0.23
Uniform Delay, d1	20.6	0.0	31.8	22.3	39.0	15.0
Progression Factor	1.00	1.00	1.35	0.59	1.00	1.00
Incremental Delay, d2	0.3	0.1	2.9	3.7	8.8	0.0
Delay (s)	20.9	0.1	46.0	16.7	47.8	15.0
Level of Service	C	A	D	B	D	B
Approach Delay (s)	14.9			33.9	23.8	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	472	10	10	930	115	0	0	2	151	10	391
Future Volume (vph)	233	472	10	10	930	115	0	0	2	151	10	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.98				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3527		1770	3476				1611		1779	1583
Flt Permitted	0.95	1.00		0.29	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3527		538	3476				1611		1779	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.92	0.92	0.92	0.50	0.50	0.50	0.86	0.86	0.86
Adj. Flow (vph)	284	576	12	11	1011	125	0	0	4	176	12	455
RTOR Reduction (vph)	0	2	0	0	9	0	0	0	2	0	0	33
Lane Group Flow (vph)	284	586	0	11	1127	0	0	0	2	0	188	422
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	23.7	37.9		44.8	44.8				44.8		16.5	40.2
Effective Green, g (s)	23.7	37.9		44.8	44.8				44.8		16.5	40.2
Actuated g/C Ratio	0.24	0.38		0.45	0.45				0.45		0.16	0.40
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	419	1336		241	1557				721		293	636
v/s Ratio Prot	c0.16	0.17			c0.32						0.11	c0.16
v/s Ratio Perm				0.02					0.00			0.11
v/c Ratio	0.68	0.44		0.05	0.72				0.00		0.64	0.66
Uniform Delay, d1	34.7	23.1		15.6	22.5				15.3		39.0	24.4
Progression Factor	1.15	0.83		1.00	1.00				1.00		1.00	1.00
Incremental Delay, d2	3.3	1.0		0.4	3.0				0.0		3.6	2.0
Delay (s)	43.3	20.3		15.9	25.5				15.3		42.6	26.4
Level of Service	D	C		B	C				B		D	C
Approach Delay (s)		27.8			25.4			15.3			31.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	472	304	32	37	9
Future Vol, veh/h	8	472	304	32	37	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	513	330	35	40	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	365	0	-	0	879	348
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	531	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1194	-	-	-	318	695
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1194	-	-	-	315	695
Mov Cap-2 Maneuver	-	-	-	-	435	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	590	-

