Appendix G2
WQMP

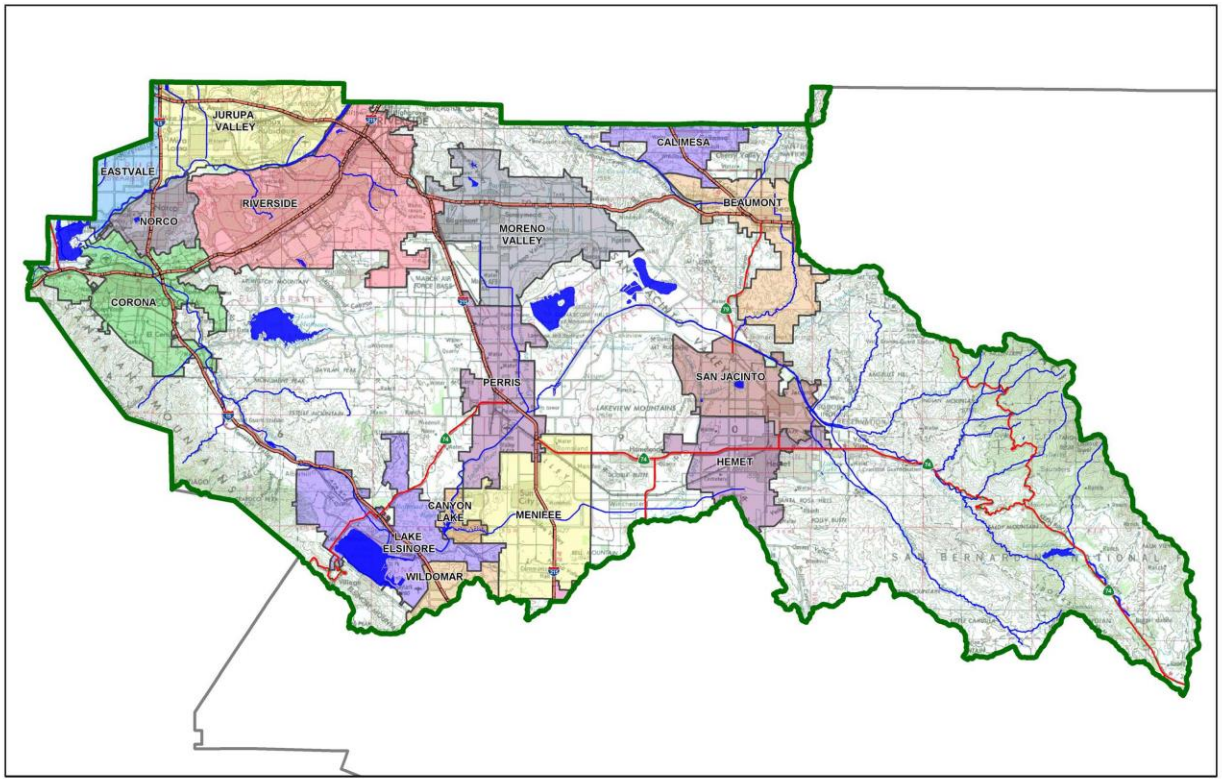
Project Specific Water Quality Management Plan

*A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County*

Project Title: Menifee 27

Development No: Tentative Tract Map 38128

Design Review/Case No: WQ-0280



☒ **Preliminary**
☐ **Final**

Original Date Prepared: 5/31/22

Revision Date(s):

Prepared for Compliance with
Regional Board Order No. **R8-2010-0033**
Template revised June 30, 2016

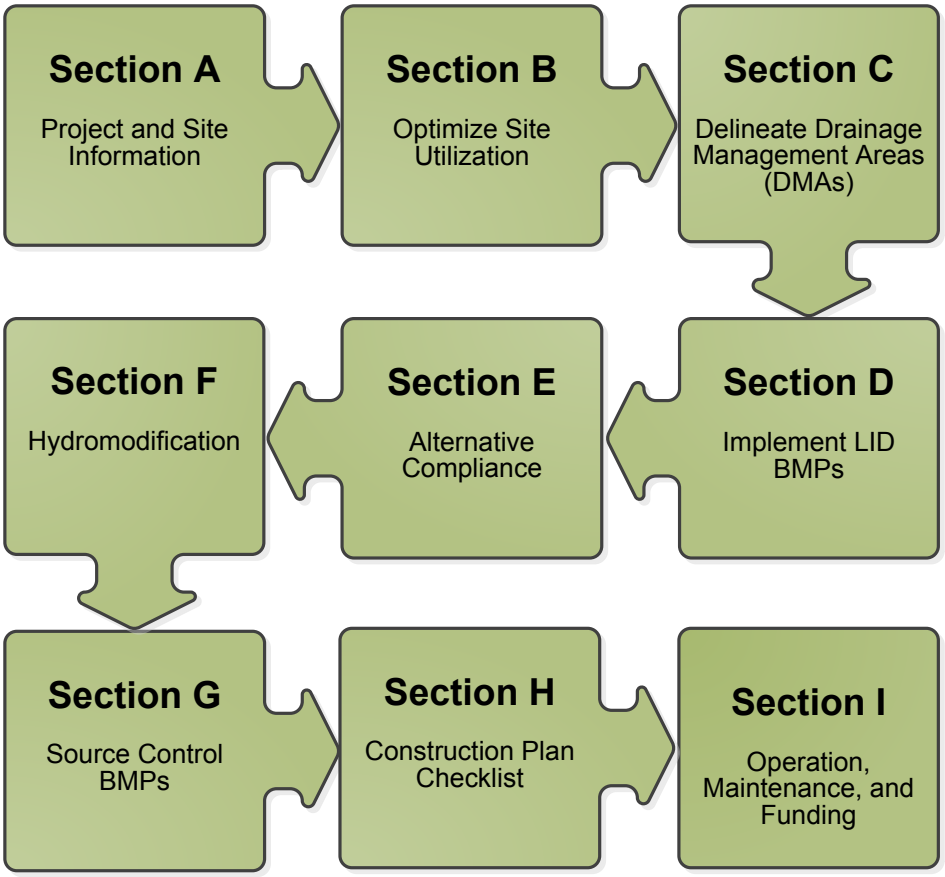
Contact Information:

Prepared for: JEN SoCal 4, LLC
556 S. Fair Oaks Avenue, #337
Pasadena, CA. 91105
(626) 263-4205

Prepared by: Jimmy Chen, P.E.
SP2 & Co.
451 W. Lambert Rd., Suite 216
Brea, CA. 92821
(714) 490-1500

A Brief Introduction

This Project-Specific WQMP Template for the **Santa Ana Region** has been prepared to help guide you in documenting compliance for your project. Because this document has been designed to specifically document compliance, you will need to utilize the WQMP Guidance Document as your "how-to" manual to help guide you through this process. Both the Template and Guidance Document go hand-in-hand, and will help facilitate a well prepared Project-Specific WQMP. Below is a flowchart for the layout of this Template that will provide the steps required to document compliance.



DocuSign Envelope ID: 60FA3489-1BFA-485D-A15B-716483A74073

OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for JEN SoCal 4, LLC by Stevenson, Porto & Pierce, Inc. for the Menifee 27 project.

This WQMP is intended to comply with the requirements of County of Riverside for 754.2 which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under County of Riverside Water Quality Ordinance (Municipal Code Section 754.2).

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

DocuSigned by:
Paul Onufer
41D565187C39465...

Owner's Signature

May 31, 2022

Date

Paul Onufer

Owner's Printed Name

Vice President

Owner's Title/Position

PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."

Preparer's Signature

05/31/2022

Date

Jimmy Chen P.E.

Preparer's Printed Name

Senior Project Manager

Preparer's Title/Position

Preparer's Licensure:



Table of Contents

Section A: Project and Site Information 6

A.1 Maps and Site Plans 6
A.2 Identify Receiving Waters 7
A.3 Additional Permits/Approvals required for the Project: 7

Section B: Optimize Site Utilization (LID Principles) 8

Section C: Delineate Drainage Management Areas (DMAs) 10

Section D: Implement LID BMPs 12

D.1 Infiltration Applicability 12
D.2 Harvest and Use Assessment 13
D.3 Bioretention and Biotreatment Assessment 15
D.4 Feasibility Assessment Summaries 16
D.5 LID BMP Sizing 17

Section E: Alternative Compliance (LID Waiver Program) 18

E.1 Identify Pollutants of Concern 19
E.2 Stormwater Credits 20
E.3 Sizing Criteria 20
E.4 Treatment Control BMP Selection 21

Section F: Hydromodification 22

F.1 Hydrologic Conditions of Concern (HCOC) Analysis 22
F.2 HCOC Mitigation 23

Section G: Source Control BMPs 24

Section H: Construction Plan Checklist 25

Section I: Operation, Maintenance and Funding 26

List of Tables

Table A.1 Identification of Receiving Waters 7
Table A.2 Other Applicable Permits 7
Table C.1 DMA Classifications 10
Table C.2 Type 'A', Self-Treating Areas 10
Table C.3 Type 'B', Self-Retaining Areas 10
Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas – N/A 11
Table C.5 Type 'D', Areas Draining to BMPs 11
Table D.1 Infiltration Feasibility 12
Table D.2 LID Prioritization Summary Matrix 16
Table D.3 DCV Calculations for LID BMPs 17
Table E.1 Potential Pollutants by Land Use Type 19
Table E.2 Water Quality Credits 20
Table E.3 Treatment Control BMP Sizing 20
Table E.4 Treatment Control BMP Selection 21
Table F.1 Hydrologic Conditions of Concern Summary 22
Table G.1 Permanent and Operational Source Control Measures 24
Table H.1 Construction Plan Cross-reference 25

List of Appendices

Appendix 1: Maps and Site Plans 27
Appendix 2: Construction Plans 28
Appendix 3: Soils Information 29
Appendix 4: Historical Site Conditions 30
Appendix 5: LID Infeasibility 31
Appendix 6: BMP Design Details 32
Appendix 7: Hydromodification 33
Appendix 8: Source Control 34
Appendix 9: O&M 35
Appendix 10: Educational Materials ..... - 6 -

Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Single Family Residential
Planning Area:	N/A
Community Name:	N/A
Development Name:	Menifee 27
PROJECT LOCATION	
Latitude & Longitude (DMS): 33°43'50.44"N, 117°13'1.52"W	
Project Watershed and Sub-Watershed: Santa Ana Watershed, San Jacinto River Basin	
Gross Acres: 7.98 acres	
APN(s): 330-230-023 & 330-230-024	
Map Book and Page No.: PM 28/6	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	SFR – Residential (2.1 - 5 DU/AC)
Proposed or Potential SIC Code(s)	1521; General Builder Contractor, Single-Family Residential
Area of Impervious Project Footprint (SF)	566,221 s.f.
Total Area of proposed Impervious Surfaces within the Project Footprint (SF)/or Replacement	566,221 s.f.
Does the project consist of offsite road improvements?	☒ Y ☐ N
Does the project propose to construct unpaved roads?	☐ Y ☒ N
Is the project part of a larger common plan of development (phased project)?	☐ Y ☒ N
EXISTING SITE CHARACTERISTICS	
Total area of existing Impervious Surfaces within the Project limits Footprint (SF)	0 s.f.
Is the project located within any MSHCP Criteria Cell?	☐ Y ☒ N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	☐ Y ☒ N
Is a Geotechnical Report attached?	☐ Y ☒ N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	C, D
What is the Water Quality Design Storm Depth for the project?	0.57

A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a **minimum**, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling
- BMP Locations (Lat/Long)

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

A.2 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
San Jacinto Reach 3 - Canyon Lake (HU 802.11)	Nutrients, Pathogens (Indicator Bacteria)	MUN, AGR, GWR, REC1, REC2, WARM, WILD, RARE	N/A
Lake Elsinore (HU 802.31)	Nutrients, Organic Enrichment/Low Dissolved Oxygen, PCBs, Sedimentation/Siltation	REC1, REC2, WARM, WILD	N/A

A.3 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	☐ Y	☒ N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	☐ Y	☒ N
US Army Corps of Engineers, CWA Section 404 Permit	☐ Y	☒ N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	☐ Y	☒ N
Statewide Construction General Permit Coverage	☒ Y	☐ N
Statewide Industrial General Permit Coverage	☐ Y	☒ N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	☐ Y	☒ N
Other *(please list in the space below as required)*	☐ Y	☐ N

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

Consideration of "highest and best use" of the discharge should also be considered. For example, Lake Elsinore is evaporating faster than runoff from natural precipitation can recharge it. Requiring infiltration of 85% of runoff events for projects tributary to Lake Elsinore would only exacerbate current water quality problems associated with Pollutant concentration due to lake water evaporation. In cases where rainfall events have low potential to recharge Lake Elsinore (i.e. no hydraulic connection between groundwater to Lake Elsinore, or other factors), requiring infiltration of Urban Runoff from projects is counterproductive to the overall watershed goals. Project proponents, in these cases, would be allowed to discharge Urban Runoff, provided they used equally effective filtration-based BMPs.

Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?

Yes; The existing site generally drains from the west to the northeast and will be intercepted by a future inlet structure by the adjacent property. The proposed site improvements allow for all of the developed flows will discharge directly into the future inlet structure which will ultimately discharge into the Romoland MDP Line A.

Did you identify and protect existing vegetation? If so, how? If not, why?

No; the existing site consisted of bare agricultural land and no vegetation.

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

Yes; Although the site was found to have infiltration rates below 1.6 in/hr, care will be taken in constructing the water quality basins to protect what infiltration we do have on site. Sub-drains will be used in the water quality basins. Open space landscaping is implemented throughout the site where feasible will minimizing the proposed impervious surfaces such as street and sidewalk widths to the allowable minimums.

Did you identify and minimize impervious area? If so, how? If not, why?

Yes; Within the development envelope, streets and sidewalks were minimized in order to meet the required overall landscaping percentage of the site. All open space areas within the development envelope are landscaped.

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

Yes; All the runoff from the roofs will be directed to adjacent landscape open spaces prior to converging within the street rights-of-way. Runoff collected by the proposed catch basins and storm drain will ultimately outlet into a proposed BMP basin located at the northeast corner of the property before discharging into the future storm drain inlet to the north. Where feasible, self-retaining areas were implemented within proposed landscape areas throughout the site which collect runoff from adjacent impervious areas. All site runoff will drain to water quality treatment areas before entering the existing storm drain. This disconnection of impervious surfaces will allow for multiple opportunities for the runoff to infiltrate.

Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)[1][2]	Area (Sq. Ft.)	DMA Type
DMA A	Mixed (Roofs, Concrete, Asphalt, Ornamental Landscaping, Compacted Soils)	1,131,976	Type D

[1]*Reference Table 2-1 in the WQMP Guidance Document to populate this column*
[2]*If multi-surface provide back-up*

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				**Type 'C' DMAs that are draining to the Self-Retaining Area**		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C]	Required Retention Depth (inches) [D]

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas **– N/A**

DMA					Receiving Self-Retaining DMA		
DMA Name/ ID	Area (square feet)	Post-project surface type	Impervious fraction	Product		Area (square feet)	Ratio
	[A]		[B]	[C] = [A] x [B]	DMA name /ID	[D]	[C]/[D]

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
DMA A	Extended Detention Basin "A"

Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)? ☐ Y ☒ N

If yes has been checked, Infiltration BMPs shall not be used for the site; proceed to section D.3

If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermittee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? ☐ Y ☒ N

Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

Table D.1 Infiltration Feasibility

Does the project site…	YES	NO
…have any DMAs with a seasonal high groundwater mark shallower than 10 feet?		X
If Yes, list affected DMAs:		
…have any DMAs located within 100 feet of a water supply well?		X
If Yes, list affected DMAs:		
…have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact?		X
If Yes, list affected DMAs:		
…have measured in-situ infiltration rates of less than 1.6 inches / hour?	X	
If Yes, list affected DMAs: All (A)		
…have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?		X
If Yes, list affected DMAs:		
…geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		X
Describe here:		

If you answered "Yes" to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

D.2 Harvest and Use Assessment

Please check what applies*:*

☐ Reclaimed water will be used for the non-potable water demands for the project.

☐Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).

☐The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If none of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

Irrigation Use Feasibility – Not Feasible

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape: 3.32 acres

Type of Landscaping (Conservation Design or Active Turf): Active Turf

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 14.38 acres

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

Enter your EIATIA factor: 0.40

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area: 5.75 acres

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
5.75 acres	3.32 acres

Toilet Use Feasibility – Not Feasible

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shut downs or other lapses in occupancy:

Projected Number of Daily Toilet Users: 384 toilet users

Project Type: Residential

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 14.38 acres

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-2 in Chapter 2 to determine the minimum number or toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: 96.2 tu/ac

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

Minimum number of toilet users: 1,384 users

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	Projected number of toilet users (Step 1)
1,384 Toilet Users	384 toilet users

Other Non-Potable Use Feasibility – Not Feasible

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

N/A

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shut downs or other lapses in occupancy or operation.

Average Daily Demand: Projected Average Daily Use (gpd)

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: Insert Area (Acres)

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-4 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-4: Enter Value

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: Minimum use required (gpd)

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the projected average daily use (Step 1) to the minimum required non-potable use (Step 4).

Minimum required non-potable use (Step 4)	**Projected average daily use (Step 1)**
N/A	N/A

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment per Section 3.4.2 of the WQMP Guidance Document.

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

☒ LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

☐ A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
DMA A	☐	☐	☐	☒	☐

For those DMAs where LID BMPs are not feasible, provide a brief narrative below summarizing why they are not feasible, include your technical infeasibility criteria in Appendix 5, and proceed to Section E below to document Alternative Compliance measures for those DMAs. Recall that each proposed DMA must pass through the LID BMP hierarchy before alternative compliance measures may be considered.

Insert narrative description here.

D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First**,** calculate the Design Capture Volume for each LID BMP using the V_{BMP} worksheet in Appendix F of the LID BMP Design Handbook. Second**,** design the LID BMP to meet the required V_{BMP} using a method approved by the Copermittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Copermittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Extended Detention Basin "A"*		
DMA 1	[A]		[B]	[C]	[A] x [C]			
Streets & Sidewalks	*260,034*	*Concrete or Asphalt*	*1.0*	*0.89*	*231,950.3*			
Residential Impervious	*366,282*	*Roofs*	*1.0*	*0.89*	*231,950.3*			
Residential Pervious	*366,282*	*Ornamental Landscaping*	*0.01*	*0.11*	*40,458.8*			
Open Space Landscape	*144,679*	*Ornamental Landscaping*	*0.1*	*0.11*	*15,981*	*Design Storm Depth (in)*	*Design Capture Volume,* V_{BMP} *(cubic feet)*	*Proposed Volume on Plans (cubic feet)*
	$A_T = \Sigma[A]$ **1,137,277**				Σ= [D] **615,113.6**	[E] **0.57**	$[F] = \frac{[D]x[E]}{12}$ **29,217.9**	[G] **100,188**

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Copermittee). Check one of the following Boxes:

☒ LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- *Or* -

☐ The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

List DMAs here.

E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project's receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil & Grease
☒ Detached Residential Development	P	N	P	P	N	P	P	P
☐ Attached Residential Development	P	N	P	P	N	P	P	P(2)
☐ Commercial/Industrial Development	P(3)	P	P(1)	P(1)	P(5)	P(1)	P	P
☐ Automotive Repair Shops	N	P	N	N	P(4, 5)	N	P	P
☐ Restaurants (>5,000 ft^2)	P	N	N	N	N	N	P	P
☐ Hillside Development (>5,000 ft^2)	P	N	P	P	N	P	P	P
☐ Parking Lots (>5,000 ft^2)	P(6)	P	P(1)	P(1)	P(4)	P(1)	P	P
☐ Retail Gasoline Outlets	N	P	N	N	P	N	P	P
Project Priority Pollutant(s) of Concern	☒	☐	☒	☒	☐	☒	☐	☐

P = Potential

N = Not Potential

(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

(3) A potential Pollutant is land use involving animal waste

(4) Specifically petroleum hydrocarbons

(5) Specifically solvents

(6) Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage[2]
Total Credit Percentage[1]	

[1]Cannot Exceed 50%

[2]Obtain corresponding data from Table 3-8 in the WQMP Guidance Document

E.3 Sizing Criteria

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	**DMA Area (square feet)**	**Post-Project Surface Type**	**Effective Impervious Fraction, I_f**	**DMA Runoff Factor**	**DMA Area x Runoff Factor**		***Enter BMP Name / Identifier Here***		
	[A]		[B]	[C]	[A] x [C]				
						Design Storm Depth (in)	*Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)*	*Total Storm Water Credit % Reduction*	*Proposed Volume or Flow on Plans (cubic feet or cfs)*
	$A_T = \Sigma[A]$				$\Sigma = [D]$	[E]	$[F] = \frac{[D]x[E]}{[G]}$	[F] X (1-[H])	[I]

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document

[E] is for Flow-Based Treatment Control BMPs [E] = .2, for Volume-Based Control Treatment BMPs, [E] obtained from Exhibit A in the WQMP Guidance Document

[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12

[H] is from the Total Credit Percentage as Calculated from Table E.2 above

[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- **High**: equal to or greater than 80% removal efficiency
- **Medium**: between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID[1]	Priority Pollutant(s) of Concern to Mitigate[2]	Removal Efficiency Percentage[3]
Extended Detention Basin	Nutrients, Sediments	Medium

[1] Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.
[2] Cross Reference Table E.1 above to populate this column.
[3] As documented in a Co-Permittee Approved Study and provided in Appendix 6.

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figure 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply.

HCOC EXEMPTION 2: The volume and time of concentration[1] of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	**Post-condition**	**% Difference**
Time of Concentration	INSERT VALUE	INSERT VALUE	INSERT VALUE
Volume (Cubic Feet)	INSERT VALUE	INSERT VALUE	INSERT VALUE

[1] Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Susceptibility Maps.

Does the project qualify for this HCOC Exemption? ☒ Y ☐ N

If Yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

The proposed developed outlets into the future drainage system of the adjacent development including their BMP basin. Their system outlets into the future RCFC & WCD MDP Line A which connects to the Romoland channel. Ultimately the runoff ends up in the Canyon Lake Reservoir.

F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.

b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.

c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Be sure to include all pertinent documentation used in your analysis of the items a, b or c in Appendix 7.

C. TR55 Method has been used to determine the Hydromodification Volume required. This volume was compared with the Water Quality Vbmp and the larger of the two volumes was used to size the BMPs. In this case, it was determined that the Water Quality Vbmp governed the sizing of the BMP.

Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and "housekeeping", that must be implemented by the site's occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. ***Identify Pollutant Sources*:** Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.

2. ***Note Locations on Project-Specific WQMP Exhibit*:** Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.

3. ***Prepare a Table and Narrative*:** Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. **Add additional narrative** in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.

4. ***Identify Operational Source Control BMPs:*** To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
Onsite Storm Drain Inlets	Mark with "Only Rain in the Drain"	Maintain regularly, provide educational material to residents (good practices and discharge prohibitions)
Landscape/Outdoor Pesticide Use	Landscaping plans to include: design for minimal irrigation, fertilizers & pesticides (mep)	Maintenance staff education and prohibitions
Sidewalks & Streets	N/A	Sweep regularly and prevent litter from accumulating (no cleaning agents or degreasers discharging to storm drain system)

Roofing, gutters, and trim	Avoid roofing, gutter, and trim made of copper or other unprotected metals that may leach into runoff.	N/A

Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)	BMP Location (Lat/Long)
"A"	Extended Detention Basin	Preliminary WQMP Site Plan Sheet 1 (Page 29) Conceptual Grading Plan Sheet2	LAT: 33°43'54.55"N LONG: 117°12'55.45"W

Note that the updated table — or Construction Plan WQMP Checklist — is **only a reference tool** to facilitate an easy comparison of the construction plans to your Project-Specific WQMP. Co-Permittee staff can advise you regarding the process required to propose changes to the approved Project-Specific WQMP.

Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

Maintenance Mechanism: *Public facilities, like the storm drain system within public right-of-way, will be maintained by the County of Riverside and funded by county maintenance funds. Private facilities, like the extended detention basin, will be maintained and funded by the Home Owners' Association.* ***(TBD)***

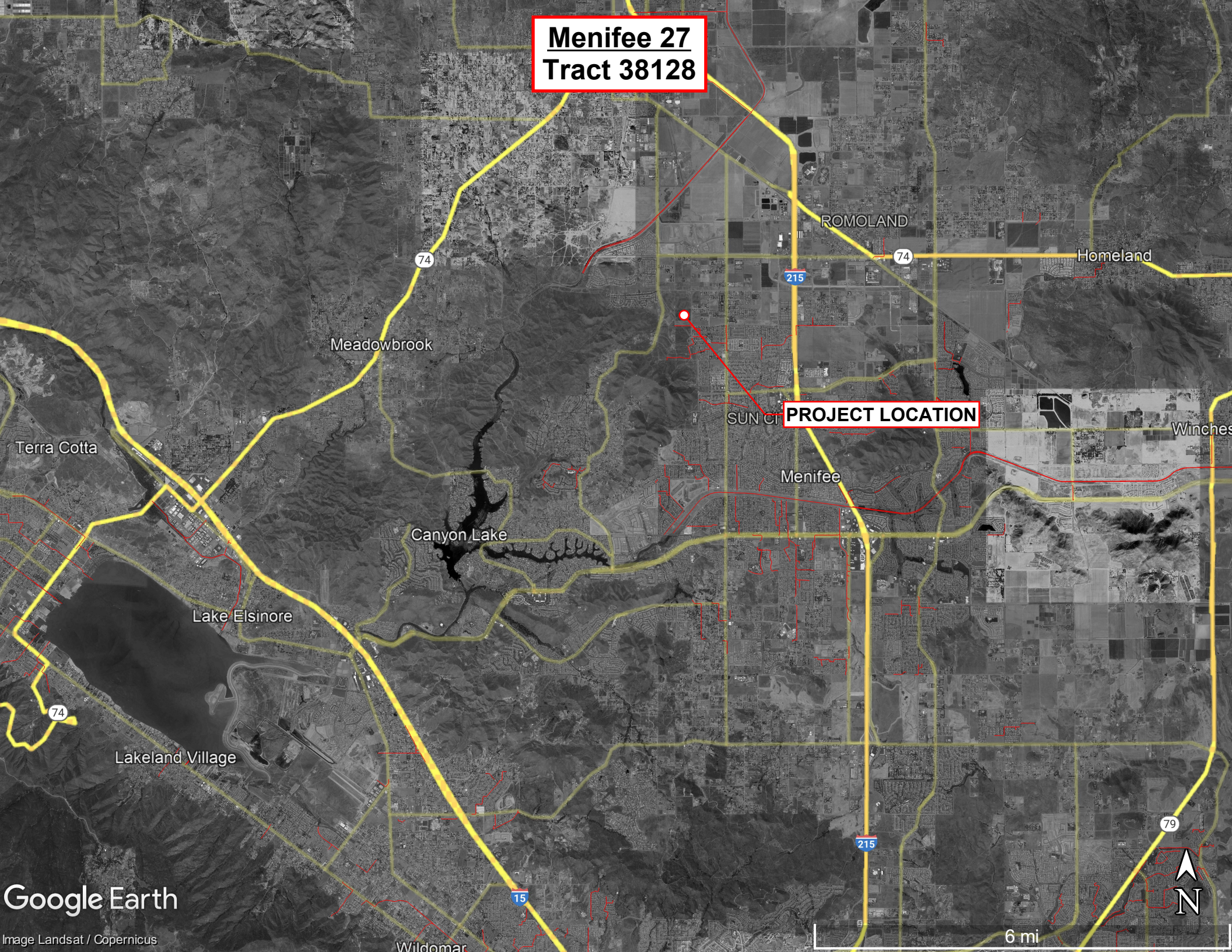
Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

☒ Y ☐ N

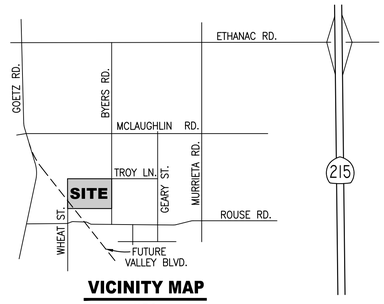
Include your Operation and Maintenance Plan and Maintenance Mechanism in Appendix 9. Additionally, include all pertinent forms of educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP in Appendix 10.

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan and Receiving Waters Map


Menifee 27
Tract 38128
PROJECT LOCATION
ROMOLAND
Homeland
Meadowbrook
Terra Cotta
Menifee
Canyon Lake
Lake Elsinore
Lakeland Village
Wildomar
74
215
15
79
Google Earth
Image Landsat / Copernicus
6 mi
N





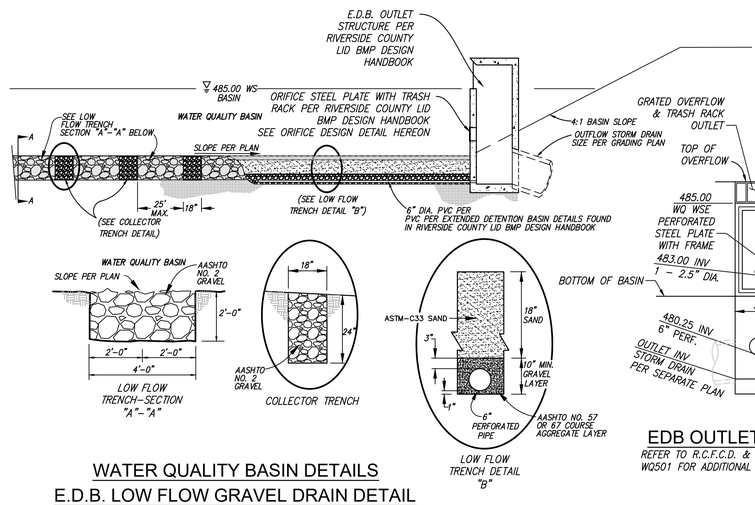
VICINITY MAP
N.T.S.

LEGEND

- FLOW ARROW
- DMA BOUNDARY
- IMPERVIOUS AREAS: (PAVED / ROOFED AREAS)
- PERVIOUS AREAS: (OPEN SPACE LANDSCAPING AND BMP BASINS)

WATER QUALITY VOLUME SUMMARY

	DMA A:
IMPERVIOUS AREAS: (PAVED / ROOFED AREAS)	626,316 S.F.
PERVIOUS AREAS: (OPEN SPACE LANDSCAPING AND BMP BASINS)	510,961 S.F.
TOTAL AREA:	26.11 ACRES
REQUIRED V_{BMP}:	29,218 cu.-ft.
PROPOSED BMP AND LOCATION	EXTENDED DETENTION BASIN "A" LAT: 33°43'54.55"N LONG: 117°12'55.45"W



WATER QUALITY BASIN DETAILS
E.D.B. LOW FLOW GRAVEL DRAIN DETAIL
N.T.S.

EDB OUTLET DETAIL
REFER TO R.C.F.C.D. & W.C.D. STD. DWG. WQ501 FOR ADDITIONAL DETAILS



85TH PERCENTILE, 24-HOUR RAIN FALL DEPTH FROM ISOHYETAL MAP: D_{85} = 0.57 IN

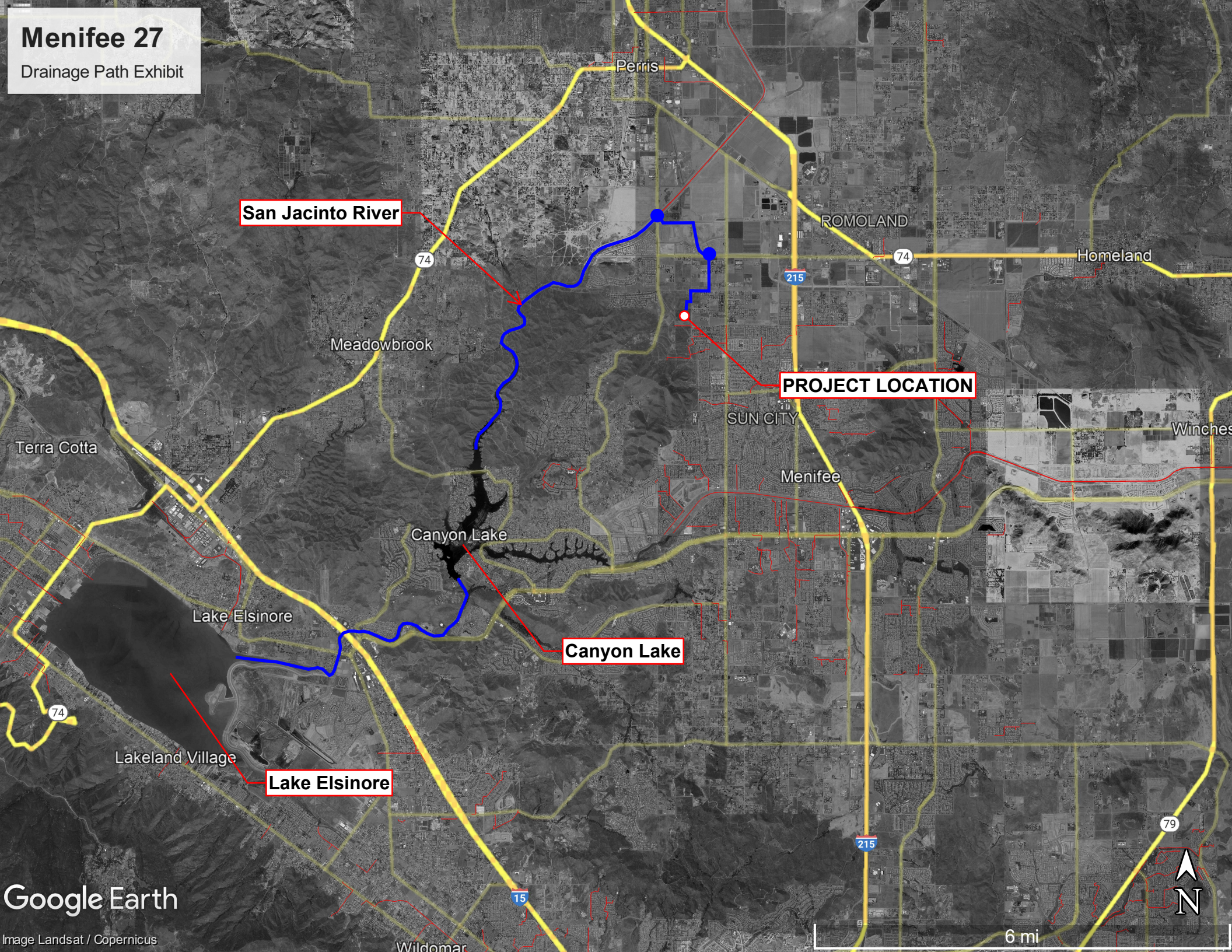
PREPARED BY:
SP2 & Co.
A LAND DEVELOPMENT SERVICES COMPANY
265 S. RANDOLPH AVENUE #105
BREA, CA 92821
PHONE: (714) 490–1500
"SERVING THE DEVELOPMENT COMMUNITY SINCE 1985"

TENTATIVE TRACT MAP 38128
PRELIMINARY WATER QUALITY MANAGEMENT PLAN
SITE PLAN

Plotted: May 31, 2022 – 3:19pm By: AlexanderJaramillo DWG: C:\Users\AlexanderJaramillo\OneDrive – sp2inc.com\Projects\Menifee_27\Stormwater\Preliminary WQMP\Drawings\PWQMP–Site Plan.dwg

Menifee 27

Drainage Path Exhibit



APPENDIX A

2016 INTEGRATED REPORT
SUMMARY OF REGIONAL BOARD NEW LISTINGS

WATERBODY	POLLUTANT
Big Bear Lake	Chlordane DDT (Dichlorodiphenyltrichloroethane)
Bolsa Bay Marsh	Toxicity
Bolsa Chica Ecological Reserve	Toxicity
Bonita Creek	Benthic Community Effects Toxicity
Lake Elsinore	DDT (Dichlorodiphenyltrichloroethane)
Little Corona Del Mar Beach	Indicator Bacteria
Newport Bay, Upper	Malathion
Peters Canyon Channel	Benthic Community Effects Malathion Selenium Toxicity
Prado Flood Control Basin	pH
San Diego Creek, Reach 1	Benthic Community Effects DDT (Dichlorodiphenyltrichloroethane) Malathion Toxicity
San Diego Creek, Reach 2	Benthic Community Effects
San Timoteo Creek, Reach 1A	Indicator Bacteria
San Timoteo Creek, Reach 2	Indicator Bacteria
San Timoteo Creek, Reach 3	Indicator Bacteria
Santiago Creek, Reach 4	Toxicity
Serrano Creek	Benthic Community Effects Toxicity
Silverado Creek	Toxicity
Talbert Channel	Toxicity
Warm Creek	Indicator Bacteria

SUMMARY OF REGIONAL BOARD NEW DELISTINGS

WATERBODY	POLLUTANT
Anaheim Bay	Dieldrin
Canyon Lake	Indicator Bacteria
Chino Creek, Reach 1B	Chemical Oxygen Demand (COD)
Cucamonga Creek, Reach 1	Indicator Bacteria
Lake Fulmor	Indicator Bacteria
Huntington Harbour	Nickel
Lytle Creek	Indicator Bacteria
Mill Creek, Reach 2	Indicator Bacteria
Newport Bay, Lower	Chlorpyrifos
Newport Bay, Upper (Ecological Reserve)	Chlorpyrifos Metals
San Diego Creek, Reach 1	Pesticides
Santa Ana Delhi Channel	Indicator Bacteria
Santa Ana River, Reach 2	Indicator Bacteria
Santa Ana River, Reach 3	Copper Lead
Silverado Creek	Indicator Bacteria
Temescal Creek, Reach 6	Indicator Bacteria

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Reach 6 – Elsinore Groundwater Subbasin Boundary to Lake Elsinore Outlet	+				I			I	I		I				I				801.35	
Coldwater Canyon Creek	X	X			X			X	X		X				X		X		801.32	
Bedford Canyon Creek	+				I			I	I		I				I	X			801.32	
Dawson Canyon Creek	I				I			I	I		I				I				801.32	
Other Tributaries to these Creeks	I				I			I	I		I				I				801.32	
SAN JACINTO RIVER BASIN																				
San Jacinto River																				
Reach 1 – Lake Elsinore to Canyon Lake	I	I			I			I	I		I				I	X			801.32	802.31
Reach 2 – Canyon Lake (see Lakes Pg. 3-45)																				
Reach 3 – Canyon Lake to Nuevo Road	+	I			I			I	I		I				I	X			802.11	
Reach 4 – Nuevo Road to North-South Mid-Section Line, T4S/R1W-S8	+	I			I			I	I		I				I	X			802.21	802.21

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

Table 3-1 BENEFICIAL USES - Continued

GROUNDWATER MANAGEMENT ZONES	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
San Timoteo	X	X	X	X															801.62	801.61
Yucaipa	X	X	X	X															801.61	801.55, 801.63, 801.67
MIDDLE SANTA ANA RIVER BASIN																				
Arlington	X	X	X	X															801.26	
Bedford	X	X	X	X															801.32	481.31
Coldwater	X	X	X	X															801.31	
Elsinore	X	X		X															802.31	
Lee Lake	X	X	X	X															801.34	
Riverside - A	X	X	X	X															801.27	801.44
Riverside – B	X	X	X	X															801.27	801.44
Riverside - C	X	X	X	X															801.27	
Riverside - D	X	X	X	X															801.27	801.26
Riverside - E	X	X	X	X															801.27	
Riverside - F	X	X	X	X															801.27	
Temescal	X	X	X	X															801.25	
Warm Spring Valley	X	X	X	X															801.31	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

Appendix 2: Construction Plans

Grading and Drainage Plans

TENTATIVE TRACT MAP 38128

PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4, OF SECTION 17, T. 5 S., R. 3 W., S.B.M.
IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

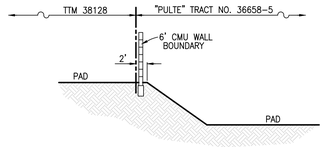
REVISIONS		
NO.	BY	DESCRIPTION
1		
2		
3		

60' 0 60' 120' 180'
SCALE: 1"=60'

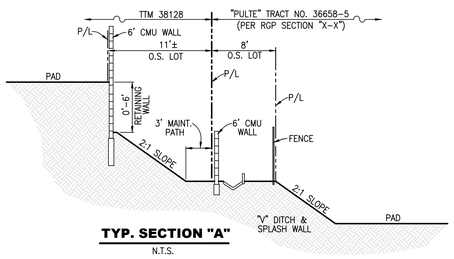
LEGEND:

CL	CENTERLINE	TC	TOP OF CURB
EXIST.	EXISTING	FG	FINISHED GRADE
C&G	CURB AND GUTTER	TW	TOP OF WALL
GB	GRADE BREAK	INV	INVERT ELEVATION
HP	HIGH POINT	HP	HIGH POINT
LP	LOW POINT	P/L	PROPERTY LINE
FL	FLOW LINE	LP	LOW POINT
EP	EDGE OF PAVEMENT	CB	CATCH BASIN
R/W	RIGHT OF WAY	BSL	BUILDING SETBACK LINE
PROP.	PROPOSED		FIRE HYDRANT
P=	PAD ELEVATION		STREET LIGHT
EVA	EMERGENCY VEHICULAR ACCESS		

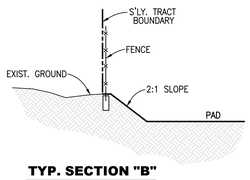
TRACT BOUNDARY
PROP. SLOPE
1430 EXIST. CONTOUR
S PROP. SEWER LINE
W PROP. WATER LINE
SD PROP. STORM DRAIN LINE



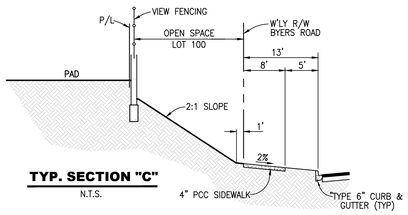
"ALTERNATE SECTION"
TYP. SECTION "A"
N.T.S.



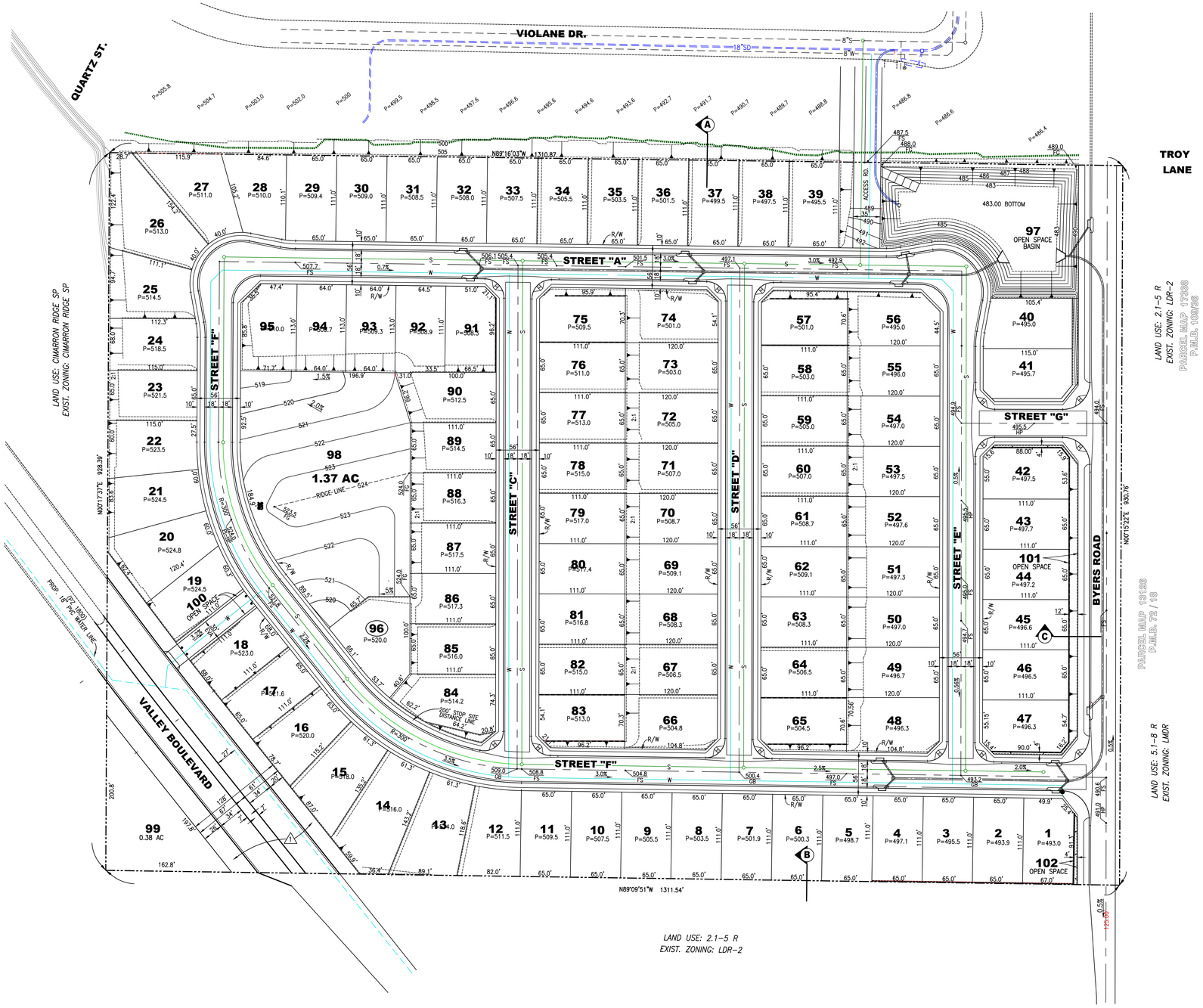
TYP. SECTION "A"
N.T.S.

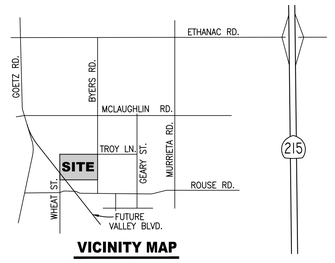


TYP. SECTION "B"
N.T.S.



TYP. SECTION "C"
N.T.S.





VICINITY MAP
N.T.S.

UTILITY PURVEYORS

SCHOOL DISTRICT: MENIFEE UNION-PERRIS UNION HIGH
SEWER: EASTERN MUNICIPAL WATER DISTRICT
WATER: EASTERN MUNICIPAL WATER DISTRICT
DRAINAGE: CITY OF MENIFEE/RIVERSIDE COUNTY FLOOD CONTROL
GAS: SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC: SOUTHERN CALIFORNIA EDISON COMPANY

FLOOD ZONE DESIGNATION

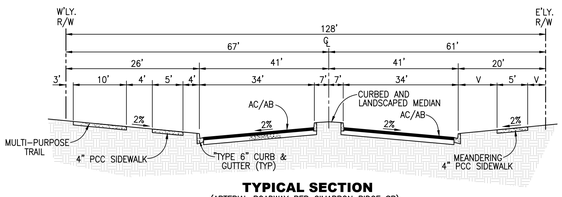
ZONE X, MAP PANEL #06065C2055H
EFFECTIVE DATE: AUGUST 18, 2014

AREA OF 0.2% ANNUAL FLOOD CHANCE; OF 1% ANNUAL FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

GENERAL NOTES:

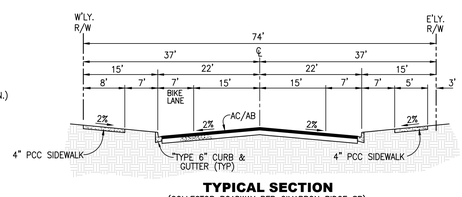
1. MAP PREPARATION DATE: 8/2021
2. TOTAL SITE ACREAGE:
   - 27.98 ACRES GROSS
3. ASSESSOR'S PARCEL NUMBERS: 330-230-023 AND 330-230-024
4. EXIST. AND PROPOSED LAND USE: 2.1-5 DU/AC RESIDENTIAL (2.1-5 R)
5. EXIST. AND PROPOSED ZONING: LOW DENSITY RESIDENTIAL-2 (LDR-2) [7,200 SF]
6. DEVELOPMENT STANDARDS:
   - MIN. NET LOT SIZE: 7,200 SF
   - MIN. LOT WIDTH: 40'
   - MIN. LOT DEPTH: 90'
   - MIN. CUL-DE-SAC FRONTAGE: 35'
   - MIN. FRONT YARD SETBACK: 15'*
   - MIN. REAR YARD SETBACK: 10'
   - MIN. INTERIOR SIDE YARD SETBACK: 5'
   - MIN. CORNER SIDE YARD SETBACK: 15'

   * MIN. 20' TO FACE OF GARAGE
7. TOPOGRAPHY SOURCE:
   - AEROTECH MAPPING, INC. DATED JULY 2021.
8. BOUNDARY DATA SHOWN HEREON IS BASED ON A FIELD BOUNDARY SURVEY CONDUCTED IN JULY 2021.
9. LOT 97 TO BE DEDICATED FOR DRAINAGE MITIGATION PURPOSES.
10. LOT 98 (PARK SITE) TO BE MAINTAINED BY HOA.
11. LOT 99 TO BE RETAINED BY THE LAND OWNER.

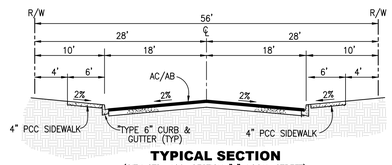


V=VARIES (2' MIN.)

TYPICAL SECTION
(ARTERIAL ROADWAY PER CIMARRON RIDGE SP)
VALLEY BOULEVARD N.T.S.



TYPICAL SECTION
(COLLECTOR ROADWAY PER CIMARRON RIDGE SP)
BYERS ROAD N.T.S.



TYPICAL SECTION
(CITY STD. 106, SECTION "A"-LOCAL STREET)
STREETS "A" THROUGH "G" N.T.S.

LEGAL DESCRIPTION

THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 5 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF;

EXCEPT THE SOUTH 390.00 FEET.

EASEMENT NOTES

1. AN OFFER OF DEDICATION IN FAVOR OF THE COUNTY OF RIVERSIDE, FOR FOR PUBLIC ROADS, PUBLIC UTILITY AND PUBLIC SERVICES AND INCIDENTAL PURPOSES, RECORDED AUGUST 22, 1962, IN BOOK 3207, PAGE 176, O.R.

   PORTION WERE LATER ACCEPTED THROUGH RESOLUTION NO. 2006-070, RECORDED APRIL 13, 2006, AS INSTRUMENT NO. 2006-0266402, O.R
2. AN EASEMENT IN FAVOR OF THE W.G. JENKINS, FOR PIPE LINES, DITCHES, FLUMES, OR OTHER WATER CONDUITS AND INCIDENTAL PURPOSES, RECORDED JANUARY 22, 1930, IN BOOK 836, PAGE 512, O.R.
   THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

PREPARED BY (ENGINEER):
STEVENSON, PORTO & PIERCE, INC.
A LAND DEVELOPMENT SERVICES COMPANY
265 S. RANDOLPH AVENUE #105
BREA, CA 92821
PHONE: (714) 490-1500
CONTACT: HENRY LOZANO

PREPARED FOR (APPLICANT):
JEN SoCaL 4, LLC
556 S. FAIR OAKS AVENUE #337
PASADENA, CA 91105
PHONE: (626) 263-4205
CONTACT: PAUL ONUFER

OWNER:
HAN FAMILY TRUST
3913 MALIBU VISTA DRIVE
MALIBU, CA 90265
CONTACT: STEVE SUNGKU HAN

TENTATIVE TRACT MAP 38128

PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4, OF SECTION 17, T. 5 S., R. 3 W., S.B.M.
IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

REVISIONS		
NO.	BY	DESCRIPTION
△		
△		
△		

60' 0 60' 120' 180'
SCALE: 1"=60'

LEGEND:

CL	CENTERLINE	TC	TOP OF CURB
EXIST.	EXISTING	FG	FINISHED GRADE
C&G	CURB AND GUTTER	TW	TOP OF WALL
GB	GRADE BREAK	INV	INVERT ELEVATION
HP	HIGH POINT	HP	HIGH POINT
LP	LOW POINT	P/L	PROPERTY LINE
FL	FLOW LINE	LP	LOW POINT
EP	EDGE OF PAVEMENT	CB	CATCH BASIN
R/W	RIGHT OF WAY	BSL	BUILDING SETBACK LINE
PROP.	PROPOSED		FIRE HYDRANT
P=	PAD ELEVATION		STREET LIGHT
EVA	EMERGENCY VEHICULAR ACCESS		
CMU	CONCRETE MASONRY UNIT		
NG	NATURAL GRADE		

TYPICAL CROSS-SECTION — SECTION REFERENCE (X/X) — SHEET NO.

TRACT BOUNDARY
PROP. SLOPE
1430 EXIST. CONTOUR
S PROP. SEWER LINE
W PROP. WATER LINE
SD PROP. STORM DRAIN LINE
PROP. HOA MAINTAINED LANDSCAPE EASEMENT
PROP. PARK SITE EASEMENT
LINE OF SIGHT-LIMITED USE AREA
"LINE OF SIGHT" LINE

UTILITY PURVEYORS

SCHOOL DISTRICT: MENIFEE UNION-PERRIS UNION HIGH
SEWER: EASTERN MUNICIPAL WATER DISTRICT
WATER: EASTERN MUNICIPAL WATER DISTRICT
DRAINAGE: CITY OF MENIFEE/RIVERSIDE COUNTY FLOOD CONTROL
GAS: SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC: SOUTHERN CALIFORNIA EDISON COMPANY

FLOOD ZONE DESIGNATION

ZONE X, MAP PANEL #06065C2055H
EFFECTIVE DATE: AUGUST 18, 2014

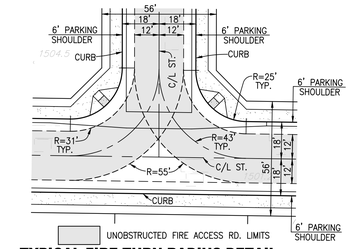
AREA OF 0.2% ANNUAL FLOOD CHANCE; OF 1% ANNUAL FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

PROPOSED EASEMENT NOTES

A PROPOSED EASEMENT IN FAVOR OF THE CITY OF MENIFEE AND E.M.W.D. FOR PUBLIC UTILITIES, ACCESS AND EMERGENCY OVERFLOW PURPOSES TO BE DEDICATED ON FINAL MAP.

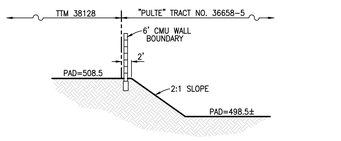
B PROPOSED EASEMENT IN FAVOR OF H.O.A. FOR LANDSCAPE MAINTENANCE PURPOSES TO BE DEDICATED ON FINAL TRACT MAP.

C PROPOSED EASEMENT IN FAVOR OF THE CITY OF MENIFEE AND E.M.W.D. FOR PUBLIC UTILITIES AND ACCESS PURPOSES TO BE DEDICATED ON FINAL MAP.



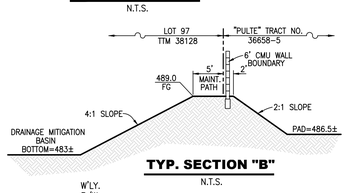
TYPICAL FIRE TURN RADIUS DETAIL

SCALE: 1"=30'



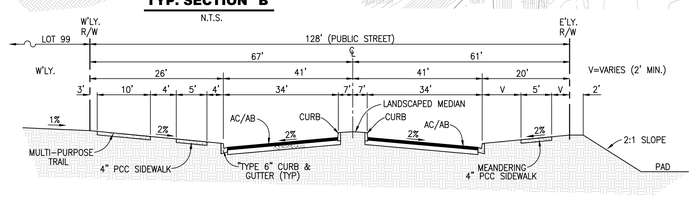
TYP. SECTION "A"

N.T.S.

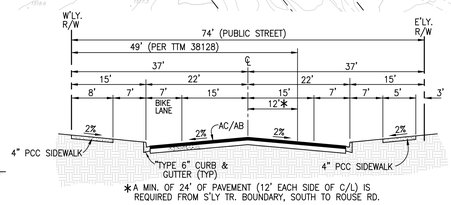


TYP. SECTION "B"

N.T.S.

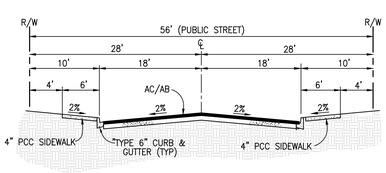


TYPICAL SECTION
(ARTERIAL ROADWAY PER CIMARRON RIDGE SP) N.T.S.
VALLEY BOULEVARD



*A MIN. OF 24' OF PAVEMENT (12' EACH SIDE OF C/L) IS REQUIRED FROM STY TR. BOUNDARY, SOUTH TO ROUSE RD.

TYPICAL SECTION
(COLLECTOR ROADWAY PER CIMARRON RIDGE SP) N.T.S.
BYERS ROAD



TYPICAL SECTION
(CITY STD. 106, SECTION "A"-LOCAL STREET)
STREETS "A" THROUGH "G" N.T.S.

LEGAL DESCRIPTION

THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 5 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF;

EXCEPT THE SOUTH 390.00 FEET.

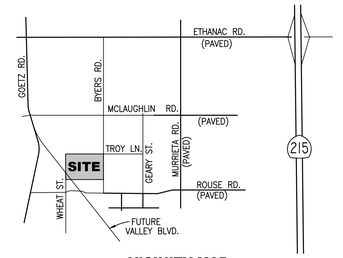
EXIST. EASEMENT NOTES

1 AN OFFER OF DEDICATION IN FAVOR OF THE COUNTY OF RIVERSIDE, FOR FOR PUBLIC ROADS, PUBLIC UTILITY AND PUBLIC SERVICES AND INCIDENTAL PURPOSES, RECORDED AUGUST 22, 1962, IN BOOK 3207, PAGE 176, O.R. PORTIONS WERE LATER ACCEPTED THROUGH RESOLUTION NO. 2006-070, RECORDED APRIL 13, 2006, AS INSTRUMENT NO. 2006-0266402, O.R.

-EASEMENT SHALL REMAIN IN EFFECT

2 AN EASEMENT IN FAVOR OF THE W.G. JENKINS, FOR PIPE LINES, DITCHES, FLUMES, OR OTHER WATER CONDUITS AND INCIDENTAL PURPOSES, RECORDED JANUARY 22, 1930, IN BOOK 836, PAGE 512, O.R.
THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

-EASEMENT WILL BE ABANDONED PRIOR TO MAP RECORDATION



VICINITY MAP

N.T.S.

LOT #	LOT AREA (SF)	LOT WIDTH	LOT DEPTH	LOT #	LOT AREA (SF)	LOT WIDTH	LOT DEPTH
1	7,200	67.0'	111.0'	56	8,082	70.6'	120.0'
2	7,215	65.0'	111.0'	57	7,785	65.0'	111.0'
3	7,215	65.0'	111.0'	58	7,215	65.0'	111.0'
4	7,215	65.0'	111.0'	59	7,215	65.0'	111.0'
5	7,215	65.0'	111.0'	60	7,215	65.0'	111.0'
6	7,215	65.0'	111.0'	61	7,215	65.0'	111.0'
7	7,215	65.0'	111.0'	62	7,215	65.0'	111.0'
8	7,215	65.0'	111.0'	63	7,215	65.0'	111.0'
9	7,215	65.0'	111.0'	64	7,215	65.0'	111.0'
10	7,215	65.0'	111.0'	65	7,643	70.6'	111.0'
11	7,215	65.0'	111.0'	66	8,413	70.3'	120.0'
12	8,066	71.0'	113.0'	67	7,800	65.0'	120.0'
13	9,504	74.0'	127.0'	68	7,800	65.0'	120.0'
14	11,072	74.0'	158.0'	69	7,800	65.0'	120.0'
15	8,880	72.0'	123.0'	70	7,800	65.0'	120.0'
16	7,740	69.0'	112.0'	71	7,800	65.0'	120.0'
17	7,215	65.0'	111.0'	72	7,800	65.0'	120.0'
18	7,548	68.0'	111.0'	73	7,800	65.0'	120.0'
19	7,240	63.0'	115.0'	74	8,247	70.3'	111.0'
20	9,368	65.0'	127.0'	75	7,759	70.3'	111.0'
21	8,054	64.5'	123.0'	76	7,215	65.0'	111.0'
22	7,966	69.0'	115.0'	77	7,215	65.0'	111.0'
23	7,475	65.0'	115.0'	78	7,215	65.0'	111.0'
24	7,882	68.0'	113.0'	79	7,215	65.0'	111.0'
25	8,341	60.0'	115.0'	80	7,215	65.0'	111.0'
26	11,544	75.0'	135.0'	81	7,215	65.0'	111.0'
27	9,130	75.0'	115.0'	82	7,215	65.0'	111.0'
28	7,282	68.0'	105.0'	83	7,615	70.3'	111.0'
29	7,211	65.0'	111.0'	84	8,939	78.0'	136.0'
30	7,215	65.0'	111.0'	85	7,215	65.0'	111.0'
31	7,215	65.0'	111.0'	86	7,215	65.0'	111.0'
32	7,215	65.0'	111.0'	87	7,215	65.0'	111.0'
33	7,215	65.0'	111.0'	88	7,215	65.0'	111.0'
34	7,215	65.0'	111.0'	89	7,215	65.0'	111.0'
35	7,215	65.0'	111.0'	90	7,863	65.0'	121.0'
36	7,215	65.0'	111.0'	91	7,228	65.9	111.4'
37	7,215	65.0'	111.0'	92	7,239	64.5'	112.0'
38	7,215	65.0'	111.0'	93	7,232	64.0'	113.0'
39	7,215	65.0'	111.0'	94	7,232	64.0'	113.0'
40	7,213	65.0'	111.0'	95	7,835	72.0'	113.0'
41	7,248	64.0'	115.0'	96	8,939	76.0'	128.0'
42	7,204	66.0'	111.0'	97	35,409	DRAINAGE BASIN	
43	7,215	65.0'	111.0'	98	59,755	OPEN SPACE/PARK	
44	7,215	65.0'	111.0'	99	16,340	OPEN SPACE	
45	7,215	65.0'	111.0'	100	3,318	ACCESS ROAD	
46	7,215	65.0'	111.0'	101	5,222	OPEN SPACE	
47	7,277	66.0'	111.0'	102	355	OPEN SPACE	
48	8,445	70.6'	120.0'	103	1,348	OPEN SPACE	
49	7,800	65.0'	120.0'	104	5,977	ACCESS ROAD	
50	7,800	65.0'	120.0'				
51	7,800	65.0'	120.0'				
52	7,800	65.0'	120.0'				
53	7,800	65.0'	120.0'				
54	7,800	65.0'	120.0'				
55	7,800	65.0'	120.0'				

GENERAL NOTES:

1. MAP PREPARATION DATE: 5/26/2022
2. TOTAL SITE ACREAGE:
   - 27.98 ACRES GROSS – 25.63 ACRES NET
3. ASSESSOR'S PARCEL NUMBERS: 330-230-023 AND 330-230-024
4. EXIST. AND PROPOSED LAND USE: 2.1-5 DU/AC RESIDENTIAL (2.1-5 R)
5. EXIST. AND PROPOSED LAND USE: 2.1-5 DU/AC RESIDENTIAL (2.1-5 R)
6. 96 SINGLE FAMILY RESIDENTIAL LOTS (7,200 SF MIN) ARE PROPOSED WITHIN THE PROJECT.
7. DEVELOPMENT STANDARDS:
   - MIN. NET LOT SIZE: 7,200 SF
   - MIN. LOT WIDTH: 40'
   - MIN. LOT DEPTH: 90'
   - MIN. CUL-DE-SAC FRONTAGE: 35'
   - MIN. FRONT YARD SETBACK: 15'*
   - MIN. REAR YARD SETBACK: 10'
   - MIN. INTERIOR SIDE YARD SETBACK: 5'
   - MIN. CORNER SIDE YARD SETBACK: 15'

   * MIN. 20' TO FACE OF GARAGE
8. TOPOGRAPHY SOURCE:
   - AEROTECH MAPPING, INC. DATED JULY 2021.
9. BOUNDARY DATA SHOWN HEREON IS BASED ON A FIELD BOUNDARY SURVEY CONDUCTED IN JULY 2021.
10. LOT 97 TO BE DEDICATED FOR DRAINAGE MITIGATION PURPOSES.
11. LOT 98 (PARK SITE) TO BE MAINTAINED BY HOA.
12. LOT 99 TO BE RETAINED BY THE LAND OWNER.
13. PRELIMINARY EARTHWORK QUANTITIES (EXCLUDED REMEDIAL GRADING):
    CUT: 188,500 C.Y.
    FILL: 172,700 C.Y.
    EXPORT: 15,800 C.Y.
14. THE SITE IS DESIGNATED AS NON-VERY HIGH FIRE HAZARD SEVERITY ZONE (NON-VHFHSZ) PER CAL FIRE HAZARD SEVERITY ZONE MAP ID: FHSZL_C33_MENIFEE
15. THE PROPERTY IS CURRENTLY VACANT AND UNDEVELOPED.
16. SEWER AND WATER SERVICE FOR THE SITE WILL BE PROVIDED BY E.M.W.D.
17. THE TENTATIVE MAP INCLUDES THE ENTIRE CONTIGUOUS OWNERSHIP OF THE LAND DIVIDER.
18. THE SITE IS NOT WITHIN A COUNTY SERVICE AREA (CSA).
19. THE SITE IS NOT WITHIN A EARTHQUAKE FAULT ZONE.
20. THE SITE HAS A VERY LOW LIQUEFACTION POTENTIAL.
21. PROPOSED DRIVEWAYS SHALL BE DESIGNED AND CONSTRUCTED PER CITY STD. 206.
22. THE PROPOSED DIMENSIONS, PAD ELEVATIONS, AND STREET GRADES SHOWN HEREON ARE APPROXIMATE.

PREPARED BY (ENGINEER):
SP2 & Co.
A LAND DEVELOPMENT SERVICES COMPANY
451 W. LAMBERT RD.-SUITE 216
BREA, CA 92821
PHONE: (714) 490-1500
CONTACT: HENRY LOZANO

LANDSCAPE ARCHITECT:
STEVEN SANHAMEL LANDSCAPE ARCHITECT
2125 TURNBERRY LANE
CORONA, CA 92881
PHONE: (951) 990-3381
CONTACT: STEVE SANHAMEL

PREPARED FOR (APPLICANT):
JEN SoCaL 4, LLC
556 S. FAIR OAKS AVENUE #337
PASADENA, CA 91105
PHONE: (626) 263-4205
CONTACT: PAUL ONUFER

OWNER:
HAN FAMILY TRUST
3913 MALIBU VISTA DRIVE
MALIBU, CA 90265
CONTACT: STEVE SUNGKU HAN

SHEET INDEX:

SHEET 1: TENTATIVE TRACT MAP 38128
SHEET 2: CONCEPTUAL GRADING PLAN
TENTATIVE TRACT MAP 38128

SHEET 1 OF 2 SHEETS

3rd SUBMITTAL COPY

REVISIONS		
NO.	BY	DESCRIPTION
1		
2		
3		

CONCEPTUAL GRADING PLAN
TENTATIVE TRACT MAP 38128

PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4, OF SECTION 17, T. 5 S., R. 3 W., S.B.M.
IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

60' 0 60' 120' 180'
SCALE: 1"=60'

LEGEND:

CL	CENTERLINE	TC	TOP OF CURB
EXIST.	EXISTING	FG	FINISHED GRADE
C&G	CURB AND GUTTER	TW	TOP OF WALL
GB	GRADE BREAK	INV	INVERT ELEVATION
HP	HIGH POINT	HP	HIGH POINT
LP	LOW POINT	P/L	PROPERTY LINE
FL	FLOW LINE	LP	LOW POINT
EP	EDGE OF PAVEMENT	CB	CATCH BASIN
R/W	RIGHT OF WAY	BSL	BUILDING SETBACK LINE
PROP.	PROPOSED		FIRE HYDRANT
P=	PAD ELEVATION		STREET LIGHT
EVA	EMERGENCY VEHICULAR ACCESS		
CMU	CONCRETE MASONRY UNIT		
NG	NATURAL GRADE		

TYPICAL CROSS- SECTION (XX) — SECTION REFERENCE, SHEET NO.

TRACT BOUNDARY

PROP. SLOPE

1430 EXIST. CONTOUR

W PROP. SEWER LINE

S PROP. WATER LINE

SD PROP. STORM DRAIN LINE

PROP. HOA MAINTAINED LANDSCAPE EASEMENT

PROP. PARK SITE EASEMENT

EXISTING DRAINAGE PATH FLOW ARROW

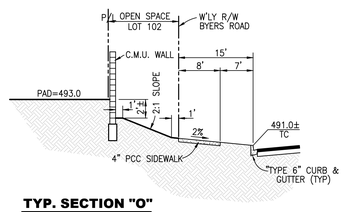
EXISTING DRAINAGE BOUNDARY LINE

PROPOSED EASEMENT NOTES

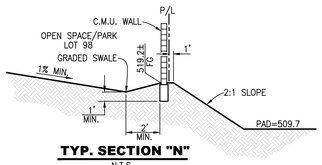
A PROPOSED EASEMENT IN FAVOR OF THE CITY OF MENIFEE AND E.M.W.D. FOR PUBLIC UTILITIES, ACCESS AND EMERGENCY OVERFLOW PURPOSES TO BE DEDICATED ON FINAL MAP.

B PROPOSED EASEMENT IN FAVOR OF H.O.A. FOR LANDSCAPE MAINTENANCE PURPOSES TO BE DEDICATED ON FINAL TRACT MAP.

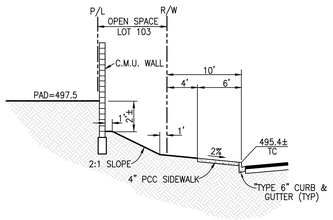
C PROPOSED EASEMENT IN FAVOR OF THE CITY OF MENIFEE AND E.M.W.D. FOR PUBLIC UTILITIES AND ACCESS PURPOSES TO BE DEDICATED ON FINAL MAP.



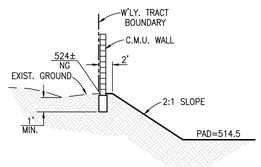
TYP. SECTION "O"
N.T.S.



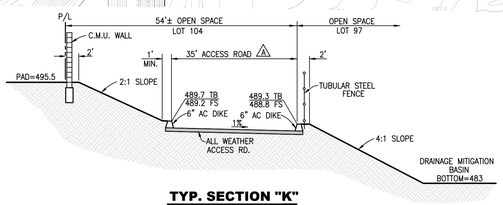
TYP. SECTION "N"
N.T.S.



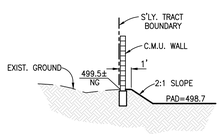
TYP. SECTION "M"
N.T.S.



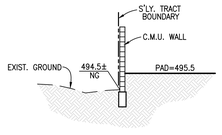
TYP. SECTION "L"
N.T.S.



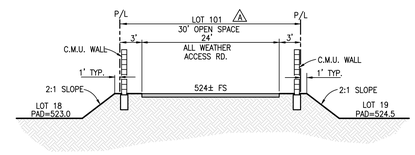
TYP. SECTION "K"
N.T.S.



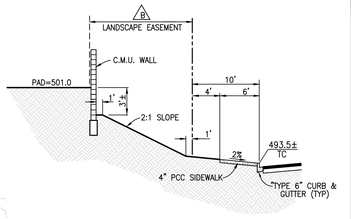
TYP. SECTION "J"
N.T.S.



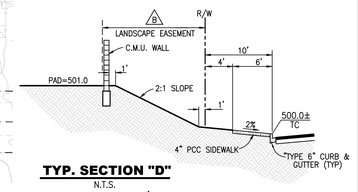
TYP. SECTION "I"
N.T.S.



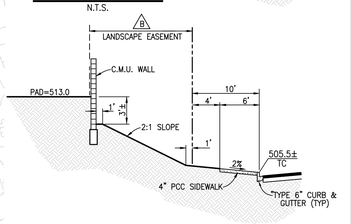
TYP. SECTION "H"
N.T.S.



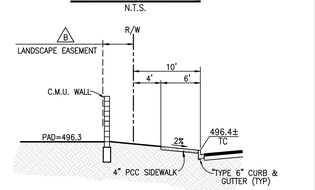
TYP. SECTION "C"
N.T.S.



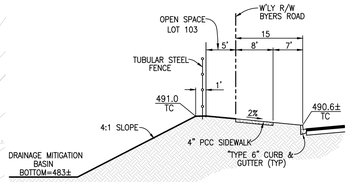
TYP. SECTION "D"
N.T.S.



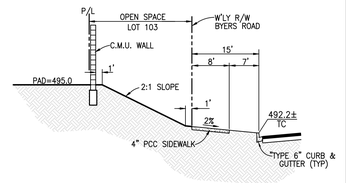
TYP. SECTION "C1"
N.T.S.



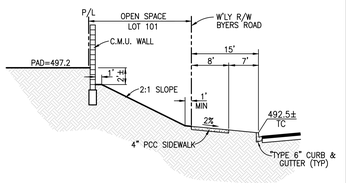
TYP. SECTION "D1"
N.T.S.



TYP. SECTION "E"
N.T.S.



TYP. SECTION "F"
N.T.S.



TYP. SECTION "G"
N.T.S.

SHEET 2 OF 2 SHEETS

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

GEOTECHNICAL AND INFILTRATION EVALUATION
PROPOSED RESIDENTIAL DEVELOPMENT
CONCEPTUAL TENTATIVE TRACT MAP 38128
APNS 330-230-023 AND -024
MENIFEE, RIVERSIDE COUNTY, CALIFORNIA

PREPARED FOR

JPMB INVESTMENTS, LLC.
556 SOUTH FAIR OAKS AVENUE, #337
PASADENA, CALIFORNIA 91105

PREPARED BY

GEOTEK, INC.
1548 NORTH MAPLE STREET
CORONA, CALIFORNIA 92878

PROJECT NO. 2759-CR **JUNE 11, 2021**

GEOTEK

GeoTek, Inc.
1548 North Maple Street, Corona, California 92878
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

June 11, 2021
Project No. 2759-CR

JPMB Investments, LLC.
446 South Fair Oaks Avenue, #337
Pasadena, California 91105

Attention: Mr. Paul Onufer

Subject: Geotechnical and Infiltration Evaluation
Proposed Single-Family Residential Development
Conceptual Tentative Tract Map 38128
APNs 330-230-023 and -024
Menifee, Riverside County, California

Dear Mr. Onufer:

We are pleased to provide the results of our geotechnical and infiltration evaluation for the subject project located in the city of Menifee, Riverside County, California. This report presents a discussion of our evaluation and provides preliminary geotechnical recommendations for site preparation, foundation design and construction.

Based on the results of our evaluation, development of the property appears feasible from a geotechnical viewpoint provided that the recommendations presented in this report and in future reports are incorporated into design and construction.

The opportunity to be of service is sincerely appreciated. If you should have any questions, please do not hesitate to call our office.

Respectfully submitted,
GeoTek, Inc.





Edward H. LaMont
CEG 1892, Exp. 07/31/22
Principal Geologist

Gaby M. Bogdanoff
GE 3133, Exp. 06/30/22
Project Engineer



Kyle R. McHargue
PG 9790, Exp. 02/28/22
Project Geologist

Distribution: (1) Addressee via email

G:\Projects\2751 to 2800\2759CR JPMB Investments, LLC APN 330-230-023 & 024 Menifee\Geo\2759CR Geotechnical and Infiltration Evaluation Menifee.docx

TABLE OF CONTENTS

1. PURPOSE AND SCOPE OF SERVICES 1

2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT 1

2.1 SITE DESCRIPTION 1

2.2 PROPOSED DEVELOPMENT 2

3. GEOTECHNICAL WORK 2

3.1 FIELD EXPLORATION 2

3.2 LABORATORY TESTING 3

4. GEOLOGIC AND SOILS CONDITIONS 3

4.1 REGIONAL SETTING 3

4.2 EARTH MATERIALS 3

4.2.1 Very Old Alluvial Fan Deposits 4

4.2.2 Granitic Bedrock 4

4.3 SURFACE WATER AND GROUNDWATER 4

4.3.1 Surface Water 4

4.4 INFILTRATION STUDY 5

4.5 FAULTING AND SEISMICITY 6

4.5.1 Seismic Design Parameters 6

4.5.2 Surface Fault Rupture 7

4.5.3 Liquefaction and Seismic Settlement 7

4.5.4 Other Seismic Hazards 7

5. CONCLUSIONS AND RECOMMENDATIONS 7

5.1 GENERAL 7

5.2 EARTHWORK CONSIDERATIONS 8

5.2.1 General 8

5.2.2 Site Clearing 8

5.2.3 Removals and Over-excavations 8

5.2.4 Engineered Fill 9

5.2.5 Excavation Characteristics 9

5.2.6 Trench Excavations and Backfill 9

5.2.7 Shrinkage and Subsidence 10

5.2.8 Import Fill 10

5.2.9 Slopes 10

5.3 DESIGN RECOMMENDATIONS 10

5.3.1 Foundation Design Criteria 10

5.3.2 Miscellaneous Foundation Recommendations 14

5.3.3 Foundation Set-Backs 14

5.4 RETAINING WALL DESIGN AND CONSTRUCTION 14

5.4.1 General Design Criteria 14

5.4.2 Cantilevered Walls 15

5.4.3 Restrained Retaining Walls 16

5.4.4 Retaining Wall Backfill and Drainage 16

5.4.5 Other Design Considerations 17

TABLE OF CONTENTS

5.5 PRELIMINARY PAVEMENT DESIGN AND CONSTRUCTION 17
5.6 SOIL CORROSIVITY 18
5.7 SOIL SULFATE CONTENT 18
5.8 CONCRETE CONSTRUCTION 19
5.8.1 General 19
5.8.2 Concrete Flatwork 19
5.8.3 Concrete Performance 19
5.9 POST CONSTRUCTION CONSIDERATIONS 20
5.9.1 Landscape Maintenance and Planting 20
5.9.2 Drainage 21
5.10 PLAN REVIEW AND CONSTRUCTION OBSERVATIONS 21

6. LIMITATIONS 22

7. SELECTED REFERENCES 23

ENCLOSURES

Figure 1 – Site Location Map
Figure 2 – Exploration Location Map

Appendix A – Logs of Exploratory Borings
Appendix B – Laboratory Test Results
Appendix C – Percolation/Infiltration Test Data
Appendix D - General Grading Guidelines

1. PURPOSE AND SCOPE OF SERVICES

The purpose of this study was to evaluate the geotechnical conditions for the proposed development. Services provided for this study included the following:

- Research and review of available geologic and geotechnical data, and general information pertinent to the site,
- Site exploration consisting of the excavation, logging, and sampling of six exploratory hollow-stem auger borings,
- Percolation testing within four shallow borings at the site,
- Collection of relatively undisturbed and bulk samples of the on-site materials,
- Laboratory testing of the samples obtained from the site,
- Review and evaluation of site seismicity, and
- Compilation of this geotechnical report which presents our findings and a general summary of pertinent geotechnical conditions relevant for site development.

The intent of this report is to aid in the evaluation of the site for future development from a geotechnical perspective. The professional opinions and geotechnical information contained in this report will likely need to be updated based on our review of final site development plans. These should be provided to GeoTek for review when available.

2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

2.1 SITE DESCRIPTION

The subject site consists of an approximately 28-acre property located south of Troy Lane and west of Byers Road in the city of Menifee, Riverside County, California. The site is identified by Riverside County Assessor's Parcel Numbers (APNs) 330-230-023 (27.5-acre) and -024 (0.88-acre). The parcels are separated by the future extension of Valley Boulevard. The site has a gently sloping topography, with a fall of about 30-35 feet to the east-northeast. Surface drainage is to the east-northeast with some local variations.

The site is bounded by graded residential pads to the north and west, vacant land to the south, and Byers Road followed by single-family homes and vacant land to the east.

The approximate location of the site is noted on the attached Figure 1, Site Location Map.

2.2 PROPOSED DEVELOPMENT

Based on our review of the *Conceptual Tentative Tract Map 38128,* prepared by Stevenson, Porto and Pierce, Inc. dated March 17, 2021, site development is to consist of a 98-lot single-family residential development that will include interior street improvements, underground utilities, hardscape/landscape improvements, and a stormwater management basin. Based on the site topography, we anticipate that the maximum depths of cut and fill will be about 10 feet or less. Graded slopes are expected to be inclined at ratios of 2:1 (h:v) and to heights generally not exceeding 10 feet.

Specific structural loading was not provided to us; however, it is anticipated that the structures will be one- or two-story, of wood-framed construction, will be supported by conventional shallow foundations and will include concrete slab-on-grade floors. For the purpose of this evaluation, we have assumed maximum column and wall loads of 50 kips and 3 kips per foot, respectively.

As site development planning progresses and more formal plans become available, the plans should be provided to GeoTek for review and comment. Additional engineering analyses may be necessary in order to provide specific earthwork recommendations and geotechnical design parameters for actual site development.

3. GEOTECHNICAL WORK

3.1 FIELD EXPLORATION

Our geotechnical field exploration was conducted on May 21, 2021 and consisted of six geotechnical test borings extended to depths ranging from about 20 to 51 feet below grade. Four percolation borings were also drilled to about 5 feet below grade within then planned stormwater management area in the northeast portion of the site. An engineer from GeoTek logged the exploratory borings and collected representative samples of the encountered soils. The borings were located at the approximate locations indicated on the Exploration Location Map (Figure 2). Logs of the exploratory borings are included in Appendix A.

3.2 LABORATORY TESTING

Laboratory testing was performed on selected soil samples collected during the field exploration. The purpose of the laboratory testing was to help confirm the field classification of the soil materials encountered and to evaluate their physical and chemical properties for use in engineering design and analysis. Results of the laboratory testing program along with a brief description and relevant information regarding testing procedures are included in Appendix B.

4. GEOLOGIC AND SOILS CONDITIONS

4.1 REGIONAL SETTING

The subject property is situated in the Peninsular Ranges geomorphic province. The Peninsular Ranges province is one of the largest geomorphic units in western North America. It extends from the point of contact with the Transverse Ranges geomorphic province, southerly to the tip of Baja California. This province varies in width from about 30 to 100 miles. It is bounded on the west by the Pacific Ocean, on the south by the Gulf of California, and on the east by the Colorado Desert Province.

The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Several major fault zones are found in this province. The Elsinore Fault zone and the San Jacinto Fault zone trend northwest-southeast and are mostly found near the middle of the province. The San Andreas Fault zone borders the northeasterly margin of the province, and the San Jacinto fault borders the province adjacent the Colorado Desert province.

More specific to the subject property, the site is located in an area geologically mapped to be underlain by very old alluvial valley deposits and granitic rock of gabbroic composition directly to the west-northwest of the site (Morton, D.M., Bovard, K.R. and Morton, G., 2003). No active faults are shown in the immediate site vicinity on the maps reviewed for the site and site area.

4.2 EARTH MATERIALS

A brief description of the earth materials encountered during our explorations is presented in the following sections.

4.2.1 Very Old Alluvial Fan Deposits

Very old alluvial fan deposit materials were encountered within the test borings to various explored depths throughout the subject site. The depths ranged from about 7-½ feet (B-2) to a maximum explored depth of 51 feet (B-1). The very old alluvial valley deposits consisted of a medium dense to very dense sand, silty sand, and clayey sand and very stiff sandy clay. Trace of caliche stringers were noted in the alluvium at various depths.

4.2.2 Granitic Bedrock

Granitic bedrock was encountered within the test borings B-2, B-3, and B-5 at 7-½ feet, 8-½ feet, and 19-½ feet, respectively. The granitic bedrock is regionally mapped as being of gabbroic composition. There is no discernable orientation shown within this geologic unit of the Romoland 7.5-minute quadrangle. As observed in the borings, the granitic bedrock was excavated as hard sand and silty sand with some weathering.

According to the results of the laboratory testing performed, the near-surface alluvial soils exhibited a "very low" to "high" expansion potential when tested in accordance with ASTM D 4829. The test results are provided in Appendix B.

4.3 SURFACE WATER AND GROUNDWATER

4.3.1 Surface Water

Surface water was not observed during our site reconnaissance or investigation. If encountered during earthwork construction, surface water on this site is the result of precipitation or possibly some minor surface run-off from immediately surrounding properties. Overall site area drainage is generally in a northeasterly direction, as directed by site topography. Provisions for surface drainage will need to be accounted for by the project civil engineer.

4.3.2 Groundwater

Groundwater was not encountered at a maximum explored depth of 51 feet below existing grade within Boring B-1 at the time of drilling. The California Department of Water Resources, Water Data Library listed several groundwater wells within the vicinity of the site showing groundwater elevations ranging from 1358 to 1402 feet above mean sea level (amsl). Given that the site ground elevations range from 1490 to 1525 feet amsl, groundwater is anticipated to be deeper than 80 feet. The depth to groundwater is expected to vary seasonally and localized perched groundwater conditions could be encountered. Groundwater is not anticipated to impact the planned development.

4.4 INFILTRATION STUDY

Four percolation test borings were drilled within the planned stormwater basin area. The borings were excavated with a truck-mounted hollow-stem auger drill rig to a depth of about 60 inches and were approximately eight inches in diameter. A three-inch diameter perforated PVC pipe encapsulated in filter sock was inserted into each of the percolation test holes. The annular space between the test hole sidewalls and PVC pipe was filled with gravel to prevent caving. The locations of the test borings are presented on Figure 2.

Subsequent to over-night pre-soaking of the test holes in general conformance with the referenced *Infiltration Testing Guidelines* (Riverside County, 2011), percolation testing was performed in the bottom 20 inches in test borings I-1 through I-4 by a representative from our firm. Testing was conducted in general conformance with the Percolation Test Procedure (Riverside County, 2011). The field percolation rates were converted to infiltration rates utilizing the Porchet Method.

The percolation and calculated infiltration rates estimated at the test locations are presented in the following table, after the water level had stabilized.

SUMMARY OF RESULTS		
Boring No.	Field Percolation Rate (minutes per inch)	Calculated Infiltration Rate (inches per hour)
I-1	60	0.1
I-2	60	0.1
I-3	60	0.1
I-4	60	0.1

Copies of the percolation boring logs, percolation data, and infiltration conversions (Porchet Method) are included in Appendix C. The reported infiltration rates are the calculated rates without any factor of safety applied. Over the lifetime of the infiltration areas, the infiltration rates may be affected by silt build up and biological activities, as well as local variations in near surface soil conditions. A suitable factor of safety should be applied to the field rate in designing the infiltration system.

It should be noted that the infiltration rates provided above were performed in relatively undisturbed on-site soils. Infiltration rates will vary and are mostly dependent on the underlying consistency of the site soils and relative density. Infiltration rates may be impacted by weight of equipment travelling over the soils, placement of engineered fill and other various factors.

GeoTek assumes no responsibility or liability for the ultimate design or performance of the storm water facility.

4.5 FAULTING AND SEISMICITY

The geologic structure of the entire southern California area is dominated mainly by northwest-trending faults associated with the San Andreas system. The site is in a seismically active region. No active or potentially active fault is known to exist at this site nor is the site situated within a State of California designated *"Alquist-Priolo"* Earthquake Fault Zone (Bryant and Hart, 2007; State of California, 1993). The nearest zoned fault is the Elsinore Fault Zone-Glen Ivy Section, approximately 7.8 miles to the southwest. The project site has not been evaluated by the State of California for liquefaction or landslide potential. The County of Riverside has designated the site as "not in fault zone, "not in a fault line," and having a "very low" liquefaction potential, and "susceptible" to subsidence.

4.5.1 Seismic Design Parameters

The site is located at approximately 33.7311° Latitude and -117.2171° Longitude. Site Class "C" is considered adequate for the property based on the very dense/stiff condition of the native materials observed in our explorations. Site spectral accelerations (Ss and S_1), for 0.2 and 1.0 second periods for a Class "C" site, was determined from the SEAOC/OSHPD web interface that utilizes the USGS web services and retrieves the seismic design data and presents that information in a report format. The following seismic design parameters, based on the ASCE 7-16/2019 CBC, are presented on the following table:

SITE SEISMIC PARAMETERS	
Mapped 0.2 sec Period Spectral Acceleration, S_S	1.427g
Mapped 1.0 sec Period Spectral Acceleration, S_1	0.526g
Site Coefficient for Site Class "C," F_a	1.2
Site Coefficient for Site Class "C," F_v	1.474
Maximum Considered Earthquake Spectral Response Acceleration for 0.2 Second, S_{MS}	1.712g
Maximum Considered Earthquake Spectral Response Acceleration for 1.0 Second, S_{M1}	0.775g
5% Damped Design Spectral Response Acceleration Parameter at 0.2 Second, S_{DS}	1.142g
5% Damped Design Spectral Response Acceleration Parameter at 1 second, S_{D1}	0.517g
Peak Ground Acceleration (PGA_M)	0.614g
Seismic Design Category	D

Final selection of the appropriate seismic design coefficients should be made by the project structural engineer based upon the local practices and ordinances, expected building response and desired level of conservatism.

4.5.2 Surface Fault Rupture

The site is in a seismically active region; however, no active or potentially active fault is known to exist at this site nor is the site situated within an *"Alquist-Priolo"* Earthquake Fault Zone (Bryant and Hart, 2007; State of California, 1993). The nearest zoned fault is the Elsinore Fault Zone-Glen Ivy Section, approximately 7.8 miles to the southwest. Therefore, the potential for surface rupture at the site is considered to be nil.

4.5.3 Liquefaction and Seismic Settlement

Because of the very dense/stiff condition of the subsurface materials and depth to groundwater in excess of 80 feet, the potential for liquefaction and seismically induced settlement is considered to be considered nil.

4.5.4 Other Seismic Hazards

Evidence of ancient landslides or slope instabilities at this site was not observed during our investigation. Thus, the potential for landslides is considered negligible.

The potential for secondary seismic hazards such as a seiche or tsunami is considered negligible due to site elevation and distance to an open body of water.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 GENERAL

Development of the site appears feasible from a geotechnical viewpoint. Specific recommendations for site development provided in this report will need to be further evaluated when development plans are provided for our review. The following sections present general recommendations. More specific geotechnical recommendations for site development can be provided when more finalized site development plans are available for review.

5.2 EARTHWORK CONSIDERATIONS

5.2.1 General

Earthwork and grading should be performed in accordance with the applicable grading ordinances of City of Menifee/Riverside County, the 2019 California Building Code (CBC), and recommendations contained in this report. The General Grading Guidelines included in Appendix D outline general procedures and do not anticipate all site-specific situations. In the event of conflict, the recommendations presented in the text of this report should supersede those contained in Appendix D.

5.2.2 Site Clearing

Site preparation should start with removal of deleterious materials and vegetation within the planned development areas of the site. All debris and deleterious materials should be properly disposed of off-site.

5.2.3 Removals and Over-excavations

Any existing undocumented fill and the upper three feet of the native very old alluvial fan deposits should be removed and replaced with engineered fill. Removals should extend down to competent very old alluvial fan deposits as determined by a GeoTek representative at the time of grading. Competent alluvium is defined as native material that is visually relatively non-porous and having a relative compaction of at least 85 percent of the soil's maximum dry density as determined per ASTM D 1557. In areas of the proposed buildings and attached patios, a minimum of two feet of engineered fill below the bottom of the proposed footings and floor-slabs should be provided.

In cut areas, overexcavation should extend down to a depth such that a minimum of two feet of engineered fill is provided below the bottom of the deepest proposed foundation.

In transition areas (requiring cut and fill), a minimum of two feet of engineered fill should be provided below the bottom of the deepest proposed foundation. To mitigate the potential of excessive differential settlement associated with variable depths of engineered fill, overexcavation should extend down to a depth of at least one-half the maximum fill depth.

As a minimum, removals should extend down and away from foundation elements at a 1:1 (h:v) projection to the recommended removal depth, or a minimum of five feet laterally, whichever is greater.

Undocumented fill should be removed from flatwork improvement areas. A minimum of 12 inches of engineered fill should be provided below asphaltic concrete pavement and Portland cement concrete hardscape areas. The horizontal extent of removals should extend at least two feet beyond the edge of hardscape.

Development plans should be reviewed by this firm when available. Depending on actual field conditions encountered during grading, locally deeper areas of removal may be recommended.

The bottom of all removals should be scarified to a minimum depth of about 12 inches, moisture conditioned to slightly above the soil's optimum moisture content, and then recompacted to at least 90 percent of the soil's maximum dry density (ASTM D 1557). The bottoms of removals should be observed by a GeoTek representative prior to scarification.

5.2.4 Engineered Fill

The on-site soils are generally considered suitable for reuse as engineered fill provided that they are free from vegetation, debris and other deleterious material. Engineered fill should be placed in six-inch to eight-inch loose lifts, moisture conditioned to at least the optimum moisture content and compacted to a minimum relative compaction of 90 percent as determined by ASTM D 1557.

The onsite soils include units of highly expansive clayey soils. These should not be used as wall backfill.

5.2.5 Excavation Characteristics

The anticipated excavations in the on-site very old alluvial fan deposits should be readily accomplished with heavy-duty earthmoving or excavating equipment in good operating condition.

5.2.6 Trench Excavations and Backfill

Trench excavations should conform to Cal-OSHA regulations. The contractor should have a competent person, per OSHA requirements, on site during construction to observe conditions and to make the appropriate recommendations.

Utility trench backfill should be compacted to at least 90 percent relative compaction (as determined per ASTM D 1557). Under-slab trenches should also be compacted to project specifications. Where applicable, based on jurisdictional requirements, the upper 12 inches of backfill below subgrade for road pavements should be compacted to at least 95 percent relative compaction. On-site materials may not be suitable for use as bedding material but should be suitable as backfill provided particles larger than six inches are removed.

Compaction should be achieved with a mechanical compaction device. Ponding or jetting of trench backfill is not recommended. If backfill soils have dried out, they should be thoroughly moisture conditioned prior to placement in trenches.

5.2.7 Shrinkage and Subsidence

For planning purposes, a shrinkage factor from 5 to 10 percent may be considered for the very old alluvial fan deposits. If encountered, a bulking factor from 5 to 10 percent may be considered for the granitic bedrock. A subsidence value of up to 0.1 foot may occur.

Several factors will impact earthwork balancing on the site, including shrinkage, trench spoil from utilities and footing excavations, as well as the accuracy of topography. Shrinkage is primarily dependent upon the degree of compactive effort achieved during construction, depth of fill and underlying site conditions.

Site balance areas should be available in order to adjust project grades, depending on actual field conditions at the conclusion of earthwork construction.

5.2.8 Import Fill

Import soils, if needed, should have "very low" expansion characteristics, be free of organics, and have a maximum size less than 6 inches. GeoTek also recommends that the proposed import soils be tested for expansion and sulfate potential, prior to its use. GeoTek should be notified a minimum of 72 hours prior to importing so that appropriate sampling and laboratory testing can be performed.

5.2.9 Slopes

Fill and cut slopes constructed at gradients of 2:1 (h:v) or flatter, in accordance with industry standards, are anticipated to be both grossly and surficially stable. Fill placed on slopes should be properly benched into competent soils at the geotechnical engineer's direction. Cut slopes should be observed by a geotechnical engineer/engineering geologist to approve the exposed conditions upon excavation.

5.3 DESIGN RECOMMENDATIONS

5.3.1 Foundation Design Criteria

Foundation design criteria for a conventional foundation system, in general conformance with the 2019 CBC, are presented in this section. These are typical design criteria and are not intended to supersede the design by the structural engineer.

Based on the results of this investigation and laboratory testing performed at this site, GeoTek anticipates that the on-site soils have "very low" (0≤EI≤20) to "high" (91≤EI≤130) expansion potential per ASTM D 4829. Additional laboratory testing should be performed at the completion of site grading to verify the expansion potential of the near-surface soils.

A summary of our preliminary foundation design recommendations is presented in the table below:

MINIMUM DESIGN REQUIREMENTS FOR CONVENTIONALLY REINFORCED SHALLOW FOUNDATIONS				
Design Parameter	"Very Low" Expansion Potential	"Low" Expansion Potential	"Medium" Expansion Potential	"High" Expansion Potential
Foundation Depth or Minimum Perimeter Beam Depth (inches below lowest adjacent grade)	1 & 2-Stories – 12	1 & 2-Stories – 12	1 & 2-Stories – 18	1 & 2-Stories – 24
Minimum Foundation Width (Inches)*	1 & 2-Stories – 12	1 & 2-Stories – 12	1 & 2-Stories – 12	1 & 2-Stories – 12
Minimum Slab Thickness (actual)	4 – Actual	4 – Actual	4 – Actual	4 – Actual
Minimum Slab Reinforcing	6" x 6" – W1.4/W1.4 welded wire fabric placed in middle of slab	6" x 6" – W2.9/W2.9 welded wire fabric placed in middle of slab	No. 3 rebar 18 inches on center, each way, placed in middle of slab	No. 4 rebar 18 inches on center, each way, placed in middle of slab.
Minimum Footing Reinforcement	Two No. 4 reinforcing bars, one placed near the top and one near the bottom	Two No. 4 reinforcing bars, one placed near the top and one near the bottom	Four No. 4 reinforcing bars, two placed near the top and two near the bottom	Four No. 5 reinforcing bars, two placed near the top and two near the bottom
Effective Plasticity Index**	NA	<15	20	31
Presaturation of Subgrade Soil (Percent of Optimum)	Minimum of 100% of the optimum moisture content to a depth of at least 12 inches prior to placing concrete	Minimum of 110% of the optimum moisture content to a depth of at least 12 inches prior to placing concrete	Minimum of 120% of the optimum moisture content to a depth of at least 18 inches prior to placing concrete	Minimum of 130% of the optimum moisture content to a depth of at least 24 inches prior to placing concrete

* Code minimums per Table 1809.7 of the 2019 CBC.
**Effective plasticity index should be verified at the completion of rough grading

It should be noted that the criteria provided are based on soil support characteristics only. The structural engineer should design the slab and beam reinforcement based on actual loading conditions.

The following criteria for design of foundations are preliminary and should be re-evaluated based on the results additional laboratory testing of samples obtained at/near finish pad grade.

An allowable bearing capacity of 1,800 pounds per square foot (psf) may be used for design of continuous footings 12 inches deep and 12 inches wide. This value may be increased by 300 psf for each additional 12 inches in depth and 50 psf for each additional 12 inches in width to a maximum value of 3,000 psf. An increase of one-third may be applied when considering short-term live loads (e.g. seismic and wind loads).

Structural foundations should be designed in accordance with the 2019 CBC, and to withstand a total estimated static settlement of less than 1 inch and a maximum differential static settlement of one-half of the total settlement over a horizontal distance of 30 feet. Seismically induced settlement is estimated to be negligible.

The passive earth pressure may be computed as an equivalent fluid having a density of 150 psf per foot of depth, to a maximum earth pressure of 1,500 psf for footings founded on engineered fill. A coefficient of friction between soil and concrete of 0.30 may be used with dead load forces. When combining passive pressure and frictional resistance, the passive pressure component should be reduced by one-third.

A grade beam, a minimum of 12 inches wide and 12 inches deep, should be utilized across large entrances. The base of the grade beam should be at the same elevation as the bottom of the adjoining footings.

A moisture and vapor retarding system should be placed below slabs-on-grade where moisture migration through the slab is undesirable. Guidelines for these are provided in the 2019 California Green Building Standards Code (CALGreen) Section 4.505.2, the 2019 CBC Section 1907.1 and ACI 360R-10. The vapor retarder design and construction should also meet the requirements of ASTM E 1643. A portion of the vapor retarder design should be the implementation of a moisture vapor retardant membrane.

It should be realized that the effectiveness of the vapor retarding membrane can be adversely impacted as a result of construction related punctures (e.g. stake penetrations, tears, punctures from walking on the vapor retarder placed atop the underlying aggregate layer, etc.). These occurrences should be limited as much as possible during construction. Thicker membranes are

generally more resistant to accidental puncture than thinner ones. Products specifically designed for use as moisture/vapor retarders may also be more puncture resistant. Although the CBC specifies a 6-mil vapor retarder membrane, it is GeoTek's opinion that a minimum 10-mil thick membrane with joints properly overlapped and sealed should be considered, unless otherwise specified by the slab design professional. The membrane should consist of Stego wrap or the equivalent.

Moisture and vapor retarding systems are intended to provide a certain level of resistance to vapor and moisture transmission through the concrete, but do not eliminate it. The acceptable level of moisture transmission through the slab is to a large extent based on the type of flooring used and environmental conditions. Ultimately, the vapor retarding system should be comprised of suitable elements to limit migration of water and reduce transmission of water vapor through the slab to acceptable levels. The selected elements should have suitable properties (i.e. thickness, composition, strength, and permeability) to achieve the desired performance level.

Moisture retarders can reduce, but not eliminate, moisture vapor rise from the underlying soils up through the slab. Moisture retarder systems should be designed and constructed in accordance with applicable American Concrete Institute, Portland Cement Association, Post-Tensioning Concrete Institute, ASTM, California Building Code and Cal Green requirements and guidelines.

GeoTek recommends that a qualified person, such as the flooring contractor, structural engineer, architect, and/or other experts specializing in moisture control within the building be consulted to evaluate the general and specific moisture and vapor transmission paths and associated potential impact on the proposed construction. That person (or persons) should provide recommendations relative to the slab moisture and vapor retarder systems and for migration of potential adverse impact of moisture vapor transmission on various components of the structures, as deemed appropriate.

In addition, the recommendations in this report and our services in general are not intended to address mold prevention; since we, along with geotechnical consultants in general, do not practice in the area of mold prevention. If specific recommendations addressing potential mold issues are desired, then a professional mold prevention consultant should be contacted.

We recommend that control joints be placed in two directions spaced approximately 24 to 36 times the thickness of the slab in inches. These joints are a widely accepted means to control cracks and should be reviewed by the project structural engineer.

5.3.2 Miscellaneous Foundation Recommendations

To minimize moisture penetration beneath the slab-on-grade areas, utility trenches should be backfilled with engineered fill, lean concrete, or concrete slurry where they intercept the perimeter footing or thickened slab edge.

Soils from the footing excavations should not be placed in the slab-on-grade areas unless properly compacted and tested. The excavations should be free of loose/sloughed materials and be neatly trimmed at the time of concrete placement.

5.3.3 Foundation Set-Backs

Where applicable, the following setbacks should apply to all foundations. Any improvements not conforming to these setbacks may be subject to lateral movements and/or differential settlements:

- The outside bottom edge of all footings should be set back a minimum of H/3 (where H is the slope height) from the face of any descending slope. The setback should be at least seven feet and need not exceed 40 feet.

- The bottom of all footings for structures near retaining walls should be deepened so as to extend below a 1:1 projection upward from the bottom inside edge of the wall footing.

- The bottom of any proposed foundations for structures should be deepened so as to extend below a 1:1 projection upward from the bottom of the nearest excavation.

5.4 RETAINING WALL DESIGN AND CONSTRUCTION

5.4.1 General Design Criteria

Recommendations presented in this report apply to typical masonry or concrete vertical walls retaining six feet or less of compacted backfill. These are typical design criteria and are not intended to supersede the design by the structural engineer.

Retaining wall foundations should be designed in accordance with *Section 5.3.1* of this report. A minimum foundation embedment of 12 inches into engineered compacted fill with "very low" to "low" expansion potential is recommended. A foundation embedment depth of at least 18 inches and 24 inches is recommended for footings in "medium" and "high" expansive soils, respectively. Structural needs may govern and should be evaluated by the project structural engineer.

All earth retention structure plans, as applicable, should be reviewed by this office prior to finalization.

The backfill material placement for all earth retention structures should meet the requirement of *Section 5.4.4* in this report.

In general, cantilever earth retention structures, which are designed to yield at least 0.001H, where H is equal to the height of the wall to the base of the footing, may be designed using the active condition. Rigid earth retention structures (including but not limited to rigid walls, and walls braced at top, such as typical basement walls) should be designed using the at-rest condition.

In addition to the design lateral forces due to retained earth, surcharges due to improvements, such as an adjacent building or traffic loading, should be considered in the design of the earth retention structures. Loads applied within a 1:1 (h:v) projection from the surcharge on the stem of the earth retention structure should be considered in the design.

Final selection of the appropriate design parameters should be made by the designer of the earth retention structures.

5.4.2 Cantilevered Walls

The recommendations presented below are for cantilevered retaining walls. Active earth pressure may be used for retaining wall design, provided the top of the wall is not restrained from minor deflections. An equivalent fluid pressure approach may be used to compute the horizontal pressure against the wall. Appropriate fluid unit weights are given below for specific slope gradients of the retained material. These do not include other superimposed loading conditions such as traffic, structures, seismic events, or adverse geologic conditions.

ACTIVE EARTH PRESSURES*		
Surface Slope of Retained Materials (h:v)	Equivalent Fluid Pressure (pcf) Select Native Backfill*	Equivalent Fluid Pressure (pcf) Select Imported Backfill**
Level	46	37
2:1	82	53

*The design pressures assume the backfill material has an expansion index less than or equal to 50 and friction angle of at least 28 degrees. Backfill zone includes area between the back of the wall and footing to a plane (1:1 h:v) up from the bottom of the wall foundation to the ground surface.

**The design pressures assume the imported backfill material has an expansion index less than or equal to 20 and a friction angle of at least 34 degrees. Backfill zone includes area between the back of the wall and footing to a plane (1:1 h:v) up from the bottom of the wall footing to the ground surface.

5.4.3 Restrained Retaining Walls

Retaining walls that will be restrained prior to placing and compacting backfill material, or that have reentrant or male corners, should be designed for an at-rest equivalent fluid pressure of 68 pcf, plus any applicable surcharge loading, for selected native backfill with a level back slope condition. At-rest equivalent fluid pressure of about 57 feet could be utilized if select imported fill is utilized. For areas of male or reentrant corners, the restrained wall design should extend a minimum distance of twice the height of the wall laterally from the corner, or a distance otherwise determined by the project structural engineer.

5.4.4 Retaining Wall Backfill and Drainage

Retaining wall backfill should be free of deleterious and/or oversized materials and should have properties indicated in Section 5.4.2. The wall backfill should also include a minimum one-foot wide section of ¾- to 1-inch clean crushed rock (or approved equivalent). The rock should be placed immediately adjacent to the back of wall and extend up from the back drain to within approximately 12 inches of finish grade. The upper 12 inches should consist of compacted onsite materials. Presence of other materials might necessitate revision to the parameters provided and modification of wall designs. The backfill materials should be placed in lifts no greater than 8-inches in thickness and compacted to a minimum of 90 percent relative compaction in accordance with ASTM Test Method D 1557. Proper surface drainage needs to be provided and maintained. Bracing of the walls during backfilling and compaction may also be necessary.

All earth retention structures should be provided with an adequate pipe and gravel back drain system to reduce the potential for hydrostatic pressure build up. As a minimum, backdrains should consist of a four-inch diameter perforated collector pipe (Schedule 40, SDR 35, or approved equivalent) embedded in a minimum of one cubic foot per lineal foot of ¾- to 1-inch

clean crushed rock or equivalent, wrapped in filter fabric (Mirafi 140N or approved equivalent). The drain system should be connected to a suitable outlet, as determined by the civil engineer. Drain outlets should be maintained over the life of the project and should not be obstructed or plugged by adjacent improvements. Waterproofing of site walls should be performed where moisture migration through the wall is undesirable.

Proper surface drainage needs to be provided and maintained. Water should not be allowed to pond behind retaining walls. Waterproofing of site walls should be performed where moisture migration through the wall is undesirable.

5.4.5 Other Design Considerations

- Wall design should consider the additional surcharge loads from superjacent slopes and/or footings, where appropriate.
- No backfill should be placed against concrete until minimum design strengths are evident by compression tests of cylinders.
- The retaining wall footing excavations, backcuts and backfill materials should be approved by the project geotechnical engineer or their authorized representative.
- Positive separations should be provided in garden walls at horizontal distances not exceeding 20 feet.

5.5 PRELIMINARY PAVEMENT DESIGN AND CONSTRUCTION

Flexible pavement design for areas to receive new pavements was conducted per Caltrans *Highway Design Manual* guidelines for flexible pavements.

For this preliminary assessment, we have assumed an as-graded R-value of 25 and Traffic Indices (TIs) of 5.5 and 8.0. Based on this assumption, the following preliminary sections were calculated:

PRELIMINARY PAVEMENT SECTIONS			
Street	Traffic Index	Thickness of Asphalt Concrete (inches)	Thickness of Aggregate Base (inches)
Local	5.5	4*	6*
Collector	8.0	5*	12

*Minimum thickness required by the City of Menifee

All base material and the upper 12 inches of subgrade should be compacted to at least 95 percent of the material's maximum dry density, per ASTM D-1557.

Traffic Indices (TIs) used in our preliminary pavement design are considered reasonable values for the proposed pavement areas and should provide a pavement life of approximately 20 years with a normal amount of flexible pavement maintenance. Irrigation adjacent to pavements, without a deep curb or other cutoff to separate landscaping from the paving may result in premature pavement failure. Traffic parameters used for preliminary design were selected based upon engineering judgment and not upon information furnished to us such as an equivalent wheel load analysis or a traffic study. We recommend that final pavement design be based on R-value testing of the subgrade soils along with the assigned TI values for the planned pavement areas.

Asphalt concrete and aggregate base should conform to current Caltrans Standard Specifications Section 39 and 26-1.02, respectively. As an alternative, asphalt concrete can conform to Section 203-6 of the current Standard Specifications for Public Work (Green Book). Crushed aggregate base or crushed miscellaneous base can conform to Section 200-2.2 and 200-2.4 of the Green Book, respectively.

All pavement installation, including preparation and compaction of subgrade, compaction of base material, placement and rolling of asphaltic concrete, should be done in accordance with the City of Menifee/County of Riverside specifications, and under the observation and testing of GeoTek and a City/County Inspector where required. Jurisdictional minimum compaction requirements in excess of the aforementioned minimums may govern.

5.6 SOIL CORROSIVITY

The soil corrosivity at this site was tested in the laboratory on two samples collected by our firm. The results of the minimum resistivity testing (1,340 to 3,283 ohm-cm) indicate that the soil samples are "highly corrosive" to "corrosive" to buried ferrous metals in accordance with current standards commonly used by corrosion engineers (Roberge, 2005). Chloride content of the samples tested (0.0009 to 0.0022 percent) was negligible. Consideration should be given to consulting with a corrosion engineer. The laboratory test results are provided in Appendix B.

5.7 SOIL SULFATE CONTENT

The sulfate content was determined in the laboratory for two representative soil samples collected by our firm. The results of the tests (0.0012 to 0.0028 percent) showed less than 0.1 percent by weight and are considered "not applicable" (i.e. negligible) as per Table 4.2.1 of ACI

318. Based upon the test results, no special concrete mix design is required for sulfate attack resistance. Additional testing of soils collected near finish grade should be performed subsequent to site grading.

5.8 CONCRETE CONSTRUCTION

5.8.1 General

Concrete construction should follow the 2019 CBC and ACI guidelines regarding design, mix placement and curing of the concrete. If desired, we could provide quality control testing of the concrete during construction.

5.8.2 Concrete Flatwork

Exterior concrete slabs, sidewalks and driveways should be designed using a four-inch minimum thickness. No specific reinforcement is required from a geotechnical perspective for improvements resting on "very low" and "low" expansive soils. For areas with "medium" and "high" expansive soils, we recommend that flatwork be reinforced with 6"x6" – W2.9/W2.9 welded wire mesh placed in middle of slab or equivalent. However, some shrinkage and cracking of the concrete should be anticipated as a result of typical mix designs and curing practices commonly utilized in industrial construction.