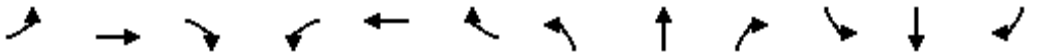
Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1194	-	-	-	469
HCM Lane V/C Ratio	0.007	-	-	-	0.107
HCM Control Delay (s)	8	-	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	384	126	572	217	118	633
Future Volume (vph)	384	126	572	217	118	633
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	4.0	4.1	5.1	4.4	4.1
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	2787
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.96	0.96
Adj. Flow (vph)	404	133	590	224	123	659
RTOR Reduction (vph)	0	0	0	0	0	335
Lane Group Flow (vph)	404	133	590	224	123	324
Turn Type	NA	Free	Prot	NA	Prot	pm+ov
Protected Phases	6		5	2	3	5
Permitted Phases		Free				3
Actuated Green, G (s)	48.3	100.0	24.8	59.9	13.3	38.1
Effective Green, g (s)	48.3	100.0	24.8	59.9	13.3	38.1
Actuated g/C Ratio	0.48	1.00	0.25	0.60	0.13	0.38
Clearance Time (s)	5.1		4.1	5.1	4.4	4.1
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	1709	1583	851	1115	235	1061
v/s Ratio Prot	c0.11		c0.17	0.12	c0.07	0.08
v/s Ratio Perm		0.08				0.04
v/c Ratio	0.24	0.08	0.69	0.20	0.52	0.30
Uniform Delay, d1	15.1	0.0	34.1	9.1	40.4	21.7
Progression Factor	1.00	1.00	1.52	0.46	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.9	0.4	1.0	0.1
Delay (s)	15.4	0.1	53.8	4.6	41.4	21.7
Level of Service	B	A	D	A	D	C
Approach Delay (s)	11.6			40.3	24.8	
Approach LOS	B			D	C	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	864	16	14	620	54	0	0	12	82	13	166
Future Volume (vph)	145	864	16	14	620	54	0	0	12	82	13	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Lane Util. Factor	1.00	0.95		1.00	0.95				1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00				1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99				0.86		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00				1.00		0.96	1.00
Satd. Flow (prot)	1770	3528		1770	3493				1611		1786	1583
Flt Permitted	0.95	1.00		0.17	1.00				1.00		0.96	1.00
Satd. Flow (perm)	1770	3528		316	3493				1611		1786	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96	0.75	0.75	0.75	0.93	0.93	0.93
Adj. Flow (vph)	156	929	17	15	646	56	0	0	16	88	14	178
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	6	0	0	124
Lane Group Flow (vph)	156	945	0	15	697	0	0	0	10	0	102	54
Confl. Bikes (#/hr)			1			1						
Turn Type	Prot	NA		Perm	NA				Perm	Split	NA	pm+ov
Protected Phases	1	6			2					7	7	1
Permitted Phases				2					2			7
Actuated Green, G (s)	13.2	48.3		59.9	59.9				59.9		11.9	25.1
Effective Green, g (s)	13.2	48.3		59.9	59.9				59.9		11.9	25.1
Actuated g/C Ratio	0.13	0.48		0.60	0.60				0.60		0.12	0.25
Clearance Time (s)	4.1	5.1		5.1	5.1				5.1		5.8	4.1
Vehicle Extension (s)	2.0	2.0		2.0	2.0				2.0		2.0	2.0
Lane Grp Cap (vph)	233	1704		189	2092				964		212	397
v/s Ratio Prot	c0.09	c0.27			c0.20						c0.06	0.02
v/s Ratio Perm				0.05					0.01			0.02
v/c Ratio	0.67	0.55		0.08	0.33				0.01		0.48	0.14
Uniform Delay, d1	41.3	18.3		8.4	10.0				8.1		41.2	29.0
Progression Factor	1.09	0.85		1.00	1.00				1.00		1.00	1.00
Incremental Delay, d2	5.3	1.2		0.8	0.4				0.0		0.6	0.1
Delay (s)	50.4	16.7		9.3	10.5				8.1		41.8	29.1
Level of Service	D	B		A	B				A		D	C
Approach Delay (s)		21.5			10.4			8.1			33.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Michael Baker
INTERNATIONAL