Sidewalks and driveways may be under the jurisdiction of the governing agency. If so, jurisdictional design and construction criteria would apply, if more restrictive than the recommendations presented in this report.

Subgrade soils should be pre-moistened prior to placing concrete. Flatwork areas with "very low" to "low" expansive subgrade soils should be pre-saturated to a minimum of 100 and 110 percent of the optimum moisture content, respectively, to a depth of 12 inches. Flatwork areas with "medium" to "high" expansive subgrade soils should be pre-saturated to a minimum of 120 and 130 percent of the optimum moisture content, respectively, to a depth of about 18 inches.

All concrete installation, including preparation and compaction of subgrade, should be done in accordance with the City of Menifee/County of Riverside specifications, and under the observation and testing of GeoTek and a City/County inspector, if necessary.

5.8.3 Concrete Performance

Concrete cracks should be expected. These cracks can vary from sizes that are essentially unnoticeable to more than 1/8 inch in width. Most cracks in concrete while unsightly do not significantly impact long-term performance. While it is possible to take measures (proper

concrete mix, placement, curing, control joints, etc.) to reduce the extent and size of cracks that occur, some cracking will occur despite the best efforts to minimize it. Concrete undergoes chemical processes that are dependent on a wide range of variables, which are difficult, at best, to control. Concrete, while seemingly a stable material, is subject to internal expansion and contraction due to external changes over time.

One of the simplest means to control cracking is to provide weakened control joints for cracking to occur along. These do not prevent cracks from developing; they simply provide a relief point for the stresses that develop. These joints are a widely accepted means to control cracks but are not always effective. Control joints are more effective the more closely spaced they are. GeoTek suggests that control joints be placed in two directions and located a distance apart approximately equal to 24 to 36 times the slab thickness.

Exterior concrete flatwork (patios, walkways, driveways, etc.) is often some of the most visible aspects of site development. They are typically given the least level of quality control, being considered "non-structural" components. We suggest that the same standards of care be applied to these features as to the structures themselves.

5.9 POST CONSTRUCTION CONSIDERATIONS

5.9.1 Landscape Maintenance and Planting

Water has been shown to weaken the inherent strength of soil, and slope stability is significantly reduced by overly wet conditions. Positive surface drainage away from graded slopes should be maintained and only the amount of irrigation necessary to sustain plant life should be provided for planted slopes. Controlling surface drainage and runoff and maintaining a suitable vegetation cover can minimize erosion. Plants selected for landscaping should be lightweight, deep-rooted types that require little water and are capable of surviving the prevailing climate.

Overwatering should be avoided. Care should be taken when adding soil amendments to avoid excessive watering. Leaching as a method of soil preparation prior to planting is not recommended. An abatement program to control ground-burrowing rodents should be implemented and maintained. This is critical as burrowing rodents can decreased the long-term performance of slopes.

It is common for planting to be placed adjacent to structures in planter or lawn areas. This will result in the introduction of water into the ground adjacent to the foundations. This type of landscaping should be avoided. Planters within 30 feet of the buildings should be above ground

and underlain by a concrete slab. Waterproofing of the foundation and/or subdrains may be warranted and advisable. We could discuss these issues, if desired, when plans are made available.

5.9.2 Drainage

The need to maintain proper surface drainage and subsurface systems cannot be overly emphasized. Positive site drainage should be maintained at all times. Drainage should not flow uncontrolled down any descending slope. Water should be directed away from foundations and not allowed to pond or seep into the ground adjacent to the footings and floor-slabs. Pad drainage should be directed toward approved areas and not be blocked by other improvements.

Roof gutters should be installed that will direct the collected water at least 20 feet from the buildings.

It is the owner's responsibility to maintain and clean drainage devices on or contiguous to their lot. In order to be effective, maintenance should be conducted on a regular and routine schedule and necessary corrections made prior to each rainy season.

5.10 PLAN REVIEW AND CONSTRUCTION OBSERVATIONS

We recommend that site grading, specifications, retaining wall/shoring plans and foundation plans be reviewed by this office prior to construction to check for conformance with the recommendations of this report. Additional recommendations may be necessary based on these reviews. We also recommend that GeoTek representatives be present during site grading and foundation construction to check for proper implementation of the geotechnical recommendations. The owner/developer should have GeoTek's representative perform at least the following duties:

- Observe site clearing and grubbing operations for proper removal of unsuitable materials.
- Observe and test bottom of removals prior to fill placement.
- Evaluate the suitability of on-site and import materials for fill placement and collect soil samples for laboratory testing when necessary.
- Observe the fill for uniformity during placement including utility trenches.
- Test the fill for field density and relative compaction.
- Test the near-surface soils to verify proper moisture content.
- Observe and probe foundation excavations to confirm suitability of bearing materials.

If requested, a construction observation and compaction report can be provided by GeoTek, which can comply with the requirements of the governmental agencies having jurisdiction over the project. We recommend that these agencies be notified prior to commencement of construction so that necessary grading permits can be obtained.

6. LIMITATIONS

This evaluation does not and should in no way be construed to encompass any areas beyond the specific area of proposed construction as indicated to us by the client. Further, no evaluation of any existing site improvements is included. The scope is based on our understanding of the project and the client's needs, our proposal (Proposal No. P-0303821-CR) dated March 11, 2021 and geotechnical engineering standards normally used on similar projects in this region.

The materials observed on the project site appear to be representative of the area; however, soil and bedrock materials vary in character between excavations and natural outcrops or conditions exposed during site construction. Site conditions may vary due to seasonal changes or other factors. GeoTek, Inc. assumes no responsibility or liability for work, testing or recommendations performed or provided by others.

Since our recommendations are based on the site conditions observed and encountered, and laboratory testing, our conclusions and recommendations are professional opinions that are limited to the extent of the available data. Observations during construction are important to allow for any change in recommendations found to be warranted. These opinions have been derived in accordance with current standards of practice and no warranty is expressed or implied. Standards of practice are subject to change with time.

7. SELECTED REFERENCES

American Society of Civil Engineers (ASCE), 2017, "Minimum Design Loads for Buildings and Other Structures," ASCE/SEI 7-16, Errata Incorporated through January 2020.

Bowles, J. E., 1977, "Foundation Analysis and Design," Second Edition

Bryant, W.A., and Hart, E.W., 2007, "Fault Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps," California Geological Survey: Special Publication 42.

California Code of Regulations, Title 24, 2019 "California Building Code," 2 volumes.

California Geological Survey (CGS, formerly referred to as the California Division of Mines and Geology), 1977, "Geologic Map of California."

_____. 2018, "Seismic Hazard Zone Report for the Bachelor Mountain 7.5-Minute quadrangle, Riverside County, California", Seismic Hazard Zone Report 120.

GeoTek, Inc., In-house proprietary information.

Morton, D.M., Bovard, K.P., and Morton, Gregory, 2003, "Geologic Map of the Romoland 7.5' Quadrangle, Riverside County, California", USGS Open File Report OF-2003-102, 1:24,000.

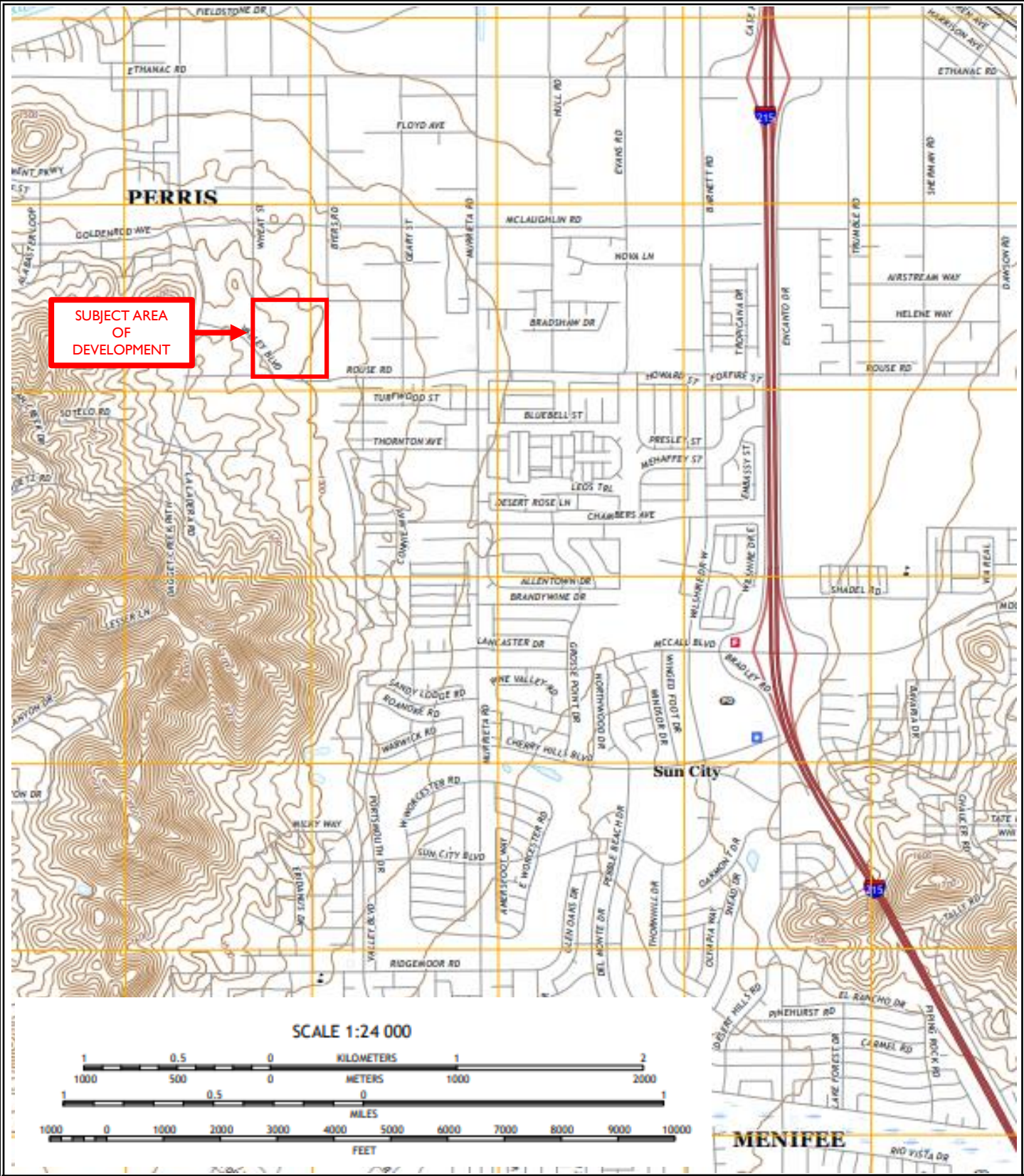
Riverside County Flood Control and Water Conservation District, 2011, "Design Handbook for Low Impact Development Best Management Practices, Appendix A – Infiltration Testing Guidelines," effective September 2011.

Roberge, P.R., 2005, "Handbook of Corrosion Engineering."

SEA/OSHPD web service, "Seismic Design Maps" (https://seismicmaps.org).

Stevenson, Porto and Pierce, Inc., "Conceptual Tentative Tract Map 38128", scale 1" = 80', dated March 17, 2021.

Terzaghi, K. and Peck, R. B., 1967, "Soil Mechanics in Engineering Practice," Second Edition.



JPMB Investments, LLC.
APNs 330-230-023 & -024
Menifee, Riverside County, California

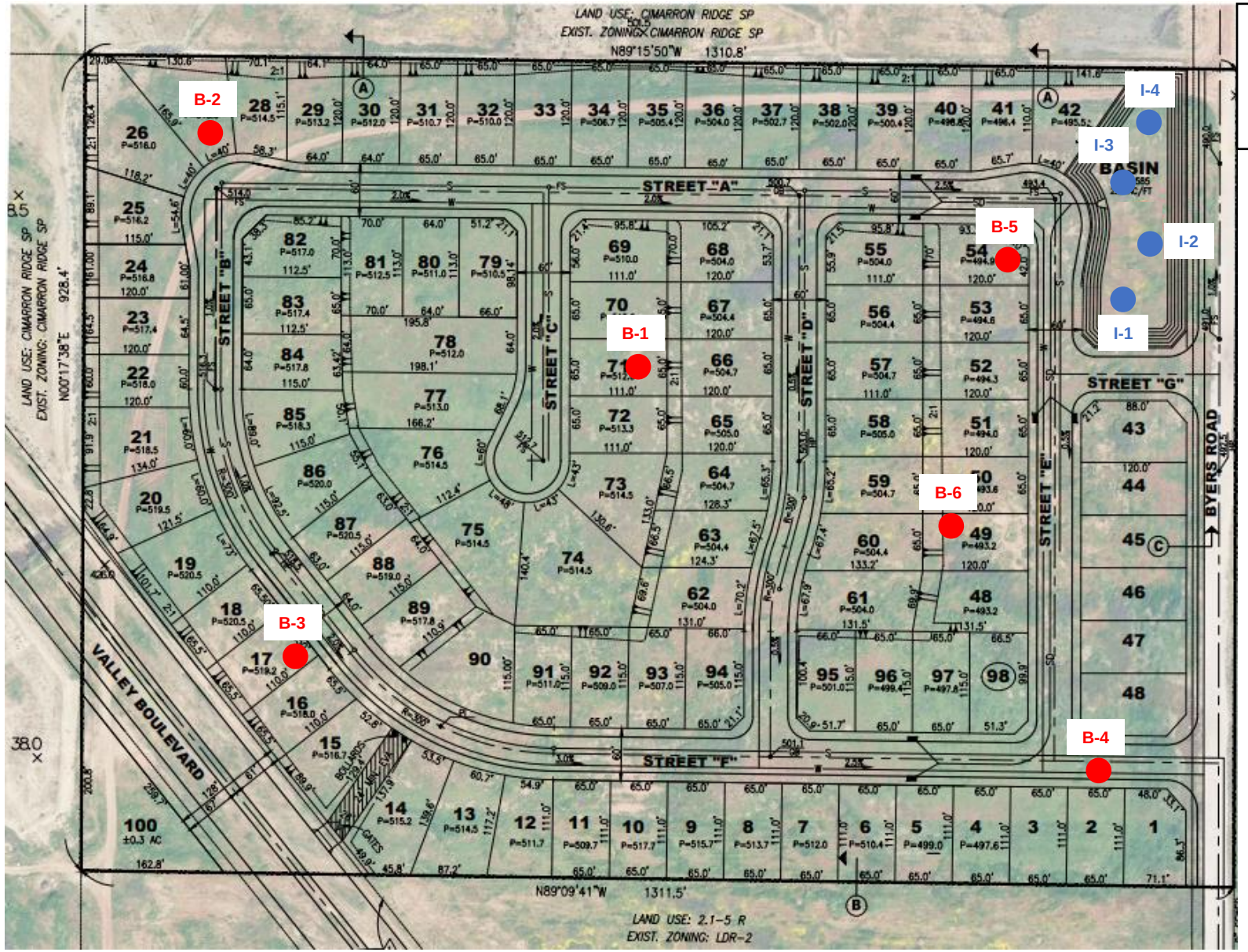
GeoTek Project No. 2759-CR

N

Modified from USGS 7.5-minute Romoland Topographic Map

Figure 1
Site Location Map

GEOTEK



LEGEND

(Locations are approximate)

B-6 Exploratory Boring

I-4 Percolation Boring

N

80' 0 80' 160' 240'

SCALE: 1"=80'

JPMB Investments, LLC
APNs 330-230-023 & -024
Menifee, Riverside County, California

Project No. 2759-CR

Basemap from 2021, Stevenson, Porto & Pierce, Inc.
"Conceptual Tentative Tract Map 38128", dated March 17.

Figure 2

Exploration Location Map

GEOTEK

APPENDIX A

LOGS OF EXPLORATORY BORINGS

Geotechnical and Infiltration Evaluation
Menifee, Riverside County, California
Project No. 2759-CR

GEOTEK

A - FIELD TESTING AND SAMPLING PROCEDURES

The Modified Split-Barrel Sampler (Ring)

The Ring sampler is driven into the ground in accordance with ASTM Test Method D 3550. The sampler, with an external diameter of 3.0 inches, is lined with 1-inch long, thin brass rings with inside diameters of approximately 2.4 inches. The sampler is typically driven into the ground 12 or 18 inches with a 140-pound hammer free falling from a height of 30 inches. Blow counts are recorded for every 6 inches of penetration as indicated on the log of boring. The samples are removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

Bulk Samples (Large)

These samples are normally large bags of representative earth materials over 20 pounds in weight collected from the field by means of hand digging or exploratory cuttings.

Bulk Samples (Small)

These are plastic bag samples which are normally airtight and contain less than 5 pounds in weight of representative earth materials collected from the field by means of hand digging or exploratory cuttings. These samples are primarily used for determining natural moisture content and classification indices.

B – BORING LOG LEGEND

The following abbreviations and symbols often appear in the classification and description of soil and rock on the logs of borings:

SOILS

USCS	Unified Soil Classification System
f-c	Fine to coarse
f-m	Fine to medium

GEOLOGIC

B: Attitudes	Bedding: strike/dip
J: Attitudes	Joint: strike/dip
C:	Contact line
……..	Dashed line denotes USCS material change
———	Solid Line denotes unit / formational change
———	Thick solid line denotes end of boring

(Additional denotations and symbols are provided on the boring logs)

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling, Inc.	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Boring No.: B-1

Depth (ft)	Sample Type	Blows/ 6 in	Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Water Content (%)	Dry Density (pcf)	Others
0				CH	**Very Old Alluvial Fan Deposits** Fat Clay with sand, red-brown, slightly moist to moist, very stiff			SH, EI, MD, SR, AL
		14 50/5		SM	F-m SAND with some silt, light brown, slightly moist, very dense	6.5	114.3	
5		50/6			Some gravel @ 5.0 feet	6.0		
		50/5			Reddish brown	6.0		
10		22 50/3			Trace caliche stringers	19.6	92.0	
15		50/4.5			F-m SAND with some silt, light red-brown, moist, very dense	10.8	111.7	
20		50/5.5		SM-SC	F-m SAND with some silt and clay, red-brown, moist, very dense	22.6		
25		50/5		SM	F-m SAND with some silt, red-brown, slightly moist, very dense			
30		10 50/4		SM	Silty f-m SAND, light red-brown, slightly moist, very dense			

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling, Inc.	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	Boring No.: B-1 (Continued) / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
30								
35		21 50/6		SM	Silty f-m SAND, red-brown, moist, very dense			
40		22 42 50/5.5			Same			
45		42 50/3		SM	Silty f SAND, light brown, slightly moist, very dense			
50		38 50/3			Same			
					BORING TERMINATED AT 51 FEET			
					Boring backfilled with excavated soils. No groundwater encountered.			
55								
60								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling, Inc.	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	Boring No.: B-2 / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**Very Old alluvial fan deposits**			
		7 12 18		SM	Silty f SAND with some rock fragments, light olive-brown, slightly moist, medium dense	4.1	137.4	
5		50/6			Silty f-m SAND, light brown, slightly moist to moist, very dense	5.3	121.8	
					Granitic Bedrock			
10		50/4.5			GABBRO, excavates as m-c SAND, tan, slightly moist to moist, hard, weathered			
15		50/4.5			Same			
20		50/4.5			Same			
					BORING TERMINATED AT 20.5 FEET			
					Boring backfilled with excavated soils. No groundwater encountered.			
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling, Inc.	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Boring No.: B-3

Depth (ft)	Sample Type	Blows/ 6 in	Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Water Content (%)	Dry Density (pcf)	Others
0					**Very Old Alluvial Fan Deposits**			EI, MD, SR, SH
		50/6		SM	Silty SAND with trace clay, red-brown, slightly moist, very dense, with rock fragments	7.0	128.1	
5		50/5				10.2		
		50/2						
					Granitic Bedrock			
10		50/6			GABBRO, excavates as f-m SAND, light brown to tan, moist, very dense, oxidized fracturing, weathered			
		50/5			Excavates as silty f-m SAND with some rock fragments, light brown, slightly moist, very dense			
15								
		50/4			Same			
20					**BORING TERMINATED AT 20 FEET**			
					Boring backfilled with excavated soils. No groundwater encountered.			
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling, Inc.	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Boring No.: B-4

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**Very Old Alluvial Fan Deposits**			
	■	26 50/5		CL-SC	Sandy CLAY to SAND with clay, brown, moist, very stiff to very dense	12.9		
5	■	32 50/5		SC	Clayey SAND, brown, moist, very stiff	18.0	102.8	
10	■	30 50/5		SM	Silty f SAND, light red-brown, moist, very dense	12.5		
15	■	50/6			Same	25.1		
20	■	50/6			Same			
					BORING TERMINATED AT 20.5 FEET			
25					Boring backfilled with excavated soils. No groundwater encountered.			
30								

LEGEND

Sample type: ■ ---Ring ■ ---SPT ▨ ---Small Bulk ▩ ---Large Bulk □ ---No Recovery ▽ ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling, Inc.	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Boring No.: B-5

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**Very Old Alluvial Fan Deposits**			
		21 50/4		SM	Silty f SAND, red-brown, moist, very dense, with some rock fragments	9.5	104.9	
5		20 50/3.5				8.9	141.2	
		50/6			Silty f-m SAND with some granitic fragments, red-brown, very dense	16.5		
10		20 50/4			Trace caliche stringers	17.0		
15		14 50/6				10.7	113.6	
20		20 50/5			**Granitic Bedrock** GABBRO, Excavates as Silty f-m SAND, light brown, slightly moist, hard			
					BORING TERMINATED AT 21 FEET			
					Boring backfilled with excavated soils. No groundwater encountered.			
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling, Inc.	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Boring No.: B-6

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**Very Old Alluvial Fan Deposits**			
5		34 50/6		SM	Silty f SAND, light brown, moist, very dense	9.5	110.7	
10		21 50/6			Becomes red-brown, moist, very dense	35.6		
15		26 50/6			Same	16.6	108.2	
20		50/4			Same	11.0	113.0	
					BORING TERMINATED AT 20.5 FEET			
					Boring backfilled with excavated soils. No groundwater encountered.			
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	**Boring No.: I-1** / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**Very Old Alluvial Fan Deposits** Silty f SAND, red-brown, slightly moist, dense - Becomes moist @ 2.0 feet			
5					**BORING TERMINATED AT 5.0 FEET** Boring subsequently prepared for infiltration testing (pvc, pipe, filter sock, gravel) No groundwater encountered			
10								
15								
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	**Boring No.: I-2** / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**Very Old Alluvial Fan Deposits** Silty f SAND, red-brown, slightly moist, dense - Becomes moist @ 2.0 feet			
5					**BORING TERMINATED AT 5.0 FEET** Boring subsequently prepared for infiltration testing (pvc, pipe, filter sock, gravel) No groundwater encountered			
10								
15								
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	**Boring No.: I-3** / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**<u>Very Old Alluvial Fan Deposits</u>** Silty f SAND, red-brown, slightly moist, dense - Becomes moist @ 2.0 feet			
5					**BORING TERMINATED AT 5.0 FEET** Boring subsequently prepared for infiltration testing (pvc, pipe, filter sock, gravel) No groundwater encountered			
10								
15								
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	JPMB Investments, LLC	**DRILLER:**	2R Drilling	**LOGGED BY:**	D. Alvarez
PROJECT NAME:	APN 330-230-023 & 024	**DRILL METHOD:**	Hollow Stem	**OPERATOR:**	Nick
PROJECT NO.:	2759-CR	**HAMMER:**	140#/30"	**RIG TYPE:**	CME 75
LOCATION:	Menifee, CA			**DATE:**	5/21/2021

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	**Boring No.: I-4** / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
0					**<u>Very Old Alluvial Fan Deposits</u>** Silty f SAND, red-brown, slightly moist, dense - Becomes moist @ 2.0 feet			
5					**BORING TERMINATED AT 5.0 FEET** Boring subsequently prepared for infiltration testing (pvc, pipe, filter sock, gravel) No groundwater encountered			
10								
15								
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

APPENDIX B

LABORATORY TEST RESULTS

Geotechnical and Infiltration Evaluation
Menifee, Riverside County, California
Project No. 2759-CR

GEOTEK

SUMMARY OF LABORATORY TESTING

Classification
Soils were classified visually in general accordance with the Unified Soil Classification System (ASTM D 2487). The soil classifications are shown on the logs of exploratory borings in Appendix A.

In-Situ Moisture Content and Unit Weight
The field moisture content was measured in the laboratory on selected samples collected during the field investigation. The field moisture content is determined as a percentage of the dry unit weight. The dry density was measured in the laboratory on selected ring samples. The results are shown on the logs of exploratory borings in Appendix A.

Moisture-Density Relationship
Laboratory testing was performed on representative site samples collected during the recent subsurface exploration. The laboratory maximum dry density and optimum moisture content for the samples tested were determined in general accordance with test method ASTM D 1557. The results are presented herein.

Direct Shear
Direct shear testing was performed on remolded samples of the surficial soils according to ASTM D 3080. The results of these tests are presented herein.

Expansion Index
The expansion potential of the soils was determined by performing expansion index tests on soil samples obtained from the site in general accordance with ASTM D 4829. The results of these tests are presented herein.

Atterberg Limits
The Atterberg limits of the most clayey samples collected from the site were determined per ASTM D 4318. The results are presented herein.

Percent Passing No. 200 Sieve
The percent of soil finer than the No. 200 sieve for two representative soil samples was determined per ASTM D 1140. The results are presented herein.

Sulfate Content, Resistivity and Chloride Content
Testing to determine the water-soluble sulfate content was performed by others in general accordance with ASTM D4327. Resistivity testing was completed by others in general accordance with ASTM G187. Testing to determine the chloride content was performed by others in general accordance with ASTM D4327. pH testing was completed by others in general accordance with ASTM D4972. The results of the testing are presented herein

GEOTEK

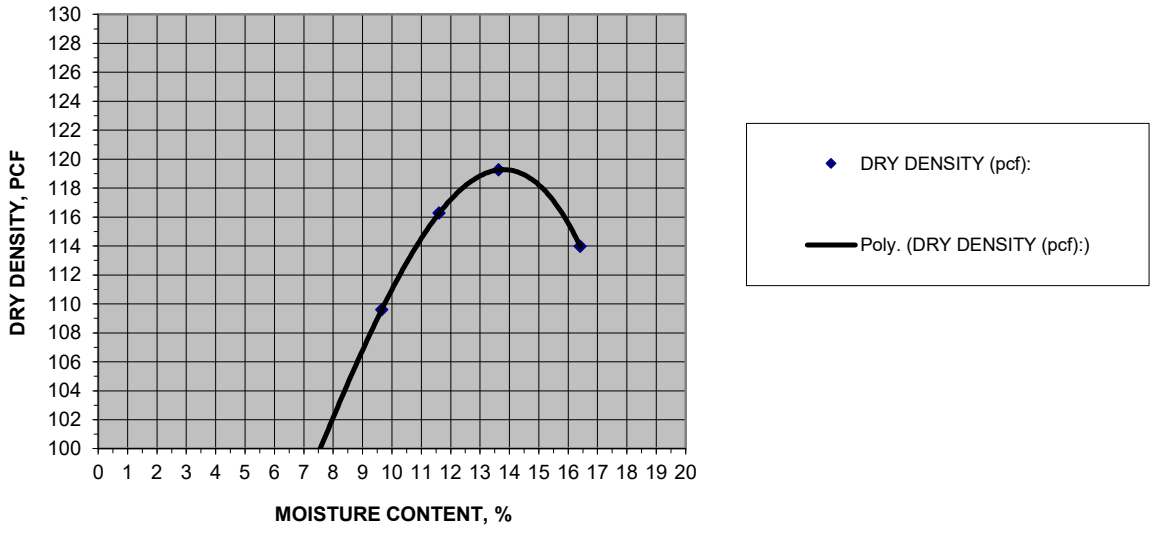
MOISTURE/DENSITY RELATIONSHIP

Client:	JPMB Investments	**Job No.:**	2759-CR
Project:	APN 330-230-023 & 024	**Lab No.:**	Corona
Location:	Menifee		
Material Type:	Reddish Brown Clay		
Material Supplier:	-		
Material Source:	-		
Sample Location:	B1 @ 0-5'		
	-		
Sampled By:	DA	**Date Sampled:**	5/25/2021
Received By:	RJ	**Date Received:**	5/25/2021
Tested By:	RL	**Date Tested:**	6/4/2021
Reviewed By:	RJ	**Date Reviewed:**	6/8/2021

Test Procedure: ASTM D1557 **Method:** A

Oversized Material (%): 13.4 **Correction Required:** ■ yes □ no

MOISTURE/DENSITY RELATIONSHIP CURVE



MOISTURE DENSITY RELATIONSHIP VALUES

Maximum Dry Density, pcf	119.0	**@ Optimum Moisture, %**	13.5
Corrected Maximum Dry Density, pcf		**@ Optimum Moisture, %**	

MATERIAL DESCRIPTION

Grain Size Distribution:

	% Gravel (retained on No. 4)
	% Sand (Passing No. 4, Retained on No. 200)
	% Silt and Clay (Passing No. 200)

Atterberg Limits:

	Liquid Limit, %
	Plastic Limit, %
	Plasticity Index, %

Classification:

Unified Soils Classification:

AASHTO Soils Classification:

GEOTEK

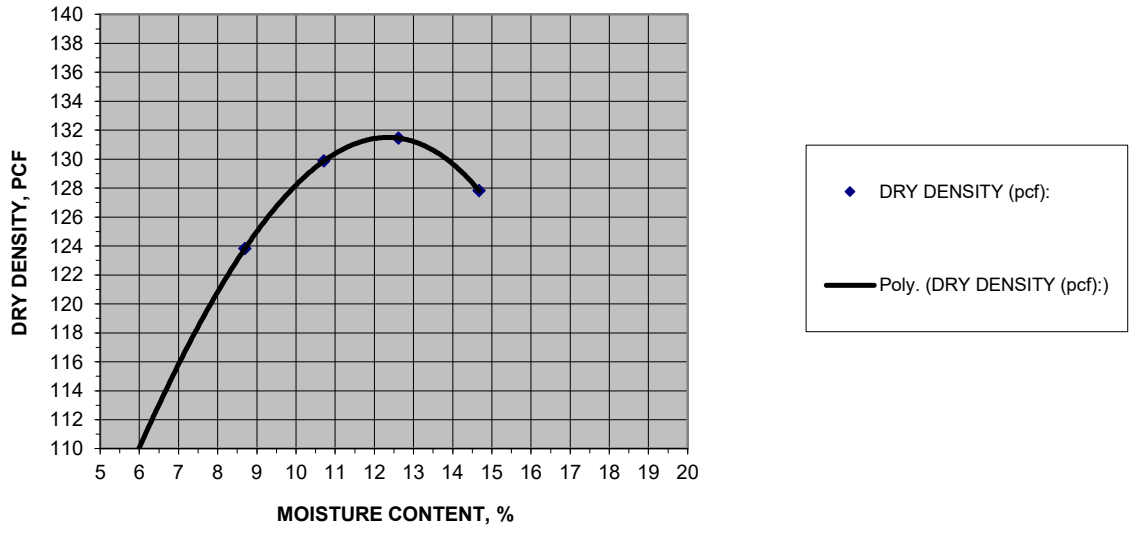
MOISTURE/DENSITY RELATIONSHIP

Client:	JPMB Investments	**Job No.:**	2759-CR
Project:	APN 330-230-023 & 024	**Lab No.:**	Corona
Location:	Menifee		
Material Type:	Reddish Brown Clayey F-M Sand		
Material Supplier:	-		
Material Source:	-		
Sample Location:	B3 @ 0-5'		
	-		
Sampled By:	DA	**Date Sampled:**	5/25/2021
Received By:	RJ	**Date Received:**	5/25/2021
Tested By:	RL	**Date Tested:**	6/7/2021
Reviewed By:	RJ	**Date Reviewed:**	6/8/2021

Test Procedure: ASTM D1557 **Method:** A

Oversized Material (%): 23.5 **Correction Required:** ■ yes □ no

MOISTURE/DENSITY RELATIONSHIP CURVE



MOISTURE DENSITY RELATIONSHIP VALUES

Maximum Dry Density, pcf	132.0	**@ Optimum Moisture, %**	12.5
Corrected Maximum Dry Density, pcf		**@ Optimum Moisture, %**	

MATERIAL DESCRIPTION

Grain Size Distribution:

	% Gravel (retained on No. 4)
	% Sand (Passing No. 4, Retained on No. 200)
	% Silt and Clay (Passing No. 200)

Atterberg Limits:

	Liquid Limit, %
	Plastic Limit, %
	Plasticity Index, %

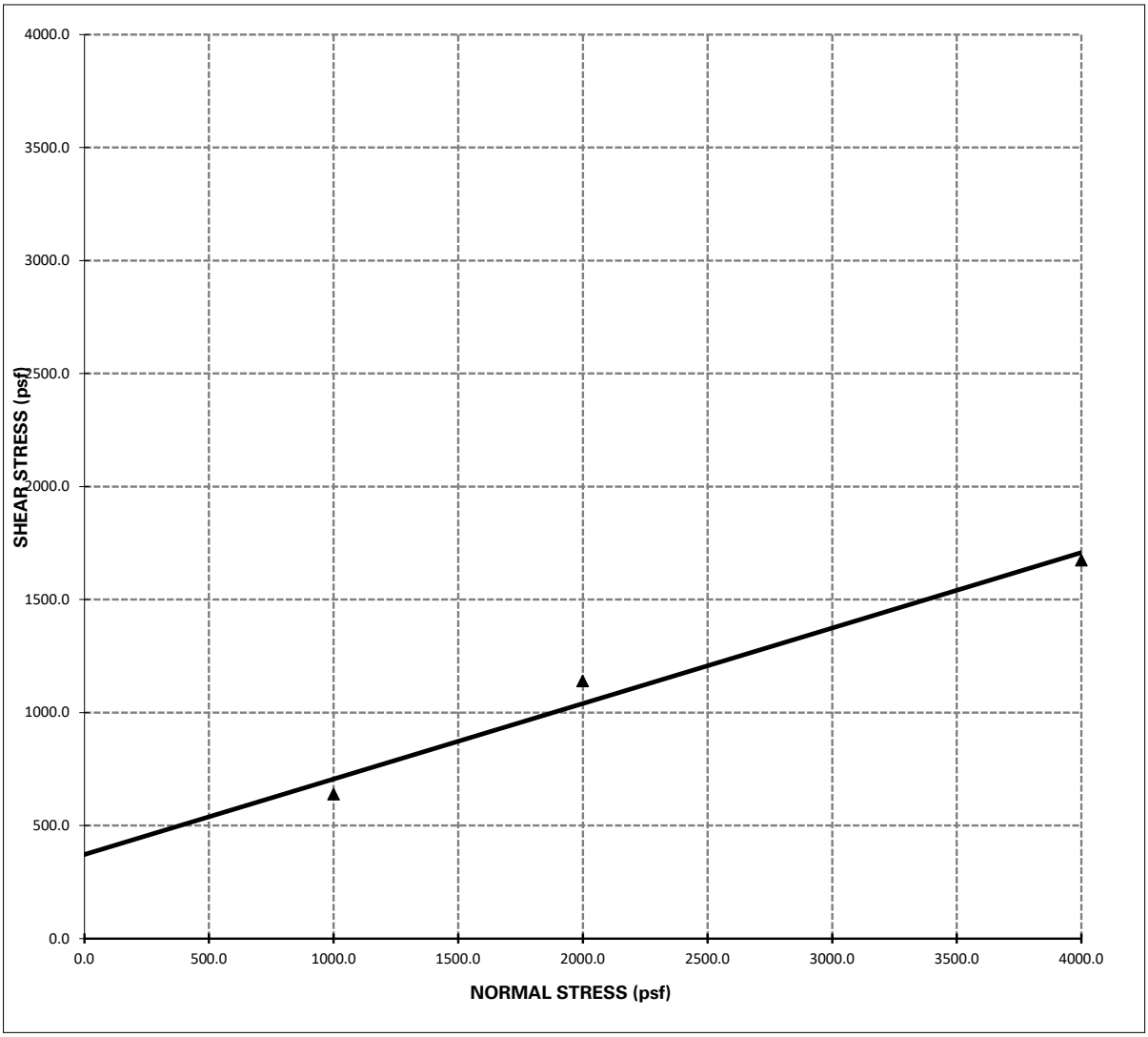
Classification:

Unified Soils Classification:

AASHTO Soils Classification:

DIRECT SHEAR TEST

Project Name:	JPMB Investments	***Sample Location:***	B1 @ 0-5'
Project Number:	2759-CR	***Date Tested:***	6/8/2021



Shear Strength: Φ = 18 ° , C = 372 psf

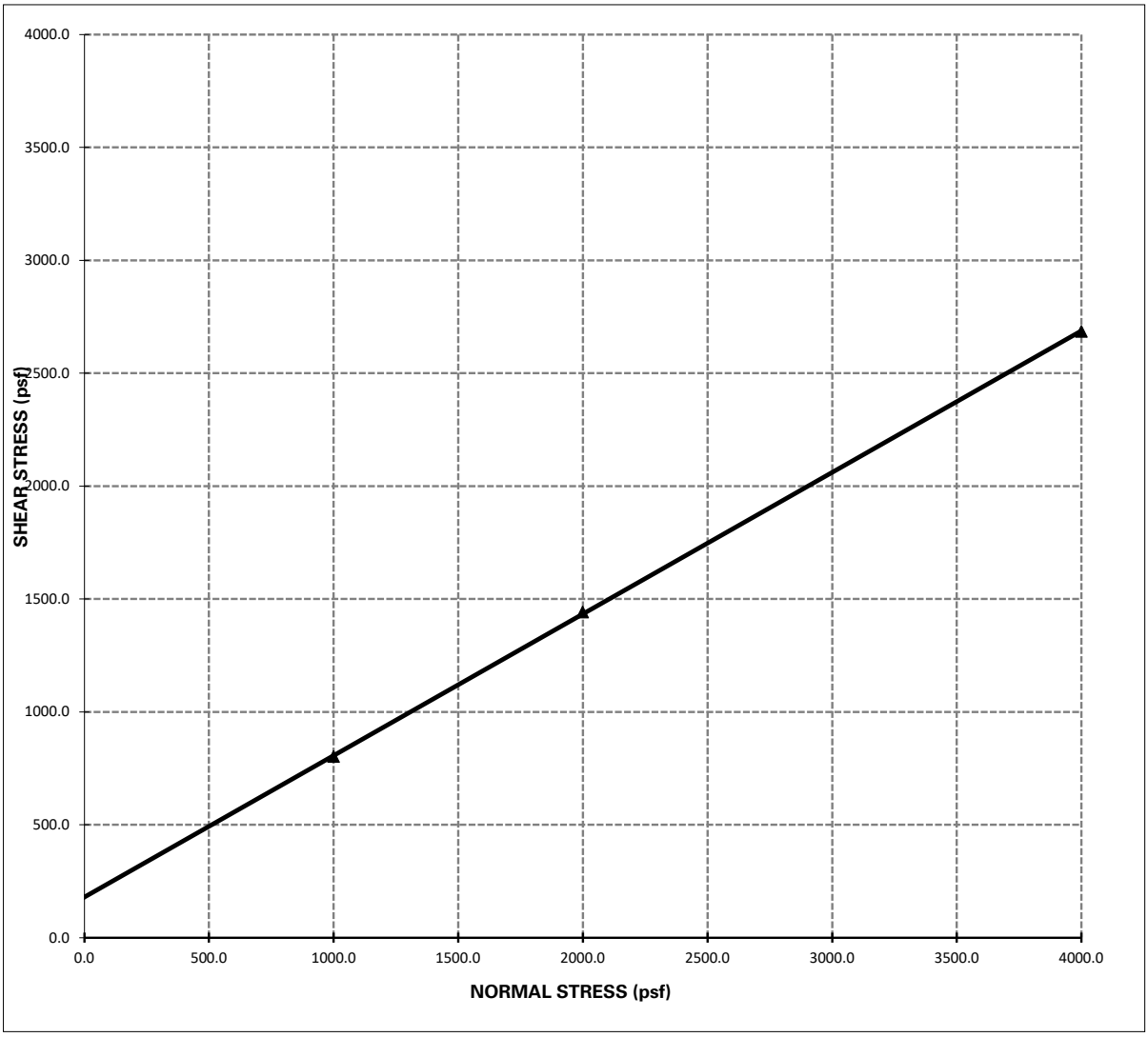
Notes: 1 - The soil specimen used in the shear box was a ring sample remolded to approximately 90% relative compaction from a bulk sample collected during the field investigation.

2 - The above reflect direct shear strength at saturated conditions.

3 - The tests were run at a shear rate of 0.035 in/min.

DIRECT SHEAR TEST

Project Name:	JPMB Investments	***Sample Location:***	B3 @ 0-5'
Project Number:	2759-CR	***Date Tested:***	6/10/2021



Shear Strength: Φ = **32°** , **C = 180 psf**

Notes: 1 - The soil specimen used in the shear box was a ring sample remolded to approximately 90% relative compaction from a bulk sample collected during the field investigation.

2 - The above reflect direct shear strength at saturated conditions.

3 - The tests were run at a shear rate of 0.035 in/min.

GEOTEK

EXPANSION INDEX TEST

(ASTM D4829)

Client:	JPMB Investments	***Tested/ Checked By:***	CD Lab No Corona
Project Number:	2759-CR	***Date Tested:***	6/2/2021
Project Location:	APN 330-230-023 & 024	***Sample Source:***	B1 @ 0-5'
		Sample Description:	

Ring #:_____ Ring Dia. : 4.01" Ring Ht.1"

DENSITY DETERMINATION

A	Weight of compacted sample & ring (gm)	714.7
B	Weight of ring (gm)	362.2
C	Net weight of sample (gm)	**352.5**
D	Wet Density, lb / ft3 (C*0.3016)	**106.3**
E	Dry Density, lb / ft3 (D/1.F)	**92.4**

SATURATION DETERMINATION

F	Moisture Content, %	15.0
G	Specific Gravity, assumed	**2.70**
H	Unit Wt. of Water @ 20 °C, (pcf)	**62.4**
I	% Saturation	**49.2**

READINGS

DATE	TIME	READING	
6/2/2021		0.2230	Initial
6/2/2021		0.2230	10 min/Dry
6/3/2021		0.3180	Final

FINAL MOISTURE

Final Weight of wet sample & tare	% Moisture
777.8	**32.9**

EXPANSION INDEX = 95

GEOTEK

EXPANSION INDEX TEST

(ASTM D4829)

Client:	JPMB Investments	***Tested/ Checked By:***	CD Lab No Corona
Project Number:	2759-CR	***Date Tested:***	6/2/2021
Project Location:	APN 330-230-023 & 024	***Sample Source:***	B3 @ 0-5'
		Sample Description:	

Ring #: _____ Ring Dia. : 4.01" Ring Ht. 1"

DENSITY DETERMINATION

A	Weight of compacted sample & ring (gm)	773.7
B	Weight of ring (gm)	363.9
C	Net weight of sample (gm)	**409.8**
D	Wet Density, lb / ft3 (C*0.3016)	**123.6**
E	Dry Density, lb / ft3 (D/1.F)	**113.0**

SATURATION DETERMINATION

F	Moisture Content, %	9.4
G	Specific Gravity, assumed	**2.70**
H	Unit Wt. of Water @ 20 °C, (pcf)	**62.4**
I	% Saturation	**51.7**

READINGS

DATE	TIME	READING	
6/2/2021		0.2680	Initial
6/2/2021		0.2680	10 min/Dry
6/3/2021		0.2830	Final

FINAL MOISTURE

Final Weight of wet sample & tare	% Moisture
815.0	**19.5**

EXPANSION INDEX = 15

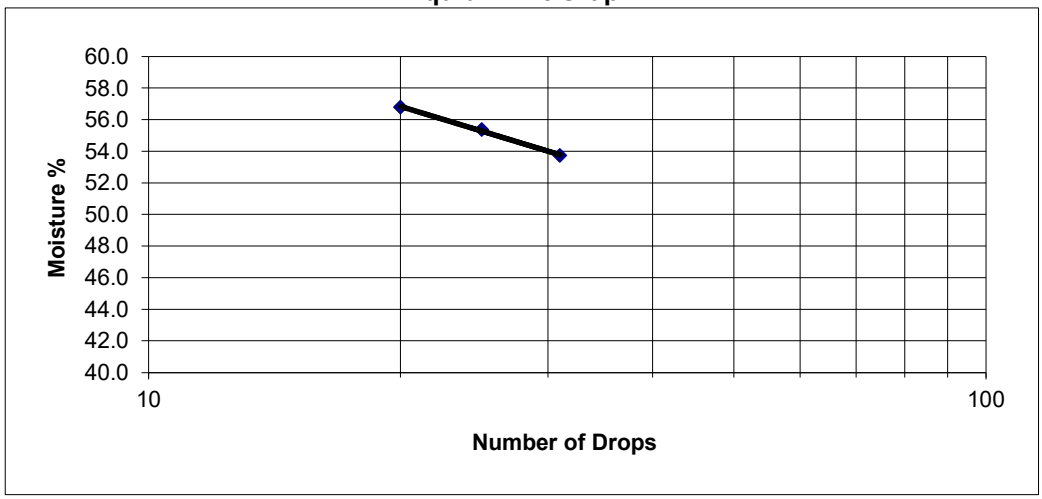
GEOTEK

ATTERBERG LIMITS DATA

Field Classification		Job No.	2759-CR
Sample Number		Client	JPMB Investments
Sample Type	Reddish Brown Clay	Project	APN 330-230-023 & 024
Location	B1 @ 0-5'		
Tested by:	RJ		

	Plastic Limit			Liquid Limit		
Number of Blows				31	25	20
Wt. of Dish + Wet Soil	36.52	36.87		13.15	12.48	12.44
Wt. of Dish + Dry Soil	35.33	35.66		10.70	10.21	10.14
Wt. of Moisture	1.19	1.21		2.45	2.27	2.30
Wt. of Dish	30.48	30.80		6.14	6.11	6.09
Wt. of Dry Soil	4.85	4.86		4.56	4.10	4.05
Moisture Content %	24.5	24.9		53.7	55.4	56.8

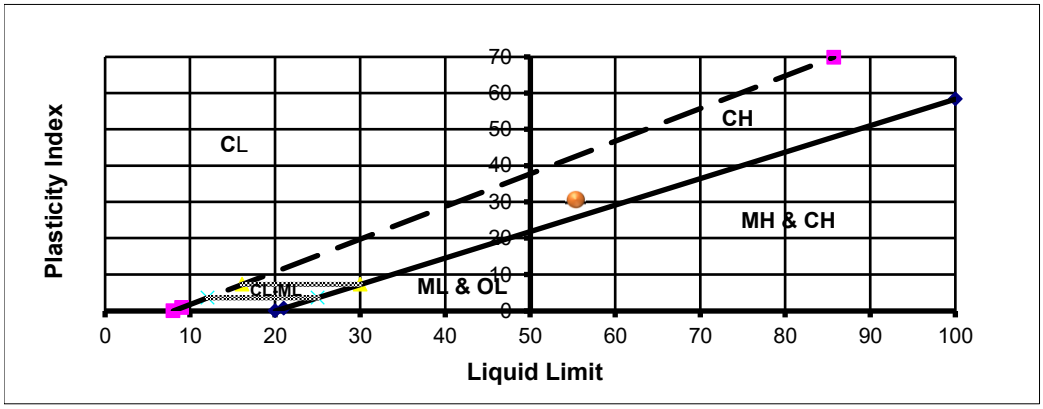
Liquid Limit Graph



Liquid Limit
55

Plastic Limit
25

Plasticity Index
31



GEOTEK

-200 WASH

Date: 6/9/2021
W.O.: 2759-CR sample ID B1
Client: JPMB Investments depth 0-5
Project: APN 330-230-023 & 024

Sieve Size	Particle Diameter		Wt. Retained	Wt. Passing	% Passing	Specs
	in.	mm.				
#200	0.0029	0.074	77.1	155.8	66.9%	

Dry Weight 232.9

Soak Time 1440 Minutes

GEOTEK

-200 WASH

Date: 6/9/2021
W.O.: 2759-CR sample ID B3
Client: JPMB Investments depth 0-5
Project: APN 330-230-023 & 024

Sieve Size	Particle Diameter		Wt. Retained	Wt. Passing	% Passing	Specs
	in.	mm.				
#200	0.0029	0.074	160.1	70.4	30.5%	

Dry Weight 230.5

Soak Time 1440 Minutes

Soil Analysis Lab Results

Client: GeoTek, Inc.
Job Name: APIV-330-230-023 & 024, Menifee
Client Job Number: 2759-CR
Project X Job Number: S210602D
June 8, 2021

	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM D4972	ASTM G200	SM 4500-S2-D	ASTM D4327	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D4327	ASTM D4327
Bore# / Description	**Depth**	**Sulfates** SO_4^{2-}		**Chlorides** Cl^-		**Resistivity** As Rec'd | Minimum		**pH**	**Redox**	**Sulfide** S^{2-}	**Nitrate** NO_3^-	**Ammonium** NH_4^+	**Lithium** Li^+	**Sodium** Na^+	**Potassium** K^+	**Magnesium** Mg^{2+}	**Calcium** Ca^{2+}	**Fluoride** F_2^{--}	**Phosphate** PO_4^{3-}
	(ft)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(Ohm-cm)	(Ohm-cm)		(mV)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
B-1	0-5	28.1	0.0028	21.8	0.0022	8,710	1,340	8.6	58	<0.01	2.6	41.6	0.01	138.2	2.0	43.0	142.9	8.7	2.2
B-3	0-5	12.4	0.0012	8.9	0.0009	9,380	3,283	8.8	42	<0.01	3.5	34.7	0.03	85.9	0.6	65.4	144.3	1.0	7.3

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography
mg/kg = milligrams per kilogram (parts per million) of dry soil weight
ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown
Chemical Analysis performed on 1:3 Soil-To-Water extract
PPM = mg/kg (soil) = mg/L (Liquid)

APPENDIX C

PERCOLATION/INFILTRATION TEST DATA

Geotechnical and Infiltration Evaluation
Menifee, Riverside County, California
Project No. 2759-CR

GEOTEK

Client:	**JPMB Investments, LLC.**
Project:	**APNs 330-230-023 & -024**
Project No:	**2759-CR**
Date:	**6/1/2021**

Boring No. **I-1**

Infiltration Rate (Porchet Method)

Time Interval, Δt =	30	min
Final Depth to Water, D_F =	40.5	in
Test Hole Radius, r =	4	in
Initial Depth to Water, D_O =	40	in
Total Test Hole Depth, D_T =	60	in

Equation - $I_t = \dfrac{\Delta H\,(60r)}{\Delta t\,(r+2H_{avg})}$

$H_O = D_T - D_O$ =	20	in
$H_F = D_T - D_F$ =	19.5	in
$\Delta H = \Delta D = H_O - H_F$ =	0.5	in
$H_{avg} = (H_O+H_F)/2$ =	19.75	in

I_t = 0.1 **Inches per Hour**

GEOTEK

Client:	**JPMB Investments, LLC.**
Project:	**APNs 330-230-023 & -024**
Project No:	**2759-CR**
Date:	**6/1/2021**

Boring No. **I-2**

Infiltration Rate (Porchet Method)

Time Interval, Δt =	30	min
Final Depth to Water, D_F =	40.5	in
Test Hole Radius, r =	4	in
Initial Depth to Water, D_O =	40	in
Total Test Hole Depth, D_T =	60	in

Equation - $I_t = \dfrac{\Delta H\,(60r)}{\Delta t\,(r+2H_{avg})}$

$H_O = D_T - D_O$ =	20	in
$H_F = D_T - D_F$ =	19.5	in
$\Delta H = \Delta D = H_O - H_F$ =	0.5	in
$H_{avg} = (H_O+H_F)/2$ =	19.75	in

I_t = 0.1 **Inches per Hour**

GEOTEK

Client:	**JPMB Investments, LLC.**
Project:	**APNs 330-230-023 & -024**
Project No:	**2759-CR**
Date:	**6/1/2021**

Boring No. **I-3**

Infiltration Rate (Porchet Method)

Time Interval, Δt =	30	min
Final Depth to Water, D_F =	40.5	in
Test Hole Radius, r =	4	in
Initial Depth to Water, D_O =	40	in
Total Test Hole Depth, D_T =	60	in

Equation - $I_t = \dfrac{\Delta H\,(60r)}{\Delta t\,(r+2H_{avg})}$

$H_O = D_T - D_O$ =	20	in
$H_F = D_T - D_F$ =	19.5	in
$\Delta H = \Delta D = H_O - H_F$ =	0.5	in
$H_{avg} = (H_O+H_F)/2$ =	19.75	in

I_t = 0.1 **Inches per Hour**

GEOTEK

Client:	**JPMB Investments, LLC.**
Project:	**APNs 330-230-023 & -024**
Project No:	**2759-CR**
Date:	**6/1/2021**

Boring No. **I-4**

Infiltration Rate (Porchet Method)

Time Interval, Δt =	30	min
Final Depth to Water, D_F =	40.5	in
Test Hole Radius, r =	4	in
Initial Depth to Water, D_O =	40	in
Total Test Hole Depth, D_T =	60	in

Equation - $I_t = \dfrac{\Delta H\,(60r)}{\Delta t\,(r+2H_{avg})}$

$H_O = D_T - D_O$ =	20	in
$H_F = D_T - D_F$ =	19.5	in
$\Delta H = \Delta D = H_O - H_F$ =	0.5	in
$H_{avg} = (H_O+H_F)/2$ =	19.75	in

I_t = 0.1 **Inches per Hour**

GEOTEK

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYER ROAD MENIFEE

Project: _____, **Job No.:** 2759-CR.

Test Hole No.: I-1 **Tested By:** DVG, **Date:** 5/21, 22/2021.

Depth of Hole As Drilled: 60" **Before Test:** 60" _____ **After Test:** 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
								PRESOAK 5 GAL 5/21/2021
	737 / 802	25	60	20	18 1/2	1 1/2		BEGIN 5/22/2021 1ST 25 MIN.
	804 / 829	25	60	20	18 3/4	1 1/4		2ND 25 MIN.
	831 / 901	30	60	20	18 1/2	1 1/2		1ST 30 MIN.
	903 / 933	30	60	20	18 1/2	1 1/2		2ND 30 MIN.
	935 / 1005	30	60	20	18 1/2	1 1/2		3RD 30 MIN.
	1007 / 1037	30	60	20	18 3/4	1 1/4		4TH 30 MIN.
	1039 / 1109	30	60	20	18 3/4	1 1/4		5TH 30 MIN.
	1111 / 1141	30	60	20	19	1		6TH 30 MIN.
	1143 / 1213	30	60	20	19	1		7TH 30 MIN.

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYER ROAD MENIFEE

Project: _____, **Job No.:** 2759-CR.

Test Hole No.: I-1 **Tested By:** DVG, **Date:** 5/21,22/2021.

Depth of Hole As Drilled: 60" **Before Test:** 60" **After Test:** 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
	1215		60	20				
	1245	30			19 1/4	3/4		8TH 30 MIN.
	1247		60	20				
	117	30			19 1/2	1/2		9TH 30 MIN.
	119		60	20				
	149	30			19 1/2	1/2		10TH 30 MIN.
	151		60	20				
	221	30			19 1/2	1/2		11TH 30 MIN.
	223		60	20				
	253	30			19 1/2	1/2		12TH 30 MIN.

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYERS ROAD MENIFEE

Project: _____, **Job No.:** 2759-CR.

Test Hole No.: I-2 **Tested By:** DVG, **Date:** 5/21,22/2021.

Depth of Hole As Drilled: _____ **Before Test:** 60" _____ **After Test:** 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
								PRESOAK 5 GAL 5/21/2021
	730 / 755	25	60	20	18 1/4	1 3/4		BEGIN 5/22/2021 1ST 25 MIN.
	757 / 822	25	60	20	18 1/2	1 1/2		2ND 25 MIN.
	824 / 854	30	60	20	18 1/4	1 3/4		1ST 30 MIN.
	856 / 926	30	60	20	18 1/2	1 1/2		2ND 30 MIN.
	928 / 958	30	60	20	18 3/4	1 1/4		3RD 30 MIN.
	1000 / 1030	30	60	20	18 3/4	1 1/4		4TH 30 MIN.
	1032 / 1102	30	60	20	19	1		5TH 30 MIN.
	1104 / 1134	30	60	20	19	1		6TH 30 MIN.
	1136 / 1206	30	60	20	19 1/4	3/4		7TH 30 MIN.

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYERS ROAD MENIFEE

Project: _____, **Job No.:** 2759-CR.

Test Hole No.: I-2 **Tested By:** DVG, **Date:** 5/21,22/2021.

Depth of Hole As Drilled: 60" **Before Test:** 60" _____ **After Test:** 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
	1208		60	20				
	1238	30			19 1/4	3/4		8TH 30 MIN.
	1240		60	20				
	110	30			19 1/2	1/2		9TH 30 MIN.
	112		60	20				
	142	30			19 1/2	1/2		10TH 30 MIN.
	144		60	20				
	214	30			19 1/2	1/2		11TH 30 MIN.
	216		60	20				
	246	30			19 1/2	1/2		12TH 30 MIN.

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYERS ROAD MENIFEE

Project: _____, **Job No.:** 2759-CR.

Test Hole No.: I-3 **Tested By:** DVG, **Date:** 5/21, 22/2021.

Depth of Hole As Drilled: 60" **Before Test:** 60" **After Test:** 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
								PRESOAK 5 GAL
								5/21/2021
	723		60	20				BEGIN 5/22/2021
	748	25			18 1/4	1 3/4		1ST 25 MIN.
	750		60	20				
	815	25			18 1/2	1 1/2		2ND 25 MIN.
	817		60	20				
	847	30			18 3/4	1 3/4		1ST 30 MIN.
	849		60	20				
	919	30			18 1/2	1 1/2		2ND 30 MIN.
	921		60	20				
	951	30			18 1/2	1 1/2		3RD 30 MIN.
	953		60	20				
	1023	30			18 3/4	1 1/4		4TH 30 MIN.
	1025		60	20				
	1055	30			18 3/4	1 1/4		5TH 30 MIN.
	1057		60	20				
	1127	30			19	1		6TH 30 MIN.
	1129		60	20				
	1159	30			19	1		7TH 30 MIN.

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYERS ROAD MENIFEE

Project: _____, Job No.: 2759-CR.

Test Hole No.: I-3 Tested By: DVG, Date: 5/21, 22/2021.

Depth of Hole As Drilled: 60" Before Test: 60" _____ After Test: 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
	1201 / 1231	30	60	20	19 1/4	3/4		8TH 30 MIN.
	1233 / 103	30	60	20	19 1/4	3/4		9TH 30 MIN.
	105 / 135	30	60	20	19 1/2	1/2		10TH 30 MIN.
	137 / 207	30	60	20	19 1/2	1/2		11TH 30 MIN.
	209 / 239	30	60	20	19 1/2	1/2		12TH 30 MIN.

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYERS ROAD MENIFEE

Project: _____, Job No.: 2759-CR.

Test Hole No.: I-4 Tested By: DVG, Date: 5/21, 22/2021.

Depth of Hole As Drilled: 60" Before Test: 60" _____ After Test: 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
								PRESOAK 5 GAL 5/21/2021
	716 / 741	25	60	20	18 1/4	1 3/4		BEGIN 5/22/2021 1ST 25 MIN.
	743 / 808	25	60	20	18 1/4	1 3/4		2ND 25 MIN.
	810 / 840	30	60	20	18	2		1ST 30 MIN.
	842 / 912	30	60	20	18 1/4	1 3/4		2ND 30 MIN.
	914 / 944	30	60	20	18 1/4	1 3/4		3RD 30 MIN.
	946 / 1016	30	60	20	18 1/2	1 1/2		4TH 30 MIN.
	1018 / 1020	30	60	20	18 3/4	1 1/4		5TH 30 MIN.
	1050 / 1120	30	60	20	18 3/4	1 1/4		6TH 30 MIN.
	1122 / 1152	30	60	20	19	1		7TH 30 MIN.

PERCOLATION DATA SHEET

SW CORNER TROY LANE & BYERS ROAD MENIFEE

Project: _____, Job No.: 2759-CR.

Test Hole No.: I-4 Tested By: DVG, Date: 5/21,22/2021.

Depth of Hole As Drilled: 60" Before Test: 60" _____ After Test: 60".

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
	1154		60	20				
	1224	30			19	1		8TH 30 MIN.
	1226		60	20				
	1256	30			19	1		9TH 30 MIN.
	1258		60	20				
	128	30			19 1/4	3/4		10TH 30 MIN.
	130		60	20				
	200	30			19 1/4	3/4		11TH 30 MIN.
	202		60	20				
	232	30			19 1/2	1/2		12TH 30 MIN.

APPENDIX D

GENERAL GRADING GUIDELINES

Geotechnical and Infiltration Evaluation
Menifee, Riverside County, California
Project No. 2759-CR

GEOTEK

GENERAL GRADING GUIDELINES

Guidelines presented herein are intended to address general construction procedures for earthwork construction. Specific situations and conditions often arise which cannot reasonably be discussed in general guidelines, when anticipated these are discussed in the text of the report. Often unanticipated conditions are encountered which may necessitate modification or changes to these guidelines. It is our hope that these will assist the contractor to more efficiently complete the project by providing a reasonable understanding of the procedures that would be expected during earthwork and the testing and observation used to evaluate those procedures.

General

Grading should be performed to at least the minimum requirements of governing agencies, Chapters 18 and 33 of the California Building Code, CBC (2019) and the guidelines presented below.

Preconstruction Meeting

A preconstruction meeting should be held prior to site earthwork. Any questions the contractor has regarding our recommendations, general site conditions, apparent discrepancies between reported and actual conditions and/or differences in procedures the contractor intends to use should be brought up at that meeting. The contractor (including the main onsite representative) should review our report and these guidelines in advance of the meeting. Any comments the contractor may have regarding these guidelines should be brought up at that meeting.

Grading Observation and Testing

1. Observation of the fill placement should be provided by our representative during grading. Verbal communication during the course of each day will be used to inform the contractor of test results. The contractor should receive a copy of the "Daily Field Report" indicating results of field density tests that day. If our representative does not provide the contractor with these reports, our office should be notified.
2. Testing and observation procedures are, by their nature, specific to the work or area observed and location of the tests taken, variability may occur in other locations. The contractor is responsible for the uniformity of the grading operations; our observations and test results are intended to evaluate the contractor's overall level of efforts during grading. The contractor's personnel are the only individuals participating in all aspect of site work. Compaction testing and observation should not be considered as relieving the contractor's responsibility to properly compact the fill.
3. Cleanouts, processed ground to receive fill, key excavations, and subdrains should be observed by our representative prior to placing any fill. It will be the contractor's responsibility to notify our representative or office when such areas are ready for observation.
4. Density tests may be made on the surface material to receive fill, as considered warranted by this firm.
5. In general, density tests would be made at maximum intervals of two feet of fill height or every 1,000 cubic yards of fill placed. Criteria will vary depending on soil conditions and size of the fill. More frequent testing may be performed. In any case, an adequate number of field density tests should be made to evaluate the required compaction and moisture content is generally being obtained.

6. Laboratory testing to support field test procedures will be performed, as considered warranted, based on conditions encountered (e.g. change of material sources, types, etc.) Every effort will be made to process samples in the laboratory as quickly as possible and in progress construction projects are our first priority. However, laboratory workloads may cause in delays and some soils may require a **minimum of 48 to 72 hours to complete test procedures**. Whenever possible, our representative(s) should be informed in advance of operational changes that might result in different source areas for materials.
7. Procedures for testing of fill slopes are as follows:
   a) Density tests should be taken periodically during grading on the flat surface of the fill, three to five feet horizontally from the face of the slope.
   b) If a method other than over building and cutting back to the compacted core is to be employed, slope compaction testing during construction should include testing the outer six inches to three feet in the slope face to determine if the required compaction is being achieved.
8. Finish grade testing of slopes and pad surfaces should be performed after construction is complete.

Site Clearing

1. All vegetation, and other deleterious materials, should be removed from the site. If material is not immediately removed from the site it should be stockpiled in a designated area(s) well outside of all current work areas and delineated with flagging or other means. Site clearing should be performed in advance of any grading in a specific area.
2. Efforts should be made by the contractor to remove all organic or other deleterious material from the fill, as even the most diligent efforts may result in the incorporation of some materials. This is especially important when grading is occurring near the natural grade. All equipment operators should be aware of these efforts. Laborers may be required as root pickers.
3. Nonorganic debris or concrete may be placed in deeper fill areas provided the procedures used are observed and found acceptable by our representative.

Treatment of Existing Ground

1. Following site clearing, all surficial deposits of alluvium and colluvium as well as weathered or creep effected bedrock, should be removed unless otherwise specifically indicated in the text of this report.
2. In some cases, removal may be recommended to a specified depth (e.g. flat sites where partial alluvial removals may be sufficient). The contractor should not exceed these depths unless directed otherwise by our representative.
3. Groundwater existing in alluvial areas may make excavation difficult. Deeper removals than indicated in the text of the report may be necessary due to saturation during winter months.
4. Subsequent to removals, the natural ground should be processed to a depth of six inches, moistened to near optimum moisture conditions and compacted to fill standards.
5. Exploratory back hoe or dozer trenches still remaining after site removal should be excavated and filled with compacted fill if they can be located.

Fill Placement

1. Unless otherwise indicated, all site soil and bedrock may be reused for compacted fill; however, some special processing or handling may be required (see text of report).

2. Material used in the compacting process should be evenly spread, moisture conditioned, processed, and compacted in thin lifts six (6) to eight (8) inches in compacted thickness to obtain a uniformly dense layer. The fill should be placed and compacted on a nearly horizontal plane, unless otherwise found acceptable by our representative.
3. If the moisture content or relative density varies from that recommended by this firm, the contractor should rework the fill until it is in accordance with the following:
   a) Moisture content of the fill should be at or above optimum moisture. Moisture should be evenly distributed without wet and dry pockets. Pre-watering of cut or removal areas should be considered in addition to watering during fill placement, particularly in clay or dry surficial soils. The ability of the contractor to obtain the proper moisture content will control production rates.
   b) Each six-inch layer should be compacted to at least 90 percent of the maximum dry density in compliance with the testing method specified by the controlling governmental agency. In most cases, the testing method is ASTM Test Designation D 1557.
4. Rock fragments less than eight inches in diameter may be utilized in the fill, provided:
   a) They are not placed in concentrated pockets;
   b) There is a sufficient percentage of fine-grained material to surround the rocks;
   c) The distribution of the rocks is observed by, and acceptable to, our representative.
5. Rocks exceeding eight (8) inches in diameter should be taken off site, broken into smaller fragments, or placed in accordance with recommendations of this firm in areas designated suitable for rock disposal. On projects where significant large quantities of oversized materials are anticipated, alternate guidelines for placement may be included. If significant oversize materials are encountered during construction, these guidelines should be requested.
6. In clay soil, dry or large chunks or blocks are common. If in excess of eight (8) inches minimum dimension, then they are considered as oversized. Sheepsfoot compactors or other suitable methods should be used to break up blocks. When dry, they should be moisture conditioned to provide a uniform condition with the surrounding fill.

Slope Construction

1. The contractor should obtain a minimum relative compaction of 90 percent out to the finished slope face of fill slopes. This may be achieved by either overbuilding the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment.
2. Slopes trimmed to the compacted core should be overbuilt by at least three (3) feet with compaction efforts out to the edge of the false slope. Failure to properly compact the outer edge results in trimming not exposing the compacted core and additional compaction after trimming may be necessary.
3. If fill slopes are built "at grade" using direct compaction methods, then the slope construction should be performed so that a constant gradient is maintained throughout construction. Soil should not be "spilled" over the slope face nor should slopes be "pushed out" to obtain grades. Compaction equipment should compact each lift along the immediate top of slope. Slopes should be back rolled or otherwise compacted at approximately every 4 feet vertically as the slope is built.
4. Corners and bends in slopes should have special attention during construction as these are the most difficult areas to obtain proper compaction.
5. Cut slopes should be cut to the finished surface. Excessive undercutting and smoothing of the face with fill may necessitate stabilization.

UTILITY TRENCH CONSTRUCTION AND BACKFILL

Utility trench excavation and backfill is the contractors responsibility. The geotechnical consultant typically provides periodic observation and testing of these operations. While efforts are made to make sufficient observations and tests to verify that the contractors' methods and procedures are adequate to achieve proper compaction, it is typically impractical to observe all backfill procedures. As such, it is critical that the contractor use consistent backfill procedures.

Compaction methods vary for trench compaction and experience indicates many methods can be successful. However, procedures that "worked" on previous projects may or may not prove effective on a given site. The contractor(s) should outline the procedures proposed, so that we may discuss them **prior** to construction. We will offer comments based on our knowledge of site conditions and experience.

1. Utility trench backfill in slopes, structural areas, in streets and beneath flat work or hardscape should be brought to at least optimum moisture and compacted to at least 90 percent of the laboratory standard. Soil should be moisture conditioned prior to placing in the trench.
2. Flooding and jetting are not typically recommended or acceptable for native soils. Flooding or jetting may be used with select sand having a Sand Equivalent (SE) of 30 or higher. This is typically limited to the following uses:
   a) shallow (12 + inches) under slab interior trenches and,
   b) as bedding in pipe zone.

   The water should be allowed to dissipate prior to pouring slabs or completing trench compaction.
3. Care should be taken not to place soils at high moisture content within the upper three feet of the trench backfill in street areas, as overly wet soils may impact subgrade preparation. Moisture may be reduced to 2% below optimum moisture in areas to be paved within the upper three feet below sub grade.
4. Sand backfill should not be allowed in exterior trenches adjacent to and within an area extending below a 1:1 projection from the outside bottom edge of a footing, unless it is similar to the surrounding soil.
5. Trench compaction testing is generally at the discretion of the geotechnical consultant. Testing frequency will be based on trench depth and the contractors procedures. A probing rod would be used to assess the consistency of compaction between tested areas and untested areas. If zones are found that are considered less compact than other areas, this would be brought to the contractors attention.

JOB SAFETY

General

Personnel safety is a primary concern on all job sites. The following summaries are safety considerations for use by all our employees on multi-employer construction sites. On ground personnel are at highest risk of injury and possible fatality on grading construction projects. The company recognizes that construction activities will vary on each site and that job site safety is the contractor's responsibility. However, it is, imperative that all personnel be safety conscious to avoid accidents and potential injury.

In an effort to minimize risks associated with geotechnical testing and observation, the following precautions are to be implemented for the safety of our field personnel on grading and construction projects.

1. Safety Meetings: Our field personnel are directed to attend the contractor's regularly scheduled safety meetings.
2. Safety Vests: Safety vests are provided for and are to be worn by our personnel while on the job site.
3. Safety Flags: Safety flags are provided to our field technicians; one is to be affixed to the vehicle when on site, the other is to be placed atop the spoil pile on all test pits.

In the event that the contractor's representative observes any of our personnel not following the above, we request that it be brought to the attention of our office.

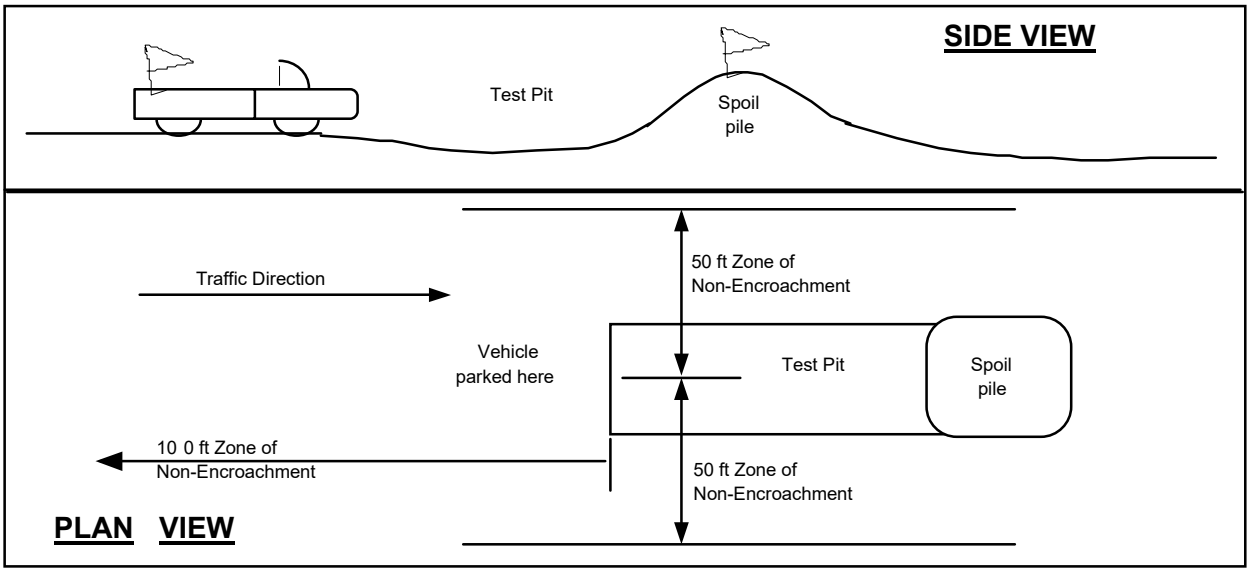
Test Pits Location, Orientation and Clearance

The technician is responsible for selecting test pit locations. The primary concern is the technician's safety. However, it is necessary to take sufficient tests at various locations to obtain a representative sampling of the fill. As such, efforts will be made to coordinate locations with the grading contractors authorized representatives (e.g. dump man, operator, supervisor, grade checker, etc.), and to select locations following or behind the established traffic pattern, preferably outside of current traffic. The contractors authorized representative should direct excavation of the pit and safety during the test period. Again, safety is the paramount concern.

Test pits should be excavated so that the spoil pile is placed away from oncoming traffic. The technician's vehicle is to be placed next to the test pit, opposite the spoil pile. This necessitates that the fill be maintained in a drivable condition. Alternatively, the contractor may opt to park a piece of equipment in front of test pits, particularly in small fill areas or those with limited access.

A zone of non-encroachment should be established for all test pits (see diagram below). No grading equipment should enter this zone during the test procedure. The zone should extend outward to the sides approximately 50 feet from the center of the test pit and 100 feet in the direction of traffic flow. This zone is established both for safety and to avoid excessive ground vibration, which typically decreases test results.

TEST PIT SAFETY PLAN



Slope Tests

When taking slope tests, the technician should park their vehicle directly above or below the test location on the slope. The contractor's representative should effectively keep all equipment at a safe operation distance (e.g. 50 feet) away from the slope during testing.

The technician is directed to withdraw from the active portion of the fill as soon as possible following testing. The technician's vehicle should be parked at the perimeter of the fill in a highly visible location.

Trench Safety

It is the contractor's responsibility to provide safe access into trenches where compaction testing is needed. Trenches for all utilities should be excavated in accordance with CAL-OSHA and any other applicable safety standards. Safe conditions will be required to enable compaction testing of the trench backfill.

All utility trench excavations in excess of 5 feet deep, which a person enters, are to be shored or laid back. Trench access should be provided in accordance with OSHA standards. Our personnel are directed not to enter any trench by being lowered or "riding down" on the equipment.

Our personnel are directed not to enter any excavation which;

1. is 5 feet or deeper unless shored or laid back,
2. exit points or ladders are not provided,
3. displays any evidence of instability, has any loose rock or other debris which could fall into the trench, or
4. displays any other evidence of any unsafe conditions regardless of depth.

If the contractor fails to provide safe access to trenches for compaction testing, our company policy requires that the soil technician withdraws and notifies their supervisor. The contractors representative will then be contacted in an effort to effect a solution. All backfill not tested due to safety concerns or other reasons is subject to reprocessing and/or removal.

Procedures

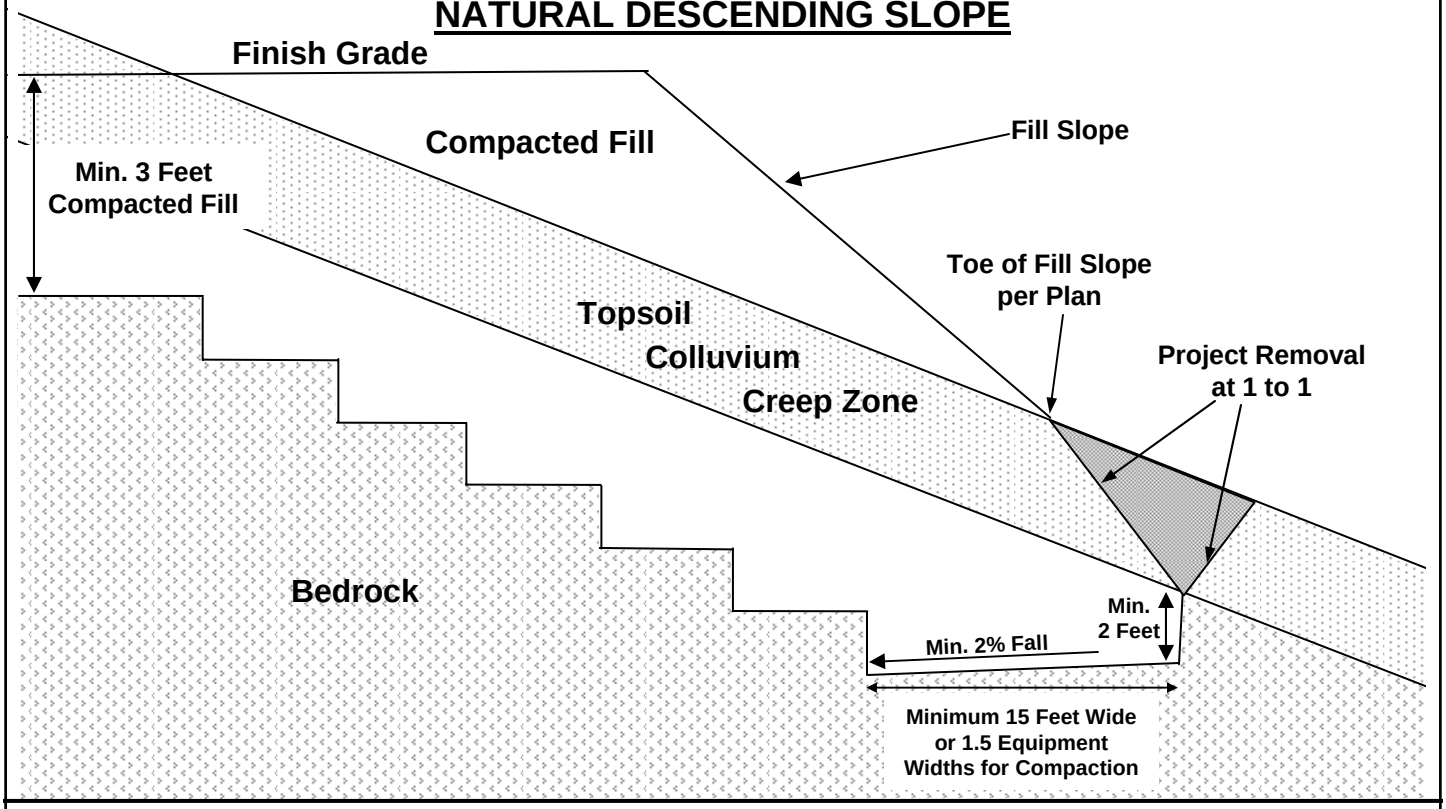
In the event that the technician's safety is jeopardized or compromised as a result of the contractor's failure to comply with any of the above, the technician is directed to inform both the developer's and contractor's representatives. If the condition is not rectified, the technician is required, by company policy, to immediately withdraw and notify their supervisor. The contractor's representative will then be contacted in an effort to effect a solution. No further testing will be performed until the situation is rectified. Any fill placed in the interim can be considered unacceptable and subject to reprocessing, recompaction or removal.

In the event that the soil technician does not comply with the above or other established safety guidelines, we request that the contractor bring this to technicians attention and notify our project manager or office. Effective communication and coordination between the contractors' representative and the field technician(s) is strongly encouraged in order to implement the above safety program and safety in general.

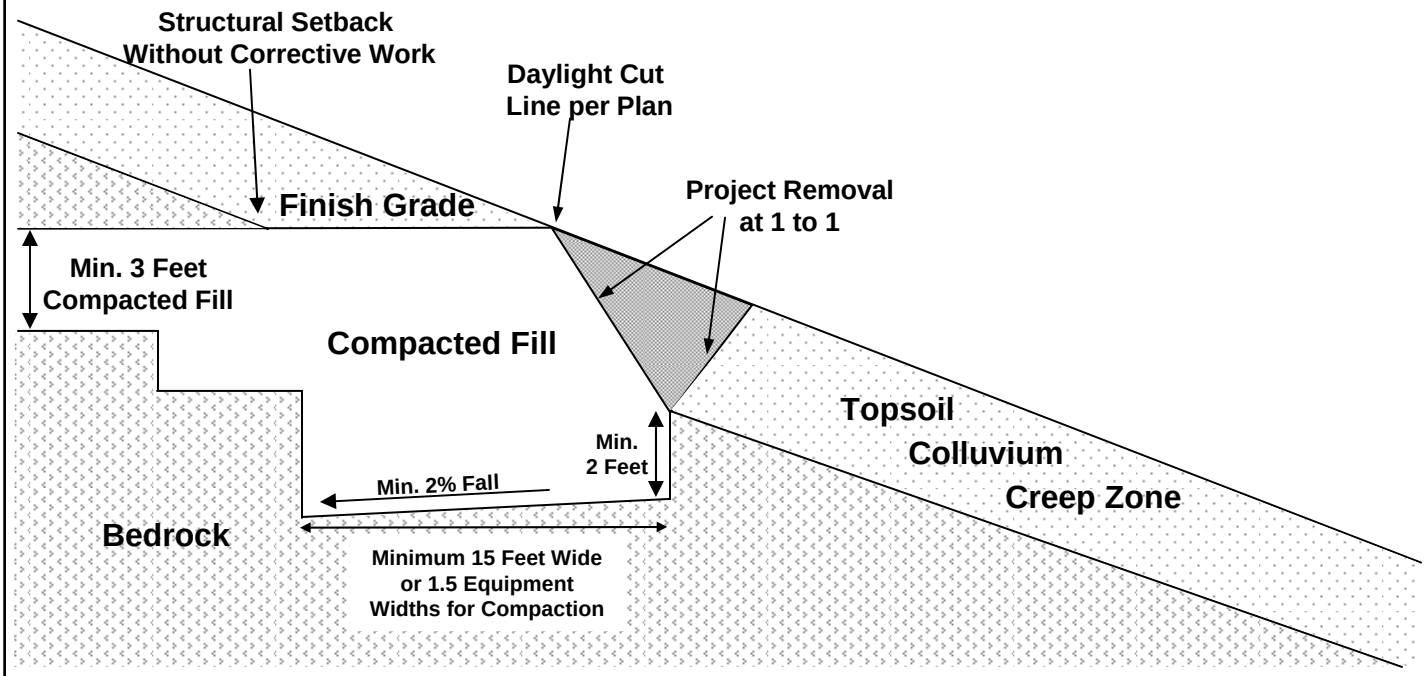
The safety procedures outlined above should be discussed at the contractor's safety meetings. This will serve to inform and remind equipment operators of these safety procedures particularly the zone of non-encroachment.

The safety procedures outlined above should be discussed at the contractor's safety meetings. This will serve to inform and remind equipment operators of these safety procedures particularly the zone of non-encroachment.

TYPICAL FILL SLOPE OVER NATURAL DESCENDING SLOPE



DAYLIGHT CUT AREA OVER NATURAL DESCENDING SLOPE



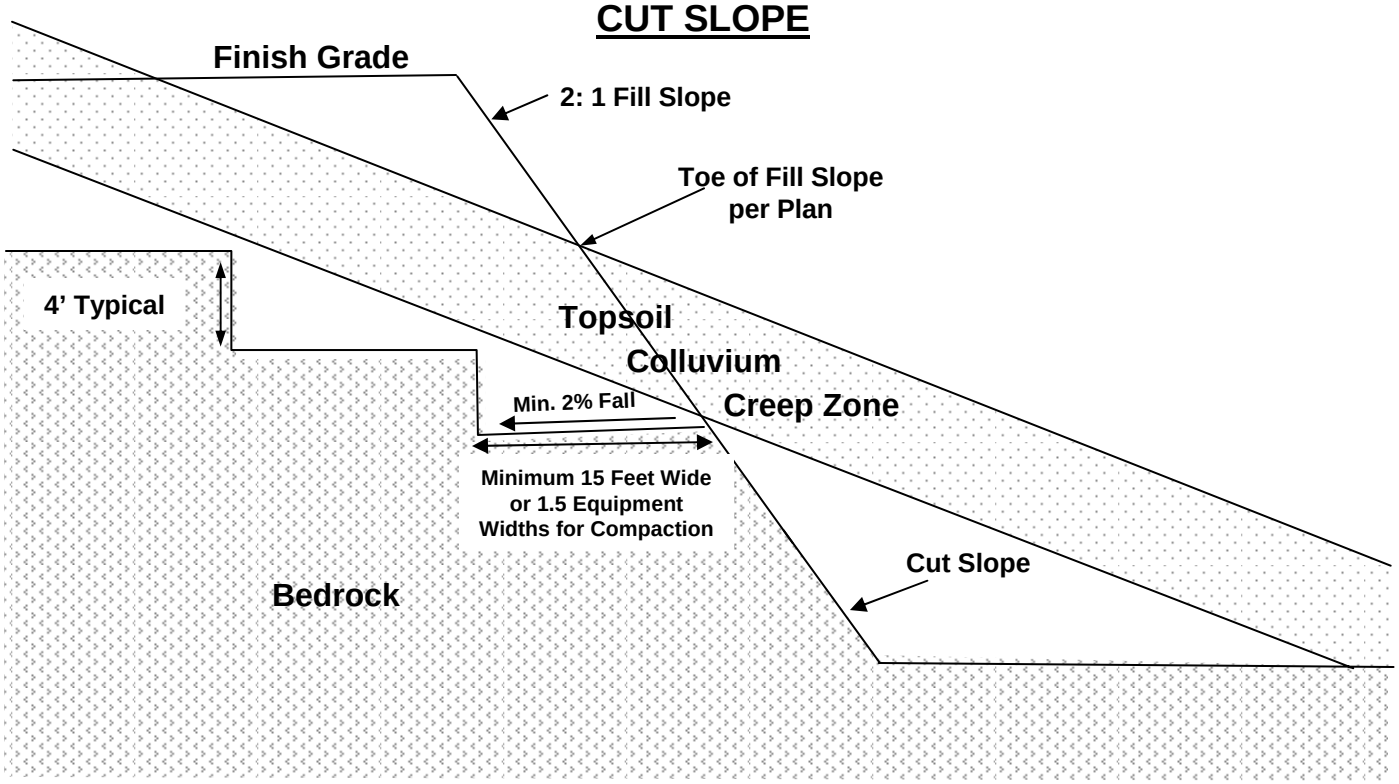
GEOTEK
1548 North Maple Street
Corona, California 92880

TREATMENT ABOVE NATURAL SLOPES

STANDARD GRADING GUIDELINES

PLATE D-1

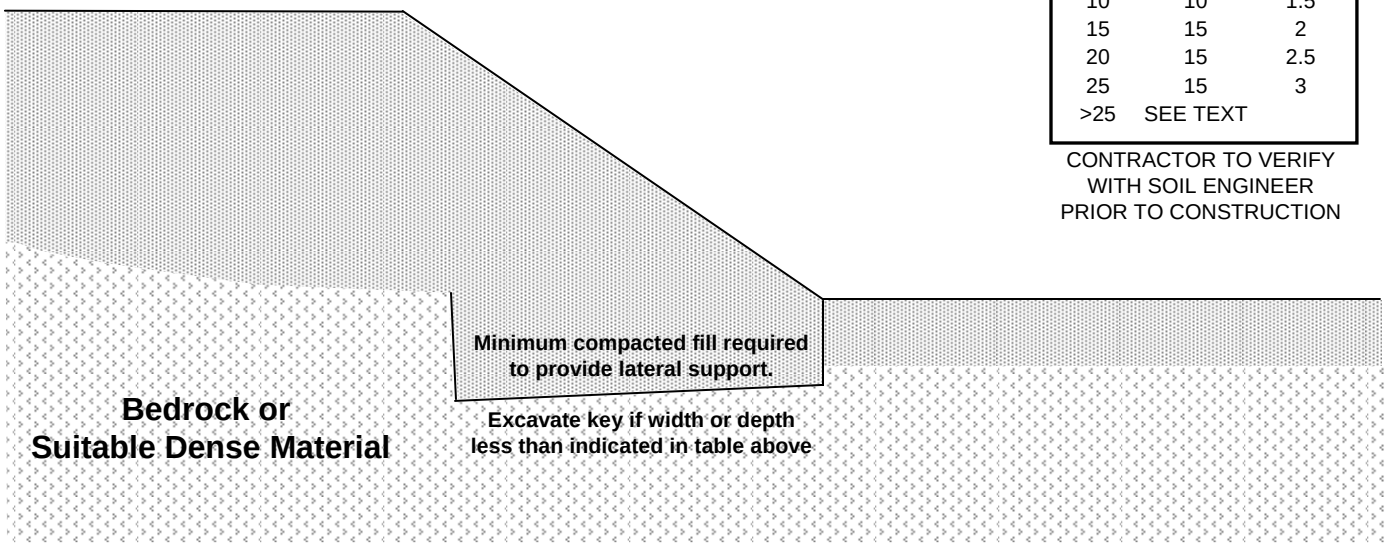
TYPICAL FILL SLOPE OVER CUT SLOPE



TYPICAL FILL SLOPE

SLOPE HEIGHT	MIN. KEY WIDTH	MIN. KEY DEPTH
5	7	1
10	10	1.5
15	15	2
20	15	2.5
25	15	3
>25	SEE TEXT	

CONTRACTOR TO VERIFY WITH SOIL ENGINEER PRIOR TO CONSTRUCTION



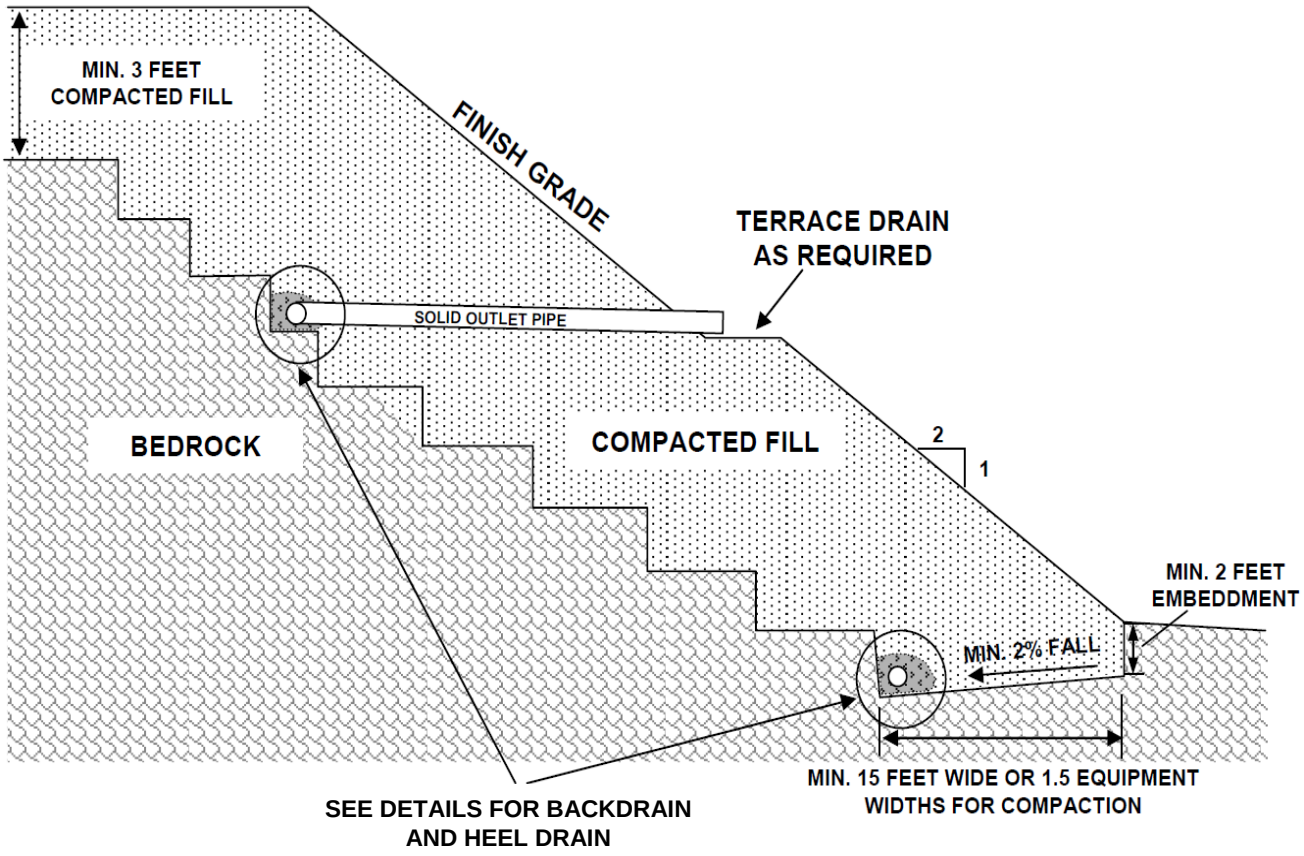
GEOTEK

1548 North Maple Street
Corona, California 92880

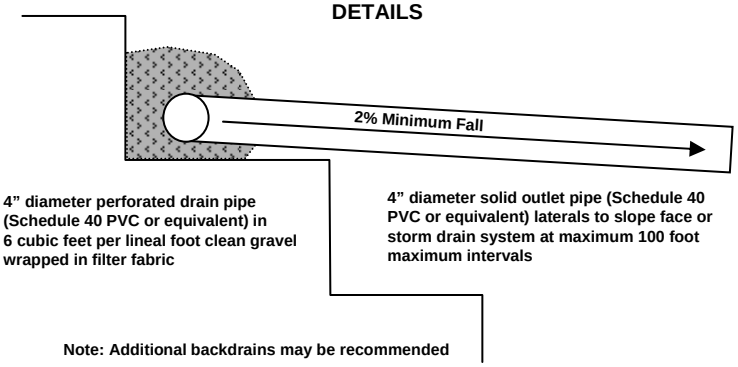
COMMON FILL SLOPE KEYS

STANDARD GRADING GUIDELINES

PLATE D-2



BACKDRAIN DETAILS



4" diameter perforated drain pipe (Schedule 40 PVC or equivalent) in 6 cubic feet per lineal foot clean gravel wrapped in filter fabric

4" diameter solid outlet pipe (Schedule 40 PVC or equivalent) laterals to slope face or storm drain system at maximum 100 foot maximum intervals

Note: Additional backdrains may be recommended

HEEL DRAIN DETAILS



6" diameter perforated drain pipe in 6 cubic feet per lineal foot clean gravel wrapped in filter fabric, outlet pipe to gravity flow with 2% minimum fall

GEOTEK	1548 North Maple Street Corona, California 92880	TYPICAL BUTTRESS AND STABILIZATION FILL	STANDARD GRADING GUIDELINES PLATE D-3

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

PHASE I ENVIRONMENTAL SITE ASSESSMENT
APNS 330-230-023 AND -024
SUN CITY AREA OF MENIFEE, RIVERSIDE COUNTY, CALIFORNIA 92585

June 9, 2021

Project No. 2759-CR

Prepared For:

JPM Investments, LLC
556 South Fair Oaks Avenue, #337
Pasadena, California 91105

GEOTEK

GeoTek, Inc.
1548 North Maple Street, Corona, California 92878
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

June 9, 2021
Project No. 2759-CR

JPM Investments, LLC
556 South Fair Oaks Avenue, #337
Pasadena, California 91105

Attention: Mr. Paul Onufer

Subject: Phase I Environmental Site Assessment
Accessors Parcel Numbers (APNs) 330-230-023 and -024
Sun City area of Menifee, Riverside County, California 92585

Dear Mr. Onufer:

GEOTEK, INC. (GEOTEK) is pleased to present this Phase I Environmental Site Assessment for the above-referenced subject Site. Services were conducted in substantial conformance with the scope and limitations of the American Society of Testing and Materials E 1527-13, "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,*" which is approved to meet the requirements of the federal All Appropriate Inquiries (AAI) standards as set forth in the Code of Federal Regulations, Title 40, Section 312 (40 CFR 312), and GEOTEK'S Proposal No. P-0303421-CR, dated March 11, 2021.

This Phase I Environmental Site Assessment has not revealed evidence of a recognized environmental condition or concern in connection with the subject Site. No further investigation is recommended.

We appreciate this opportunity to be of service. If you have any questions, or if we can be of further service, please contact us at (951) 710-1160.

Sincerely,
GEOTEK, INC.



Edward H. LaMont
Principal Geologist, CEG 1892
Expires 07/31/2022

J. Michael Batten, CEM, REPA
Environmental Services Manager
Registered Environmental Property
Assessor No. 113162
Expires 06/15/2022

Franklin Sullivan
Staff Environmentalist

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1
2.0 INTRODUCTION 3
2.1 PURPOSE 3
2.2 SCOPE OF WORK 3
2.3 SIGNIFICANT ASSUMPTIONS 4
2.4 LIMITATIONS AND EXCEPTIONS 4
2.5 SPECIAL TERMS AND CONDITIONS 5
2.6 RELIANCE 5
3.0 DESCRIPTION OF SITE AND SURROUNDING AREA 6
3.1 SITE LOCATION AND LEGAL DESCRIPTION 6
3.2 SITE AND VICINITY GENERAL CHARACTERISTICS 6
3.3 CURRENT PROPERTY USE 6
3.4 SITE IMPROVEMENTS 6
3.4.1 HAZARDOUS SUBSTANCES 6
3.4.2 STORAGE TANKS 7
3.4.3 POLY-CHLORINATED BIPHENYLS (PCBS) 7
3.4.4 CONTROLLED SUBSTANCES 7
3.4.5 INDICATIONS OF SOLID WASTE DISPOSAL 7
3.4.6 UTILITY SUPPLY 7
3.4.7 DRAINAGE 7
3.4.8 OTHER CONDITIONS OF CONCERN 8
3.4.9 INTERVIEWS 8
3.5 CURRENT ADJOINING PROPERTY USE 8
4.0 CLIENT PROVIDED INFORMATION 9
4.1 ENVIRONMENTAL CLEAN UP LIENS 9
4.2 ACTIVITY AND USE LIMITATIONS 9
4.3 SPECIALIZED KNOWLEDGE 9
4.4 PURCHASE PRICE 9
4.5 COMMONLY KNOWN INFORMATION 9
4.6 OBVIOUS INDICATORS OF CONTAMINATION 9
4.7 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION 9
4.8 REASON FOR PERFORMING PHASE I ESA 10
4.9 OTHER USER PROVIDED INFORMATION 10
5.0 PROPERTY PHYSICAL SETTING 11
5.1 REGIONAL GEOLOGY 11
5.2 LOCAL GEOLOGIC SETTING AND TOPOGRAPHY 11

5.3 VICINITY SURFACE DRAINAGE 11
5.4 HYDROGEOLOGY 12
6.0 ENVIRONMENTAL REGULATORY RECORDS REVIEW 13
6.1 ENVIRONMENTAL DATABASE RECORDS SEARCH 13
6.2 DISCUSSION OF REGULATORY RECORDS 14
6.2.1 NATIONAL PRIORITY LIST 14
6.2.2 SUPERFUND ENTERPRISE MANAGEMENT SYSTEM 15
6.2.3 RESOURCE CONSERVATION AND RECOVERY ACT 15
6.2.4 EMERGENCY RESPONSE NOTIFICATION SYSTEM 16
6.2.5 FEDERAL INSTITUTIONAL CONTROL/ENGINEERING CONTROL REGISTRIES 16
6.2.6 STATE RESPONSE SITES 16
6.2.7 ENVIROSTOR DATABASE 16
6.2.8 CALIFORNIA HAZARDOUS MATERIAL INCIDENT REPORT SYSTEM 17
6.2.9 SOLID WASTE FACILITIES LIST 17
6.2.10 LEAKING UNDERGROUND STORAGE TANKS LIST 17
6.2.11 UNDERGROUND STORAGE TANKS LIST 17
6.2.12 SPILLS, LEAKS, INVESTIGATION AND CLEANUP COST RECOVERY LISTING (SLIC) 18
6.2.13 STATE INSTITUTIONAL CONTROL/ENGINEERING CONTROL REGISTRIES 18
6.2.14 TRIBAL DATABASES 18
6.2.15 OTHER DATABASES 19
6.2.16 DRYCLEANERS 19
6.2.17 UNMAPPABLE FACILITIES 19
6.3 LOCAL REGULATORY AGENCY RECORDS 19
7.0 VAPOR ENCROACHMENT SCREENING 21
8.0 SITE AND SURROUNDING AREA HISTORY 22
8.1 HISTORICAL SITE USAGE 22
8.1.1 AERIAL PHOTOGRAPH REVIEW 22
8.1.2 TOPOGRAPHIC MAP REVIEW 22
8.1.3 BUILDING DEPARTMENT RECORDS 23
8.1.4 CITY DIRECTORY REVIEW 23
8.1.5 SANBORN MAP REVIEW 23
8.1.6 CHAIN OF TITLE 23
8.2 HISTORICAL IMMEDIATELY SURROUNDING PROPERTY USAGE 23
8.2.1 AERIAL PHOTOGRAPH REVIEW 23
8.2.2 TOPOGRAPHIC MAP REVIEW 24
8.2.3 CITY DIRECTORIES 25
8.2.4 SANBORN MAP REVIEW 25
8.3 HISTORICAL USE SUMMARY 25

9.0 SIGNIFICANT DATA GAPS 26
10.0 CONCLUSIONS AND RECOMMENDATIONS 27
11.0 CERTIFICATIONS 28
12.0 REFERENCES 29

LIST OF APPENDICES

Appendix A: Figures
Appendix B: Supporting Documents
Appendix C: Photographs
Appendix D: Environmental Database Report
Appendix E: Vapor Encroachment Screening
Appendix F: Project Team Qualifications

1.0 EXECUTIVE SUMMARY

GEOTEK, INC. (GEOTEK) has performed a Phase I Environmental Site Assessment (ESA) for APNs 330-230-023 and 330-230-024 (the "Site"), located in Sun City area of Menifee, Riverside County, California. Our services were conducted in substantial conformance with the scope and limitations of the American Society of Testing and Materials (ASTM) E 1527-13, "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*", which is approved to meet the requirements of the federal All Appropriate Inquiries (AAI) standards as set forth in the Code of Federal Regulations, Title 40, Section 312 (40 CFR 312), and GEOTEK Proposal No. P-0303421-CR, dated March 11, 2021. Any additions or deletions from our scope of services are discussed in the appropriate sections of this assessment.

A representative of GEOTEK conducted a Site reconnaissance on June 8, 2021. The weather was warm and the sky was clear. The rectangular shaped Site is currently comprised of two (2) parcels (Riverside County Assessor's Parcel Numbers 330-230-023 and -024) and encompasses a total of approximately 27.5 acres. The Site can generally be accessed from Buyers Road to the east and Troy Lane to the north.

The Site is currently vacant land. Visual evidence of hazardous substances and wastes were not observed during our Site reconnaissance. No visual indication of spills or leaks were observed. No pungent or acrid odors were observed emanating from the Site.

The Site is in an area largely characterized by residential development and vacant land. The Site is bounded by Troy Lane, followed by graded but vacant land to the north; Buyers Road, followed by residential structures and vacant land to the east; vacant land to the south; and graded but vacant land, followed by Goetz Road to the west.

Based on readily available historic information, the parcels appear to have been vacant land from at least 1938 until present day. The surrounding properties appear to historically have been vacant land and residential development since at least 1938. Residential structures can first be observed to the northeast in the 1984 aerial photograph. The aerial photograph dated 1989 depicts residential development to the east and adjacent to the Site. Grading for residential construction can first be observed to the north, west and south of the Site in the aerial photograph dated 2002 until present day. The current configuration of the Site and surrounding properties can be observed in the 2016 and 2020 aerial photographs.

The Site does not appear on the environmental database report obtained for this assessment. None of the adjacent properties appear on the database report. There are three (3) facilities listed on the database report within the various search distances specified by ASTM E 1527-13.

None of these facilities represent environmental concerns to the Site due to their distances, locations hydrogeologically downgradient, or their "Case Closed" regulatory status.

This Phase I Environmental Site Assessment has not revealed evidence of a recognized environmental condition or concern in connection with the subject Site. No further investigation is recommended.

This executive summary does not contain all the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in any decisions made or actions taken based on this information.

2.0 INTRODUCTION

GEOTEK, INC. (GEOTEK) has performed a Phase I Environmental Site Assessment (ESA) APNs 330-230-023 and -024 (the "Site"), located in the Sun City area of Menifee, Riverside County, California.

2.1 PURPOSE

The purpose of this Phase I ESA was to identify and evaluate actual and potential environmental conditions involving the subject Site. It was not the purpose of this assessment to determine the degree or extent of contamination, if any, but rather the potential for contamination.

2.2 SCOPE OF WORK

The Phase I ESA is a general characterization of environmental concerns based on reasonably ascertainable information and observations. GEOTEK performed the Phase I ESA in substantial accordance with ASTM E 1527-13. The following services were provided for the assessment:

- A reconnaissance of the Site and surrounding properties to visually assess current utilization and indications of potential surface contamination. This was accomplished by driving the Site boundaries, and then traversing the Site until the entire Site had been surveyed.

- A reconnaissance of the surrounding area for approximately one-half mile was conducted, without entering the properties, making observations concerning property uses, conditions, and housekeeping.

- A review of the geologic and hydro-geologic settings was conducted using reasonably ascertainable public records and documents.

- An environmental database report was obtained from a data service provider. This database report compiles and locates documented "hazardous waste" facilities within specific minimum search distances as defined by ASTM E 1527-13. If necessary, additional information on identified facilities was gathered by a file review at the appropriate federal, state, local, and/or tribal regulatory agency.

- A review of reasonably ascertainable historical records (including aerial photographs, topographic maps, building records, and city directories) was conducted to assess the

historical land utilization and indications of potential contamination or sources of contamination for the Site.

- This report was prepared, which relates the findings of this study and presents our conclusions and recommendations.

Specific items not included in this Scope of Services are soil analysis, water analysis, asbestos containing materials analysis, radon analysis, lead-based paint analysis, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, vapor intrusion testing, high voltage power lines, and other items not within the scope of ASTM E 1527-13.

2.3 SIGNIFICANT ASSUMPTIONS

Specific assumptions by GEOTEK for this assessment include:

- GEOTEK had permission to access the Site grounds;
- The client has provided GEOTEK with available geotechnical or environmental reports for the Site;
- The client has provided GEOTEK with known current or historic uses of hazardous materials at the Site, or with other specialized knowledge of the environmental history of the Site and surrounding area;
- The client is not the sole and absolute source of information;
- Seller has provided proper and complete access to their knowledge, both written and verbal, and GEOTEK can rely on the information.

2.4 LIMITATIONS AND EXCEPTIONS

GEOTEK conducted a Phase I Environmental Site Assessment in substantial accordance with ASTM E 1527-13 and as authorized by Beazer Homes. This study does not include sampling of soil, groundwater and/or materials on-site for environmental testing. This report is intended for the use of Beazer Homes. The contents should not be relied upon by any party other than the aforementioned without the express written consent of GEOTEK.

The findings, conclusions, and recommendations made in this report are based on the information that was made available to GEOTEK, in most instances from public records. The information is relevant to the date of our site work and should not be relied on to represent conditions at any later date. The opinions and conclusions expressed herein are based on information obtained during our assessment and on our experience and current standards of technical practice. GEOTEK makes no other warranties, either express or implied, concerning the completeness of the data furnished to us. GEOTEK cannot be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time our assessment was undertaken. GEOTEK is not responsible, nor liable for work, testing or recommendations performed or provided by others. This Phase I Environmental Site Assessment is not and should not be construed as a warranty or guarantee about the presence or absence of environmental hazards or contaminants, which may affect the subject site. Facts, conditions, and acceptable risk factors change with time; accordingly, this report should be viewed within this context.

Specific limitations to the scope of ASTM E 1527-13 due to contract limitations, availability of resources, and/or encountered Site conditions are discussed in the appropriate section(s) of this report.

2.5 SPECIAL TERMS AND CONDITIONS

This assessment report is presented as fulfilling the standard requirements of most financial institutions, governmental regulatory agencies, ASTM, and generally accepted industry standards and practices. Please refer to GEOTEK Proposal No. P-0303421-CR for complete terms and conditions for this assessment.

2.6 RELIANCE

This assessment has been prepared for the exclusive use and may be relied upon by JPM Investors, LLC and their successors and assignees. Third party reliance letters may be issued upon request and upon the payment of the, then current, fee for such letters. All third parties relying on this report, by such reliance, agree to be bound by the General Conditions and Limitations agreed to by Beazer Homes. No reliance by any party is permitted without such agreement, regardless of the content of the reliance letter itself.

3.0 DESCRIPTION OF SITE AND SURROUNDING AREA

The objective of describing the Site and surrounding area is to document current conditions as observed and to obtain information which would indicate the likelihood of a recognized environmental condition in connection with the Site. A representative of GEOTEK conducted a Site reconnaissance on June 8, 2021. The weather was warm and the sky was clear. The Site can generally be accessed from Buyers Road to the east and Troy Lane to the north.

3.1 SITE LOCATION AND LEGAL DESCRIPTION

The Site is located west of Buyers Road and south of Troy Lane in Sun City area of Menifee, Riverside County, California. According to the U.S. Geological Survey (USGS) Romoland and Perris Quadrangle topographic map sheets (7.5-minute series), the Site is located in Section 17, Township 5 South, Range 3 West, San Bernardino Baseline and Meridian. The Site is also known as APNs 330-230-023 and -024. Additional legal descriptions for the Site are included in the *Amended Preliminary Report* (Fidelity National Title Company, 2021) included in Appendix B.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The Site is currently vacant land. The Site is in an area largely characterized by residential development and vacant land.

3.3 CURRENT PROPERTY USE

The Site is currently vacant land.

3.4 SITE IMPROVEMENTS

The Site is currently vacant land. Photographs of the Site are included in Appendix C.

3.4.1 HAZARDOUS SUBSTANCES

Visual evidence of hazardous substances and/or wastes was not observed during our Site reconnaissance. No visual indication of spills or leaks was observed. No pungent or acrid odors were observed emanating from the Site.

3.4.2 STORAGE TANKS

GEOTEK did not observe evidence of underground or above-ground fuel storage tanks (such as vent pipes, fill pipes, regular-shaped depressions, etc.) on the Site.

3.4.3 POLY-CHLORINATED BIPHENYLS (PCBS)

GEOTEK did not observe suspect equipment (transformers, elevators, hydraulic lift mechanisms, trash compactors, etc.) which may contain PCBs on the Site.

3.4.4 CONTROLLED SUBSTANCES

GEOTEK consulted the U.S. Drug Enforcement Agency (DEA) website to cross-check the Site address against published facilities subject to DEA enforcement. The Site did not appear on the list of published facilities. A copy of the DEA printout is included in Appendix B.

GEOTEK did not observe evidence of illegal or controlled substances being used or manufactured at the Site.