Appendix F:
Signal Warrant Worksheets

OPENING YEAR PLUS PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: AM

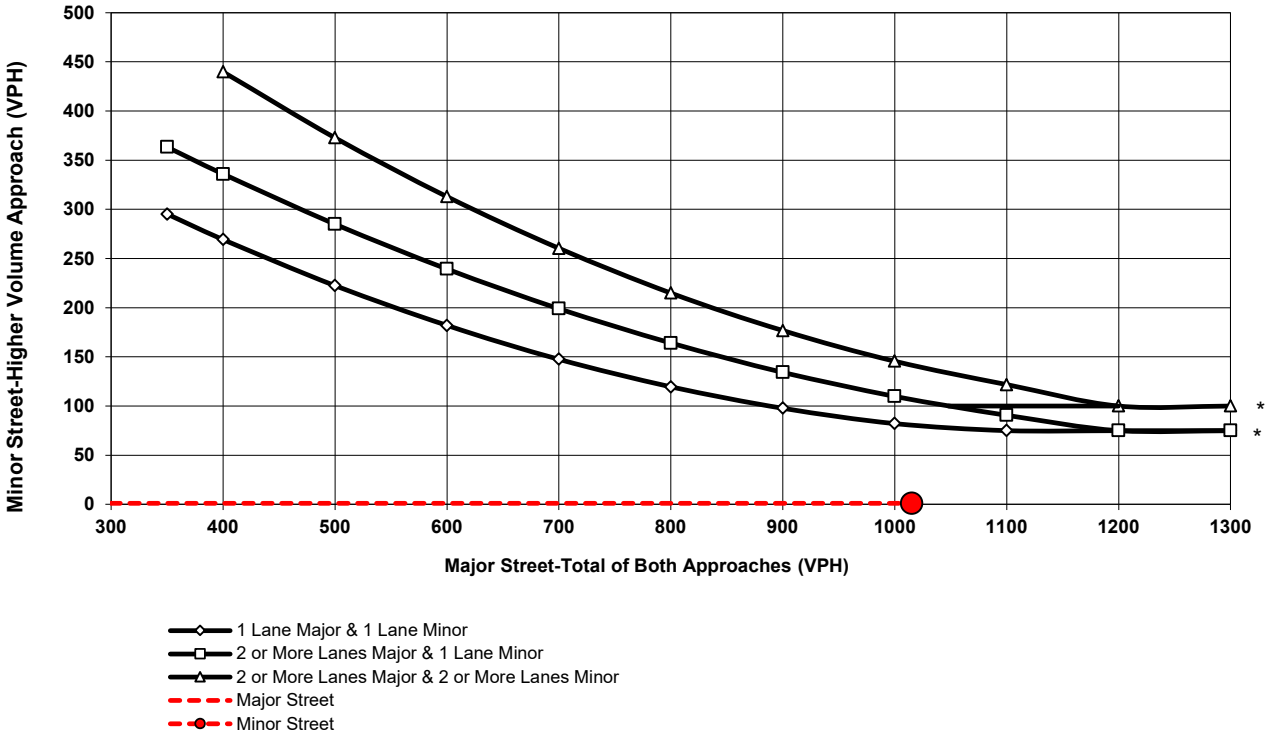
Major Street: Campo Road

Minor Street: Project Driveway

Total of Both Approaches (VPH):	1015	Higher Volume Approach (VPH):	1
Number of Approach Lanes:	2	Number of Approach Lanes:	1

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:
100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

OPENING YEAR PLUS PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: PM

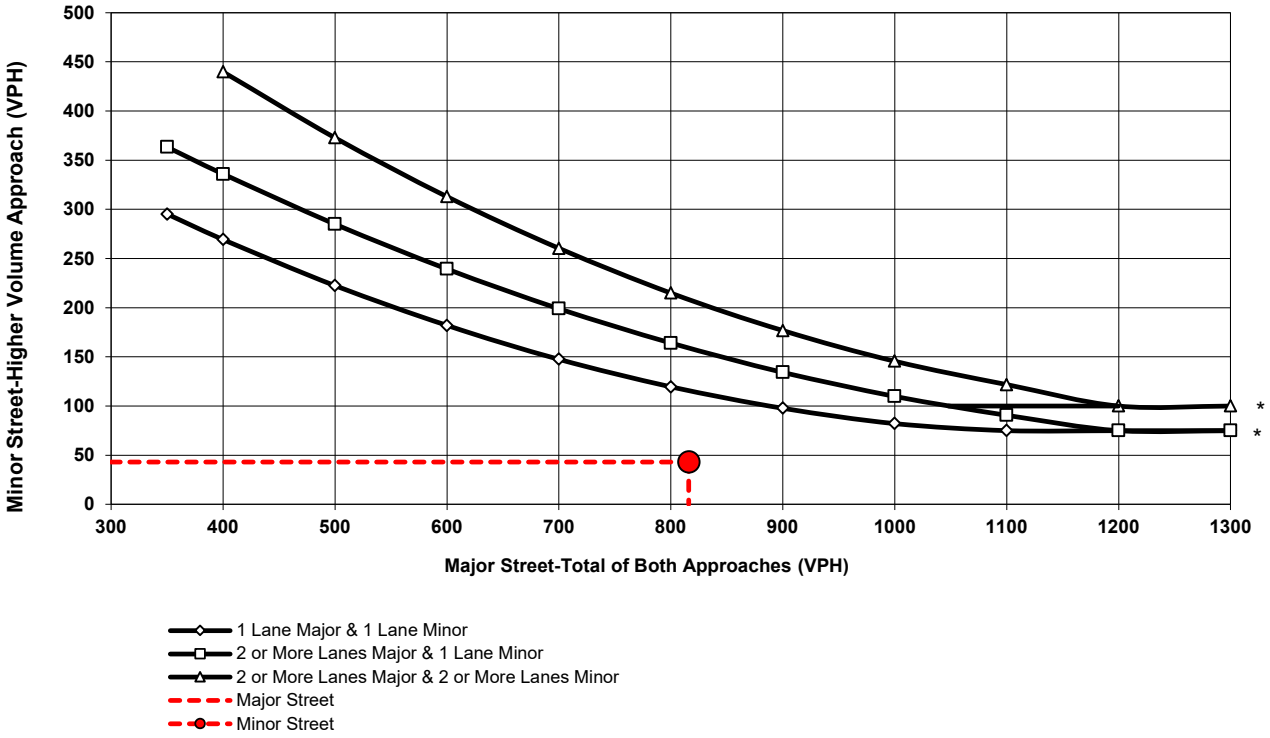
Major Street: Campo Road

Minor Street: Project Driveway

Total of Both Approaches (VPH):	816	Higher Volume Approach (VPH):	43
Number of Approach Lanes:	2	Number of Approach Lanes:	1

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:
100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1