3.4.5 INDICATIONS OF SOLID WASTE DISPOSAL

GEOTEK did not observe trash at the Site. Waste disposal for the Site and Site area is provided by the Waste Management Company.

3.4.6 UTILITY SUPPLY

GEOTEK did not observe utility services at the Site. Water and sewer services for the Site and area are provided by the Eastern Municipal Water District. Electric services for the Site and area are provided by Southern California Edison. Gas services for the Site and area are provided by the Southern California Gas Company.

3.4.7 DRAINAGE

Natural drainage at the Site is generally interpreted to be toward the northeast, conforming to the natural topography in the area. Ponded water was not observed during our Site reconnaissance.

3.4.8 Other Conditions of Concern

No visual indication of other conditions of concern (water wells, drywells, cesspools, etc.) that would indicate a recognized environmental condition was observed during the Site reconnaissance.

3.4.9 Interviews

GeoTek interviewed the following individuals while performing this assessment, in the form of completing a *User Questionnaire*:

- Mr. Paul Onufer (a representative of the current Site owner) completed a User Questionnaire.

Information from this interview is incorporated into the appropriate sections of this report.

3.5 Current Adjoining Property Use

The Site is in an area largely characterized by residential development and vacant land. The Site is bounded by Troy Lane, followed by graded but vacant land to the north; Buyers Road, followed by residential structures and vacant land to the east; vacant land to the south; and graded but vacant land, followed by Goetz Road to the west.

4.0 CLIENT PROVIDED INFORMATION

As a form of interview, Mr. Paul Onufer, a representative of the current Site owner completed a "User Questionnaire" for the Site in accordance with ASTM E 1527-13. A copy of the completed questionnaire is included in Appendix B.

4.1 ENVIRONMENTAL CLEAN UP LIENS

Mr. Onufer is not aware of any environmental clean-up liens at the Site.

4.2 ACTIVITY AND USE LIMITATIONS

Mr. Onufer is not aware of any activity use limitations at the Site.

4.3 SPECIALIZED KNOWLEDGE

Mr. Onufer states that he is in the same line of business as the current owner of the neighboring property and that the only chemical being used on the site, to his knowledge, is fuel for construction equipment.

4.4 PURCHASE PRICE

Mr. Onufer states that the purchase price being paid for the property reasonably reflects the fair market value of the property.

4.5 COMMONLY KNOWN INFORMATION

Mr. Onufer states that he is not aware of commonly known or reasonably ascertainable information for the Site.

4.6 OBVIOUS INDICATORS OF CONTAMINATION

Mr. Onufer states that he is not aware of obvious indicators of a likely environmental impact at the Site.

4.7 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

JPM Investors, LLC currently owns and manages the Site. The Site is currently vacant land.

4.8 Reason for Performing Phase I ESA

This Phase I ESA was performed at the request of JPM Investors, LLC as part of their due diligence for possible future improvements on the Site.

4.9 Other User Provided Information

GeoTek was not provided with any additional information for the Site from an environmental perspective by JPM Investments, LLC:

5.0 PROPERTY PHYSICAL SETTING

Surface and subsurface environments are of interest because they control the movement of water-born contaminants, which could be transported to and from the subject Site. GEOTEK reviewed information regarding the physical setting of the subject Site and immediately surrounding area.

5.1 REGIONAL GEOLOGY

The property is situated in the Peninsular Ranges geomorphic province. The Peninsular Ranges province is one of the largest geomorphic units in western North America. Basically, it extends from the point of contact with the Transverse Ranges geomorphic province, southerly to the tip of Baja California. This province varies in width from about 30 to 100 miles. It is bounded on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province.

The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Several major fault zones are found in this province. The Elsinore Fault zone and the San Jacinto Fault zone trend northwest-southeast and are found near the middle of the province. The San Andreas Fault zone borders the northeasterly margin of the province.

5.2 LOCAL GEOLOGIC SETTING AND TOPOGRAPHY

The Site and Site area are understood to be underlain by alluvium (Dibblee, T.W. and Minch, J.A., 2008). Additional data regarding soil survey information for the Site and Site area is also included in Appendix D (environmental database report).

The Site and Site area can be considered as having relatively flat terrain. Based on the USGS topographic map for the area and other documents reviewed for this report, the elevation of the subject Site is approximately 1500 feet above mean sea level.

5.3 VICINITY SURFACE DRAINAGE

Natural drainage at the Site is interpreted to be dominantly directed toward the northeast, conforming to the natural topography in the area. Storm water runoff does not drain towards the Site from the adjacent properties due to existing streets and/or improvements.

According to the Federal Emergency Management Agency (FEMA), the Site is not located in a flood hazard zone. A copy of the FEMA map is included in Appendix B.

5.4 HYDROGEOLOGY

According to a review of historical groundwater data (California Department of Water Resources and California State Water Resources Control Board groundwater well data [http://wdl.water.ca.gov and http://geotracker.waterboards.ca.gov]) and in-house information, groundwater is approximately 65 feet below ground surface, with a flow estimated to be directed to the northeast.

6.0 ENVIRONMENTAL REGULATORY RECORDS REVIEW

The records review is conducted to help identify known recognized environmental conditions at the Site and/or on adjacent or nearby properties which may have impacted the subject Site.

6.1 ENVIRONMENTAL DATABASE RECORDS SEARCH

GEOTEK obtained and reviewed an environmental database report of the federal and state environmental records specified by ASTM E 1527-13. The database report was provided by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. Additionally, orphan or un-mappable sites listed by EDR were reviewed for the approximate minimum search distances noted and included in our discussion, if applicable. Refer to Appendix D for a copy of the database report.

ENVIRONMENTAL DATABASE	MINIMUM SEARCH DISTANCE	SITE	ADJACENT	TOTAL LISTED
U.S. Environmental Protection Agency (EPA) - National Priorities List (NPL), including delisted NPL	1.0 Mile	No	0	0
EPA – Superfund Enterprise Management System (SEMS), including archived sites (formerly CERCLIS)	0.5 Mile	No	0	0
EPA – Resource Conservation and Recovery Act (RCRA), Corrective Action Facilities (CORRACTS)	1.0 Mile	No	0	0
EPA – RCRA, Transportation, Storage, and Disposal facilities (TSD)	0.5 Mile	No	0	0
EPA - RCRA Generators	Site and Adjacent	No	0	0
EPA – Emergency Response Notification System (ERNS)	Site	No	N/A	0
Federal institutional control/engineering control registries	0.5 Mile	No	0	0
California Environmental Protection Agency (CEPA) – State Response Sites (Response, formerly Annual Work Plan and Bond Expenditure Plan)	1.0 Mile	No	0	0

ENVIRONMENTAL DATABASE	MINIMUM SEARCH DISTANCE	SITE	ADJACENT	TOTAL LISTED
CEPA – EnviroStor Database (formerly CALSITES)	0.5 Mile	No	0	1
CEPA – CHMIRS - California Hazardous Materials Information Reporting System	Site	No	No	0
CEPA - Solid Waste Fill/Landfill (SWF/LF), Solid Waste Assessment Test (SWAT)/Waste Management Unit Database System (WMUDS) and Recycling Facilities (SWRCY)	0.5 Mile	No	0	0
CEPA – Leaking Underground Storage Tanks (LUST)	0.5 Mile	No	0	0
CEPA – Underground Storage Tanks (UST), including historic USTs	Site and Adjacent	No	0	0
CEPA – Spills, Leaks, Investigations & Cleanup Cost Recovery Listing (SLIC)	0.5 Mile	No	0	0
State institutional control/engineering control registries	Site	No	N/A	0
Local and/or Tribal databases	Up To 1.0 Mile	No	0	0
Drycleaners	0.25 Mile	No	0	0
Other databases	Up to 1.0 Mile	No	0	5
Unmappable facilities	Up to 1.0 Mile	No	0	0

N/A – Not Applicable

6.2 Discussion of Regulatory Records

6.2.1 National Priority List

The National Priority List (NPL) is the EPA's list of confirmed or proposed Superfund sites. Our review of this data includes sites which have been delisted from the NPL. The NPL is searched for a 1.0-mile distance.

The Site does not appear on the NPL. There are no facilities on the NPL within 1.0-mile of the Site.

6.2.2 SUPERFUND ENTERPRISE MANAGEMENT SYSTEM

The Superfund Enterprise Management System (SEMS, formerly CERCLIS) is a compilation of sites that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances. Our review of SEMS sites includes archive (no further remedial action planned) facilities. The SEMS list is searched for a 0.5-mile distance.

The Site does not appear on the SEMS list. There are no facilities on the SEMS list within 0.5-mile of the Site.

The Site does not appear on the SEMS-ARCHIVE list. There are no facilities on the SEMS-ARCHIVE list within 0.5-mile of the Site.

6.2.3 RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act compile selective information on facilities which generate, transport, store, treat and or dispose of hazardous waste. RCRA facilities can be listed on one of three databases:

- *Corrective Action Facilities (CORRACTS)* are facilities undergoing corrective action. A corrective action order is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. The CORRACTS list is searched for a 1.0-mile distance.

  The Site does not appear on the CORRACTS list. There are no facilities on the CORRACTS list within 1.0-mile of the Site.

- *Transportation, Storage, and Disposal Facilities (TSD)* includes facilities that transport, store or dispose of hazardous waste and are not listed on the RCRA Generators list. The TSD is searched for a 0.5-mile distance.

  The Site does not appear on the RCRA TSD list. There are no facilities on the RCRA TSD list within 0.5-mile of the Site.

- *Generators List* identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Generators database is a compilation by the EPA of reporting facilities that generate hazardous waste. The RCRA generators list is searched for the Site and adjacent properties.

The Site does not appear on the RCRA Generators list. There are no facilities on the RCRA-SQG Generators list within 1.0-mile of the Site.

6.2.4 Emergency Response Notification System

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil or hazardous substances. The ERNS list is searched for the Site. The Site does not appear on the ERNS list.

6.2.5 Federal Institutional Control/Engineering Control Registries

The EPA maintains three (3) databases which list sites that have institutional and/or engineering controls in place as part of their operations. These databases are searched for a 0.5-mile distance.

The Site does not appear on the U.S. Engineering Controls databases. There are no facilities on these databases within 0.5-mile of the Site.

6.2.6 State Response Sites

The State Response Sites (RESPONSE) records are the state equivalent to the federal National Priorities List (NPL) database. The RESPONSE database is searched for a 1.0-mile distance.

The Site does not appear on the RESPONSE database. There are no RESPONSE facilities listed within 1.0-mile of the Site.

6.2.7 EnviroStor Database

The EnviroStor Database (EnviroStor, formerly CALSITES) records are the state equivalent to the federal SEMS database. EnviroStor is searched for a 0.5-mile distance.

The Site does not appear on the EnviroStor database.

There is one (1) Envirostor facility listed within 0.5-mile distance.

The facility is listed as Elementary School No. 14 and is located at the intersection of Fencepost Drive and Ram Drive. The facility is 0.125 to 0.25 (0.231) mile southwest of the Site. The status of the facility is listed as "Inactive – Withdrawn". The contaminants of concern were

DDT, DDE and DDD. The potentially affected media was listed as soil. There were no confirmed contaminants of concern. Due to its distance, status, and the nature of this listing, this facility is not considered an environmental concern to the Site.

6.2.8 California Hazardous Material Incident Report System

The California Hazardous Material Incident Report Systems (CHMIRS) is a state database used to collect information on reported hazardous materials incidents (accidental leaks and spills). The CHMIRS list is searched for a 0.25-mile distance.

The Site does not appear on the CHMIRS list. There are no CHMIRS facilities located within 0.25-mile of the Site.

6.2.9 Solid Waste Facilities List

The Solid Waste Fill/Landfill (SWF/LF), Waste Management Unit Database System (WMUDS)/Solid Waste Assessment Test (SWAT), and Solid Waste Recycling Facilities (SWRCY) databases (collectively the "SWLF databases") includes information pertaining to closed and open solid waste facilities operating in the state of California. The SWLF, WMUDS/SWAT and SWRCY databases are searched for a 0.5-mile distance.

The Site does not appear on the SWLF databases. There are no facilities on the SWLF databases within 0.5-mile of the Site.

6.2.10 Leaking Underground Storage Tanks List

The California Leaking Underground Storage Tanks (LUST) list is a compilation of petroleum storage tank sites that have reported a release. The LUST list is searched for a 0.5-mile distance.

The Site does not appear on the LUST list. There are no LUST facilities within a 0.5-mile distance of the Site.

6.2.11 Underground Storage Tanks List

The California Underground Storage Tank (UST) lists are a compilation of petroleum storage tank sites that are registered with the state of California. Our review included the historic UST

database and the CERES UST database (collectively the "UST lists"). The UST lists are searched for the Site and adjacent properties.

The Site does not appear on the UST lists. There are no UST facilities located within 0.5-mile distance of the Site.

There are no HIST UST facilities within 0.5-mile distance of the Site.

6.2.12 Spills, Leaks, Investigation and Cleanup Cost Recovery Listing (SLIC)

The SLIC database is compiled by the CEPA California Regional Water Quality Control Board, Santa Ana Region. It is designed to protect and restore water quality from spills, leaks, and similar discharges. The SLIC is searched for a 0.5-mile distance.

The Site does not appear on the SLIC database. There are no SLIC facilities within a 0.5-mile distance of the Site.

6.2.13 State Institutional Control/Engineering Control Registries

The State of California maintains institutional and engineering control databases or registries. This lists sites with engineering or institutional controls in place. Institutional controls include administrative measures intended to prevent exposure to contaminants remaining on site. Engineering controls include various forms of caps, building foundations, liners, and treatment methods. The State Institutional Control/Engineering Control Registries is searched for the Site.

The subject Site does not appear on the State Institutional Control/Engineering Control Registries.

6.2.14 Tribal Databases

Tribal governments are under the jurisdiction of the EPA for environmental concerns. Currently, the EPA Region 9 publishes LUST and UST information for tribes in Arizona, California, Hawaii, Nevada, and the Pacific Territories. The LUST database is searched for 0.5 mile, and the UST database is searched for 0.25 mile.

The Site does not appear on the Tribal LUST or UST databases. No facilities were identified on the Tribal LUST or UST databases within 0.5 mile of the Site.

6.2.15 Other Databases

EDR compiles information from multiple federal, state, local, and proprietary databases. Most are secondary or tertiary or redundant. Facilities compiled on these other databases are evaluated based on the severity of the listing, distance, and location.
The Site does not appear on the environmental database report obtained for this assessment.

There are three (3) listings within the appropriate search distances specified by ASTM E 1527-13.

There is one (1) facility listed with the Resource Conservation and Recovery Act (Non Generators) list database (RCRA NonGen/ NLR).

There are two (2) facilities listed with the State Clearing House (SCH) database.

There is one (1) facility listed with the California Reporting System (CERS) database.

Due to either their distance, "proximity" implies near, "distance" implies far away from the Site or status, these facilities do not represent environmental concerns to the Site.

6.2.16 Drycleaners

The DRYCLEANERS list is compiled and provided by EDR. The DRYCLEANER database is searched for a 0.25-mile distance.

The Site does not appear on the DRYCLEANER list. There are no DRYCLEANER facilities listed within 0.25-mile of the Site.

6.2.17 Unmappable Facilities

GeoTek reviewed the listing of "orphan" or unmappable facilities in the database report.

There are no unmapped facilities on the report.

6.3 Local Regulatory Agency Records

GeoTek contacted the Riverside County Fire Department and the City of Menifee Police Department regarding underground or above ground storage tanks, hazardous material permits

or business plans, emergency responses, spills, inspections, or other information of an environmental or hazardous nature. Neither of these agencies had any information for the Site.

7.0 VAPOR ENCROACHMENT SCREENING

The purpose of a Vapor Encroachment Screen (VES) is to identify, to the extent feasible, if a Vapor Encroachment Condition (VEC) exists at the Site.

A Vapor Encroachment Screen Report was generated for the Site and Site area utilizing EDR's Vapor Encroachment Worksheet (see Appendix E).

It was determined that there are no historical dry cleaners or auto stations located within 600 feet and/or up gradient from the Site.

It is our opinion that a VEC in not likely to exist at the subject Site. The Vapor Encroachment Screen report is included in Appendix E.

8.0 SITE AND SURROUNDING AREA HISTORY

In order to construct the history of the Site and the surrounding area, GEOTEK reviewed reasonably ascertainable public documents, including aerial photographs, topographic maps, building records, city directories, fire insurance maps, and county assessor history records.

8.1 HISTORICAL SITE USAGE

8.1.1 AERIAL PHOTOGRAPH REVIEW

GEOTEK reviewed aerial photographs dated 1938, 1949, 1953, 1961, 1967, 1974, 1978, 1985, 1989, 1994, 1997, 2002, 2006, 2009, 2012, 2016 and 2020 (see Appendix B).

The Site appears to be vacant land in the aerial photographs dated from 1938 until 2002.

In the 2006 aerial photograph, dirt roads can be observed transecting the Site. The Site remains vacant land.

From the aerial photograph dated 2009 until present day, the Site appears unremarkable aside from vegetative growth at the surface.

A 2020 aerial photograph is utilized for Figure 2 (Appendix A).

8.1.2 TOPOGRAPHIC MAP REVIEW

GEOTEK reviewed the Elsinore Quadrangle (30-minute series), dated 1901; the Murrieta and Perris Quadrangle (15-minute series), dated 1942; the Murrieta and Perris Quadrangles (15-minute series), dated 1943; the Murrieta Quadrangles (15-minute series), dated 1947; the Romoland and Perris Quadrangle (7.5-minute series), dated 1953; the Perris and Romoland Quadrangle (7.5-minute series), dated 1973; the Perris and Romoland Quadrangle (7.5-minute series), dated 1979; and the Perris and Romoland Quadrangles (7.5-minute series), dated 2012 (see Appendix B).

The Site appears to be vacant land from the topographic map sheets dated 1901 until 1979.

A 2012 topographic map sheet is utilized for Figure 1 (Appendix A).

8.1.3 Building Department Records

Building department records were not obtained from and not provided by EDR for this assessment as the Site has historically been vacant land.

8.1.4 City Directory Review

GeoTek obtained The EDR – City Directory Image Report, as obtained from and provided by EDR, and included in Appendix B. Due to the Site not having an address, there are no listings for the Site. A copy of the City Directory Image Report is included in Appendix B.

8.1.5 Sanborn Map Review

Sanborn Fire Insurance Maps for the parcel were requested from EDR-Sanborn, which owns and maintains the largest and most complete collection of the maps. Source sheets were not available for the Site. The Sanborn Map Report is included in Appendix B.

8.1.6 Chain of Title

GeoTek has not received nor been authorized to obtain Chain-of-Title documents for the Site.

8.2 Historical Immediately Surrounding Property Usage

8.2.1 Aerial Photograph Review

GeoTek reviewed aerial photographs dated 1938, 1949, 1953, 1961, 1967, 1974, 1978, 1985, 1989, 1994, 1997, 2002, 2006, 2009, 2012, 2016 and 2020 (see Appendix B).

The surrounding properties appear to be vacant in the aerial photographs dated from 1938 until 1978.

Residential structures can be observed on the properties to the northeast and to the east of the Site in the aerial photograph dated 1985.

In the aerial photograph dated 1989, residential development can be observed in the properties to the east and northeast of the Site.

In the 1994 and 1997 aerial photographs, a neighborhood can be observed to the east and northeast as well as to the far southeast of the Site.

In the 2002 aerial photograph, residential structures can be observed to the far northwest of the Site.

In the 2006, 2009, 2012 and 206 aerial photographs, the adjacent properties to the north, west and southwest appear to be graded for residential development. There is also increased residential development to the southeast of the Site.

The 2020 aerial photograph depicts the current configuration of the surrounding properties.

8.2.2 TOPOGRAPHIC MAP REVIEW

GEOTEK reviewed the Elsinore Quadrangle (30-minute series), dated 1901; the Murrieta and Perris Quadrangle (15-minute series), dated 1942; the Murrieta and Perris Quadrangles (15-minute series), dated 1943; the Murrieta Quadrangles (15-minute series), dated 1947; the Romoland and Perris Quadrangle (7.5-minute series), dated 1953; the Perris and Romoland Quadrangle (7.5-minute series), dated 1973; the Perris and Romoland Quadrangle (7.5-minute series), dated 1979; and the Perris and Romoland Quadrangles (7.5-minute series), dated 2012 (see Appendix B).

The topographic map sheet dated 1901 depicts several structures in the properties surrounding the Site.

The 1942, 1943 and 1947 topographic map sheets depict structures primarily to the northeast, east and southeast of the Site.

No structures can be observed on the topographic map sheet dated 1953. However, two wells can be seen on the properties to the east of the Site.

What appears to be residential development can be observed to the southeast of the Site on the topographic map sheets dated 1973 and 1979.

The 2012 maps show little detail other than streets in the vicinity. The 2012 map is presented as Figure 1 in Appendix A.

8.2.3 CITY DIRECTORIES

GEOTEK has reviewed a City Directory Image report obtained from and provided by EDR for the Site and surrounding property addresses. The City Directory Image report provides information on a several nearby property addresses. The named facilities do not currently represent an environmental concern to the Site. A copy of the City Directory Image Report is included in Appendix B.

8.2.4 SANBORN MAP REVIEW

Sanborn Maps for the Site were requested from EDR-Sanborn, which owns and maintains the largest and most complete collection of the maps. Source sheets were not available for the Site. The Sanborn Map Report is included in Appendix B.

8.3 HISTORICAL USE SUMMARY

Based on readily available historic information, the parcels appear to have been vacant land from at least 1938 until present day. The surrounding properties appear to historically have been vacant land and residential development since at least 1938. Residential structures can first be observed to the northeast in the 1984 aerial photograph. The aerial photograph dated 1989 depicts residential development to the east and adjacent to the Site. Grading for residential construction can first be observed to the north, west and south of the Site in the aerial photograph dated 2002 until present day. The current configuration of the Site and surrounding properties can be observed in the 2016 and 2020 aerial photographs.

Data gaps exist from 1901 to 1938 and 1967 to 1974 due to the limited records which are reasonably ascertainable in the local area. However, it is our opinion that additional historic information, if it were to become available, is not likely to change the conclusions or recommendations of this assessment.

9.0 SIGNIFICANT DATA GAPS

No significant data gaps were discovered while performing this Phase I Environmental Site Assessment. Therefore, it is our opinion that sufficient information was obtained to identify current Site conditions and past Site usage.

Minor data gaps include:

- Gaps in the historic records 1901 to 1938 and 1967 to 1974;
- GEOTEK has not received nor reviewed Chain-of-Title documents for the Site.

It is our opinion that additional information, if it were to become available, is not likely to change the conclusions or recommendations of this assessment.

10.0 CONCLUSIONS AND RECOMMENDATIONS

GEOTEK has performed a Phase I Environmental Site Assessment (ESA) for the subject Site in substantial conformance with the scope and limitations of ASTM E 1527-13 and GEOTEK Proposal No. P-0303421-CR, dated March 11, 2021. Any exceptions to, or deletions from, this practice are described in the appropriate sections of this report.

This Phase I Environmental Site Assessment has not revealed evidence of a recognized environmental condition or concern in connection with the subject Site. No further investigation is recommended.

11.0 CERTIFICATIONS

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject Site. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

The qualifications of the Project Team are included in Appendix F.

We appreciate this opportunity to be of service. If you have any questions, or if we can be of further service, please contact us at (951) 710-1160.

Sincerely,
GEOTEK, INC.

REGISTERED GEOLOGIST
EDWARD H. LaMONT
No. 1892
Exp. _____
Certified Engineering Geologist
STATE OF CALIFORNIA

Edward H. LaMont
Principal Geologist, CEG 1892
Exp. 07/31/2022

J. Michael Batten, CEM, REPA
Environmental Services Manager
Registered Environmental Property Assessor No. 113162
Expires 06/15/2022

Franklin Sullivan
Staff Environmentalist

G:\Projects\2751 to 2800\2759CR JPMB Investments, LLC APN 330-230-023 & 024 Menifee\Phase I ESA\2759CR Phase I Environmental Site Assessment Valley Blvd Troy Lane, Sun City.doc

12.0 REFERENCES

CALIFORNIA, STATE OF

- Dibblee, T.W. and Minch, J.A., 2008, "Geologic map of the Murrieta 15-minute quadrangle, Riverside County, California" Dibblee Geological Foundation, Dibblee Foundation Map DF-417, scale 1:62,500
- Water Resources, Department of Hydrologic Data

ENVIRONMENTAL DATA RESOURCES, INC.

- Aerial Photo Decade Package, Inquiry No. 6522877.8, dated June 04, 2021
- Certified Sanborn Map Report, Inquiry No. 6522877.3, dated June 04, 2021
- City Directory Image Report, Inquiry No. 6522877.5, dated June 04, 2021
- Historical Topo Map Report, Inquiry No. 6522877.4, dated June 04, 2021
- Radius Map Report, Inquiry No. 6522877.2s, dated June 04, 2021
- Vapor Encroachment Screen Report, Inquiry No. 6522877.2s, dated June 09, 2021

FEDERAL EMERGENCY MANAGEMENT AGENCY

- Flood Insurance Rate Map, Map No. 06065C1620G, dated August 28, 2008, accessed on June 4, 2021

MENIFEE, CITY OF

- Police Department, Records Inquiry

RIVERSIDE, COUNTY OF

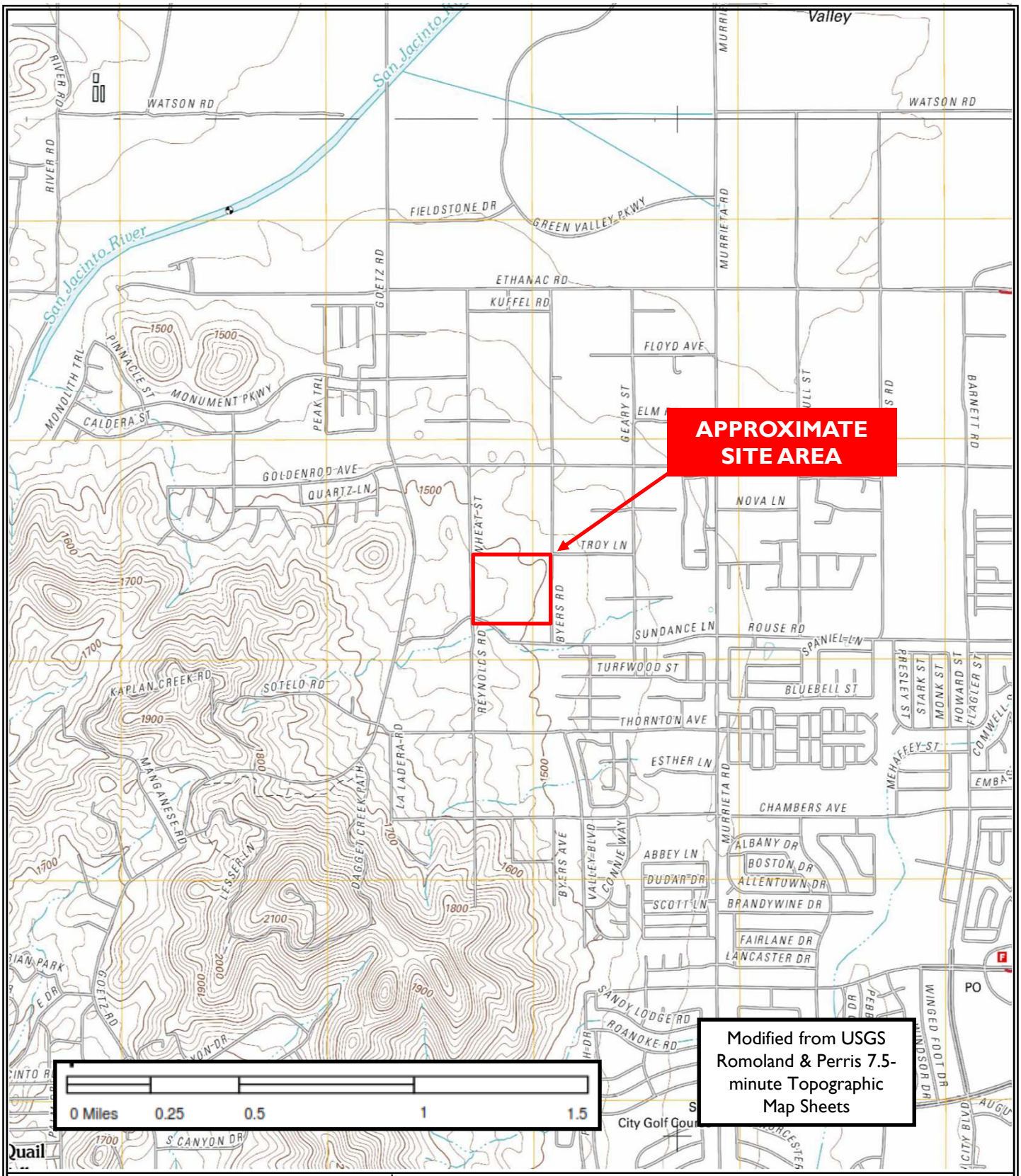
- Assessor's Office, Records Inquiry
- Fire Department, Records Inquiry

U.S. GOVERNMENT

- Drug Enforcement Agency
- Records inquiry, http://www.dea.gov/seizures
- Federal Emergency Management Agency (FEMA)

APPENDIX A

FIGURES



JPMB Investments, LLC
APN 330-230-023 & -024
Valley Boulevard/Troy Lane
Sun City, California 92585

Project No. 2759-CR

NORTH

Figure 1

Site Location and Topography Map

GEOTEK



JPM Investments, LLC
APN 330-230-023 & -024
Valley Boulevard/ Troy Lane
Sun City, California 92585

GeoTek Project No. 2759-CR

GEOTEK

Figure 2

General Site Layout Map

APPENDIX B

SUPPORTING DOCUMENTS

Menifee 27.5

Valley Boulevard/Troy Lane

Sun City, CA 92585

Inquiry Number: 6522877.8

June 04, 2021

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

06/04/21

Site Name:

Menifee 27.5
Valley Boulevard/Troy Lane
Sun City, CA 92585
EDR Inquiry # 6522877.8

Client Name:

Geotek
1548 North Maple Street
Corona, CA 92880
Contact: Anna M. Scott

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
2006	1"=500'	Flight Year: 2006	USDA/NAIP
2002	1"=500'	Acquisition Date: January 01, 2002	USGS/DOQQ
1997	1"=500'	Acquisition Date: January 01, 1997	USGS/DOQQ
1994	1"=500'	Flight Date: June 01, 1994	USGS
1989	1"=500'	Flight Date: August 15, 1989	USDA
1985	1"=500'	Flight Date: July 28, 1985	USDA
1978	1"=500'	Flight Date: September 20, 1978	USDA
1974	1"=500'	Flight Date: November 06, 1974	USGS
1967	1"=500'	Flight Date: May 15, 1967	USDA
1961	1"=500'	Flight Date: June 14, 1961	USDA
1953	1"=500'	Flight Date: August 28, 1953	USDA
1949	1"=500'	Flight Date: May 08, 1949	USDA
1938	1"=500'	Flight Date: June 14, 1938	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2021 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 6522877.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 6522877.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 6522877.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 6522877.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 6522877.8
YEAR: 2002
= 500'
N
EDR


INQUIRY #: 6522877.8
YEAR: 1997
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 6522877.8

YEAR: 1994

= 500'

N

EDR


INQUIRY #: 6522877.8
YEAR: 1989
= 500'
N
EDR


INQUIRY #: 6522877.8
YEAR: 1985
= 500'
N
EDR



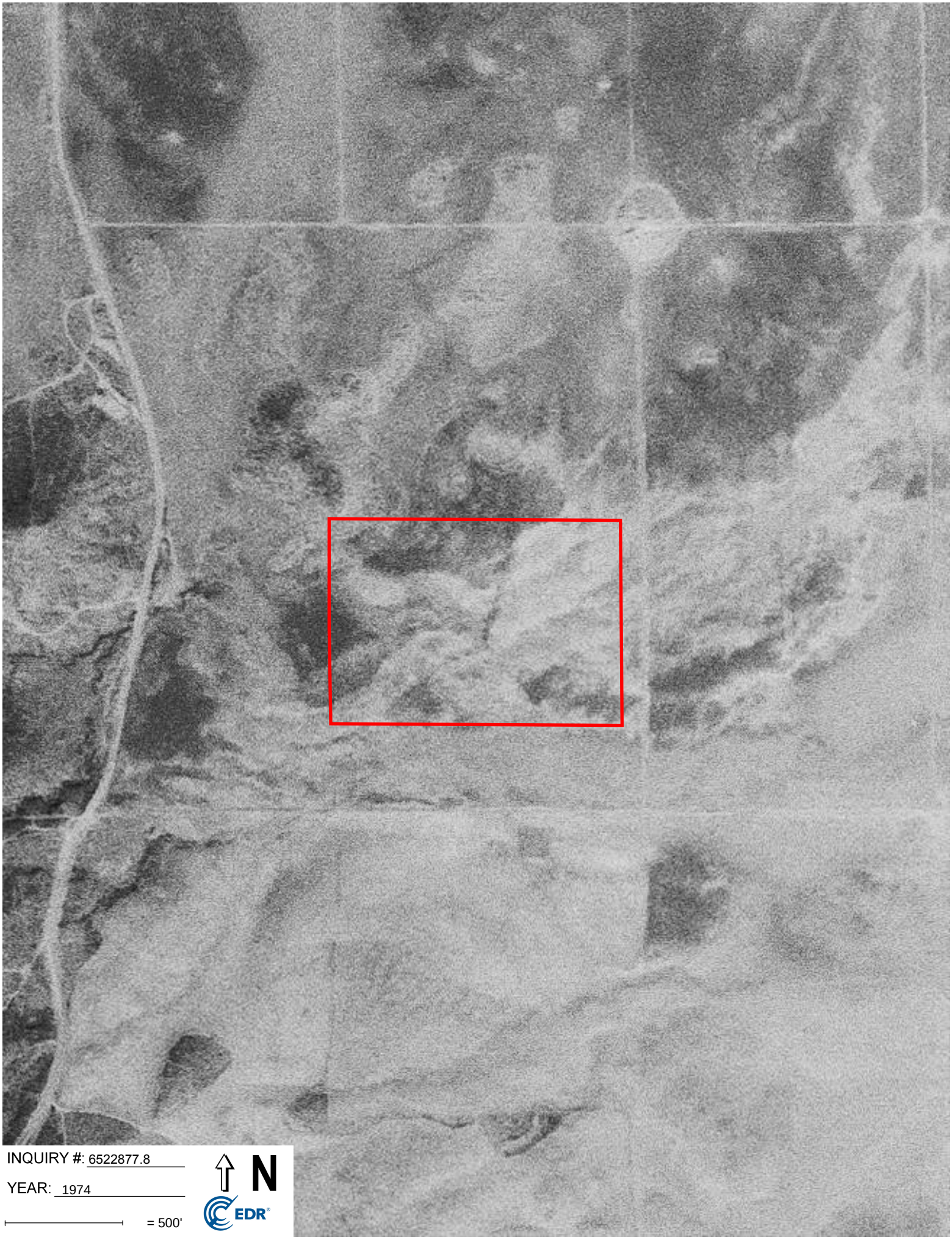
INQUIRY #: 6522877.8

YEAR: 1978

= 500'

N

EDR



INQUIRY #: 6522877.8

YEAR: 1974

= 500'

N

EDR



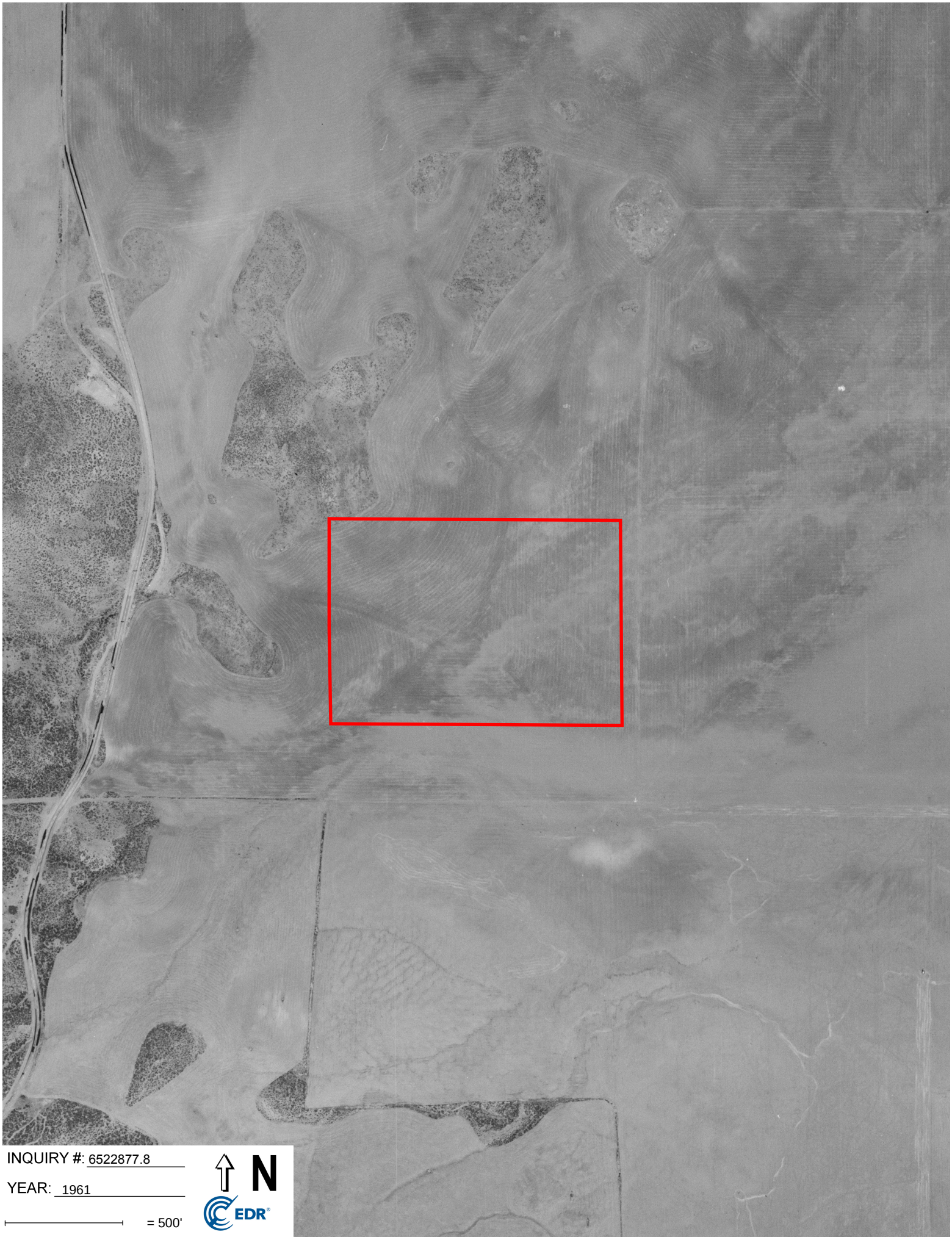
INQUIRY #: 6522877.8

YEAR: 1967

= 500'

N

EDR



INQUIRY #: 6522877.8

YEAR: 1961

= 500'

N

EDR



INQUIRY #: 6522877.8

YEAR: 1953

= 500'

N

EDR



INQUIRY #: 6522877.8

YEAR: 1949

= 500'

N

EDR



INQUIRY #: 6522877.8

YEAR: 1938

= 500'

N

EDR

Menifee 27.5

Valley Boulevard/Troy Lane

Sun City, CA 92585

Inquiry Number: 6522877.3

June 04, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/04/21

Site Name:

Menifee 27.5
Valley Boulevard/Troy Lane
Sun City, CA 92585
EDR Inquiry # 6522877.3

Client Name:

Geotek
1548 North Maple Street
Corona, CA 92880
Contact: Anna M. Scott

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Geotek 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 # 53C8-455C-9158

PO # NA

Project 2759-CR

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 #: 53C8-455C-9158

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™

Limited Permission To Make Copies

Geotek (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2021 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Menifee 27.5
Valley Boulevard & Troy Lane
Sun City, CA 92585

Inquiry Number: 6522877.5
June 09, 2021

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

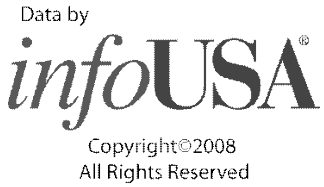
DESCRIPTION

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.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.



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
1985	☐	☐	Haines Criss-Cross Directory
1980	☐	☐	Haines Criss-Cross Directory
1976	☐	☐	Haines Criss-Cross Directory
1971	☐	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

Valley Boulevard & Troy Lane
Sun City, CA 92585

Year	*CD Image*	*Source*	
TROY LN			
2017	pg A1	EDR Digital Archive	
2014	pg A3	EDR Digital Archive	
2010	pg A5	EDR Digital Archive	
2005	pg A7	EDR Digital Archive	
2000	pg A9	EDR Digital Archive	
1995	pg A11	EDR Digital Archive	
1992	pg A13	EDR Digital Archive	
1985	-	Haines Criss-Cross Directory	Street not listed in Source
1980	-	Haines Criss-Cross Directory	Street not listed in Source
1976	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source
VALLEY BLVD			
2017	pg A2	EDR Digital Archive	
2014	pg A4	EDR Digital Archive	
2010	pg A6	EDR Digital Archive	
2005	pg A8	EDR Digital Archive	
2000	pg A10	EDR Digital Archive	
1995	pg A12	EDR Digital Archive	
1992	pg A14	EDR Digital Archive	
1985	-	Haines Criss-Cross Directory	Street not listed in Source
1980	-	Haines Criss-Cross Directory	Street not listed in Source
1976	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

TROY LN 2017

25540	COLLETT, MICHAEL
25612	FRYE, CHERYL C
25619	WOOD, CHRISTINA
25630	ORTEGA, ANTONIA B
25641	SANDOVAL, HENRY
25680	WATSON, WILLIAM J
25705	ROWLEY, EVAN V
25715	SMITH, JEREMY
26329	PALMERTON, DANIEL C
26341	CASTREJON, MANUEL V
26365	AGUILAR, RICARDO T
26377	MOLNAR, NELLIE P
26389	DUNCAN, MICHAEL L
26680	STRONG, KARN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

VALLEY BLVD 2017

28333 CHERRY HILLS CLUB

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

TROY LN 2014

25540	COLLETT, MICHAEL
25570	MASSIE, ROBERT O
25597	PATE, DANNY
25598	GLANCY, DOYLE W
25619	WOOD, CHRISTINA
25630	ORTEGA, ANTONIA B
25641	SANDOVAL, HENRY
25680	OCCUPANT UNKNOWN,
25685	BAKKEN, CHRISTOPHER D
25702	BOWMAN, ALLEN
	BOWMAN, KEVIN C
25705	OCCUPANT UNKNOWN,
25715	PANTANO, MICHELLE
25730	HUTCHISON, PAT
26329	PALMERTON, DANIEL C
26341	CASTREJON, MANUEL V
26365	AGUILAR, RICARDO T
26377	MOLNAR, NELLIE P
26389	DUNCAN, MICHAEL L
26680	STRONG, KARN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

VALLEY BLVD 2014

28333 CATERERS THE
CHERRY HILLS CLUB
KOZICKI, JOSEPH
NORWOOD, WAUNITA V
THE CHERRY HILL CLUB
29285 HEADEND, SUN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

TROY LN 2010

25513 BOUCHER, JOHN A
25540 MASSIE, ROBERT O
25598 GUTIERREZ, ANGEL
25630 PEREZ, GUADALUPE M
25641 BOWMAN, JAMES N
25685 BAKKEN, CHRISTOPHER D
25702 BOWMAN, KEVIN C
25705 ROWLEY, JAMIE L
25715 MCDERMOTT, JENNY
25730 HUTCHISON, PAT
26329 PALMERTON, DANIEL C
26341 CASTREJON, MANUEL V
26365 AGUILAR, RICARDO T
26377 ROBERTS, KAREN
26389 DUNCAN, MICHAEL L
26680 STRONG, KARN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

VALLEY BLVD 2010

28333 CATERERS
CHERRY HILLS CLUB
GOREL, LILLIE
NORWOOD, WAUNITA V

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

TROY LN 2005

25513	BOUCHER, JOHN A
25540	MASSIE, ROBERT O
25597	OCCUPANT UNKNOWN,
25598	GLANCY, DOYLE W
25612	FRYE, CHERYL C
25619	OCCUPANT UNKNOWN,
25630	PEREZ, GUADALUPE M
25641	OCCUPANT UNKNOWN,
25685	BAKKEN, CHRISTOPHER D
25702	BOWMAN, ALLEN F
	DRAEGER, SUSAN
25705	ROWLEY, EVAN V
25715	AYRES, JENNY M
25730	HUTCHISON, PAT
26329	CHRISTNER, DENNIS D
26341	CASTREJON, MANUEL V
26365	FRYAR, LAWRENCE E
26377	OCCUPANT UNKNOWN,
26389	RAMIREZ, MANUEL

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

VALLEY BLVD 2005

28333 GOREL, LILLIE
HOOD, ROBBIE L
HORIZON BAY NEWS
PLAUNT, RALPH H
SENIOR LIFESTYLE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

TROY LN 2000

25513 BALDWIN, BETTY
25540 MASSIE, ROBERT O
25598 BARRIOS, ANGEL
DRAKE, VICKIE
GLANCY, D W
25612 FRYE, CHERYL C
25630 PEREZ, G
25641 OCCUPANT UNKNOWN,
25663 OCCUPANT UNKNOWN,
25685 OCCUPANT UNKNOWN,
25702 BOWMAN, ALLEN
25705 ROWLEY, EVAN
25715 OCCUPANT UNKNOWN,
25730 HUTCHISON, WILLIAM

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

VALLEY BLVD 2000

28333 CHERRY HILLS CLUB
MONTAGUE, JANE A
THE CATERERS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

TROY LN 1995

25513	BALDWIN, FRANK
25540	OCCUPANT UNKNOWNN
25597	LOPEZ, TRINA
25598	BLUE SKIES CONSTRUCTION
	OCCUPANT UNKNOWNN
25612	ARCHER, DANIEL K
25630	OCCUPANT UNKNOWNN
25641	LANDRY, LISA
25663	JENNINGS, RICHARD
25680	WATSON, WILLIAM
25685	WHITE, ROBYN
25702	BOWMAN, ALLEN
25705	OCCUPANT UNKNOWNN
25715	A 1 COUNTY APPLIANCE
	MCDERMOTT, JENNY M
25730	HUTCHISON, WILLIAM

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

VALLEY BLVD 1995

28333 ALEXANDER, LESLIE
ARMSTRONG, HAZEL
BAKER, FRANCES
BALDWIN, KENNETH R
BANFIELD, DELMER H
BEAIRD, O P
BRANDVOLD, G K
CHERRY HILLS CLUB
CLARK, DAVID R
EVANS, STEPHEN G
FINKEL, CHARLES
GIBSON, MARY
GILL, FAYE
HARGROVE, CHESTER
HIRSCHY, RAE
HULL, LULU M
KIM, ROSE
KOLUMBAN, VERA
LAPOINTE, GRANT L
LAURENT, L C
LEWIS, EULAV
MCCORMICK, G
MEADORS, K K
MEINK, ADELIA
MILLER, PAULINE L
MOORE, ALBERT S
MUELLER, LUCILE
NICHOLLS, MABEL
NOBLE, AGNES M
ODDIE, AURORA S
PARKER, GEORGE R
PAYNE, F C
SCHNEIDER, PETER
SEGNER, FLOYD D
SELTZER, ALBERT
TREBISKY, EDNA S
WAETERLING, ARTHUR E
WOLFE, HELEN S
ZIMMER, HERBERT A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

TROY LN 1992

25513 BALDWIN, FRANK
25597 BYRAM, TERRI
25641 LANDRY, LISA
25663 JENNINGS, RICHARD
25702 BOWMAN, ALLEN
25715 A 1 COUNTY APPLNC
25730 HUTCHISON, WILLIAM

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

VALLEY BLVD 1992

28333 CHERRY HILLS CLUB

Menifee 27.5

Valley Boulevard/Troy Lane

Sun City, CA 92585

Inquiry Number: 6522877.4

June 04, 2021

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

06/04/21

Site Name:

Menifee 27.5
Valley Boulevard/Troy Lane
Sun City, CA 92585
EDR Inquiry # 6522877.4

Client Name:

Geotek
1548 North Maple Street
Corona, CA 92880
Contact: Anna M. Scott

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Geotek 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: 2759-CR

Coordinates:

Latitude:	33.730892 33° 43' 51" North
Longitude:	-117.217106 -117° 13' 2" West
UTM Zone:	Zone 11 North
UTM X Meters:	479887.71
UTM Y Meters:	3732339.63
Elevation:	1518.65' above sea level

Maps Provided:

2012
1979
1973
1953
1947
1943
1942
1901

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2021 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Romoland
2012
7.5-minute, 24000



Perris
2012
7.5-minute, 24000

1979 Source Sheets



Romoland
1979
7.5-minute, 24000
Aerial Photo Revised 1976



Perris
1979
7.5-minute, 24000
Aerial Photo Revised 1978

1973 Source Sheets

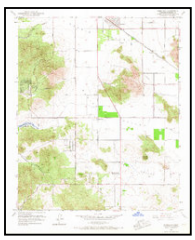


Romoland
1973
7.5-minute, 24000
Aerial Photo Revised 1973



Perris
1973
7.5-minute, 24000
Aerial Photo Revised 1973

1953 Source Sheets



Romoland
1953
7.5-minute, 24000
Aerial Photo Revised 1951

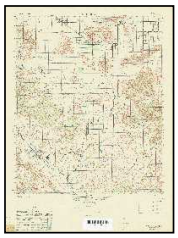


Perris
1953
7.5-minute, 24000
Aerial Photo Revised 1951

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947 Source Sheets



MURRIETA
1947
15-minute, 50000

1943 Source Sheets



PERRIS
1943
15-minute, 62500



Murrieta
1943
15-minute, 62500
Aerial Photo Revised 1939

1942 Source Sheets



Perris
1942
15-minute, 62500
Aerial Photo Revised 1939



Murrieta
1942
15-minute, 62500
Aerial Photo Revised 1939

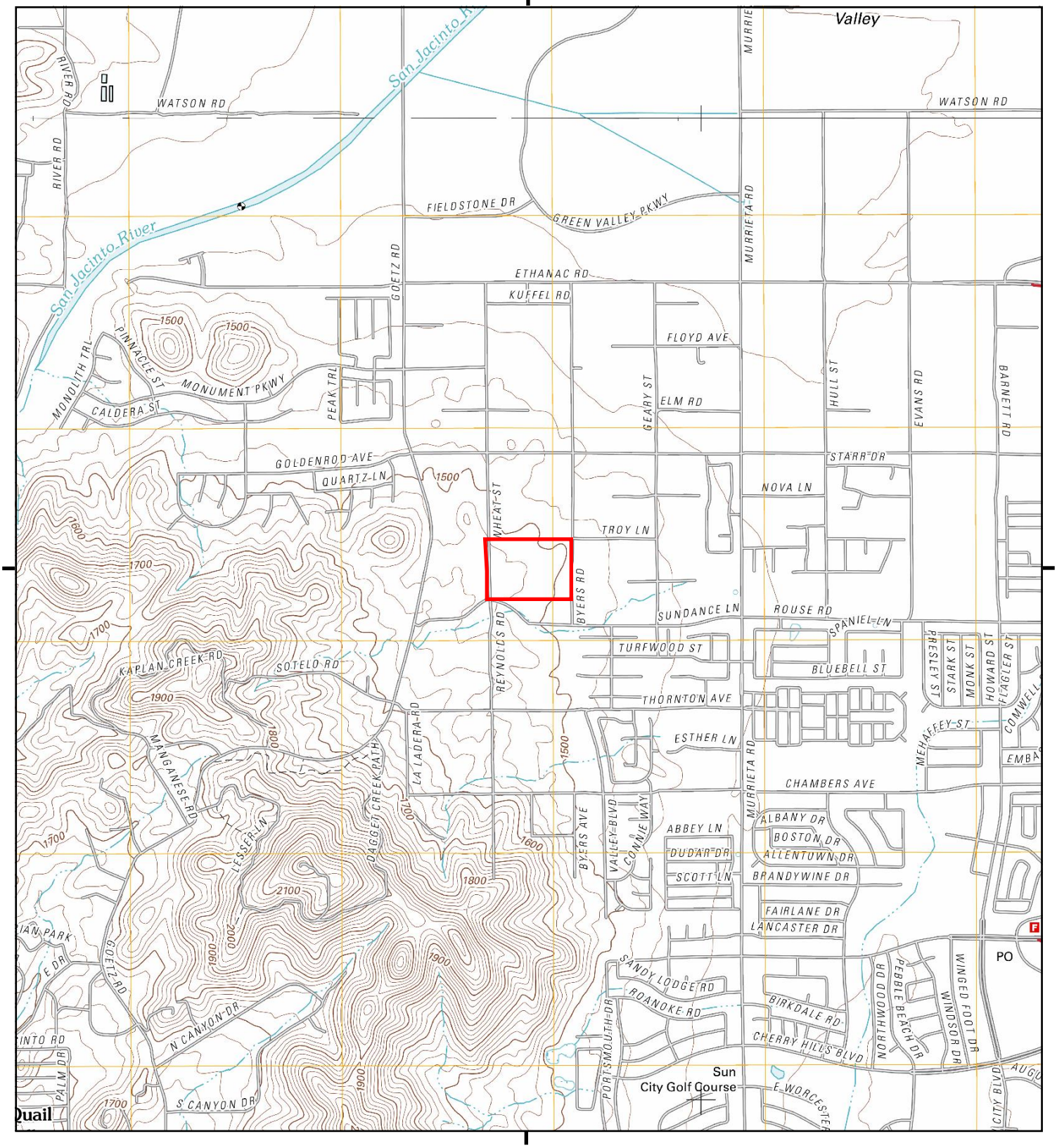
1901 Source Sheets



Elsinore
1901
30-minute, 125000

Historical Topo Map

2012



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

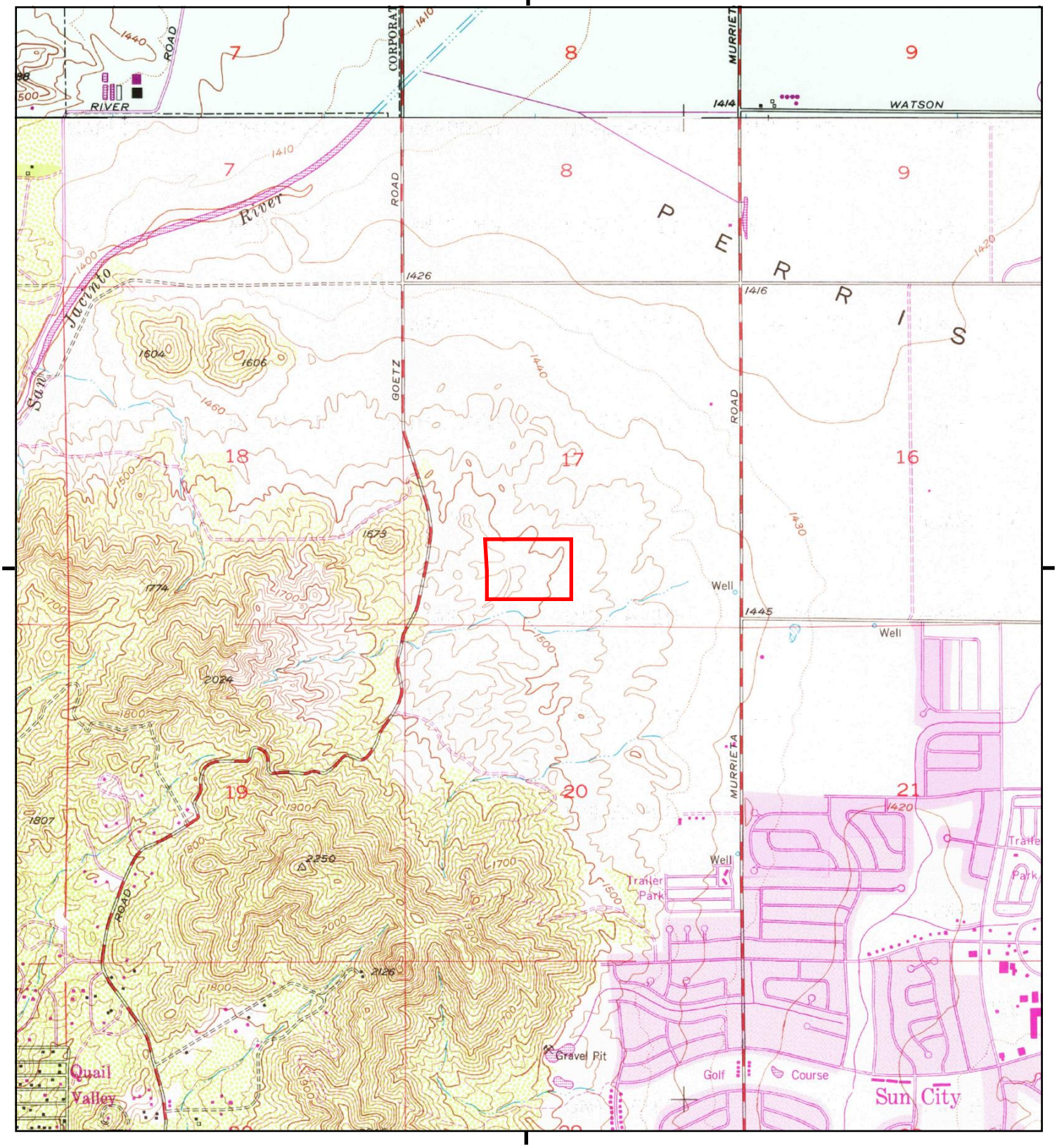
TP, Romoland, 2012, 7.5-minute
N, Perris, 2012, 7.5-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

N

Historical Topo Map

1979



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

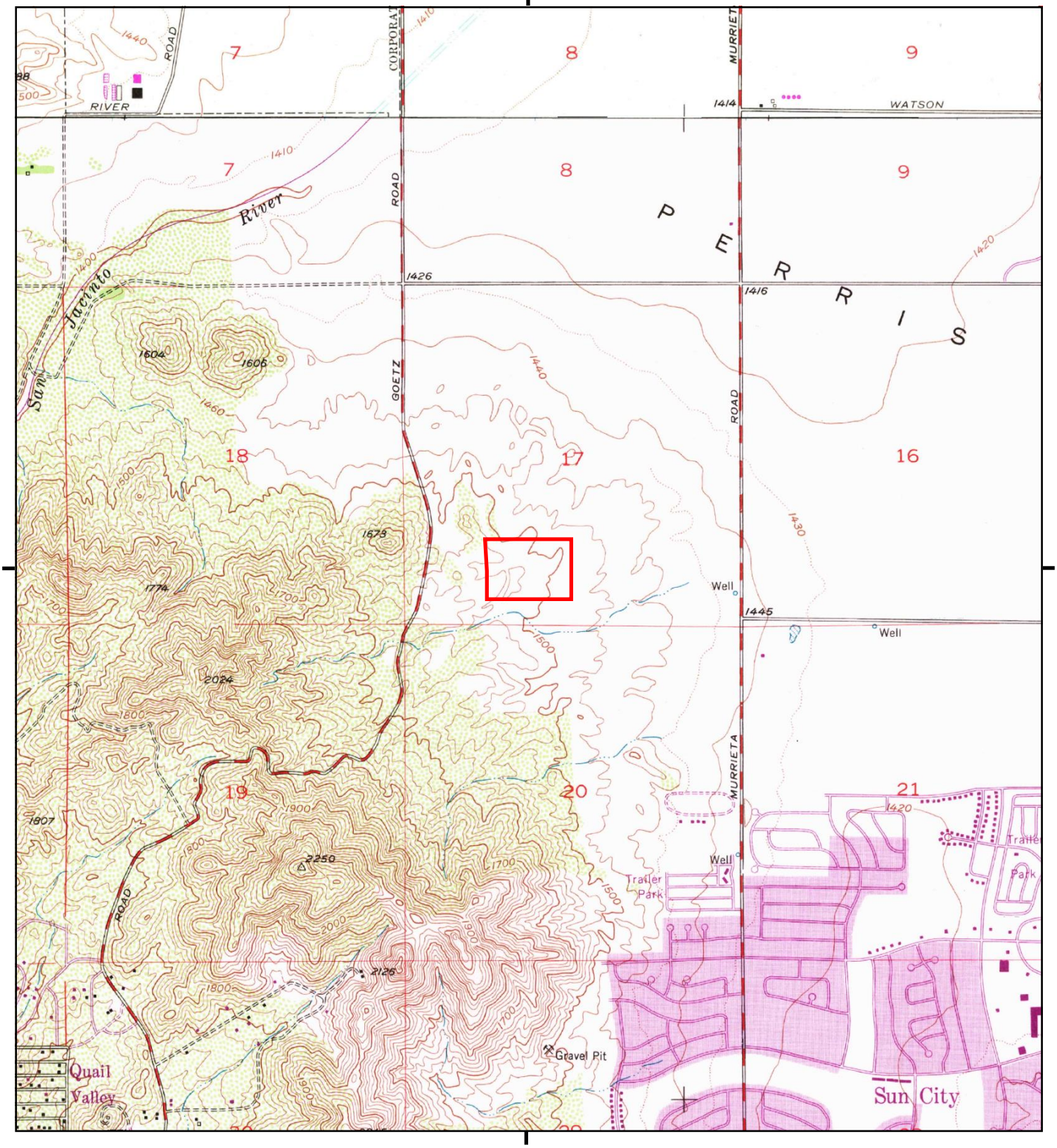
TP, Romoland, 1979, 7.5-minute
N, Perris, 1979, 7.5-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

N

Historical Topo Map

1973



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

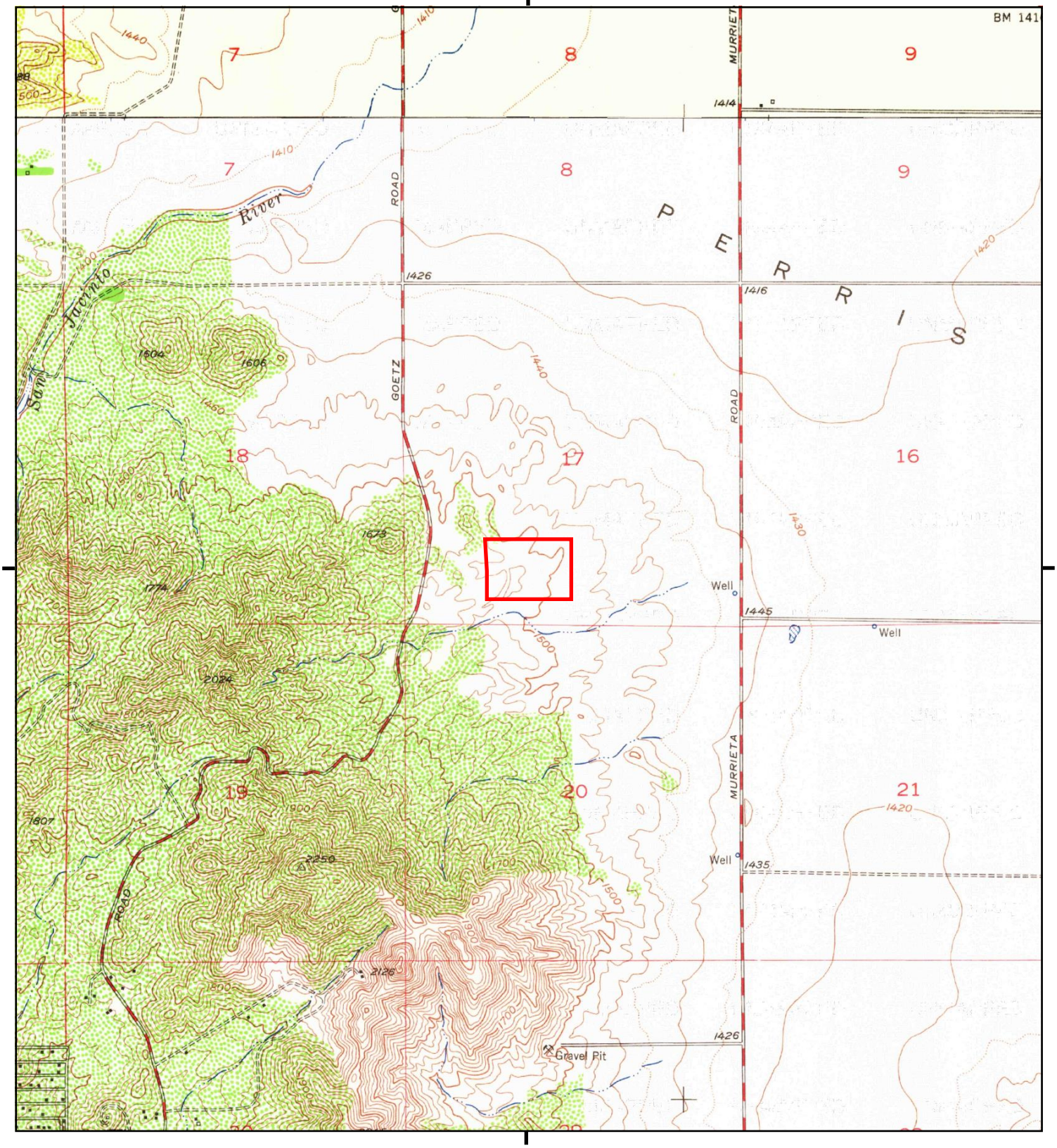
TP, Romoland, 1973, 7.5-minute
N, Perris, 1973, 7.5-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

N

Historical Topo Map

1953



This report includes information from the following map sheet(s).

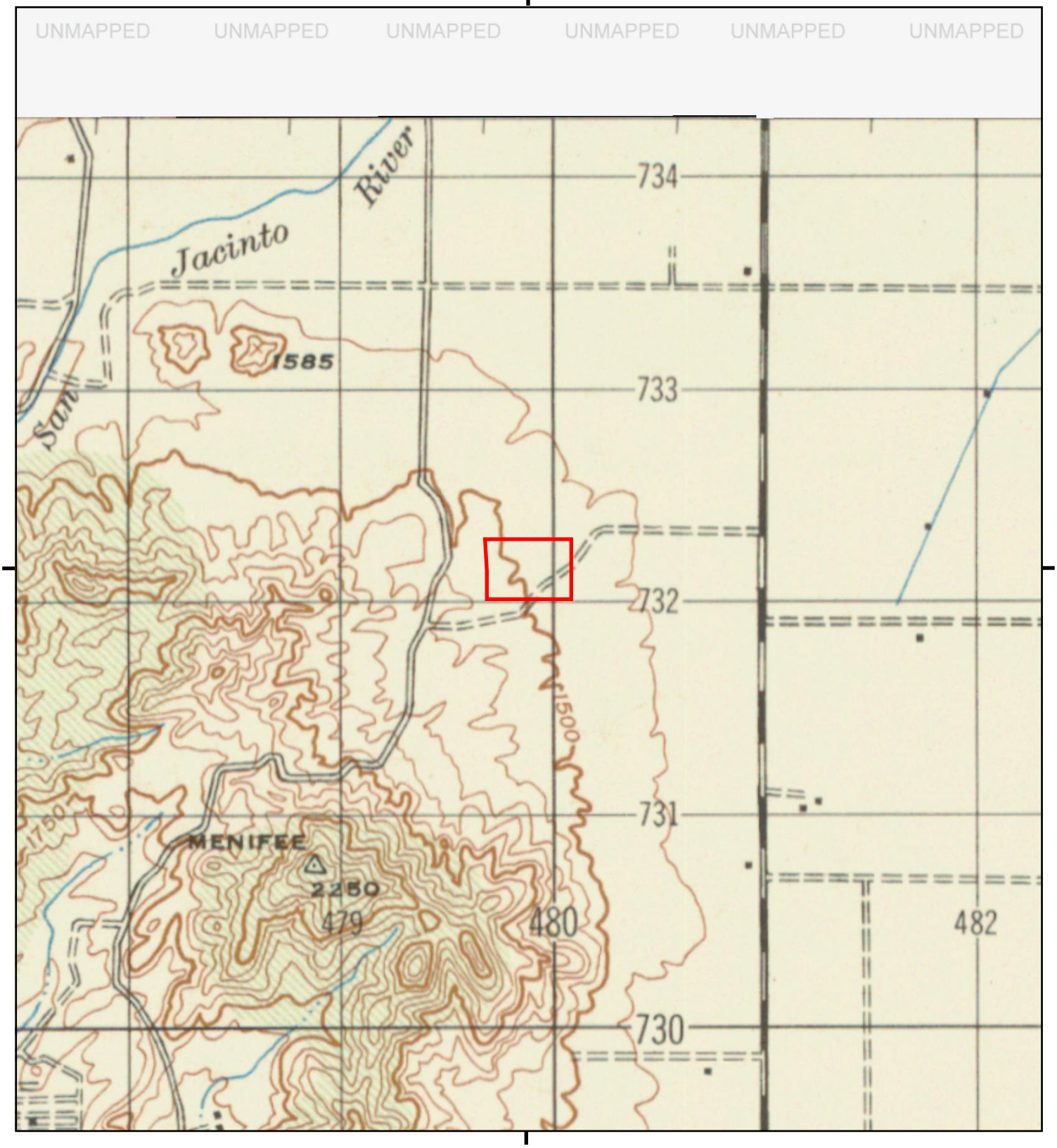
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Romoland, 1953, 7.5-minute
N, Perris, 1953, 7.5-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

N



This report includes information from the following map sheet(s).

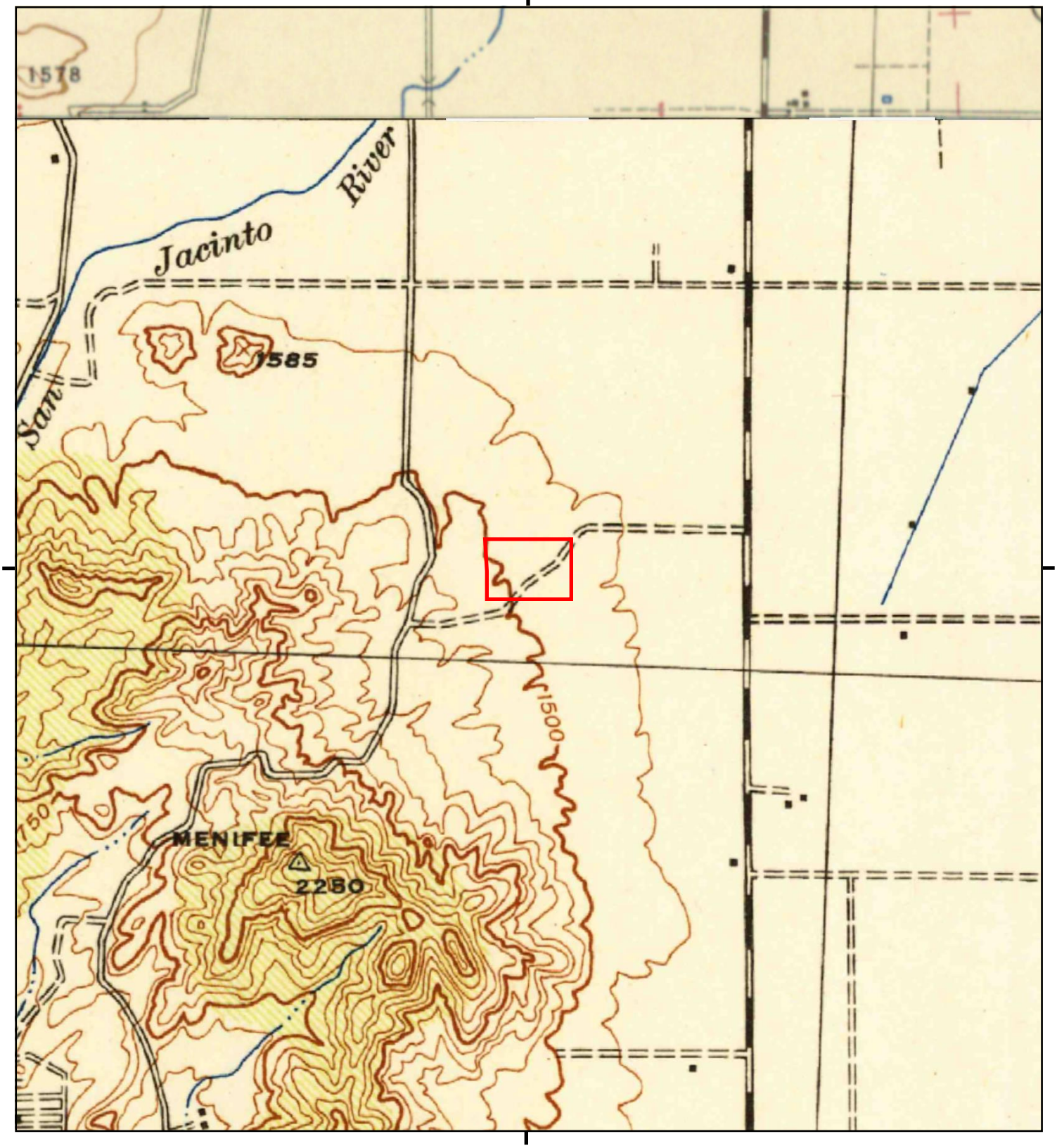
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, MURRIETA, 1947, 15-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

N



This report includes information from the following map sheet(s).

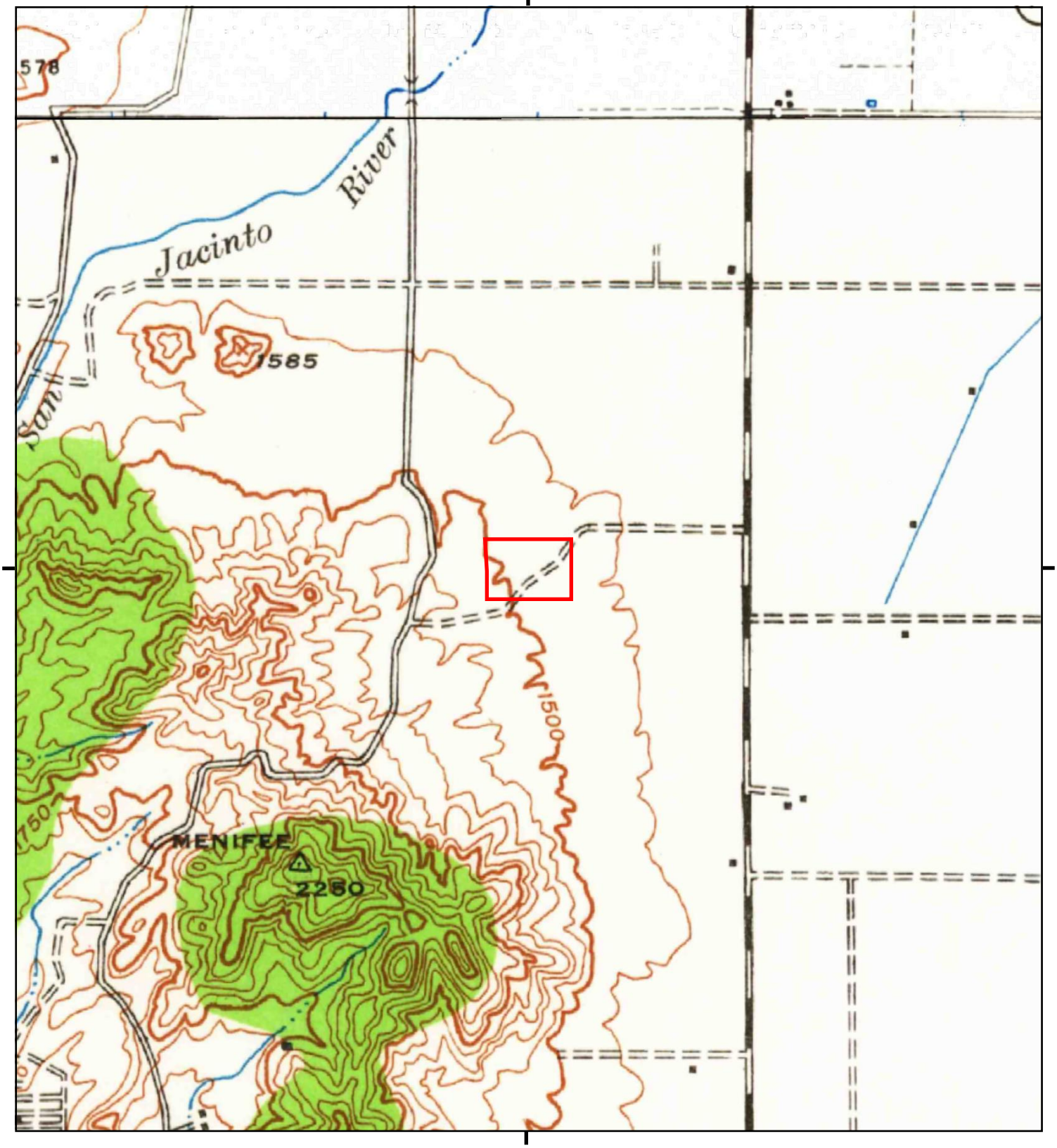
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Murrieta, 1943, 15-minute
NE, PERRIS, 1943, 15-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

N



This report includes information from the following map sheet(s).

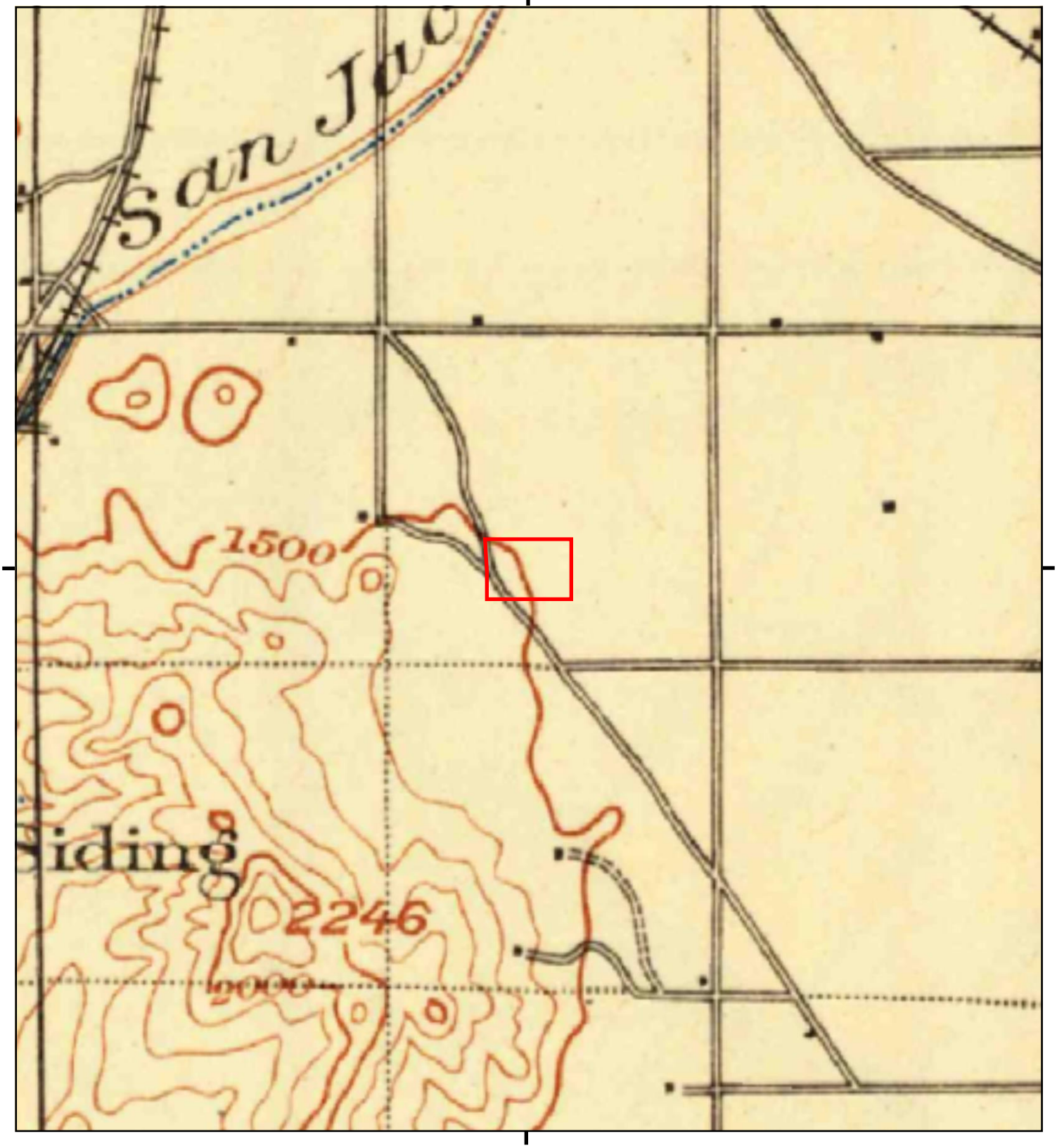
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Murrieta, 1942, 15-minute
NE, Perris, 1942, 15-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

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, Elsinore, 1901, 30-minute

SITE NAME: Menifee 27.5
ADDRESS: Valley Boulevard/Troy Lane
Sun City, CA 92585
CLIENT: Geotek

N

GeoTek, Inc.
1548 North Maple Street, Corona, California 92878
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

March 11, 2021
Proposal No. P-0303421-CR

JPMB Investments, LLC
556 South Fair Oaks Avenue, #337
Pasadena, California 91105

Attention: Mr. Paul Onufer

Subject: Proposal for a Phase I Environmental Site Assessment
Assessor's Parcel Numbers (APNs) 330-230-023 and -024
Menifee, Riverside County, California

Dear Mr. Onufer:

As requested, we are pleased to present this proposal to perform a Phase I Environmental Site Assessment (ESA) for the subject Site. The Phase I ESA is intended to provide information of current and past Site use with regard to the presence of hazardous materials, generation of hazardous waste, and the presence of off-site contamination sources.

SCOPE OF SERVICES

GEOTEK will conduct the proposed ESA in general accordance with the American Society of Testing and Materials (ASTM) Standard E 1527-13, *"Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process"* (ASTM E 1527-13), which is approved to meet the requirements of the federal All Appropriate Inquiries (AAI) standards (40 CFR 312). The proposed project will be supervised by a qualified environmental professional as defined by AAI. Generally, and for the purposes of this proposal, the GEOTEK Scope of Services will consist of the following:

1. Records Review. The purpose of this task is to obtain and review records that will help identify recognized environmental conditions in connection with the subject property. This information will be acquired from a data service provider and publicly available sources that can provide information within a reasonable time period. The minimum search distances specified in ASTM E 1527-13 for the various published databases will be used. The agencies that will provide data for review include, but are not limited to, the U.S. Environmental Protection Agency (USEPA), the Building and Safety Department and the Fire Department. Interviews with appropriate regulatory agency personnel are included in this task.

2. Environmental Setting Review. This task will research published data on the geology, hydrology, and hydrogeology of the Site vicinity. This information is useful in evaluating the potential migration of contaminants onto or off of the Site. The agencies that will provide data for review include, but are not limited to, the Federal Emergency Management Agency (FEMA), the U.S. Geological Survey (USGS) and the Natural Resources Conservation Service (NRCS).

3. Historical Records Review. This task will utilize historical aerial photographs, topographic maps, city directories, interviews, buildings department records, fire insurance maps, and any other readily available historic documents for the Site and vicinity.

   This proposal does not include the cost of obtaining a Chain-of-Title report. If a Chain-of-Title report is provided to GEOTEK, we will incorporate it into our report. GEOTEK can obtain and include Chain-of-Title information for an additional fee. Please be aware that certain information required by ASTM E-1527-13 and AAI (specifically environmental liens and use limitations) are best obtained from reviewing Chain-of-Title documents and place the responsibility to review on these on the "user" of an ESA, not the environmental professional. If you would like, we can obtain this information for an additional fee. If you choose to provide the Chain-of-Title documents, please be aware that GEOTEK will not begin preparation of the written report until we have received this information.

4. Site Reconnaissance. GEOTEK will perform a Site reconnaissance for visual indications on the ground surface of hazardous materials and waste handling. This includes observations of drum storage and chemical use areas, noxious odors, discolored ground surfaces, wells, underground storage tanks, sumps, electrical transformers, areas of solid waste disposal, and potential contamination from immediately adjacent properties. Land use of adjoining properties will also be evaluated. Interviews with the current owners of the Site, adjacent property owners, and client representatives are included in this task.

5. Report Preparation. A report presenting our findings, conclusions, and recommendations, including applicable photographs, drawings, and supporting documentation will be prepared and submitted. Two (2) copies are included in this scope of services. Additional copies will be charged at the current rate detailed on the attached Work Authorization and Agreement and Schedule of Fees.

Specific items not included in this Scope of Services are soil analysis, water analysis, asbestos containing materials analysis, radon analysis, lead-based paint analysis, lead in drinking water, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, high voltage powerlines, and other items not within the scope of ASTM E 1527. Any of these items can be included in this study for an additional fee.

If, at any time during the study, conditions are disclosed that require a change in the scope of work, project work may be temporarily halted, and our findings will be discussed with you. Additional work will not be performed until a modification in the Scope of Services and fees are approved in writing.

CLIENT INPUT AND COOPERATION

Both ASTM E 1527-13 and the AAI standard require input from the client (or "user") for a complete Phase I ESA. The attached questionnaire, which is taken from the ASTM standard, is designed to elicit the user input that the standards require. Please fill out the questionnaire and return it to us at your earliest convenience. Please be aware that GEOTEK will not begin preparation of the written report until the completed questionnaire is received from you.

In addition, both ASTM E 1527-13 and the AAI standard require GeoTek to interview past or present owners, as well as current occupants of the Site. GEOTEK requests your assistance in arranging access to the appropriate individuals. If these persons cannot be interviewed, this will be noted as a data gap in our final report.

SCHEDULE

GEOTEK is prepared to begin the proposed ESA immediately upon receipt of your written authorization to proceed. We anticipate a duration of 10-15 working days to complete the assignment. However, please be aware that the processing time for information from regulatory agencies, lenders, and other third parties is beyond our control, and may delay completion of the report. ASTM E 1527-13 stipulates 20 calendar days as a "reasonable time" when attempting to obtain certain information.

FEES AND CONDITIONS

GEOTEK proposes to perform this study on a fixed fee basis for the amount of **$2,400.00**. If post-report consultation is needed, it will be provided at an additional fee on a time-and-materials basis in accordance with the attached "Work Authorization and Agreement" form. This fee is valid for a period of 90 days from the date of this proposal.

This proposal and the work tasks detailed herein are presented as fulfilling the standard requirements of most financial institutions, governmental regulatory agencies, ASTM, and generally accepted industry standards and practices. The Client should advise GEOTEK if they have any specific guidelines or requirements furnished to them which are different than those listed in this proposal. Occasionally an agency will request additional requirements, not

covered by this proposal, to be included in the preparation of the Phase I ESA. If this were to happen, GEOTEK would advise the Client of this request and provide a supplemental proposal covering the additional costs.

We request that the following information be provided to GEOTEK:

- Reports of previous geotechnical or environmental-related investigations of the Site.
- The names, addresses and phone numbers of the current and past owners and/or lessees of the subject Site.
- Chain of Title documents for names of previous owners of the Site, use restrictions, and environmental liens.
- A disclosure statement describing known onsite uses of hazardous materials.
- Any documents or information regarding the current or historical uses of the Site.
- A statement from the Client indicating the purchase price for the Site is reflective of the fair market value of the Site.
- Any specialized knowledge or experience pertaining to potential environmental conditions or concerns at the Site.

Failure to provide this information may prevent the Client from qualifying for innocent landowner protections under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Third party reliance letter(s), if needed, will be charged to this work authorization at a rate of $500.00 per request. Verbal authorization from you will be necessary for the completion of such third party reliance. A Change Order for this service will be issued at the time of request.

AUTHORIZATION

If this proposal is acceptable, please sign and return the attached "Work Authorization and Agreement" form as our authorization to proceed. Work will be scheduled upon receipt of your authorization. Also, please return the "User Questionnaire" at your earliest convenience.

If GEOTEK receives a request to proceed (whether verbal, in writing, or in the form of a Work Order or Purchase Order) with any or all of the services described in this proposal prior to receiving a signed copy of the attached Work Authorization and Agreement, and GEOTEK provides any or all of the services, GEOTEK and you expressly agree that the terms of this proposal, the attached fee schedule, and the terms and conditions set forth in the attached Work Authorization and Agreement form shall govern all the services performed, except to the extent such terms are superseded by an executed agreement.

We appreciate this opportunity to be of service to you. If you have any questions, or if we can be of further service, please contact us at (951) 710-1160.

Respectfully submitted,
GEOTEK, INC.

Edward H. LaMont
Principal Geologist
CEG 1892, Exp. 7/31/20

Anna M. Scott
Project Geologist

Attachments: User Questionnaire
Work Authorization and Agreement

G:\Geo. & Env. Proposals\2021\March\P-0303421-CR JPMB Investments, LLC Menifee ESA\P-0303421-CR JPMB Investments, LLC Menifee ESA.doc

USER QUESTIONNAIRE

INTRODUCTION

In order to qualify for one of the *Landowner Liability Protections* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2002, the *user* must provide the following information (if available) to the *environmental professional.* Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

(1) Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

CIRCLE YES or (NO)

If yes, please explain in detail.

(2) Are you aware of any Act Use Limitations (AUL), 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 or (NO)

If yes, please explain.

(3) As the *user* of this Environmental Site Assessment (ESA) do you have any specialized knowledge or familiarity 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 its neighboring *property,* so that you may have specific knowledge of the chemicals and processes used by this type of business?

(YES) or NO Same line of business as the current owner of Neighboring property. Only chemicals would be fuel for construction equipment

If yes, please explain.

(4) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*?

YES or NO

If you believe that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

YES or NO

If yes, please explain.

(5) Are you aware of commonly known or *reasonably* ascertainable information that would help the *environment professional* to identify conditions pinpointing releases or threaten releases of hazardous materials and/ or chemicals? For example, as user,

(a.) Do you know of any past uses of the *property*? YES or NO

(b.) Do you know of specific chemicals that are present or once were present at the *property*? YES or NO

(c.) Do you know of any chemical spills or any other chemical releases that have taken place at the *property*? YES or NO

(d.) Do you know of any environmental cleanups that have taken place at the *property*? YES or NO

If any yes, please explain.

(6) As the user of this Environmental Site Assessment (ESA), based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of a contamination at the *property*?

YES *or* NO

If yes, please explain.

Completed By Paul Ovante
Print Name

GeoTek, Inc. — Work Authorization And Agreement

PROJECT INFORMATION

Date: 3/11/2021

Project Name: APNs 330-230-023 and -024 - Phase I ESA — Proposal No: P-0303421-CR

Project Location: Menifee, Riverside County, California — Project No:

Scope of Services: Scope and estimated fees are outlined in the attached proposal. Services not outlined in the proposal or in this Agreement, are not included in the scope of this contract and will be invoiced separately as Additional Services (as provided in Paragraph 4 below). All services, including any Additional Services, are subject to the Terms and Conditions below.

Fee Estimate: $2,400.00 Retainer: COD:

Reimbursable Expenses not in fee Estimate:

CLIENT INFORMATION

Name: JPMB Investments, LLC

Attention: Mr. Paul Onufer — Email: ponufer@avpre.net

Address 1: 556 South Fair Oaks Avenue, #337 — Phone No: (626) 263-4205 Ext:

Address 2: — Cell Phone:

City: Pasadena State: CA Zip: 91105 — Fax No:

TERMS AND CONDITIONS

1) **AGREEMENT.** This Work Authorization and Agreement together with the proposal P-0303421-CR ("the "Proposal"), the terms of which are incorporated herein by reference and made a part of this Agreement (defined below) will constitute the agreement between Client, as identified above, and GeoTek, Inc., a Nevada Corporation ("GeoTek") for performance of the professional services outlined in the Proposal, ("Services"). GeoTek is willing to provide the Services for consideration and upon the terms set forth in the Proposal and hereinafter stated. This Work Authorization and Agreement and the Proposal will be referred to collectively hereinafter as the "Agreement". Any future work performed for Client will be under the terms of this Agreement unless a new agreement is executed in writing by both parties.

2) **FEES/QUOTATIONS.** Unless otherwise specified, the Proposal will define the: (1) Services to be provided, (2) the estimated fee and expense amount(s) for such Services, and (3) the billing type or method (e.g. time and materials, lump sum, fixed fee to a maximum, etc.). Client agrees to pay GeoTek its quoted rates for the Services and any Additional Services (as defined below) and products provided subject to changes in pricing from time to time. Any quotation will be good for a period of thirty (30) days from the date of the quotation. Quotation(s) of fees and expenses are estimates only. The actual fees and expenses will be shown when the final invoice is tendered.

3) **BILLING AND PAYMENT.** Invoices will be submitted on a progress basis for all Services performed during the term of the project. All invoices are due and payable upon receipt. Any and all invoices or any portion thereof, outstanding after thirty (30) days will accrue interest at 1.5% per month but in no event more than the maximum rate permissible by law from the original date of the invoice until paid.

4) **CHANGE ORDERS.** Client acknowledges that it is impossible to predict with certainty what changes to the Services will be necessary as requirements for changes come from many sources beyond GeoTek's control. In the event changes become necessary, any services that are not specifically set forth in either GeoTek's proposal or this Agreement but are requested by Client, its agents, representatives, or designees, either verbally or in writing, will be considered "Additional Services". If Client, its agents, representatives, or designees request any Additional Services, GeoTek will issue Client a Change Order for Additional Services ("Change Order") confirming Client's authorization to proceed with such Additional Services. Within twenty-four (24) hours of receipt of a Change Order, Client must notify GeoTek of any disagreements with or amendments to any of the terms of the Change Order. Client's failure to provide GeoTek with such timely notice will constitute acceptance of the terms of the Change Order and Client will be responsible for all additional charges, costs, fees and expenses incurred by GeoTek for such Additional Services. Due to the need for rapid decisions, fax transmissions and email are acceptable modes of confirmation. The Terms and Conditions of this Agreement and most recent fee chedule will apply to all Additional Services.

5) **RIGHT OF ENTRY.**

a) Client hereby grants GeoTek the right of entry to the job site to permit GeoTek to perform the work under this Agreement. Client warrants that it has the authority to grant such right of entry.

b) Client acknowledges that excavations or destructive testing may be required to perform portions of the Services. Excavations will be backfilled in a prudent manner but cannot be returned to the previous condition. Damage to landscaping or natural vegetation may result. Client will indemnify and hold GeoTek harmless from any and all damages to persons or property caused by or to GeoTek or third parties as a result of the Services.

6) **PERFORMANCE.**

a) Governmental rules and regulations are subject to interpretations. GeoTek will prepare all reports with a view toward complying with governmental rules and regulations, but no guarantee is given that any or all reports will be approved by the applicable governmental agency.

b) GeoTek is relying entirely on plans and maps given to GeoTek by the Client or Client's agents, representatives or designees. Client will indemnify and hold GeoTek harmless from any and all damages to person or property caused by or to GeoTek or third parties resulting from undisclosed underground conditions or errors or inaccuracy of plans, maps or any other information provided by the Client or Client's agents, representatives or designees to GeoTek.

c) GeoTek will not be responsible for delays or its failure to perform as a result of inclement weather, accidents, acts of God, public insurrection, war, labor difficulties, riots, interference by governmental agencies, or any other act reasonably beyond GeoTek's control.

d) Client will disclose in writing to GeoTek any and all known or suspected hazardous or toxic conditions or materials present at the job site and will indemnify, defend and hold GeoTek harmless from and against any and all liability, costs, attorneys or expert fees or damage to person or property arising from hazardous or toxic conditions or materials present at the job site.

7) **HAZARDOUS MATERIALS.** GeoTek is not a generator, transporter and does not store or dispose of hazardous waste or non hazardous waste. Client will be responsible for the proper management, storage and disposal of hazardous waste or non hazardous waste present on the site and that may be encountered whether or not identified during GeoTek's evaluation.

8) **PROFESSIONAL OPINION.** GeoTek's professional services will be performed, findings obtained, and recommendations prepared in accordance with generally accepted engineering practices in effect at the time and place the services are performed. The professional opinions of GeoTek will be based upon conditions revealed at exploration locations and reconnaissance of surrounding terrain or through research efforts. The services on any given site are limited. It is agreed that GeoTek is not responsible for the affect that unknowns such as acts of others on adjacent properties, variables of nature including, but not limited to, earthquakes, the works of man, Acts of God, and other variables beyond the control of GeoTek may have on any opinion rendered hereunder. No opinions of any kind are given by GeoTek except those expressly stated in GeoTek's written reports. GeoTek does not warrant (either expressed or implied) or guarantee any of its recommendations, opinions or Services.

9) **INSURANCE.** GeoTek maintains worker's compensation and public liability insurance policies for bodily injury and property damage. Certificates of insurance will be furnished upon request. With regard to property claims, GeoTek will not be responsible for damage beyond those amounts paid under the policies. GeoTek will not be responsible for any consequential, lost profits, business interruption, or other damages claimed by Client. Requests for waivers of subrogation or other endorsements are subject to a 5% fee surcharge.

10) **INDEMNIFICATION and LIMITATION OF LIABILITY.**

a) GeoTek agrees, subject to the limitations herein, to indemnify and hold harmless Client from and against damages, liability and reasonable costs arising from the negligent acts of GeoTek in the performance of its Services under this Agreement, to the extent that GeoTek is responsible for such damages, liability and reasonable costs on a comparative fault basis. Notwithstanding the foregoing agreement to indemnify Client, the parties expressly agree that GeoTek has no duty to defend Client from or against any claims, damages, liabilities, judgments, demands, causes of action, costs, expenses, or proceedings of any kind. GeoTek will not be obligated to indemnify Client for Client's own negligence or the negligence of others.

b) Client agrees, subject to limitations herein, to indemnify and hold harmless GeoTek from and against damages, liability, and reasonable costs arising from the negligent acts of Client related to any work performed under this Agreement to the extent that Client is responsible for such damages, liability, and reasonable costs on a comparative fault basis. Notwithstanding the foregoing agreement to indemnify GeoTek, the parties expressly agree that the Client has no duty to defend GeoTek from or against any claims, damages, liabilities, judgments, demands, causes of action, costs, expenses, or proceedings of any kind. Client will not be obligated to indemnify GeoTek for GeoTek's own negligence or the negligence of others.

c) Client acknowledges that it is aware of the risks involved in construction, limitations inherent to the contract Services, and variations that can exist from the conditions identified. Client agrees to limit any liability, claim for damages to person or property, attorneys fees, expert fees or other costs of defense, or expenses (collectively "Claims") to be levied against GeoTek arising out of or relating to any design defect, error, omission, professional negligence or other promise of GeoTek (collectively "Liabilities") to the amount of GeoTek's fees paid under the Agreement. This limitation will apply regardless of the cause of action or legal theory pled or asserted. The fee charged Client for the Services to be rendered pursuant to this Agreement has been established with regard to the legal effect of this Limitation of Liability section. Increased limits of liability can be negotiated for an increased fee.

d) Except for work performed or provided by those subcontractors or subconsultants retained directly by GeoTek for whom GeoTek is legally liable, GeoTek assumes no responsibility or liability for work, testing, design(s) or recommendations performed or provided by others including, without limitation, other contractors, subcontractors, or consultants of any tier.

e) The parties understand and agree that Client's sole and exclusive claim, demand, suit, judgment and/or remedy for any claims arising from or in any way related to the performance of the Services provided under this Agreement will be directed and/or asserted only against GeoTek and not against any of GeoTek's shareholders, engineers, employees, officers, or directors.

f) Notwithstanding any other provision of this Agreement, neither the Client nor GeoTek, their respective officers, directors, partners, employees, contractors or subconsultants will be liable to the other or will make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the Project or to this Agreement. This mutual waiver of consequential damages will include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation and any other consequential damages that either party may have incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both the Client and GeoTek will require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in this project.

11) **DISPUTE RESOLUTION.** In an effort to resolve any conflicts that arise during the design and construction of the project or following the completion of the project the Client and GeoTek agree that all disputes between them arising out of or relating to this Agreement or the project will be submitted to non binding mediation unless the parties mutually agree otherwise.

12) **JOBSITE SAFETY.** Neither the professional activities of GeoTek nor the presence of GeoTek or its employees and subconsultants at a construction/project site, will relieve the General Contractor of its obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending and coordinating the Work in accordance with the contract documents and any health or safety precautions required by any regulatory agencies. GeoTek and its personnel have no authority to exercise any control over any construction contractor or its employees in connection with their work or any health or safety programs or procedures. The Client agrees that the General Contractor will be solely responsible for Jobsite safety, and warrants that this intent will be carried out in the Client's contract with the General Contractor. The Client also agrees that the Client, GeoTek and GeoTek's subconsultants will be indemnified by the General Contractor and will be made additionally insured under the General Contractor's policies of general liability insurance.

13) **OWNERSHIP OF INSTRUMENTS OF SERVICE.** All reports, drawings, specifications, computer files, field data, notes and other documents and instruments prepared by GeoTek as instruments of service will remain the property of GeoTek. GeoTek will retain all common law, statutory and other reserved rights, thereto. All documents prepared by GeoTek under this Agreement for a particular project are not intended and not represented to be suitable for reuse by Client or others on any other project. Any such reuse without written authorization from GeoTek will be without liability to GeoTek and Client agrees to indemnify, defend, and hold harmless GeoTek from and against any and all losses, claims, damages and expenses (including attorney's fees) arising out of or resulting there from.

14) **FORCE MAJEURE.** Force Majeure as used in this Article will mean an act of God, strike, lockout, or other industrial disturbance, act of public enemy, war, blockage, public riot, lightning, fire, flood, explosion, earthquake, failure to timely receive necessary governmental approvals government restraint, unavailability of equipment, and any other cause, whether of the kind specifically enumerated above or otherwise, other than financial liability, which is not reasonably within the control of the party claiming suspension. If either party is rendered unable, wholly or in part, by Force Majeure to carry out their obligations under this Agreement, other than the obligation to make money payments, such party will give to the other party prompt written notice of the Force Majeure with reasonably full particulars concerning it; thereupon, the obligations of the party giving notice, so far as they were affected by the Force Majeure, will be suspended during, but no longer than, the continuance of the Force Majeure. The affected party will use all possible diligence to remove the Force Majeure as quickly as possible.

15) **TERMINATION.**

a) In the event of termination of this Agreement by either party for any reason, the Client will within fifteen (15) calendar days of termination pay GeoTek for all Services rendered and all reimbursable costs incurred by GeoTek up to the date of termination, in accordance with the payment provisions of this Agreement.

b) The Client may terminate this Agreement for the Client's convenience and without cause upon giving GeoTek not less than seven (7) calendar days written notice.

c) Either party may terminate this Agreement for cause upon giving the other party not less than seven (7) calendar days written notice for any of the following reasons:

i.) Failure by the other party to materially perform in accordance with the terms of this Agreement and through no fault of the terminating party;

ii.) Assignment of this Agreement or transfer of the Project by either party to any other entity without the prior written consent of the other party;

iii.) Material changes in the conditions under which this Agreement was entered into, the scope of Services or the nature of the Project, and the failure of the parties to reach agreement on the compensation and schedule adjustments necessitated by such changes.

d) In the event of any termination that is not the fault of GeoTek, Client will pay GeoTek, in addition to payment for services rendered and reimbursable costs incurred, for all expenses reasonably incurred by GeoTek in connection with the orderly termination of this Agreement, including without limitation, demobilization, reassignment of personnel, overhead costs and all other expenses directly resulting from the termination.

16) **SUSPENSION OF SERVICES.**

a) If the Project or GeoTek's Services are suspended by the Client for more than thirty (30) calendar days, consecutive or in the aggregate, over the term of this Agreement, GeoTek will be compensated for all Services performed and reimbursable expenses incurred prior to the receipt of notice of suspension. In addition, upon resumption of Services, the Client will compensate GeoTek for expenses incurred as a result of the suspension and resumption of its Services, and GeoTek's schedule and fees for the remainder of the Project will be equitably adjusted.

b) If GeoTek's Services are suspended for more than ninety (90) days, consecutive or in the aggregate, GeoTek may terminate this Agreement upon giving not less than five (5) calendar days written notice to the Client.

c) If the Client is in breach of the payment terms or otherwise is in breach of this Agreement, GeoTek may, at its sole discretion, suspend performance of services and/or withhold any and all reports and work product. In the event GeoTek suspends performance and/or withholds reports and work product pursuant to this provision, GeoTek will not be in default of this Agreement and GeoTek will have no liability to the Client. Client agrees to make no claim against GeoTek for any delay or damage as a result of such suspension and/or withholding of reports and work product and agrees to defend and indemnify GeoTek from and against any and all claims for damages including, without limitation, claims for delay, lost profit, business interruption, consequential or any other damages resulting from the suspension of services and/or withholding of any report and work product. Upon receipt of payment in full of all outstanding sums due from the Client, or curing of such other breach which caused GeoTek to suspend Services and/or withhold reports and work product, GeoTek will resume Services and/or provide Client with the applicable reports and work product and there will be an equitable adjustment to the remaining project schedule and fees as a result of the suspension.

17) **MISCELLANEOUS.**

a) All terms of this Agreement will be governed by and construed under the law of the State in which the Services are provided. Diversity of the parties will not determine jurisdiction.

b) No provision of this Agreement will be interpreted for or against any party because that party or its legal representative drafted the provision.

c) In the event that legal action is taken to enforce the terms of this agreement or resolve a dispute the prevailing party will be entitled to reasonable attorney's fees and costs incurred.

d) Failure by a party to exercise any right, remedy, or option in this Agreement or delay by a party in exercising the same will not operate as a waiver. No waiver will be effective unless it is in writing.

e) Every provision of this Agreement is intended to be severable. If any term or provision hereof is declared by a court of competent jurisdiction to be illegal, invalid or unenforceable for any reason whatsoever, such illegality, invalidity or unenforceability will not affect the balance of the terms and provisions hereof, which terms and provisions will remain in full force and effect.

f) This Agreement may be executed at different times and in multiple counterparts, including, without limitation, facsimile counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

g) Client may not assign its rights or obligations under this Agreement without the express written consent of GeoTek. GeoTek may assign its rights and obligations under this Agreement to any of its affiliate companies without Client's consent upon written notice to Client. In the event of such an assignment, the assignee will assume the obligations of GeoTek under this Agreement as though such assignee had been an original party to this Agreement.

18) **AMENDMENTS.** Except as specifically provided herein, no addition(s) to or modification(s) of this Agreement will be binding on either party unless made in writing and executed by GeoTek and Client.

By Signing below, the parties accept the services outlined in the proposal, the rates indicated on any attached fee schedule, and all the terms and conditions contained within each page of this Agreement, including but not limited to attachments and exhibits.

CLIENT'S Authorized Signature of Acceptance:

By: _____
Signature

_____
Printed Name

Title: Manager

CONSULTANT Authorized Signature of Acceptance:

By: _____
Signature

Ed LaMont, CEG
Printed Name

Title: Branch Manager P-0303421-CR

GeoTek, Inc.
1548 North Maple Street, Corona, California 92880
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

2020 Master Fee Schedule
GEOTECHNICAL, SPECIAL INSPECTION AND MATERIALS TESTING SERVICES

Non-Prevailing Wage Project

PERSONNEL RATES

Professional and Project Management

Staff Type	Unit Rate	Unit
Principal Engineer/Geologist	$ 185.00	Hour
Geotechnical Engineer	$ 160.00	Hour
Project Engineer/Geologist	$ 135.00	Hour
Staff Engineer/Geologist	$ 125.00	Hour
Field Engineer/Geologist	$ 105.00	Hour
Field Supervisor	$ 95.00	Hour
Project Adminstration/Drafting	$ 62.00	Hour

Inspectors and Technicians

Staff Type	Rate	Cost
Lead Inspector	$ 81.00	Hour
Certified Welding Inspector(AWS/CWI)	$ 90.00	Hour
Soils Technician	$ 71.00	Hour
ICC Certified Inspector(RC, PC, SM, SS, SSB)	$ 71.00	Hour
ACI Technician	$ 71.00	Hour
Proof Load Testing	$ 125.00	Hour
Floor Flatness Technician	Quote Upon Request	
Ground Penetrating Radar		
One Man Crew	$ 200.00	Hour
Two Man Crew	$ 271.00	Hour
Non-Destructive Testing (ASNT)		
Level III Review	$ 200.00	Hour
Magnetic Particle Testing Level II	$ 100.00	Hour
Ultrasonic Testing Level II	$ 100.00	Hour
Radiographic Inspection	Quote Upon Request	
Coring		
Coring Machine Operator with equipment	$ 125.00	Hour
Helper (Add Per Hour)	$ 71.00	Hour
Wood Fabrication Inspection	$ 110.00	Hour
Nailing Inspection	$ 90.00	Hour
Roofing Inspection	$ 90.00	Hour
Laboratory Technician	$ 90.00	Hour
Sample Pick-up Driver (If not done on a per trip basis)	$ 71.00	Hour

ENVIRONMENTAL AND GEOTECHNICAL INVESTIGATIONS

Description	Unit Rate	Unit
Phase 1 and Phase 2 Reports	Quote Upon Request	
Geotechnical Investigation Report	Quote Upon Request	
Percolation or Infiltration Testing	Quote Upon Request	

LABORATORY TESTS

Soils and Asphalt

Description	Unit Rate	Unit
Asphalt Content by Ignition	$ 305.00	Each
Burn-Off Method CT 382/ASTM D6307	$ 300.00	Each
Bitumen Content (extraction), ASTM D2172	$ 200.00	Each
Bitumen Content CT 310/Cal 382 Ignition Furnace	$ 150.00	Each
Gradation of Extracted Sample, ASTM C 136/CT 202	$ 305.00	Each
Maximum Specific Gravity, (Marshall) ASTM D2041	$ 300.00	Each
Collapse/Swell ASTM D4546	$ 95.00	Each
Compaction, Modified Proctor ASTM D1557	$ 185.00	Each
Compaction, Modified Proctor ASTM D698	$ 185.00	Each
Hveem Maximum Density, CT 304/308	$ 350.00	Each
Consolidation ASTM D2435, D4546	$ 225.00	Each
Corrosivity Suite D4972, G57, D4327, D46589M	$ 200.00	Each
Direct Shear, Consolidated-Drained ASTM D3080	$ 210.00	Each
Direct Shear, Residual ASTM D6467 Mod	$ 210.00	Each
Expansion Index Test UBC 29-2/ASTM D4829	$ 144.00	Each
Liquid Limit, Plactic Limit and P.I. ASTM D4318	$ 130.00	Each
Particle Size Analysis of Soil #4 to Fines ASTM D422	$ 285.00	Each
Specific Gravity of Soil, ASTM D854	$ 172.00	Each

Soils and Asphalt Continued

Description	Unit Rate	Unit
Percent Finer than #200 Sieve ASTM D1140	$ 120.00	Each
Permeability of Granular Soils ASTM D2434	$ 185.00	Each
Permeability, Flexible Wall, Cohesive Soil ASTM D5084	$ 436.00	Each
"R" Value ASTM D2844/CT 301	$ 275.00	Each
Resistivity of Soil ASTM G57 and pH ASTM D4972	$ 130.00	Each
Sand Equivalent ASTM D2419/CT 217	$ 115.00	Each
Sieve Analysis of Extracted Aggregate ASTM D5444	$ 75.00	Each
Sieve Analysis, 3" to #200 Gradation ASTM C117	$ 144.00	Each
Sieve Analysis Minus #200 by Wash ASTM D1140/C117	$ 65.00	Each
Soil Classification, ASTM D 2487	$ 280.00	Each
Soil Moisture/Density In Situ Sample ASTM D1587/D2937	$ 30.00	Each
Water Soluble Sulfate	$ 60.00	Each

Concrete and Aggregate Tests

Description	Unit Rate	Unit
Specific Gravity & Absorption Coarse Agg. ASTM C127	$ 75.00	Each
Specific Gravity & Absorption Fine Agg. ASTM C128	$ 75.00	Each
Trial Batches ASTM C192	$ 800.00	Each
Durability Index Coarse & Fine Aggregate ASTM D3744	$ 120.00	Each
Lightweight Concrete Unit Weight ASTM C495	$ 35.00	Each
Modulus of Elasticity of Concrete ASTM C469	$ 200.00	Each
Sieve Analysis, Coarse Aggregate ASTM C136/CT 202	$ 75.00	Each
Sieve Analysis, Fine Agg #4 to #200 ASTM C117/C136	$ 140.00	Each
Specific Gravity & Absorption Coarse Agg. ASTM C127	$ 75.00	Each
Specific Gravity & Absorption Fine Agg. ASTM C128	$ 75.00	Each
Splitting Tensile/Concrete Cylinder ASTM C496	$ 50.00	Each
L.A. Rattler, ASTM C131 or C535/Cal 211	$ 300.00	Each
Sulfate Soundness (per sieve), ASTM C88	$ 140.00	Each
Unit Weight of Aggregates, ASTM C29	$ 120.00	Each
Cleanness Value, CT 227	$ 120.00	Each
Moisture Content of Aggregate ASTM C29	$ 75.00	Each
Concrete		
Shrinkage, set of 3, ASTM C157, CT 530	$ 370.00	Each
Compression 4x8 Cylinders ASTM C39	$ 25.00	Each
Compression, 6x12 Cylinders, ASTM C39	$ 25.00	Each
Compression, 3X6 Cylinders Lightweight ASTM C495	$ 35.00	Each
Compression, 2X2 Cubes, each age, ASTM C109	$ 25.00	Each
Concrete Core Compression ASTM C42	$ 72.00	Each
Splitting Tensile, 6X12 Cylinders, ASTM C496	$ 75.00	Each
Unit Weight of Concrete Cylinders, ASTM C567	$ 45.00	Each
Unit Weight of Lightweight ASTM C495	$ 55.00	Each
Flexural Strength of Concrete, ASTM C78 or C495	$ 75.00	Each
Shotcrete Panel Core Compression Test, ASTM C42	$ 110.00	Each
Emission of Moisture through Concrete	$ 100.00	per test

Masonry Tests

Description	Unit Rate	Unit
Brick Absorption ASTM C67	$ 25.00	Each
Brick Compression ASTM C67	$ 50.00	Each
Dimensional Measurement-Masonry Units ASTM C140	$ 75.00	Each
Masonry Unit Compression Gross Area ASTM C140	$ 110.00	Each
Masonry Unit Compression Net Area ASTM C140	$ 85.00	Each
Absorption & Moisture of Block ASTM C140	$ 25.00	Each
Compression, Grout Prisms, ASTM C39	$ 25.00	Each
Compression, Mortar Cylinders, ASTM C39	$ 25.00	Each
Compression, Composite Prisms, ASTM E447	$ 110.00	Each
Compression, Masonry Core, ASTM C140	$ 75.00	Each
Shear, Masonry Core, CCR Title 24	$ 100.00	Each
Epoxy Grout 2x2x2 Cube Compression ASTM C579	$ 25.00	Each
Masonry Composite Prism Compression ASTM C1314	$ 160.00	Each
Grout Prism - Compression Test ASTM C1019	$ 35.00	Each

GeoTek, Inc.
1548 North Maple Street, Corona, California 92880
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

2020 Master Fee Schedule
GEOTECHNICAL, SPECIAL INSPECTION AND MATERIALS TESTING SERVICES
Non-Prevailing Wage Project

Reinforcing Steel Tests

Description	Unit Rate	Unit
Bend Test of Rebar #11 ASTM A370	$ 100.00	Each
Bend Test of Rebar #14 ASTM A370	$ 170.00	Each
Bend Test of Rebar #3 - #10 ASTM A370	$ 80.00	Each
Tensile #11 Rebar ASTM A370	$ 80.00	Each
Tensile #14 Rebar ASTM A370	$ 200.00	Each
Tensile Test #3 - #10 ASTM A370	$ 75.00	Each

Prestressing Steel Tests

Description	Unit Rate	Unit
Yield Strength, Breaking Strength, Elongation (add $ 25.00 per test; for Modulus of Elasticity)	$ 300.00	Each

Structural Steel Tests

Description	Unit Rate	Unit
High Strength Bolts/Nuts/Washer Compliance Test ASTM Mild Steel Not Over 1" Thick	$ 150.00	Each
Tensile Strength, ASTM A370 (test only)	$ 150.00	Each
Anchor Bolts, A 505	$ 210.00	Each
Tensile Strength	$ 200.00	Each
Bolts Proof Load or Ultimate	$ 125.00	Each
Hardness (Rockwell)	$ 50.00	Each

Fireproofing Tests

Description	Unit Rate	Unit
Fireproofing Adhesion / Cohesion Test Kit ASTM E736	$ 50.00	Each
Fireproofing Density Test ASTM E605	$ 45.00	Each

Miscellaneous

Description	Unit Rate	Unit
Concrete Mix Design Review	$ 160.00	Each
Weld Procedure Review	$ 200.00	Each
QA/QC Plan Written Procedures	Quote Upon Request	
Administrative/Clerical Services	$ 62.00	Hour

BASIS OF CHARGES

Description	Unit Rate / Unit
Work from 0-4 hours	4-Hour Minimum Billing
Work from 4-8 hours	8-Hour Minimum Billing
Project Management as Project Engineer/Geologist	1- Hour Minimum weekly
Work over 8 hours per day, or on Saturdays	Time and One-Half
Work over 12 hours per day	Double Time
Work on Sundays/Holidays	Double Time
Show-Up Time	2-Hour Minimum Billing
Laboratory Testing - Rush Fee	Add 50% to Testing Cost
Outside Services/Reimbursables	Cost + 20%
Shipping Charges	Cost + 20%
Parking/Tolls	At Cost
Certified Payroll Compliance	$100 per month
Deputy Inspectors (If applicable)	
Travel Time (Beyond 75-Mile Radius of Project Site)	$ 71.00 Hour
Per-diem, Including Lodging (Beyond 100-Mile Radius)	Quote Upon Request

state	county		city	address1	address2	date
California		95126	San Jose	478 Stockton Avenue		1/1/1970
California	Alameda		San Lorenzo	17283 Via Annette Dr		2/6/2004
California	Alameda		San Lorenzo	17283 Via Annette Dr		2/6/2004
California	Alameda		San Leandro	1735 138th Ave		2/18/2004
California	Alameda		San Leandro	1735 138th Ave		2/18/2004
California	Alameda		Newark	37120 Spruce St G		2/29/2004
California	Alameda		Hayward	333 Jackson St 219		3/12/2004
California	Alameda		Hayward	333 Jackson St 219		3/12/2004
California	Alameda		Hayward	1032 Central Blvd		6/9/2004
California	Alameda		Hayward	1032 Central Blvd		6/9/2004
California	Alameda		Hayward	231 Culp Ave		8/29/2004
California	Alameda		Hayward	231 Culp Ave		8/29/2004
California	Alameda		Union City	32673 Brenda Way 3		9/28/2004
California	Alameda		Union City	32673 Brenda Way 3		9/28/2004
California	Alameda		Pleasanton	6443 Alisal St		1/19/2005
California	Alameda		San Leandro	872 Donovan Dr		5/4/2005
California	Alameda		San Leandro	14446 Elm St		5/31/2005
California	Alameda		Hayward	27948 Pueblo Serena Way		1/9/2006
California	Alameda		Union City	2351 Hartford Drive		4/7/2006
California	Alameda		Union City	2351 Hartford Drive		4/7/2006
California	Alameda		Fremont	35856 Toledo Court		7/28/2006
California	Alameda		San Lorenzo	1302 Via San Juan Street		10/25/2007
California	Alameda		San Leandro	1553 Santa Maria Road		11/28/2007
California	Alameda		San Leandro	1553 Santa Maria Road		11/28/2007
California	Alameda		Hayward	698 Overhill Drive		5/16/2008
California	Alameda		Hayward	698 Overhill Drive		5/16/2008
California	Alameda		Berkeley	2240 9th Street		7/19/2008
California	Alameda		Oakland	923 39th Street		11/25/2008
California	Alameda		San Lorenzo	16150 Arriba Viaduct		4/8/2009
California	Alameda		Pleasanton	818 Angela Street		3/10/2010
California	Alameda		Pleasanton	818 Angela Street		3/10/2010
California	Alameda		Castro Valley	19127 Santa Maria Avenue		3/24/2010
California	Alameda		Castro Valley	19127 Santa Maria Avenue		3/24/2010
California	Alameda		Oakland	1950 86th Avenue		12/7/2015
California	Alameda		Oakland	1950 86th Avenue		12/7/2015
California	Butte		Oroville	1940 Helman St		2/4/2004
California	Butte		Oroville	1940 Helman St		2/4/2004
California	Butte		Oroville	110 Greenback Dr		2/5/2004
California	Butte		Oroville	110 Greenback Dr		2/5/2004
California	Butte		Oroville	2437 Oro Quincy Hwy		3/17/2004
California	Butte		Oroville	2437 Oro Quincy Hwy		3/17/2004
California	Butte		Paradise	6441 Moss Ln		3/31/2004
California	Butte		Paradise	6441 Moss Ln		3/31/2004
California	Butte		Magalia	3 Jordan Hill Rd		3/31/2004
California	Butte		Biggs	2164 Larkin		4/9/2004
California	Butte		Biggs	2164 Larkin		4/9/2004

California	Butte	Chico	939 W East Ave 4	4/19/2004
California	Butte	Chico	939 W East Ave 4	4/19/2004
California	Butte	Oroville	126 Canyon Highlands Dr	5/5/2004
California	Butte	Oroville	126 Canyon Highlands Dr	5/5/2004
California	Butte	Oroville	208 Misty View Ln	5/10/2004
California	Butte	Oroville	208 Misty View Ln	5/10/2004
California	Butte	Chico	853 E 7th St	7/14/2004
California	Butte	Oroville	2750 De Bangar Hwy	7/21/2004
California	Butte	Paradise	538 Castle	7/23/2004
California	Butte	Paradise	538 Castle	7/23/2004
California	Butte	Oroville	2720 Oro Dam Blvd 6a	8/3/2004
California	Butte	Oroville	2720 Oro Dam Blvd 6a	8/3/2004
California	Butte	Chico	453 Posada Way 12	8/4/2004
California	Butte	Chico	453 Posada Way 12	8/4/2004
California	Butte	Magalia	14723 Gold Cone Dr	9/21/2004
California	Butte	Biggs	488 G St	10/26/2004
California	Butte	Biggs	488 G St	10/26/2004
California	Butte	Oroville	1130 Tehama St	1/12/2005
California	Butte	Oroville	1130 Tehama St	1/12/2005
California	Butte	Chico	1056 E 8th St	3/18/2005
California	Butte	Chico	1056 E 8th St	3/18/2005
California	Butte	Oroville	1915 Plumas St	6/9/2005
California	Butte	Durham	9606 Fimple Rd	7/15/2005
California	Butte	Chico	696 7th E St	10/19/2005
California	Butte	Chico	1402 Pomona Ln	11/17/2005
California	Butte	Oroville	2794 Oak Knoll Way	11/30/2005
California	Butte	Chico	997 E 16th St	12/15/2005
California	Butte	Chico	997 E 16th St	12/15/2005
California	Butte	Gridley	233 Kentucky Street	2/21/2006
California	Butte	Gridley	233 Kentucky Street	2/21/2006
California	Butte	Gridley	275 Kentucky St	2/21/2006
California	Butte	Gridley	275 Kentucky St	2/21/2006
California	Butte	Paradise	5955 Hazel Way	5/25/2006
California	Butte	Oroville	91 Toyon Hills Drive	2/23/2007
California	Butte	Chico	1735 Magnolia Avenue	2/26/2007
California	Butte	Chico	1735 Magnolia Avenue	2/26/2007
California	Butte	Oroville	165 Hurles Circle	3/18/2007
California	Butte	Oroville	165 Hurles Circle	3/18/2007
California	Butte	Oroville	4210 Oro Bangor Highway	6/1/2007
California	Butte	Oroville	4210 Oro Bangor Highway	6/1/2007
California	Butte	Palermo	2398 Louis Avenue	8/27/2007
California	Butte	Palermo	2398 Louis Avenue	8/27/2007
California	Butte	Oroville	2349 Via Madero	9/11/2007
California	Butte	Oroville	1616 Oro Dam Boulevard	10/29/2007
California	Butte	Oroville	1616 Oro Dam Boulevard	10/29/2007
California	Butte	Oroville	1660 20th Street	1/31/2008
California	Butte	Oroville	1660 20th Street	1/31/2008

California	Butte	Oroville	3 Alverda Drive	5/13/2008
California	Butte	Oroville	3 Alverda Drive	5/13/2008
California	Butte	Chico	1024 Neal Dow Avenue	6/7/2008
California	Butte	Honcut	16 Truxton Court	9/2/2008
California	Butte	Honcut	16 Truxton Court	9/2/2008
California	Butte	Oroville	1840 7th Street	9/17/2008
California	Butte	Oroville	1840 7th Street	9/17/2008
California	Butte	Chico	729 Nord Avenue	9/30/2008
California	Butte	Chico	729 Nord Avenue	9/30/2008
California	Butte	Oroville	5075 Lower Wyandotte Avenue	4/7/2009
California	Butte	Oroville	1960 Rose Street	4/7/2009
California	Butte	Oroville	1960 Rose Street	4/7/2009
California	Butte	Oroville	5075 Lower Wyandotte Avenue	4/7/2009
California	Butte	Gridley	124 East Gridley Road	5/14/2010
California	Butte	Gridley	124 East Gridley Road	5/14/2010
California	Butte	Durham	8200 Durnel Drive	5/22/2010
California	Butte	Durham	8200 Durnel Drive	5/22/2010
California	Calaveras	Mountain Ranch	5645 Doster Rd	12/20/2004
California	Calaveras	Mountain Ranch	5645 Doster Rd	12/20/2004
California	Contra Costa	Rodeo	1120 4th St	7/8/2004
California	Contra Costa	Rodeo	1120 4th St	7/8/2004
California	Contra Costa	Antioch	1927 Birch Ave	12/12/2004
California	Contra Costa	Martinez	625 Marina Vista St	3/22/2005
California	Contra Costa	Martinez	625 Marina Vista St	3/22/2005
California	Contra Costa	Richmond	2420 Esmond Avenue	12/5/2006
California	Contra Costa	El Sobrante	2211 Rancho Road	9/20/2007
California	Contra Costa	El Sobrante	2211 Rancho Road	9/20/2007
California	Contra Costa	Richmond	712 Bradford Drive	7/29/2008
California	Contra Costa	Richmond	712 Bradford Drive	7/29/2008
California	Contra Costa	Brentwood	638 Summerwood Drive	2/11/2010
California	Contra Costa	Brentwood	638 Summerwood Drive	2/11/2010
California	Contra Costa	Crockett	815 1st Avenue	12/9/2010
California	Contra Costa	Crockett	815 1st Avenue	12/9/2010
California	Contra Costa	Bay Point	71 Mountain View Avenue	3/22/2011
California	Contra Costa	Bay Point	71 Mountain View Avenue	3/22/2011
California	Contra Costa	Brentwood	1880 East Eden Plains Street	10/2/2014
California	Contra Costa	Brentwood	1880 East Eden Plains Street	10/2/2014
California	Contra Costa	Concord	5075 Commerical Circle	5/14/2020
California	Del Norte	Crescent City	1733 Wildwood Ln	4/14/2004
California	Del Norte	Crescent City	1733 Wildwood Ln	4/14/2004
California	El Dorado	El Dorado	6841 Union Mine Rd	4/29/2004
California	El Dorado	El Dorado	6841 Union Mine Rd	4/29/2004
California	Fresno	Reedley	22134 E Hogan Ave	1/15/2004
California	Fresno	Reedley	22134 E Hogan Ave	1/15/2004
California	Fresno	Fresno	12884 S Elm Ave	7/15/2004
California	Fresno	Fresno	12884 S Elm Ave	7/15/2004
California	Fresno	Fresno	1315 E Cornell	7/15/2004

California	Fresno	Fresno	1315 E Cornell	7/15/2004
California	Fresno	Fresno	7090 N Fruit Ave 140	7/29/2004
California	Fresno	Coalinga	47932 Lost Hills Rd	8/30/2004
California	Fresno	Fresno	4822 E Mono St	6/9/2005
California	Fresno	Fresno	4822 E Mono St	6/9/2005
California	Fresno	San Joaquin	2243 Eldorado S B	3/10/2006
California	Fresno	Fresno	2540 North Floyd Avenue	11/24/2006
California	Fresno	Fresno	2540 North Floyd Avenue	11/24/2006
California	Fresno	Caruthers	14594 South Elm Avenue	11/28/2006
California	Fresno	Caruthers	14594 South Elm Avenue	11/28/2006
California	Fresno	Fresno	8971 Mountain View	12/13/2006
California	Fresno	Fresno	8971 Mountain View	12/13/2006
California	Fresno	Fowler	6424 South Fowler Avenue	8/21/2007
California	Fresno	Reedley	20069 Clayton Avenue	12/8/2007
California	Fresno	Reedley	20069 Clayton Avenue	12/8/2007
California	Fresno	Fresno	4409 East Hedges Avenue A	12/16/2008
California	Fresno	Dos Palos	43186 Merrill Avenue	4/15/2010
California	Fresno	Dos Palos	43186 Merrill Avenue	4/15/2010
California	Fresno	Clovis	287 West Barstow Avenue 125	10/26/2012
California	Fresno	Fresno	3001 West Swift Ave Avenue 10	8/6/2013
California	Fresno	Fresno	3001 West Swift Ave Avenue 10	8/6/2013
California	Fresno	Squaw Valley	46992 Creekside Road	11/18/2013
California	Fresno	Fresno	4851 North N Cedar Ave Avenu	1/6/2014
California	Fresno	Fresno	3852 East E Olive Ave Avenue 2	1/14/2014
California	Fresno	Fresno	3852 East E Olive Ave Avenue 2	1/14/2014
California	Fresno	Fresno	3025 East E Gettysburg Ave Ave	1/21/2014
California	Fresno	Fresno	3025 East E Gettysburg Ave Ave	1/21/2014
California	Fresno	Fresno	7675 N First Street Box 203	9/6/2015
California	Fresno	Fresno	4102 E North Avenue	12/24/2015
California	Fresno	Fresno	2715 N Millbrook Avenue	2/3/2016
California	Fresno	Fresno	2715 N Millbrook Avenue	2/3/2016
California	Glenn	Willows	5627 County Road 69	5/12/2004
California	Glenn	Willows	5627 County Road 69	5/12/2004
California	Humboldt	Fortuna	1788 Penn Ave	3/2/2004
California	Humboldt	Fortuna	1788 Penn Ave	3/2/2004
California	Humboldt	Mckinleyville	2331 Central Ave 4	3/25/2004
California	Humboldt	Eureka	1984 Gage Ln	4/27/2004
California	Humboldt	Blue Lake	113 Raymar Ave	5/9/2005
California	Humboldt	Eureka	1034 14th St	6/6/2005
California	Humboldt	Eureka	1034 14th St	6/6/2005
California	Humboldt	Eureka	1323 Summer Street	6/15/2006
California	Humboldt	Arcata	258 Lupin Avenue	8/30/2006
California	Humboldt	Arcata	258 Lupin Avenue	8/30/2006
California	Imperial	Holtville	819 1/2 Fern St	1/28/2004
California	Imperial	Holtville	819 1/2 Fern St	1/28/2004
California	Imperial	Holtville	2300 Slayton Rd	2/5/2004
California	Imperial	Seeley	2205 Haskell Rd	7/20/2004

California	Imperial	Holtville	819 1/2 Fern Ave	3/20/2006
California	Imperial	Holtville	819 1/2 Fern Ave	3/20/2006
California	Kern	Shafter	18478 S Shafter Ave	1/23/2004
California	Kern	Shafter	18478 S Shafter Ave	1/23/2004
California	Kern	Delano	1305 20th Ave	2/4/2004
California	Kern	Delano	1305 20th Ave	2/4/2004
California	Kern	Bakersfield	8614 Fuller	2/22/2004
California	Kern	Bakersfield	2600 Norman Ave	5/26/2004
California	Kern	Bakersfield	2600 Norman Ave	5/26/2004
California	Kern	Shafter	31396 Burbank Ave	6/12/2004
California	Kern	Taft	412 Kern St	8/26/2004
California	Kern	Lake Isabella	3105 Wenyor	9/21/2004
California	Kern	Lake Isabella	3105 Wenyor	9/21/2004
California	Kern	Ridgecrest	709 W Atkins Ave	12/9/2004
California	Kern	Bakersfield	321 Oakdale Dr	3/15/2005
California	Kern	Bakersfield	2714 Allen Rd	3/22/2005
California	Kern	Bakersfield	2714 Allen Rd	3/22/2005
California	Kern	Taft	217 Lierly St	6/20/2005
California	Kern	Bakersfield	2314 Center St	10/19/2005
California	Kern	Bakersfield	200 Miraflores	2/28/2006
California	Kern	Bakersfield	200 Miraflores	2/28/2006
California	Kern	Bakersfield	101 Agarnsey Ln	3/20/2006
California	Kern	Bakersfield	101 Agarnsey Ln	3/20/2006
California	Kern	Bakersfield	109 Clyde Street	4/26/2006
California	Kern	Bakersfield	109 Clyde Street	4/26/2006
California	Kern	Bakersfield	200 Miraflores Avenue	3/18/2007
California	Kern	Bakersfield	200 Miraflores Avenue	3/18/2007
California	Kern	Ridgecrest	345 West Moyer Avenue	6/4/2007
California	Kern	Ridgecrest	345 West Moyer Avenue	6/4/2007
California	Kern	Lamont	10224 San Emidio Street	7/11/2007
California	Kern	Lamont	10224 San Emidio Street	7/11/2007
California	Kern	Lamont	8008 Middleton Lane	5/19/2008
California	Kern	Lamont	8008 Middleton Lane	5/19/2008
California	Kern	Johannesburg	405 Broadway Avenue	10/9/2008
California	Kern	Johannesburg	405 Broadway Avenue	10/9/2008
California	Kern	Bakersfield	8th Street	6/22/2009
California	Kern	Bakersfield	3801 Newcombe Court	3/3/2011
California	Kern	Bakersfield	3801 Newcombe Court	3/3/2011
California	Kern	Bakersfield	3804 La Tonia Court	3/3/2011
California	Kern	Bakersfield	3804 La Tonia Court	3/3/2011
California	Kern	Bakersfield	218 El Tejon Avenue	7/8/2011
California	Kern	Bakersfield	218 El Tejon Avenue	7/8/2011
California	Kern	Bakersfield	7601 Redbank	12/13/2011
California	Kern	Bakersfield	7601 Redbank	12/13/2011
California	Kings	Unincorporated	6260 Barstow Ave	5/21/2004
California	Kings	Unincorporated	6260 Barstow Ave	5/21/2004
California	Kings	Hanford	11111 9 3/4 Avenue	4/16/2007

California	Kings	Hanford	11111 9 3/4 Avenue	4/16/2007
California	Lake	Lakeport	525 Esplanade St	1/27/2004
California	Lake	Clearlake	13660 East Lake Dr	4/19/2004
California	Lake	Clearlake	13660 East Lake Dr	4/19/2004
California	Lake	Clearlake	15888 19th St	4/28/2004
California	Lake	Clearlake	15888 19th St	4/28/2004
California	Lake	Finley	3424 Stone Dr	9/15/2004
California	Lake	Finley	3424 Stone Dr	9/15/2004
California	Lake	Lower Lake	10243 Siegler Canyon Rd	11/17/2004
California	Lake	Lower Lake	10243 Siegler Canyon Rd	11/17/2004
California	Lake	Clearlake	16537 35th Ave	6/18/2005
California	Lake	Nice	6643 Collier	2/15/2006
California	Lake	Clearlake	13820 Manakee Drive	1/20/2010
California	Lake	Clearlake	13820 Manakee Drive	1/20/2010
California	Los Angeles	Redondo Beach	208 B Ave	1/4/2004
California	Los Angeles	Los Angeles	2742 Lanfranco St 7	1/7/2004
California	Los Angeles	Covina	444 Citrus N Ave	1/13/2004
California	Los Angeles	Santa Fe Springs	11462 Telegraph Rd	1/14/2004
California	Los Angeles	Littlerock	8632 Avenue U E	1/21/2004
California	Los Angeles	Long Beach	2520 Pacific Coast E Hwy 221	1/27/2004
California	Los Angeles	Lancaster	3995 Avenue H W	3/3/2004
California	Los Angeles	East Los Angeles	4135 Floral Ave	3/5/2004
California	Los Angeles	Compton	1016 Poinsettia S Ave	3/10/2004
California	Los Angeles	Llano	25757 V E Ave	3/24/2004
California	Los Angeles	Palmdale	38233 Hendon Dr	4/3/2004
California	Los Angeles	Torrance	4111 Pacific Coast Highway 308	4/11/2004
California	Los Angeles	Norwalk	11026 Imperial E Hwy 10	4/21/2004
California	Los Angeles	Los Angeles	560 Keenan Ave	5/12/2004
California	Los Angeles	La Canada Flintri	5016 Angeles Crest Hwy	5/25/2004
California	Los Angeles	Los Angeles	5320 1/2 Ithaca Ave	6/22/2004
California	Los Angeles	Whittier	8171 Washington Ave	6/24/2004
California	Los Angeles	Long Beach	1401 11 E St	7/1/2004
California	Los Angeles	Signal Hill	2210 Gaviota N Ave C	7/6/2004
California	Los Angeles	Glendora	19104 Manua Loa	7/21/2004
California	Los Angeles	Los Angeles	21150 Hobart	8/18/2004
California	Los Angeles	La Puente	410 Evanwood Ave	9/22/2004
California	Los Angeles	Baldwin Park	3109 Robinette Ave	9/28/2004
California	Los Angeles	San Dimas	1717 Monte Vista Dr	10/7/2004
California	Los Angeles	Pomona	320 Jefferson W Ave	10/19/2004
California	Los Angeles	Lynwood	10868 Drury Ln	10/29/2004
California	Los Angeles	El Monte	11828 Emery St	11/18/2004
California	Los Angeles	El Monte	4350 Ranger Ave	11/29/2004
California	Los Angeles	La Puente	18631 Altario St	1/13/2005
California	Los Angeles	Lancaster	42705 6th E St	2/3/2005
California	Los Angeles	Downey	9322 Stamps Ave	2/18/2005
California	Los Angeles	City Of Commerc	5820 Ramon Ct	4/14/2005
California	Los Angeles	San Pedro	975 5th W St	8/3/2005

California	Los Angeles	Winnetka	8474 Quartz Ave	9/28/2005
California	Los Angeles	Van Nuys	15149 Domino St	11/8/2005
California	Los Angeles	Whittier	6133 Mcnees Ave	1/14/2006
California	Los Angeles	Panorama City	8154 Allott	1/19/2006
California	Los Angeles	Wilmington	1724 Fries Ave	2/17/2006
California	Los Angeles	Gardena	14903 Chadron Ave 1	3/1/2006
California	Los Angeles	Los Angeles	1406 Gordon Street	3/26/2006
California	Los Angeles	Long Beach	2124 Mc Kenzie Avenue	4/25/2006
California	Los Angeles	Lancaster	44634 Date Avenue	6/2/2006
California	Los Angeles	Shadow Hills	10339 Johanna Avenue	6/22/2006
California	Los Angeles	Los Angeles	123 S Lake Street	7/14/2006
California	Los Angeles	Sylmar	12600 Bradley Street	7/19/2006
California	Los Angeles	Diamond Bar	2620 Castlerock Road	8/1/2006
California	Los Angeles	Covina	19850 Arrow Highway	8/6/2006
California	Los Angeles	Los Angeles	3015 Sunnynook Drive	8/11/2006
California	Los Angeles	Palmdale	38566 East 35th Street	10/3/2006
California	Los Angeles	Los Angeles	244 47th Place	10/12/2006
California	Los Angeles	Los Angeles	244 West 47th Place	10/12/2006
California	Los Angeles	Pomona	1347 Cambrin Road	12/7/2006
California	Los Angeles	Los Angeles	11630 West 207th Street	12/7/2006
California	Los Angeles	Cerritos	12513 Sandy Creek Lane	3/9/2007
California	Los Angeles	Long Beach	1624 Junipero Avenue	4/4/2007
California	Los Angeles	Whittier	10816 Townley Drive	5/11/2007
California	Los Angeles	Huntington Park	2505 Olive Street	5/15/2007
California	Los Angeles	South Gate	2634 Palm Place	5/29/2007
California	Los Angeles	Pomona	260 La Verne Avenue	7/12/2007
California	Los Angeles	Lancaster	45448 Elm	7/14/2007
California	Los Angeles	Wilmington	1630 Sandison Street	7/20/2007
California	Los Angeles	Los Angeles	321 Westminster Avenue	8/9/2007
California	Los Angeles	Los Angeles	1216 Hanover Avenue	8/12/2007
California	Los Angeles	Huntington Park	6418 Seville	9/18/2007
California	Los Angeles	Los Angeles	359 71st Street	10/10/2007
California	Los Angeles	Diamond Bar	749 Featherwood Drive	11/1/2007
California	Los Angeles	Long Beach	3613 La Jara Street	11/14/2007
California	Los Angeles	Los Angeles	3744 59th Street	12/20/2007
California	Los Angeles	Van Nuys	7400 Sepulveda Boulevard	2/12/2008
California	Los Angeles	Los Angeles	218 1/2 54th Street	3/14/2008
California	Los Angeles	Los Angeles	4154 Compton Avenue	4/17/2008
California	Los Angeles	Downey	10350 Haledon Avenue	5/21/2008
California	Los Angeles	Baldwin Park	4442 Edra Avenue	6/16/2008
California	Los Angeles	Encino	17448 Ventura Boulevard	8/11/2008
California	Los Angeles	Bellflower	17122 Downey Avenue	11/2/2008
California	Los Angeles	Huntington Park	2409 Olive Street	11/18/2008
California	Los Angeles	Long Beach	1875 Lime Avenue	12/22/2008
California	Los Angeles	Los Angeles	6118 Hooper Street	4/24/2009
California	Los Angeles	Bell	3717 Bell Avenue	6/6/2009
California	Los Angeles	Los Angeles	5170 South Normandie Avenue	1/3/2010

California	Los Angeles	Los Angeles	2109 Estrella Avenue	2/2/2010
California	Los Angeles	Long Beach	2345 East Harding Street	2/4/2010
California	Los Angeles	Long Beach	2454 Easy Avenue	2/10/2010
California	Los Angeles	Santa Fe Springs	13310 Telegraph Road	4/14/2010
California	Los Angeles	Bell Gardens	7534 Purdy Street	5/1/2010
California	Los Angeles	Inglewood	8815 South Van Ness Avenue	5/4/2010
California	Los Angeles	Los Angeles	6516 South Main Street	6/2/2010
California	Los Angeles	Norwalk	12618 Studebaker Road	6/14/2010
California	Los Angeles	Hawthorne	12600 Prairie Avenue	7/19/2010
California	Los Angeles	Hawthorne	2851 West 120th Street	7/22/2010
California	Los Angeles	Los Angeles	213 1/2 West 66 Street	9/21/2010
California	Los Angeles	Hawthorne	13611 Doty Avenue	2/3/2011
California	Los Angeles	Los Angeles	1564 East 117th Street	4/4/2013
California	Los Angeles	Artesia	11635 Artesia Boulevard	5/1/2013
California	Los Angeles	Beverly Hills	712 North Rexford Drive	6/1/2013
California	Los Angeles	Covina	771 Rancho Simi Drive	6/1/2016
California	Los Angeles	Compton	14502 S Keene Ave	8/14/2016
California	Los Angeles	Gardena	1218 W 134th St	9/25/2016
California	Los Angeles	North Hollywooc	7829 Nagle Av	12/10/2017
California	Los Angeles	Lancaster	42835 San Francisco Av	12/10/2017
California	Madera	Chowchilla	18899 Road 16	4/28/2004
California	Madera	Chowchilla	1304 Colusa Ave A	1/25/2005
California	Madera	Madera	21442 Avenue 19 Ave	2/10/2005
California	Madera	Madera	815 East Clinton Avenue	8/29/2006
California	Madera	Madera	18697 Avenue Pass	8/21/2007
California	Madera	Madera	512 Fein Street	8/25/2007
California	Madera	Madera	35626 14 1/2 Avenue	2/1/2008
California	Madera	Madera	13577 20th Avenue	9/4/2008
California	Madera	Madera	19184 Ave 18	5/15/2014
California	Madera	Madera	25816 Avenue 18 1/2	6/14/2016
California	Madera	Madera	11265 Iowa Av	12/27/2017
California	Mendocino	Fort Bragg	16900 Franklin Road	5/9/2006
California	Mendocino	Willits	65000 Sherwood Ridge Road	2/20/2008
California	Mendocino	Redwood Valley	9800 West Road	4/9/2009
California	Mendocino	Philo	3500 Little Mill Creek Road	5/6/2010
California	Mendocino	Fort Bragg	621 West St	9/16/2016
California	Mendocino	Hopland	14410 Mountain House Rd	9/21/2016
California	Merced	Merced	2536 Lobo	2/4/2004
California	Merced	Stevinson	18910 W 6th St	2/10/2004
California	Merced	Merced	3613 N Garner Rd	2/27/2004
California	Merced	Livingston	5679 Arena Way	4/6/2004
California	Merced	Hilmar	20295 August Rd	4/15/2004
California	Merced	Cressey	9835 Cressey	6/3/2004
California	Merced	Delhi	16235 Redbud Ct	6/29/2004
California	Merced	South Dos Palos	8827 W K St	7/23/2004
California	Merced	Winton	9605 Eucalyptus Ave	8/8/2004
California	Merced	Winton	6280 Central Ave	8/8/2004

California	Merced	Hilmar	19511 Williams Ave	10/13/2004
California	Merced	Merced	321 S 59 S Hwy	1/3/2005
California	Merced	Gustine	8450 Highway 33 S Hwy	3/2/2005
California	Merced	Atwater	9000 Moran Ave	5/11/2005
California	Merced	Atwater	1236 Hull Rd	9/23/2005
California	Merced	Stevinson	23875 Second Avenue	3/27/2006
California	Merced	Los Banos	313 J Street	8/11/2006
California	Merced	Atwater	1001 Sandpiper Way	11/15/2006
California	Merced	Delhi	8620 Hinton	11/15/2006
California	Merced	Merced	824 S Freya	1/25/2007
California	Merced	Winton	7409 Amanda Drive	3/13/2007
California	Merced	Merced	2499 East Gerard Avenue	3/21/2007
California	Merced	Merced	14717 East 272nd	9/6/2007
California	Merced	Hilmar	250 N Union	10/12/2007
California	Merced	Merced	5 West 25th Street 2	1/16/2008
California	Merced	Stevinson	2917 Cemetery Road	2/20/2008
California	Merced	Stevinson	2991 Cemetery	2/20/2008
California	Merced	Winton	6814 Arlene Way	3/12/2008
California	Merced	Atwater	4146 South Elliott Road	8/11/2008
California	Merced	Delhi	15575 August Avenue	9/8/2008
California	Merced	Ballico	11368 North Santa Fe Avenue	1/10/2010
California	Merced	Hilmar	19542 East First Street	4/1/2010
California	Merced	Winton	7125 North Vine Avenue	4/21/2010
California	Merced	Stevinson	2228 Nelander Avenue	4/27/2010
California	Merced	Livingston	15290 Sunset Drive	5/22/2010
California	Merced	Delhi	9640 Sands Road	6/6/2010
California	Merced	Winton	7040 Myrtle Avenue	2/8/2016
California	Merced	Atwater	2521 Boulder Dr	9/21/2016
California	Monterey	Salinas	1769 Yosemite Cir	5/21/2004
California	Monterey	Pacific Grove	316 Prescott Ln	7/16/2004
California	Monterey	Salinas	1233 East Polk Street	6/20/2007
California	Monterey	Salinas	18840 Northeast Eisenhowere I	6/20/2007
California	Monterey	Greenfield	424 7th Avenue	9/19/2010
California	Nevada	Grass Valley	439 Neal St 1	7/30/2004
California	Orange	Laguna Beach	985 Pacific Coast N Hwy	2/1/2004
California	Orange	Buena Park	7555 Beach Blvd 128	2/10/2004
California	Orange	Irvine	173 Topeka	2/11/2004
California	Orange	Tustin	13624 Estero Cir	4/24/2004
California	Orange	Santa Ana	1137 Mcfadden W	7/7/2004
California	Orange	Westminster	7681 Baylor Dr	7/15/2004
California	Orange	La Habra	2320 Story Ave	7/16/2004
California	Orange	Garden Grove	8062 Garden Grove Blvd 241	9/21/2004
California	Orange	Orange	2135 Almond W St	10/15/2004
California	Orange	Santa Ana	1233 Genoa S Dr	11/30/2004
California	Orange	Cypress	4812 Grace Avenue	4/10/2006
California	Orange	Westminster	9851 Bolsa Avenue	5/5/2006
California	Orange	Westminster	5051 Princeton Avenue	5/17/2006

California	Orange	La Palma	4761 Sharon Drive A	7/17/2006
California	Orange	Stanton	10698 Court Street	9/15/2006
California	Orange	Stanton	7701 Westbrook Way	4/19/2007
California	Orange	Yorba Linda	5471 Jefferson Street	11/13/2007
California	Orange	Fullerton	641 Commonwealth Avenue	12/7/2007
California	Orange	Anaheim	131 Magnolia Avenue	3/21/2008
California	Orange	Anaheim	3554 West Cornelia Circle	3/24/2008
California	Orange	Anaheim	1819 Cris	3/27/2008
California	Orange	Anaheim	1261 Placentia Street	3/29/2008
California	Orange	Anaheim	2500 East Terrace Street	4/8/2008
California	Orange	Santa Ana	1314 Harbor Boulevard	4/9/2008
California	Orange	Garden Grove	9755 Bixby Avenue	4/11/2008
California	Orange	Costa Mesa	929 Joann Street	5/13/2008
California	Orange	Santa Ana	3012 Halladay	5/19/2008
California	Orange	Santa Ana	412 Baker Street	5/21/2008
California	Orange	Orange	207 Esplande Street	5/30/2008
California	Orange	Santa Ana	702 Santa Ana Boulevard	7/14/2008
California	Orange	Anaheim	622 Velare Avenue	9/16/2008
California	Orange	Westminster	13100 Goldenwest Street	4/28/2009
California	Orange	Santa Ana	1450 Auto Drive	5/11/2009
California	Orange	Garden Grove	10042 Lampson Avenue	5/13/2009
California	Orange	Westminster	6942 Garden Grove Boulevard	5/21/2009
California	Orange	Buena Park	7111 Beach Boulevard	2/10/2010
California	Orange	Garden Grove	13691 Barnett Way	2/13/2010
California	Orange	Anaheim	1303 West Marlboro Avenue	2/22/2010
California	Orange	Placentia	745 Dunn	3/16/2010
California	Orange	Irvine	87 Pinestone	3/23/2010
California	Orange	Orange	2300 North Tustin Avenue	3/29/2010
California	Orange	Huntington Beac	8230 Talbert	4/7/2010
California	Orange	Santa Ana	4417 Morningside	4/28/2010
California	Orange	Brea	2595 Imperial Highway	5/20/2010
California	Orange	Santa Ana	800 South Sullivan Street D3	12/23/2011
California	Orange	Anaheim	10141 Gravier St	12/8/2017
California	Plumas	Portola	5630 Casey Jones Road	4/14/2006
California	Plumas	Chester	460 Melissa Avenue	10/11/2007
California	Plumas	Quincy Junction	1426 Butterfly Valley Road	2/17/2010
California	Plumas	Portola	324 Bella Vista	3/9/2010
California	Riverside	Desert Hot Sprin	66366 6th St	1/20/2004
California	Riverside	Riverside	344 N State 148	1/28/2004
California	Riverside	Hemet	531 Cedar Ln 2	2/7/2004
California	Riverside	Perris	332 W 11th St	2/8/2004
California	Riverside	Hemet	1675 Cobble Ln	2/11/2004
California	Riverside	Cathedral City	68557 C Street	2/16/2004
California	Riverside	Hemet	1097 N State St 2	2/18/2004
California	Riverside	Glen Avon Heigh	4080 Conning	2/29/2004
California	Riverside	Corona	734 Viewtop Ln	3/12/2004
California	Riverside	El Cerrito	19078 Rising Sun Rd	3/12/2004

California	Riverside	Norco	2574 Ridgecrest	3/16/2004
California	Riverside	Hemet	772 N State	3/24/2004
California	Riverside	Hemet	225 S Elk St 36	3/30/2004
California	Riverside	Riverside	5861 Mitchell	3/31/2004
California	Riverside	Corona	995 Pomona Rd 17	4/2/2004
California	Riverside	Beaumont	34250 San Timiteo Canyon Rd	4/15/2004
California	Riverside	Beaumont	1016 Palm Ave	4/19/2004
California	Riverside	Lake Elsinore	17911 Thoreson	4/29/2004
California	Riverside	Hemet	43939 Florida Ave	5/4/2004
California	Riverside	Hemet	585 S Santa Fe	5/15/2004
California	Riverside	Winchester	33091 Willard	5/20/2004
California	Riverside	Hemet	2688 E Florida Ave 18	6/4/2004
California	Riverside	Indio	46540 Padua Cir	6/9/2004
California	Riverside	Anza	57310 Valley Vista	6/11/2004
California	Riverside	Perris	143 Perou St	6/27/2004
California	Riverside	Victorville	20197 Nandina Ave	7/9/2004
California	Riverside	Corona	1330 W 8th St 18	7/21/2004
California	Riverside	Perris	618 Bond Dr	7/29/2004
California	Riverside	San Jacinto	437 Mead	8/2/2004
California	Riverside	Moreno Valley	25204 Bridle Trail	8/29/2004
California	Riverside	Indio	47800 Madison St 169	9/21/2004
California	Riverside	Lake Matthews	17224 Cajon Dr	9/28/2004
California	Riverside	Banning	1007 Linda Vista Rd	10/26/2004
California	Riverside	Victorville	22875 Rios	11/16/2004
California	Riverside	Menifee	26814 Madera Ct	12/6/2004
California	Riverside	Hemet	4400 Florida W Ave 117	12/8/2004
California	Riverside	Hemet	41251 Rope Rd	1/29/2005
California	Riverside	Perris	4715 Wade Ave	3/3/2005
California	Riverside	San Jacinto	344 N State St Sp 196	6/15/2005
California	Riverside	Perris	19881 Gustin Rd	12/12/2005
California	Riverside	Hemet	525 Gilbert N 49	1/20/2006
California	Riverside	Lake Elsinore	34323 Sunrise Drive	1/27/2006
California	Riverside	Corona	446 Francis E St	2/2/2006
California	Riverside	San Jacinto	610 Washington E Ave	2/22/2006
California	Riverside	Hemet	25873 Riverview Lane	3/15/2006
California	Riverside	Desert Hot Sprin	13255 Mexquite Avenue	3/23/2006
California	Riverside	San Jacinto	182 De Anza	4/20/2006
California	Riverside	Nuevo	22788 Via Santana	4/21/2006
California	Riverside	Calimesa	9453 Sharondale Road	6/8/2006
California	Riverside	Riverside	11235 Cypress	6/27/2006
California	Riverside	Mountain Cente	63137 Jeraboa Road	4/12/2007
California	Riverside	Corona	379 East Rancho Road	1/2/2008
California	Riverside	Norco	3117 Shadow Canyon Circle	1/31/2008
California	Riverside	Hemet	32809 Red Mountain Road	2/18/2008
California	Riverside	Palm Springs	383 Vereda Norte	6/20/2008
California	Riverside	Perris	21747 Webster Avenue	8/7/2008
California	Riverside	Perris	21881 Oleander Avenue	8/29/2008

California	Riverside	Mira Loma	10351 Oak Bark Lane	11/12/2008
California	Riverside	Desert Hot Sprin	12155 Ocotillo Road	4/29/2009
California	Riverside	Hemet	871 San Mateo Circle	5/21/2009
California	Riverside	Temecula	29774 Calle Pantano	2/2/2010
California	Riverside	Riverside	4080 Pedley Road	2/5/2010
California	Riverside	Banning	514 East Victory Avenue	3/21/2010
California	Riverside	Riverside	11744 Hazeldell Drive	4/2/2010
California	Riverside	Riverside	12172 Severn Way	4/2/2010
California	Riverside	Perris	644 Primrose Place	4/8/2011
California	Riverside	Perris	2520 Spectacular Bid Street	7/29/2014
California	Riverside	Moreno Valley	16329 Saddleback Lane	2/3/2015
California	Riverside	Moreno Valley	25399 Todd Drive	8/15/2015
California	Riverside	Moreno Valley	16329 Saddlebrook Lane	2/9/2016
California	Riverside	Hemet	1610 Bluejay Way	3/2/2016
California	Riverside	Indio	43430 Monroe St	9/3/2016
California	Riverside	Coachella	731 Orchard St	10/4/2016
California	Riverside	Mira Loma	12332 Kern River Dr	12/6/2017
California	Riverside	Temecula	30984 Lolita Rd	12/7/2017
California	Sacramento	Sacramento	4405 23rd St	2/4/2004
California	Sacramento	Sacramento	4719 Hayford Way	2/24/2004
California	Sacramento	Sacramento	7624 Birdie Ct	3/23/2004
California	Sacramento	Sacramento	1536 Strader Ave	3/26/2004
California	Sacramento	Sacramento	5867 Auburn Blvd 30	3/30/2004
California	Sacramento	Sacramento	2530 Street S 8	4/1/2004
California	Sacramento	Rancho Cordova	10892 Walnutwood Way	4/4/2004
California	Sacramento	Elverta	2495 Rhine Way	8/5/2004
California	Sacramento	Sacramento	3534 Summer Park Dr 354	10/8/2004
California	Sacramento	Elk Grove	5354 Jade Creek	2/23/2005
California	Sacramento	Elverta	2110 Quail Ranch Court	2/28/2006
California	Sacramento	Sacramento	4144 Cabinet Circle	3/6/2006
California	Sacramento		5140 W Sherman Island Road	5/13/2006
California	Sacramento	Sacramento	7662 Country Park Drive	6/6/2006
California	Sacramento	Sacramento	5230 Palm	1/30/2007
California	Sacramento	Sacramento	2681 Fairfield Street	2/13/2007
California	Sacramento	Citrus Heights	7401 Lovato	6/23/2007
California	Sacramento	Sacramento	6316 Welty Way	12/3/2008
California	Sacramento	Galt	132 4th	4/20/2010
California	San Bernardino	Fontana	14430 Santa Ana	1/15/2004
California	San Bernardino	Ontario	844 Wysteria E Ct	1/21/2004
California	San Bernardino	Redlands	1034 Alta St	1/28/2004
California	San Bernardino	Victorville	16717 C St	1/30/2004
California	San Bernardino	Chino	11838 Central Ave 93	2/11/2004
California	San Bernardino	Rialto	349 N Lilac	2/17/2004
California	San Bernardino	Apple Valley	21845 Arapahoe St 1	2/17/2004
California	San Bernardino	Victorville	16868 Stoddard Wells Rd	2/19/2004
California	San Bernardino	Twentynine Palm	4828 Lear Ave	2/22/2004
California	San Bernardino	Hesperia	14926 Fir St	2/25/2004

California	San Bernardino	San Bernardino	1443 Cedar 23	3/9/2004
California	San Bernardino	Victorville	15330 Condor Rd	3/9/2004
California	San Bernardino	Newberry Spring	52875 Bedford Rd	3/25/2004
California	San Bernardino	Fontana	13519 Arrow Rt	3/30/2004
California	San Bernardino	Twentynine Paln	7580 Mac Rd	3/31/2004
California	San Bernardino	San Bernardino	1443 Cedar St 1	4/9/2004
California	San Bernardino	Twentynine Paln	5665 Aeronia	4/15/2004
California	San Bernardino	Baker	71759 Baker Blvd	4/16/2004
California	San Bernardino	Highland	7409 Los Feliz Dr	4/23/2004
California	San Bernardino	San Bernardino	3160 N State St	4/23/2004
California	San Bernardino	Phelan	8135 Joshua St	4/27/2004
California	San Bernardino	Chino	12018 Central Ave	5/13/2004
California	San Bernardino	Highland	25715 Lime St	5/18/2004
California	San Bernardino	Apple Valley	10620 Matilija	5/21/2004
California	San Bernardino	Highland	28457 Merrion Ave	5/21/2004
California	San Bernardino	San Bernardino	2176 Amanda St	5/21/2004
California	San Bernardino	Joshua Tree	62475 Cove Ln	5/27/2004
California	San Bernardino	Apple Valley	10808 Mills Rd	6/2/2004
California	San Bernardino	Barstow	24966 Camino Del Sol St	6/7/2004
California	San Bernardino	Hesperia	15356 Pendleton	6/16/2004
California	San Bernardino	Twentynine Paln	68077 Indian Trail	6/16/2004
California	San Bernardino	Muscoy	2544 3rd St	6/23/2004
California	San Bernardino	Newberry Spring	47962 Horner Rd	6/24/2004
California	San Bernardino	Hesperia	11976 Mariposa Rd	7/3/2004
California	San Bernardino	Ontario	1506 E Highland Ct	7/26/2004
California	San Bernardino	Fontana	7642 Kempster Ave	9/7/2004
California	San Bernardino	Phelan	6721 Nielson Rd	9/17/2004
California	San Bernardino	Barstow	2577 Community Blvd	9/18/2004
California	San Bernardino	Joshua Tree	3255 Sunset Rd	9/26/2004
California	San Bernardino	Rancho Cucamor	7651 Effen	10/1/2004
California	San Bernardino	Hesperia	7892 Alston	10/1/2004
California	San Bernardino	Newberry Spring	35377 Newberry Rd	10/11/2004
California	San Bernardino	Phelan	11480 Macron	10/19/2004
California	San Bernardino	Victorville	17053 B St	10/19/2004
California	San Bernardino	Victorville	16688 Hughes	10/21/2004
California	San Bernardino	Redlands	28565 San Timoteo Canyon	10/25/2004
California	San Bernardino	San Bernardino	1162 E 2nd	11/16/2004
California	San Bernardino	Bloomington	16742 14th St	11/17/2004
California	San Bernardino	Barstow	29779 N 1st	11/18/2004
California	San Bernardino	Chino Hills	15553 Esther St	12/13/2004
California	San Bernardino	San Bernardino	2547 3rd Ave	12/28/2004
California	San Bernardino	Trona	13860 Fremont St 2	12/30/2004
California	San Bernardino	Barstow	434 S Second St 1	1/1/2005
California	San Bernardino	Upland	359 Seventh St	1/5/2005
California	San Bernardino	San Bernardino	123 E 11th St	1/19/2005
California	San Bernardino	San Bernardino	1318 E Gould St	1/22/2005
California	San Bernardino	Redlands	2155 Citrus Ave 112	2/14/2005

California	San Bernardino	Yucaipa	12470 15th St	5/25/2005
California	San Bernardino	Hesperia	10721 Maple St	7/29/2005
California	San Bernardino	Victorville	16262 Yucca Ave	8/1/2005
California	San Bernardino	San Bernardino	11571 5th St	8/29/2005
California	San Bernardino	Victorville	11550 White Rd	10/17/2005
California	San Bernardino	Hesperia	9553 Los Banos Ave	1/12/2006
California	San Bernardino	Victorville	13126 Mesa	2/7/2006
California	San Bernardino	Ontario	956 Princeton W St	2/10/2006
California	San Bernardino	Victorville	16755 Union St B	2/24/2006
California	San Bernardino	Victorville	15618 Topango Road	3/2/2006
California	San Bernardino	San Bernardino	2131 Genevieve Street	3/10/2006
California	San Bernardino	Victorville	13602 Nassau Drive	3/15/2006
California	San Bernardino	San Bernardino	756 W 19 St	3/16/2006
California	San Bernardino	Fontana	17265 Lurelane Street	3/20/2006
California	San Bernardino	Redlands	828 6th Street	3/23/2006
California	San Bernardino	Hesperia	11516 Hawthorne	3/25/2006
California	San Bernardino	Newberry Spring	42378 Silver Valley Road	4/21/2006
California	San Bernardino	Hesperia	9393 Hickory	6/8/2006
California	San Bernardino	Hesperia	10983 4th Avenue	6/9/2006
California	San Bernardino	Oro Grande	21451 National Trails Highway	6/13/2006
California	San Bernardino	Fontana	13449 Ivy	6/15/2006
California	San Bernardino	Loma Linda	26232 Newport Avenue	8/1/2006
California	San Bernardino	Yermo	37933 Grandview Avenue	8/10/2006
California	San Bernardino	Yucca Valley	58620 San Marino Drive	9/6/2006
California	San Bernardino	San Bernardino	19829 Kendall Drive	9/12/2006
California	San Bernardino	San Bernardino	2292 Portola Street	10/13/2006
California	San Bernardino	Apple Valley	12618 Pocono Road	10/15/2006
California	San Bernardino	Fontana	14349 Figwood Drive	12/13/2006
California	San Bernardino	Victorville	14349 Hesperia Road	12/21/2006
California	San Bernardino	Apple Valley	20024 Happy Trails Highway	1/4/2007
California	San Bernardino	Hesperia	13010 Prairie Trail	2/22/2007
California	San Bernardino	Pinon Hills	11475 Prado Road	3/27/2007
California	San Bernardino	Victorville	13852 Burning Tree Lane	5/3/2007
California	San Bernardino	Redlands	511 Redlands Boulevard	5/16/2007
California	San Bernardino	Colton	1822 Admiralty Street	6/15/2007
California	San Bernardino	San Bernardino	243 Meridian Avenue	7/18/2007
California	San Bernardino	Victorville	16753 Zenda Street	8/6/2007
California	San Bernardino	Ontario	740 Camalot	9/10/2007
California	San Bernardino	San Bernardino	223 49th	11/7/2007
California	San Bernardino	San Bernardino	1431 7th Street	11/26/2007
California	San Bernardino	Adelanto	17526 Keats Road	11/29/2007
California	San Bernardino	Rialto	624 Etiwanda Avenue	12/22/2007
California	San Bernardino	Joshua Tree	8997 Tortuga Road	1/14/2008
California	San Bernardino	San Bernardino	6317 Bonnie Street	4/3/2008
California	San Bernardino	Fontana	16411 Athol Street	4/17/2008
California	San Bernardino	San Bernardino	7234 Dwight Way	7/1/2008
California	San Bernardino	Landers	57646 Linn Road	10/14/2008

California	San Bernardino	Hesperia	9519 Maple Avenue	10/18/2008
California	San Bernardino	Hinkley	23572 State Highway 58	4/5/2009
California	San Bernardino	Apple Valley	9611 Navajo Road	5/5/2009
California	San Bernardino	Victorville	13143 Sleepy Ridge Lane	3/5/2010
California	San Bernardino	San Bernardino	205 West Benedict Road	4/2/2010
California	San Diego	Boulevard	2605 Paseo Alta Ct	1/7/2004
California	San Diego	San Ysidro	905 Hwy Caliente Rd	1/16/2004
California	San Diego	San Diego	875 Hotel S Cir	1/30/2004
California	San Diego	Santee	8593 Magnolia Ave	1/30/2004
California	San Diego	Escondido	1306 Ronda Ave	3/23/2004
California	San Diego	Fallbrook	422 Catalpa Ln	5/19/2004
California	San Diego	San Diego	6173 Fauna Drive	5/21/2004
California	San Diego	Lakeside	11441 El Nopal	8/12/2004
California	San Diego	Escondido	431 4th E Ave 1b	8/31/2004
California	San Diego	San Diego	4242 34th St D	9/16/2004
California	San Diego	Vista	1280 Hacienda Dr G6	11/24/2004
California	San Diego	Escondido	16975 Guejito Rd	3/3/2005
California	San Diego	Escondido	1825 East Valley Way	6/6/2006
California	San Diego	Vista	1710 Avocado Drive	9/14/2006
California	San Diego	Oceanside	3965 Brown Street	9/20/2006
California	San Diego	Vista	663 Eucalyptus	4/3/2007
California	San Diego	La Puente	1254 Bannon	5/10/2007
California	San Diego	San Diego	3835 Midway #203 Drive	6/20/2007
California	San Diego	Vista	526 Mar Vista Drive	11/29/2007
California	San Diego	Vista	1610 N Santa Fe	4/9/2008
California	San Diego	Valley Center	30118 Miller Road	11/7/2008
California	San Diego	San Diego	9777 De La Amistad Viaduct	6/12/2009
California	San Diego	Escondido Juncti	1531 Montiel	1/20/2010
California	San Diego	Carlsbad	847 Laguna	8/8/2010
California	San Diego	Carlsbad	382 Acacia	8/8/2010
California	San Diego	Alpine	404 Summerhill Terrace	12/2/2013
California	San Francisco	San Francisco	35 Belvedere St 5	3/29/2006
California	San Joaquin	Stockton	7790 N Ashley Ln	1/20/2004
California	San Joaquin	Stockton	9800 E Eight Mile Rd	4/16/2004
California	San Joaquin	Stockton	5708 N Highway 99	4/18/2004
California	San Joaquin	Stockton	1560 Silver Creek	4/22/2004
California	San Joaquin	Stockton	10285 Hildreth Ln	6/30/2004
California	San Joaquin	Stockton	2717 W March Ln	7/31/2004
California	San Joaquin	Stockton	2654 W March Ln 304	8/4/2004
California	San Joaquin	Stockton	3416 Farmington E Rd 2	8/26/2004
California	San Joaquin	Stockton	2274 E Fremont	9/25/2004
California	San Joaquin	Stockton	2071 La Jolla Dr	4/25/2005
California	San Joaquin	Stockton	2553 Michaelangelo Drive	6/1/2006
California	San Joaquin	Tracy	14703 Finck Road	8/3/2006
California	San Joaquin	Stockton	301 Morada	4/19/2007
California	San Joaquin	Manteca	481 South Union Road	4/20/2007
California	San Joaquin	Lathrop	15523 Sixth Street	10/11/2007

California	San Joaquin	Tracy	11422 West Larch Road	3/14/2008
California	San Luis Obispo	Atascadero	1400 San Ramon	1/5/2004
California	San Luis Obispo	Atascadero	4080 Dolores Avenue	3/14/2006
California	San Luis Obispo	Grover Beach	448 North 9th Street	3/30/2006
California	San Luis Obispo	Morro Bay	525 Atascadero Road	7/12/2006
California	San Luis Obispo	San Luis Obispo	3500 Bullock	8/29/2006
California	San Luis Obispo	Paso Robles	749 Orchard	9/5/2006
California	San Luis Obispo	Templeton	30 Danelion Road	1/15/2007
California	San Luis Obispo	Nipomo	155 East Price Street	4/29/2008
California	San Luis Obispo	San Luis Obispo	1771 Cordova	12/7/2011
California	San Mateo	East Palo Alto	1894 Bay Road	6/4/2006
California	San Mateo	Belmont	926 South Road	6/21/2006
California	San Mateo	Daly City	439 Bonnie Street	1/14/2010
California	Santa Clara	San Jose	3570 Columbine Dr	1/15/2004
California	Santa Clara	San Jose	110 Roundtable Dr 1	2/8/2004
California	Santa Clara	Gilroy	7860 Driftwood Ter A	4/3/2004
California	Santa Clara	San Jose	1374 Randol Ave	5/5/2004
California	Santa Clara	Santa Clara	1232 Warburton Ave	6/8/2004
California	Santa Clara	San Jose	90 Saddlebrook Dr	6/22/2004
California	Santa Clara	San Jose	935 Foxchase Dr 413	9/21/2004
California	Santa Clara	Morgan Hill	6760 Croy Rd	9/29/2004
California	Santa Clara	Los Altos	25562 Fernhill Dr	10/26/2004
California	Santa Clara	San Jose	2251 Lansford Ave	11/15/2004
California	Santa Clara	San Jose	1425 Stahl St	10/16/2005
California	Santa Clara	San Jose	1560 Darlene Ave	1/24/2006
California	Santa Clara	San Jose	1919 Fruitdale Avenue	5/11/2006
California	Santa Clara	San Jose	4075 Hobart Avenue	4/27/2007
California	Santa Clara	Campbell	768 Nevins Street	7/11/2007
California	Santa Clara	San Jose	2475 Glen Angus Way	2/21/2008
California	Santa Clara	Santa Clara	2597 Borax Drive	2/22/2008
California	Santa Clara	San Jose	843 Spindrift Way	3/18/2008
California	Santa Clara	San Jose	1480 Douglas Street	3/20/2008
California	Santa Clara	San Jose	71 Avenida Espana	5/29/2008
California	Santa Clara	San Jose	973 Idlewood Drive	8/31/2008
California	Santa Clara	San Jose	800 Saratoga Avenue A308	6/10/2010
California	Santa Clara	Gilroy	2250 Roop Rd Road	8/19/2010
California	Santa Clara	San Jose	5674 San Felipe Road	8/26/2010
California	Santa Clara	Santa Clara	2147 Newhall Street	3/9/2011
California	Santa Clara	San Jose	315 N 21st Street	9/18/2015
California	Santa Clara	Santa Clara	930 El Camino Real	5/19/2016
California	Santa Cruz	Soquel	2600 41st St	8/12/2004
California	Santa Cruz	Santa Cruz	911 Soquel Ave	3/18/2005
California	Santa Cruz	Santa Cruz	231 Felix Street	5/2/2006
California	Santa Cruz	Santa Cruz	870 17th Avenue	9/29/2006
California	Santa Cruz	Watsonville	216 Silverleaf Drive	10/17/2007
California	Santa Cruz	Santa Cruz	15769 Comstock Mill Road	3/13/2008
California	Santa Cruz	Capitola	1066 41st Avenue	9/12/2010

California	Shasta	Redding	1420 Arizona Street	2/2/2004
California	Shasta	Redding	781 S Street	3/21/2004
California	Shasta	Redding	12691 Williamson Rd	3/30/2004
California	Shasta	Anderson	6465 Saddle Trail Rd	7/29/2004
California	Shasta	Redding	80 Churn Creek Rd	7/18/2005
California	Shasta	Igo	14463 Windwalker Ln	3/27/2006
California	Shasta	Shingletown	7498 Hilda Rd	4/13/2006
California	Shasta	Redding	3115 Stratford Avenue	9/19/2006
California	Shasta	Redding	1571 College View Drive	8/29/2007
California	Shasta	Redding	13922a Sundust Road	3/11/2010
California	Siskiyou	Weed	208 Jackson St	2/21/2004
California	Siskiyou	Dorris	2100 Sheepy Island Rd 437	3/3/2004
California	Solano	Vallejo	1130 Monterey St	2/12/2004
California	Solano	Dixon	805 N Adams St 110	3/23/2004
California	Solano	Vallejo	1163 Lewis Ave	3/30/2004
California	Solano	Vallejo	618 Main St	4/20/2004
California	Solano	Vallejo	136 Hogan St	5/14/2004
California	Solano	Suisun City	515 Crested Dr	3/9/2005
California	Solano	Vacaville	7234 Shelton Ln	9/29/2005
California	Solano	Dixon	9155 Olmo Rd	3/3/2006
California	Solano	Vallejo	318 Taper Avenue	1/31/2008
California	Solano	Vacaville	148 Lomita Avenue	3/5/2008
California	Solano	Vallejo	264 Flyingcloud Court	4/30/2010
California	Stanislaus	Ceres	4837 Faith Home Rd 119	1/1/2004
California	Stanislaus	Oakdale	143 N 6th St	1/5/2004
California	Stanislaus	Modesto	3356 Maze W Blvd	1/17/2004
California	Stanislaus	Hickman	948 Hickman Rd	1/20/2004
California	Stanislaus	Modesto	1520 Prospect Ln	1/24/2004
California	Stanislaus	Stanislaus	13660 Carpenter Rd	2/7/2004
California	Stanislaus	Waterford	575 E St	3/5/2004
California	Stanislaus	Turlock	6407 Mitchell Rd	4/12/2004
California	Stanislaus	Turlock	1625 Larkspur St	6/29/2004
California	Stanislaus	Ceres	4022 Esmail Keyes	7/2/2004
California	Stanislaus	Modesto	1312 Mchenry 111	7/13/2004
California	Stanislaus	Modesto	2009 Monticello Ave	7/13/2004
California	Stanislaus	Modesto	1516 Bollinger Ct	9/1/2004
California	Stanislaus	Modesto	1240 N 9th St 10	9/5/2004
California	Stanislaus	Denair	5319 Berkeley Ave	9/19/2004
California	Stanislaus	Modesto	8100 Yosemite Blvd	10/3/2004
California	Stanislaus	Oakdale	13537 Orange Blossom Rd	10/22/2004
California	Stanislaus	Oakdale	410 Arboles Way	10/26/2004
California	Stanislaus	Turlock	265 Ironwood	10/30/2004
California	Stanislaus	Turlock	357 E Olive Ave	11/4/2004
California	Stanislaus	Oakdale	755 River Ave	11/29/2004
California	Stanislaus	Oakdale	445 N Fifth	12/6/2004
California	Stanislaus	Modesto	3708 Almeria Dr	12/11/2004
California	Stanislaus	Ceres	2033 Hackett Rd	1/18/2005

California	Stanislaus	Denair	4540 Arnold Rd	2/2/2005
California	Stanislaus	Modesto	400 Algen Ave	2/2/2005
California	Stanislaus	Modesto	1022 Calder Ct	3/26/2005
California	Stanislaus	Grayson	1705 Hito Dr	4/7/2005
California	Stanislaus	Modesto	205 Glacier Ave	1/18/2006
California	Stanislaus	Riverbank	3939 Minniear Ave	1/31/2006
California	Stanislaus	Modesto	3500 Plain View Road	3/7/2006
California	Stanislaus	Ceres	527 Mitchell Rd	3/22/2006
California	Stanislaus	Ceres	3707 Monte Vista E Ave	3/24/2006
California	Stanislaus	Modesto	1411 Scenic Drive	4/24/2006
California	Stanislaus	Modesto	110 Wisenor	5/18/2006
California	Stanislaus	Modesto	2008 Stracker Way	6/8/2006
California	Stanislaus	Modesto	620 Paradise Road	9/13/2006
California	Stanislaus	Modesto	306 Locust Street	9/14/2006
California	Stanislaus	Ceres	1743 Central	10/20/2006
California	Stanislaus	Modesto	665 7th Street	12/4/2006
California	Stanislaus	Modesto	1331 Paradise Road	6/3/2007
California	Stanislaus	Turlock	201 G Street	6/26/2007
California	Stanislaus	Turlock	1105 Berea	9/15/2007
California	Stanislaus	Turlock	1090 Denair Avenue	1/6/2008
California	Stanislaus	Newman	531 Lady Slipper	1/15/2008
California	Stanislaus	Turlock	1125 South Tegner Road A	2/16/2008
California	Stanislaus	Turlock	3800 Crowell Road	4/18/2008
California	Stanislaus	Modesto	1016 East Marlow	6/19/2008
California	Stanislaus	Hickman	861 Meier Road	6/19/2008
California	Stanislaus	Modesto	1016 Marlow	6/19/2008
California	Stanislaus	Turlock	590 Minaret Avenue	8/5/2008
California	Stanislaus	Ceres	112 Taylor Road	8/25/2008
California	Stanislaus	Ceres	1948 Evans Road	11/16/2008
California	Stanislaus	Ceres	1528 Evans Road	11/18/2008
California	Stanislaus	Turlock	677 North Soderquist Road	12/15/2008
California	Stanislaus	Denair	18000 Keyes Road	4/14/2009
California	Stanislaus	Turlock	4519 Moffett Road	4/22/2009
California	Stanislaus	Patterson	1830 Orange Avenue	5/3/2009
California	Stanislaus	Ceres	3107 East Taylor Road	5/19/2009
California	Stanislaus	Turlock	6107 Mountain View Road	5/19/2009
California	Stanislaus	Ceres	3107 Taylor Road	5/19/2009
California	Stanislaus	Modesto	1898 Skylane Way	5/21/2009
California	Stanislaus	Oakdale	20601 Warnerville Road	5/28/2009
California	Stanislaus	Turlock	460 Moffet Road	5/29/2009
California	Stanislaus	Riverbank	2924 Stanislaus Street	6/18/2009
California	Stanislaus	Oakdale	10742 Pioneer Avenue	6/30/2009
California	Stanislaus	Ceres	2329 6th Street	2/5/2010
California	Stanislaus	Turlock	1180 West Linwood Avenue	2/9/2010
California	Stanislaus	Riverbank	3238 Pocket Avenue	5/22/2010
California	Stanislaus	Newman	1200 Main Street	7/26/2010
California	Stanislaus	Modesto	1600 French	8/11/2011

California	Stanislaus	Hughson	1828 White Birtch Drive	8/28/2011
California	Stanislaus	Modesto	1749 Poland	2/9/2012
California	Sutter	Yuba City	2898 Mckenly Rd	1/11/2004
California	Sutter	Yuba City	1400 Lytle Rd	2/17/2004
California	Sutter	Yuba City	1718 Elmer Rd	3/10/2004
California	Sutter	Yuba City	1292 Harter Rd	5/11/2004
California	Sutter	Sutter	2235 Madrone St	5/17/2004
California	Sutter	Yuba City	1619 Franklin Rd K	6/7/2004
California	Sutter	Yuba City	1081 Northridge Dr	9/1/2004
California	Sutter	Yuba City	400 Walton N Ave 3	9/2/2004
California	Sutter	Yuba City	761 Chestnut St	10/18/2004
California	Sutter	Yuba City	413 Pine St	10/30/2004
California	Sutter	Yuba City	1368 Hutchinson A	11/5/2004
California	Sutter	Live Oak	2691 Stafford Dr	11/10/2004
California	Sutter	Yuba City	24 Central Ave	12/11/2004
California	Sutter	Yuba City	132 S Walton Ave A	12/22/2004
California	Sutter	Yuba City	1587 Gray Ave	2/15/2005
California	Sutter	Live Oak	9755 O St	4/7/2005
California	Sutter	Yuba City	1341 Dustin Dr 39	9/1/2005
California	Sutter	Yuba City	4098 Marlette Rd	1/23/2006
California	Sutter	Yuba City	1115 Marcia Avenue	2/18/2006
California	Sutter	Yuba City	1250 Kenny Drive	5/19/2006
California	Sutter	Yuba City	617 Forbes Avenue	1/2/2007
California	Tehama	Corning	6330 Piedmont Rd	9/27/2004
California	Tehama	Corning	323 Rio Del Rey Court	7/31/2006
California	Tehama	Red Bluff	19932 Sawtooth Drive	8/1/2006
California	Tehama	Los Molinos	24881 68th	4/28/2010
California	Trinity	Trinity Center	360 Maude Avenue	3/11/2007
California	Tulare	Woodville	16477 Hudson Ave	1/29/2004
California	Tulare	Porterville	27003 Avenue 120	2/7/2004
California	Tulare	Lindsay	1445 E Honolulu	3/24/2004
California	Tulare	Dinuba	39780 Road 56	3/31/2004
California	Tulare	Tulare	26442 99 Hwy 210	5/26/2004
California	Tulare	Porterville	670 E Poplar	1/7/2006
California	Tulare	Porterville	1611 E Success Drive	1/7/2006
California	Tulare	Cutler	39500 Road 136	4/28/2006
California	Tulare	Tipton	14144 Road 152	8/9/2006
California	Tulare	Dinuba	38929 Road 84	8/17/2006
California	Ventura	N/a	5892 Santa Clara Rd	2/22/2006
California	Ventura	Ventura	1300 Saratoga Street	5/4/2006
California	Ventura	Fillmore	2989 West W Telegraph Road H	6/14/2006
California	Ventura	Oxnard	765 Kohala Street	11/9/2006
California	Ventura	Thousand Oaks	982 East Janas Road	3/20/2007
California	Yolo	West Sacrament	1155 Linden Rd	1/13/2004
California	Yolo	Woodland	1730 Donner Way	3/10/2004
California	Yolo	West Sacrament	1900 Evergreen Avenue	3/30/2007
California	Yuba	Marysville	1118 I St	4/6/2004

California	Yuba	Marysville	1205 E 22nd St	4/12/2004
California	Yuba	Marysville	222 H St	4/14/2004
California	Yuba	Marysville	1804 Hile Ave C	5/12/2004
California	Yuba	Marysville	1505 Ramirez Rd	5/20/2004
California	Yuba	Arboga	13814 Charlies Ln	5/27/2004
California	Yuba	Marysville	5956 Park Ave O	7/18/2004
California	Yuba	Marysville	5818 Park Ave	8/3/2004
California	Yuba	Marysville	5931 Redburn Ave	8/8/2004
California	Yuba	Marysville	1735 N Beale Rd	9/10/2004
California	Yuba	Olivehurst	3735 Arboga Rd	9/27/2004
California	Yuba	Olivehurst	4456 College	9/28/2004
California	Yuba	Marysville	2209 Boulton Way	10/18/2004
California	Yuba	Marysville	976 Kay St	10/25/2004
California	Yuba	Olivehurst	1941 14th St	11/3/2004
California	Yuba	Olivehurst	4461 College Way	11/17/2004
California	Yuba	Marysville	5395 Feather River Blvd	12/21/2004
California	Yuba	Olivehurst	1696 10th Ave	1/27/2005
California	Yuba	Marysville	5528 Alicia Ave	2/22/2005
California	Yuba	Marysville	5696 Arboga Rd	3/9/2005
California	Yuba	Marysville	1100 E 17th St 36	5/18/2005
California	Yuba	Marysville	885 Grand Ave	5/24/2005
California	Yuba	Marysville	209 E St	12/13/2005
California	Yuba	Marysville	1097 Vine Ave	1/12/2006
California	Yuba	Olivehurst	1440 Broadway Rd	1/17/2006
California	Yuba	Loma Rica	5124 Wolf Trail	1/25/2006
California	Yuba	Olivehurst	3948 Shimer Rd	1/31/2006
California	Yuba	Olivehurst	4605 Summers Ln	1/31/2006
California	Yuba	Marysville	647 Ramirez Rd B	2/16/2006
California	Yuba	Marysville	714 Boyer Road	3/30/2006
California	Yuba	Marysville	5514 Feather River Boulevard	7/13/2006
California	Yuba	Marysville	8369 Hwy 70	10/3/2006
California	Yuba	Marysville	7340 Doc Adams Road	10/9/2006
California	Yuba	Marysville	1164 Redwood Avenue	6/11/2007
California	Yuba	Marysville	4499 East Erle Road	7/7/2007

APPENDIX C

PHOTOGRAPHS

PHOTOGRAPHS
APNs 330-230-023 & -024
Sun City, California



1. View west from north portion of the Site.



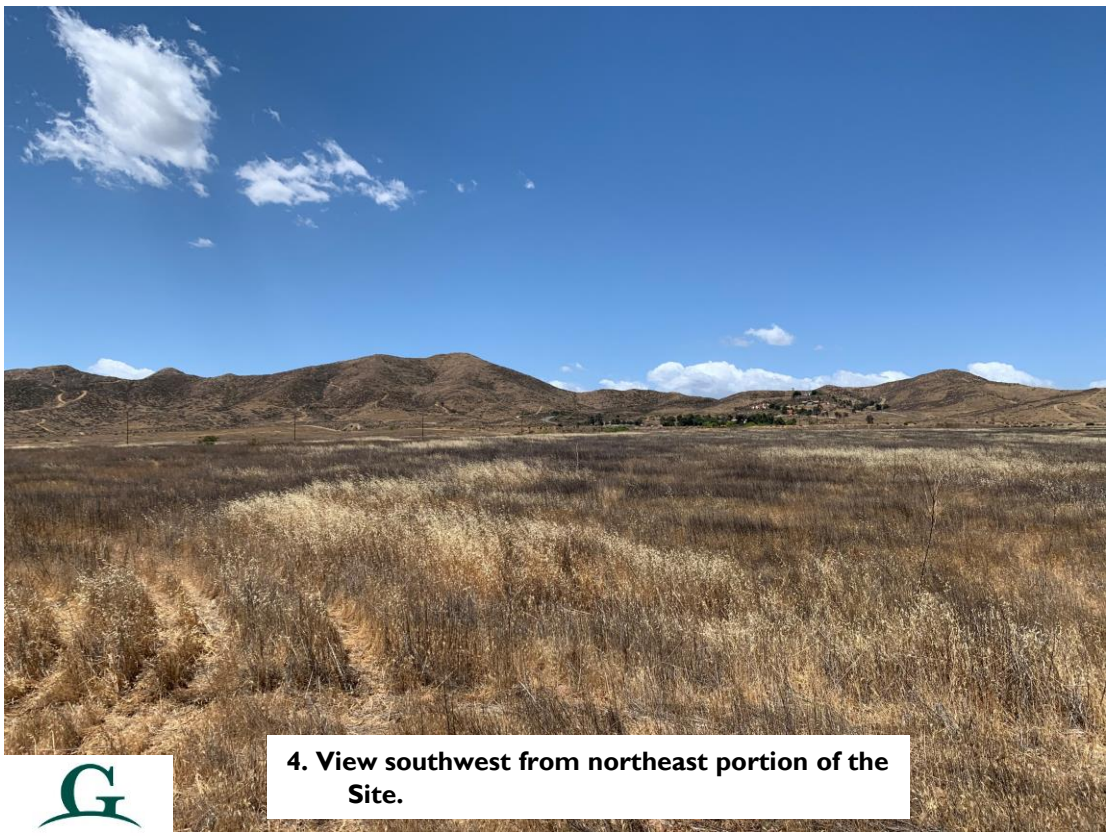
2. View east-southeast from northwest portion of the Site.

GEOTEK

PHOTOGRAPHS
APNs 330-230-023 & -024
Menifee, California



3. View south from northeast portion of the SIte.



4. View southwest from northeast portion of the Site.

GEOTEK

PHOTOGRAPHS
APNs 330-230-023 & -024
Menifee, California



5. View northwest from east portion of Site

GEOTEK

APPENDIX D

ENVIRONMENTAL DATABASE REPORT

Menifee 27.5
Valley Boulevard/Troy Lane
Sun City, CA 92585

Inquiry Number: 6522877.2s
June 04, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	9
Orphan Summary	18
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-13
Physical Setting Source Map Findings	A-15
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

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

VALLEY BOULEVARD/TROY LANE
SUN CITY, CA 92585

COORDINATES

Latitude (North):	33.7308920 - 33° 43' 51.21''
Longitude (West):	117.2171060 - 117° 13' 1.58''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	479887.2
UTM Y (Meters):	3732146.0
Elevation:	1518 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5641314 ROMOLAND, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
VALLEY BOULEVARD/TROY LANE
SUN CITY, CA 92585

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	BOWMAN, ALLAN	25702 TROY LANE	RCRA NonGen / NLR	Lower	889, 0.168, ENE
2	ELEMENTARY SCHOOL NO	FENCE POST DRIVE/RAM	ENVIROSTOR, SCH	Higher	1221, 0.231, SW
3	MONUMENT RANCH SITE	GOETZ ROAD / ETHANAC	ENVIROSTOR, SCH, CERS	Lower	4148, 0.786, NNW

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 CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

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-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
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

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

LUST ..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
UST ..... Active UST Facilities
AST ..... Aboveground Petroleum Storage Tank Facilities
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
CDL	Clandestine Drug Labs
Toxic Pits	Toxic Pits Cleanup Act Sites
CERS HAZ WASTE	CERS HAZ WASTE
US CDL	National Clandestine Laboratory Register
PFAS	PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST	SWEEPS UST Listing
HIST UST	Hazardous Substance Storage Container Database
CA FID UST	Facility Inventory Database
CERS TANKS	California Environmental Reporting System (CERS) Tanks

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
UXO - Unexploded Ordnance Sites
ECHO - Enforcement & Compliance History Information
DOCKET HWC - Hazardous Waste Compliance Docket Listing
FUELS PROGRAM - EPA Fuels Program Registered Listing
CA BOND EXP. PLAN - Bond Expenditure Plan
Cortese - "Cortese" Hazardous Waste & Substances Sites List
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
HIST CORTESE - Hazardous Waste & Substance Site List
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
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)
MINES MRDS - Mineral Resources Data System
HWTS - Hazardous Waste Tracking System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP - EDR Proprietary Manufactured Gas Plants
EDR Hist Auto - EDR Exclusive Historical Auto Stations

EXECUTIVE SUMMARY

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.

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

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 01/25/2021 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ELEMENTARY SCHOOL NO Facility Id: 60000776 Status: Inactive - Withdrawn	***FENCE POST DRIVE/RAM***	***SW 1/8 - 1/4 (0.231 mi.)***	***2***	***11***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MONUMENT RANCH SITE Facility Id: 70000024 Status: No Further Action	***GOETZ ROAD / ETHANAC***	***NNW 1/2 - 1 (0.786 mi.)***	***3***	***13***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

SCH: 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.

A review of the SCH list, as provided by EDR, and dated 01/25/2021 has revealed that there is 1 SCH site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ELEMENTARY SCHOOL NO Facility Id: 60000776 Status: Inactive - Withdrawn	***FENCE POST DRIVE/RAM***	***SW 1/8 - 1/4 (0.231 mi.)***	***2***	***11***

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.

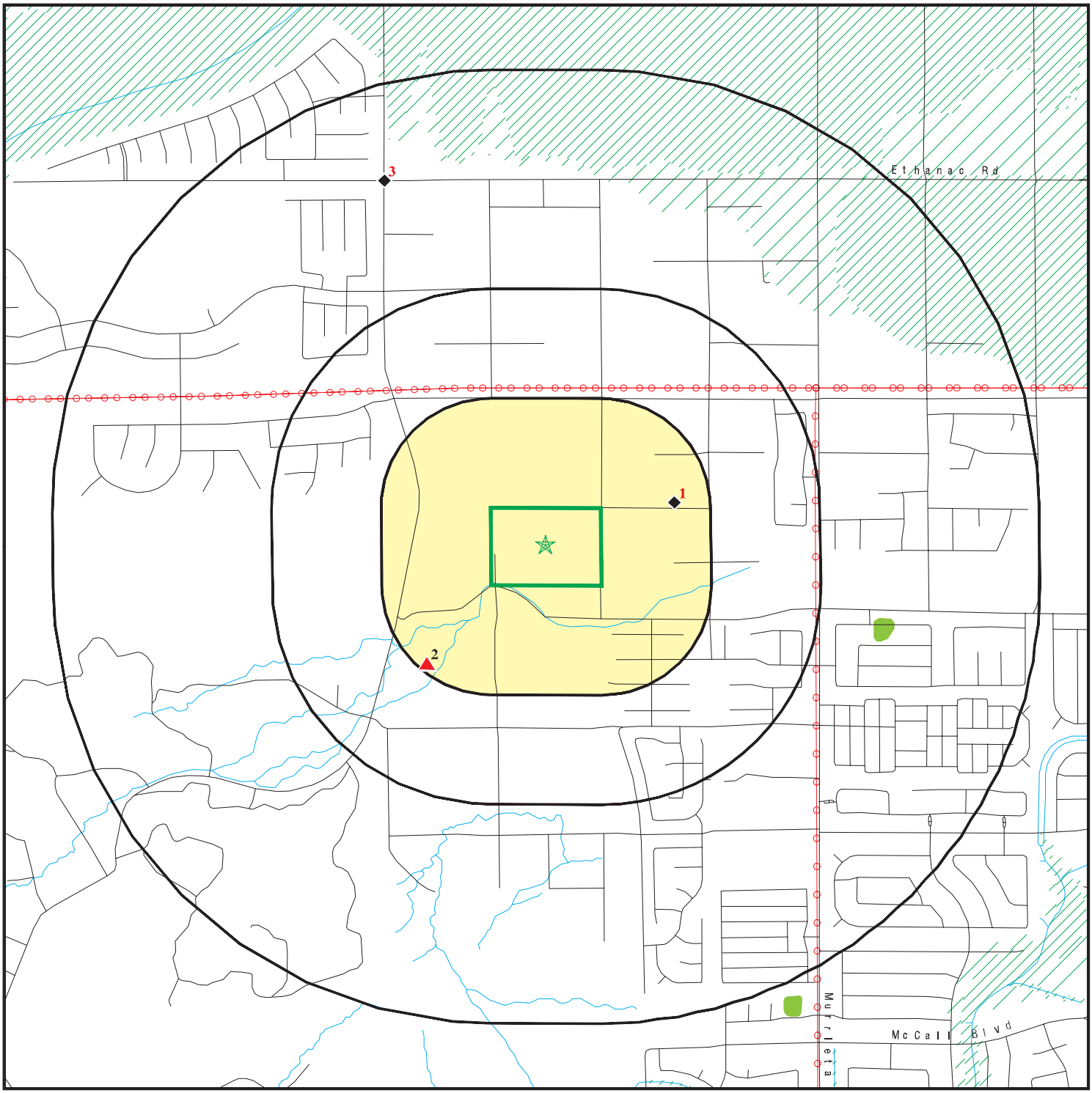
A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/22/2021 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BOWMAN, ALLAN EPA ID:: CAC002988394	25702 TROY LANE	ENE 1/8 - 1/4 (0.168 mi.)	1	9

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6522877.2S



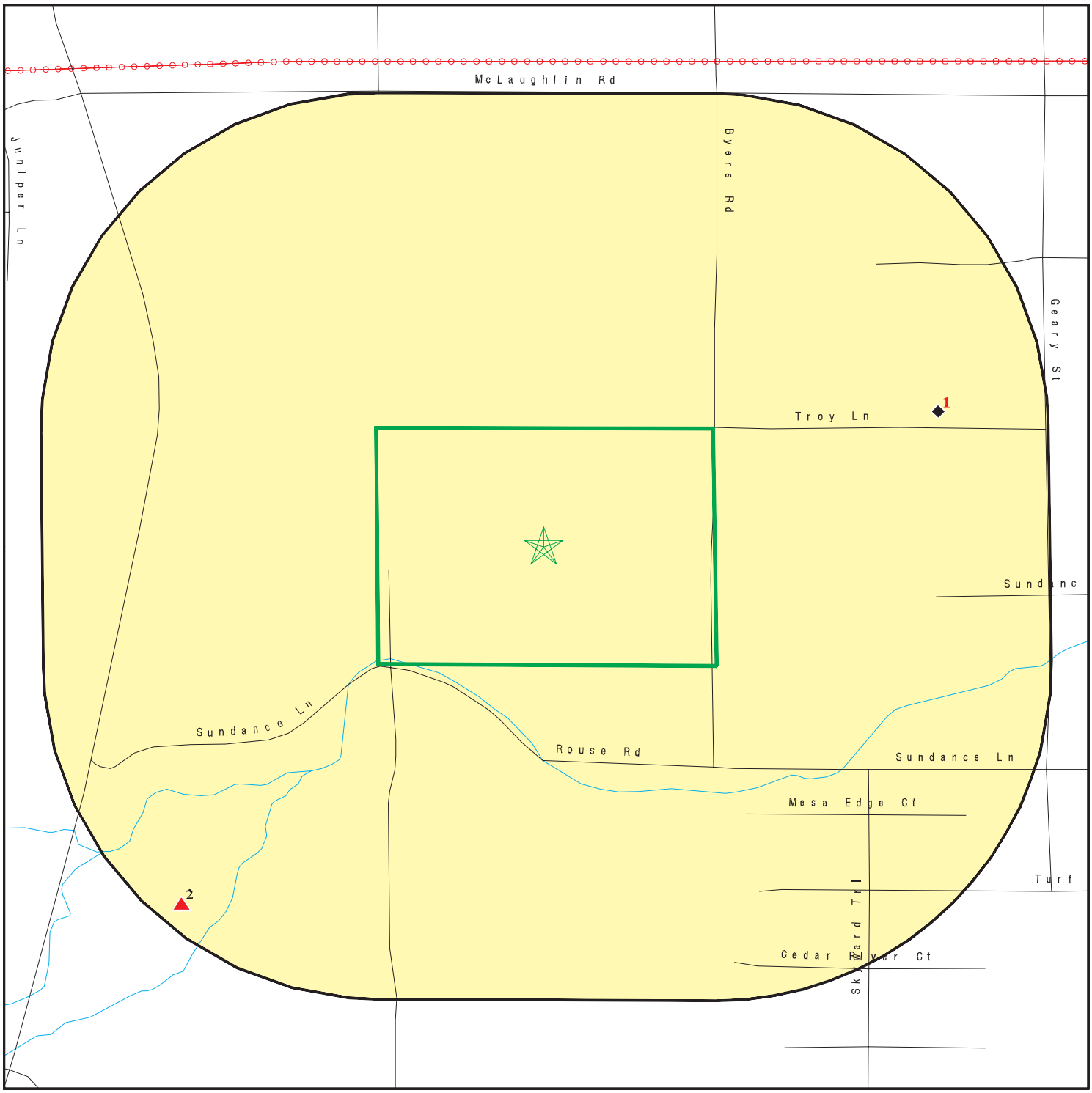
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 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: Menifee 27.5 ADDRESS: Valley Boulevard/Troy Lane Sun City CA 92585 LAT/LONG: 33.730892 / 117.217106	CLIENT: Geotek CONTACT: Anna M. Scott INQUIRY #: 6522877.2s DATE: June 04, 2021 1:42 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 6522877.2S



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

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

N

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:	Menifee 27.5	CLIENT:	Geotek
ADDRESS:	Valley Boulevard/Troy Lane Sun City CA 92585	CONTACT:	Anna M. Scott
LAT/LONG:	33.730892 / 117.217106	INQUIRY #:	6522877.2s
		DATE:	June 04, 2021 1:45 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

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		0	0	0	NR	NR	0
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		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
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		0	1	0	1	NR	2
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		0	0	0	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
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
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	1	NR	NR	NR	1
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	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		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
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		0	1	NR	NR	NR	1
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
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	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		0	0	0	NR	NR	0
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		0	0	0	NR	NR	0
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
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
MINES MRDS	0.001		0	NR	NR	NR	NR	0
HWTS	TP		NR	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		0	NR	NR	NR	NR	0
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	0	3	0	1	0	4

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
ENE
1/8-1/4
0.168 mi.
889 ft.

BOWMAN, ALLAN
25702 TROY LANE
ROMOLAND, CA 92585

RCRA NonGen / NLR **1024768512**
CAC002988394

Relative:
Lower

Actual:
1470 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		2018-11-08 00:00:00.0
Handler Name:	BOWMAN, ALLAN	
Handler Address:		25702 TROY LANE
Handler City,State,Zip:		ROMOLAND, CA 92585-9236
EPA ID:		CAC002988394
Contact Name:		BOWMAN, ALLAN
Contact Address:		25702 TROY LANE
Contact City,State,Zip:		ROMOLAND, CA 92585-9236
Contact Telephone:		951-287-0109
Contact Fax:		Not reported
Contact Email:		TAMMYHURLEY@ALLIANCE-ENVIRO.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		25702 TROY LANE
Mailing City,State,Zip:		ROMOLAND, CA 92585-9236
Owner Name:		BOWMAN, ALLAN
Owner Type:		Other
Operator Name:		BOWMAN, ALLAN
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

BOWMAN, ALLAN (Continued) **1024768512**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-11-20 16:30:55.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	BOWMAN, ALLAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	25702 TROY LANE
Owner/Operator City,State,Zip:	ROMOLAND, CA 92585-9236
Owner/Operator Telephone:	951-287-0109
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	BOWMAN, ALLAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	25702 TROY LANE
Owner/Operator City,State,Zip:	ROMOLAND, CA 92585-9236
Owner/Operator Telephone:	951-287-0109
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

BOWMAN, ALLAN (Continued) **1024768512**

Historic Generators:
- Receive Date: 2018-11-08 00:00:00.0
- Handler Name: BOWMAN, ALLAN
- Federal Waste Generator Description: Not a generator, verified
- State District Owner: Not reported
- Large Quantity Handler of Universal Waste: No
- Recognized Trader Importer: No
- Recognized Trader Exporter: No
- Spent Lead Acid Battery Importer: No
- Spent Lead Acid Battery Exporter: No
- Current Record: Yes
- Non Storage Recycler Activity: Not reported
- Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
- NAICS Code: 56299
- NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
- Violations: No Violations Found

Evaluation Action Summary:
- Evaluations: No Evaluations Found

---

2 **ELEMENTARY SCHOOL NO. 14** **ENVIROSTOR** **S108974351**
SW **FENCE POST DRIVE/RAM DRIVE** **SCH** **N/A**
1/8-1/4 **SUN CITY, CA 92585**
0.231 mi.
1221 ft.

Relative:
Higher

Actual:
1557 ft.

ENVIROSTOR:
- Name: ELEMENTARY SCHOOL NO. 14
- Address: FENCE POST DRIVE/RAM DRIVE
- City,State,Zip: SUN CITY, CA 92585
- Facility ID: 60000776
- Status: Inactive - Withdrawn
- Status Date: 10/22/2008
- Site Code: 404764
- Site Type: School Investigation
- Site Type Detailed: School
- Acres: 12.5
- NPL: NO
- Regulatory Agencies: SMBRP
- Lead Agency: SMBRP
- Program Manager: Angela Garcia
- Supervisor: Shahir Haddad
- Division Branch: Southern California Schools & Brownfields Outreach
- Assembly: 67
- Senate: 23
- Special Program: Not reported
- Restricted Use: NO
- Site Mgmt Req: NONE SPECIFIED
- Funding: School District
- Latitude: 33.727
- Longitude: -117.2218

ELEMENTARY SCHOOL NO. 14 (Continued) **S108974351**

APN: NONE SPECIFIED
Past Use: NONE
Potential COC: DDD DDE DDT
Confirmed COC: 30006-NO 30007-NO 30008-NO
Potential Description: SOIL
Alias Name: 404764
Alias Type: Project Code (Site Code)
Alias Name: 60000776
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 10/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 03/10/2008
Comments: DTSC determined that a Preliminary Environmental Assessment is required based on the Phase I report

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

SCH:

Name: ELEMENTARY SCHOOL NO. 14
Address: FENCE POST DRIVE/RAM DRIVE
City,State,Zip: SUN CITY, CA 92585
Facility ID: 60000776
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 12.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Angela Garcia
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404764
Assembly: 67
Senate: 23
Special Program Status: Not reported
Status: Inactive - Withdrawn
Status Date: 10/22/2008

ELEMENTARY SCHOOL NO. 14 (Continued) **S108974351**

Restricted Use:	NO
Funding:	School District
Latitude:	33.727
Longitude:	-117.2218
APN:	NONE SPECIFIED
Past Use:	NONE
Potential COC:	DDD, DDE, DDT
Confirmed COC:	30006-NO, 30007-NO, 30008-NO
Potential Description:	SOIL
Alias Name:	404764
Alias Type:	Project Code (Site Code)
Alias Name:	60000776
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	10/22/2008
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	03/10/2008
Comments:	DTSC determined that a Preliminary Environmental Assessment is required based on the Phase I report
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

---

3 **MONUMENT RANCH SITE** **ENVIROSTOR** **S109548225**
NNW **GOETZ ROAD / ETHANAC ROAD** **SCH** **N/A**
1/2-1 **PERRIS, CA 92570** **CERS**
0.786 mi.
4148 ft.

Relative:
Lower

Actual:
1431 ft.

ENVIROSTOR:

Name:	MONUMENT RANCH SITE
Address:	GOETZ ROAD / ETHANAC ROAD
City,State,Zip:	PERRIS, CA 92570
Facility ID:	70000024
Status:	No Further Action
Status Date:	06/22/2006
Site Code:	404643
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	23
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP

MONUMENT RANCH SITE (Continued) **S109548225**

Program Manager: Not reported
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 61
Senate: 31
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 33.74253
Longitude: -117.2405
APN: 330-160-007, 330-160-008, 330-160-009, 330-160-010, 330-160-011, 330-160-012, 330-160-013, 330-160-014, 330-160-015, 330160007, 330160008
Past Use: AGRICULTURAL - ORCHARD, AGRICULTURAL - ROW CROPS
Potential COC: Arsenic DDD DDE DDT
Confirmed COC: 30001-NO 30006-NO 30007-NO 30008-NO
Potential Description: SOIL
Alias Name: Romoland School District
Alias Type: Alternate Name
Alias Name: 330-160-007
Alias Type: APN
Alias Name: 330-160-008
Alias Type: APN
Alias Name: 330-160-009
Alias Type: APN
Alias Name: 330-160-010
Alias Type: APN
Alias Name: 330-160-011
Alias Type: APN
Alias Name: 330-160-012
Alias Type: APN
Alias Name: 330-160-013
Alias Type: APN
Alias Name: 330-160-014
Alias Type: APN
Alias Name: 330-160-015
Alias Type: APN
Alias Name: 330160007
Alias Type: APN
Alias Name: 330160008
Alias Type: APN
Alias Name: 404643
Alias Type: Project Code (Site Code)
Alias Name: 20050024
Alias Type: Envirostor ID Number
Alias Name: 70000024
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 01/03/2006
Comments: PEA workplan approval

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

MONUMENT RANCH SITE (Continued) **S109548225**

Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	06/20/2006
Comments:	DTSC issued a No Further Action determination based on a Preliminary Environmental Assessment Report
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	06/26/2006
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	08/09/2005
Comments:	Not reported
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

SCH:

Name:	MONUMENT RANCH SITE
Address:	GOETZ ROAD / ETHANAC ROAD
City,State,Zip:	PERRIS, CA 92570
Facility ID:	70000024
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	23
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Not reported
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404643
Assembly:	61
Senate:	31
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	06/22/2006
Restricted Use:	NO
Funding:	School District
Latitude:	33.74253
Longitude:	-117.2405
APN:	330-160-007, 330-160-008, 330-160-009, 330-160-010, 330-160-011, 330-160-012, 330-160-013, 330-160-014, 330-160-015, 330160007, 330160008

MONUMENT RANCH SITE (Continued) **S109548225**

Past Use:	AGRICULTURAL - ORCHARD, AGRICULTURAL - ROW CROPS
Potential COC:	Arsenic, DDD, DDE, DDT
Confirmed COC:	30001-NO, 30006-NO, 30007-NO, 30008-NO
Potential Description:	SOIL
Alias Name:	Romoland School District
Alias Type:	Alternate Name
Alias Name:	330-160-007
Alias Type:	APN
Alias Name:	330-160-008
Alias Type:	APN
Alias Name:	330-160-009
Alias Type:	APN
Alias Name:	330-160-010
Alias Type:	APN
Alias Name:	330-160-011
Alias Type:	APN
Alias Name:	330-160-012
Alias Type:	APN
Alias Name:	330-160-013
Alias Type:	APN
Alias Name:	330-160-014
Alias Type:	APN
Alias Name:	330-160-015
Alias Type:	APN
Alias Name:	330160007
Alias Type:	APN
Alias Name:	330160008
Alias Type:	APN
Alias Name:	404643
Alias Type:	Project Code (Site Code)
Alias Name:	20050024
Alias Type:	Envirostor ID Number
Alias Name:	70000024
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	01/03/2006
Comments:	PEA workplan approval
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	06/20/2006
Comments:	DTSC issued a No Further Action determination based on a Preliminary Environmental Assessment Report
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	06/26/2006
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement

MONUMENT RANCH SITE (Continued) **S109548225**

Completed Date:	08/09/2005
Comments:	Not reported
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

CERS:

Name:	MONUMENT RANCH SITE
Address:	GOETZ ROAD / ETHANAC ROAD
City,State,Zip:	PERRIS, CA 92570
Site ID:	340232
CERS ID:	70000024
CERS Description:	School Investigation

Affiliation:

Affiliation Type Desc:	Lead Project Manager
Entity Name:	IVY OSORNIO
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:	Supervisor
Entity Name:	SHAHIR HADDAD
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

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

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: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 07/12/2021
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 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

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: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 07/12/2021
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: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 07/12/2021
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: 03/30/2021
Next Scheduled EDR Contact: 07/12/2021
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: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 07/26/2021
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: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 07/26/2021
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: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 39

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/05/2021
Next Scheduled EDR Contact: 08/23/2021
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: 02/22/2021
Date Data Arrived at EDR: 02/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
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: 02/22/2021
Date Data Arrived at EDR: 02/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
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: 12/14/2020
Date Data Arrived at EDR: 12/15/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 7

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 07/05/2021
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: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
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: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
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: 02/08/2021
Date Data Arrived at EDR: 02/09/2021
Date Made Active in Reports: 05/03/2021
Number of Days to Update: 83

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/11/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Quarterly

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 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 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 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 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 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

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 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 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 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

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/09/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 09/30/2020
Date Data Arrived at EDR: 12/22/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/02/2020
Date Data Arrived at EDR: 12/18/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
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: 03/05/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 04/01/2021
Number of Days to Update: 23

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Semi-Annually

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: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
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: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/02/2020
Date Data Arrived at EDR: 12/18/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 11/12/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/09/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 09/30/2020
Date Data Arrived at EDR: 12/22/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

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: 03/22/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Varies

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

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: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
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: 12/17/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/09/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 12/11/2020
Date Data Arrived at EDR: 12/11/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/16/2021
Next Scheduled EDR Contact: 06/28/2021
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: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/09/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 08/23/2021
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: 04/22/2021
Next Scheduled EDR Contact: 08/09/2021
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: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
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: 04/29/2021
Next Scheduled EDR Contact: 08/09/2021
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: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/22/2021
Next Scheduled EDR Contact: 09/06/2021
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: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
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: 12/31/2019
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/19/2021
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: 01/20/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
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: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
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: 02/24/2021
Date Data Arrived at EDR: 02/24/2021
Date Made Active in Reports: 05/14/2021
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/24/2021
Next Scheduled EDR Contact: 06/21/2021
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

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: 02/11/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/05/2021
Number of Days to Update: 83

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

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

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: 01/20/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

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: 03/01/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
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: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 07/12/2021
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: 03/02/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 77

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 05/28/2021
Next Scheduled EDR Contact: 09/13/2021
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: 12/16/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 85

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/24/2021
Next Scheduled EDR Contact: 07/05/2021
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: 12/31/2020
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
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: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 02/11/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 47

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 08/30/2021
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: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
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: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
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: 05/18/2021
Next Scheduled EDR Contact: 08/23/2021
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: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 04/30/2021
Next Scheduled EDR Contact: 08/16/2021
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: 05/07/2021
Next Scheduled EDR Contact: 08/16/2021
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: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 06/28/2021
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: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/17/2021
Next Scheduled EDR Contact: 08/30/2021
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: 01/20/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 60

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
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: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 06/14/2021
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: 01/22/2021
Date Data Arrived at EDR: 02/18/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
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: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/05/2021
Number of Days to Update: 50
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 08/16/2021
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: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
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: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
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: 03/08/2021
Date Data Arrived at EDR: 03/11/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 61
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 08/02/2021
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: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/13/2021
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: 05/27/2021
Next Scheduled EDR Contact: 09/13/2021
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: 05/07/2021
Next Scheduled EDR Contact: 08/16/2021
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: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
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: 04/27/2021
Next Scheduled EDR Contact: 08/09/2021
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: 12/31/2020
Date Data Arrived at EDR: 01/13/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 68

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
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: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
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: 04/28/2021
Next Scheduled EDR Contact: 08/16/2021
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: 05/21/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 07/12/2021
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

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 56

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/26/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

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: 02/01/2021
Date Data Arrived at EDR: 02/24/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Semi-Annually

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: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
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: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
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: 12/11/2020
Date Data Arrived at EDR: 12/11/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 81

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/02/2021
Next Scheduled EDR Contact: 09/20/2021
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: 02/03/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 33

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2021
Next Scheduled EDR Contact: 07/26/2021
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: 01/02/2021
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
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: 11/03/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
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: 02/17/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/14/2021
Next Scheduled EDR Contact: 08/30/2021
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: 12/17/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/09/2021
Number of Days to Update: 82

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
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: 05/14/2021
Next Scheduled EDR Contact: 08/23/2021
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: 03/01/2021
Date Data Arrived at EDR: 03/04/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 77

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
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: 02/23/2021
Date Data Arrived at EDR: 02/25/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 83

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
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: 02/26/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
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: 12/31/2018
Date Data Arrived at EDR: 06/16/2020
Date Made Active in Reports: 08/28/2020
Number of Days to Update: 73

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 06/28/2021
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: 12/31/2020
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/09/2021
Number of Days to Update: 79

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
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: 02/08/2021
Date Data Arrived at EDR: 02/12/2021
Date Made Active in Reports: 05/05/2021
Number of Days to Update: 82

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/05/2021
Next Scheduled EDR Contact: 08/23/2021
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: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/16/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 05/07/2021
Number of Days to Update: 79

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/14/2021
Next Scheduled EDR Contact: 08/30/2021
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: 02/16/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 05/10/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/14/2021
Next Scheduled EDR Contact: 08/30/2021
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: 01/05/2021
Date Data Arrived at EDR: 01/05/2021
Date Made Active in Reports: 03/18/2021
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
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: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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: 01/29/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 05/28/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/08/2021
Date Data Arrived at EDR: 02/09/2021
Date Made Active in Reports: 05/04/2021
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/11/2021
Next Scheduled EDR Contact: 08/23/2021
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: 03/02/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 78

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 05/28/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 03/09/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
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: 03/12/2021
Date Data Arrived at EDR: 03/16/2021
Date Made Active in Reports: 06/01/2021
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
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: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
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: 05/14/2021
Next Scheduled EDR Contact: 08/30/2021
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: 03/19/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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: 03/09/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
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: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 05/19/2021
Next Scheduled EDR Contact: 09/13/2021
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: 01/20/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

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: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

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: 04/08/2021
Date Data Arrived at EDR: 04/09/2021
Date Made Active in Reports: 04/20/2021
Number of Days to Update: 11

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
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: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
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: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
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: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
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: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 03/17/2021
Date Data Arrived at EDR: 03/18/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 7

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/17/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 08/16/2021
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: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/24/2020
Number of Days to Update: 8

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/05/2021
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: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
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: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/16/2021
Number of Days to Update: 80

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 12/17/2020
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 04/16/2021
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/05/2021
Number of Days to Update: 83

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/05/2021
Next Scheduled EDR Contact: 08/09/2021
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: 01/14/2021
Date Data Arrived at EDR: 01/15/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 80

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
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: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 2

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/10/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
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: 05/11/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/29/2020
Date Data Arrived at EDR: 10/30/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 77

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 01/28/2021
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 08/16/2021
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: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 02/10/2021
Date Data Arrived at EDR: 02/12/2021
Date Made Active in Reports: 03/11/2021
Number of Days to Update: 27

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/07/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 06/01/2021
Next Scheduled EDR Contact: 08/02/2021
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: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/11/2021
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 72

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/11/2021
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/26/2021
Number of Days to Update: 73

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/13/2021
Next Scheduled EDR Contact: 07/26/2021
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: 01/01/2021
Date Data Arrived at EDR: 02/18/2021
Date Made Active in Reports: 05/10/2021
Number of Days to Update: 81

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/07/2021
Next Scheduled EDR Contact: 07/26/2021
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: 03/26/2021
Next Scheduled EDR Contact: 07/05/2021
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: 02/04/2021
Date Data Arrived at EDR: 04/16/2021
Date Made Active in Reports: 04/21/2021
Number of Days to Update: 5

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
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: 03/26/2021
Next Scheduled EDR Contact: 07/05/2021
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: 03/26/2021
Next Scheduled EDR Contact: 07/05/2021
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: 10/19/2020
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/26/2021
Number of Days to Update: 73

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
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: 04/07/2021
Next Scheduled EDR Contact: 07/26/2021
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: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
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: 09/11/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 77

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
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: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
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: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/21/2020
Date Data Arrived at EDR: 12/21/2020
Date Made Active in Reports: 03/10/2021
Number of Days to Update: 79

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/04/2021
Date Data Arrived at EDR: 02/09/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 9

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 06/02/2021
Next Scheduled EDR Contact: 09/06/3021
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/08/2021
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 72

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
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: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
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: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/03/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/12/2021
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/02/2021
Date Made Active in Reports: 04/20/2021
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 04/30/2021
Next Scheduled EDR Contact: 08/16/2021
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: 05/25/2021
Date Data Arrived at EDR: 05/26/2021
Date Made Active in Reports: 06/01/2021
Number of Days to Update: 6

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
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: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
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: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/10/2021
Number of Days to Update: 55

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/15/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/10/2021
Number of Days to Update: 55
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/15/2021
Next Scheduled EDR Contact: 06/28/2021
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: 03/31/2021
Next Scheduled EDR Contact: 07/12/2021
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: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 04/29/2021
Date Made Active in Reports: 05/03/2021
Number of Days to Update: 4
Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
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: 11/16/2020
Date Data Arrived at EDR: 11/18/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 78
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/03/2021
Next Scheduled EDR Contact: 08/16/2021
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: 03/02/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 05/21/2021
Number of Days to Update: 79

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 05/28/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 08/02/2021
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: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
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: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/05/2021
Number of Days to Update: 83

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

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: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
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: 02/11/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/05/2021
Number of Days to Update: 83

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
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: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/07/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 05/14/2021
Number of Days to Update: 3

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/06/2021
Next Scheduled EDR Contact: 08/30/2021
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: 03/12/2021
Next Scheduled EDR Contact: 06/21/2021
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: 06/02/2021
Next Scheduled EDR Contact: 09/20/2021
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: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/24/2021
Date Data Arrived at EDR: 02/26/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 82

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
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: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 08/16/2021
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: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
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: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
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: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 12/03/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 77

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/24/2021
Next Scheduled EDR Contact: 09/12/2021
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 7

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 07/05/2021
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: 01/05/2021
Date Data Arrived at EDR: 01/06/2021
Date Made Active in Reports: 03/18/2021
Number of Days to Update: 71

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 05/05/2021
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 82

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
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: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
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: 12/28/2020
Date Data Arrived at EDR: 01/29/2021
Date Made Active in Reports: 04/22/2021
Number of Days to Update: 83
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
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: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
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: 05/05/2021
Next Scheduled EDR Contact: 08/23/2021
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: 03/29/2021
Date Data Arrived at EDR: 04/21/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 2
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
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: 03/01/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
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: 12/21/2020
Date Data Arrived at EDR: 12/23/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 12
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/26/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/21/2021
Date Data Arrived at EDR: 04/22/2021
Date Made Active in Reports: 05/12/2021
Number of Days to Update: 20

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/24/2021
Next Scheduled EDR Contact: 08/09/2021
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: 10/05/2020
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 05/10/2021
Number of Days to Update: 82

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/11/2021
Next Scheduled EDR Contact: 08/23/2021
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: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
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: 04/30/2021
Next Scheduled EDR Contact: 08/09/2021
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: 04/09/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/13/2021
Next Scheduled EDR Contact: 08/30/2021
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: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
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
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.

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.

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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MENIFEE 27.5
VALLEY BOULEVARD/TROY LANE
SUN CITY, CA 92585

TARGET PROPERTY COORDINATES

Latitude (North):	33.730892 - 33° 43' 51.21''
Longitude (West):	117.217106 - 117° 13' 1.58''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	479887.2
UTM Y (Meters):	3732146.0
Elevation:	1518 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5641314 ROMOLAND, 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).

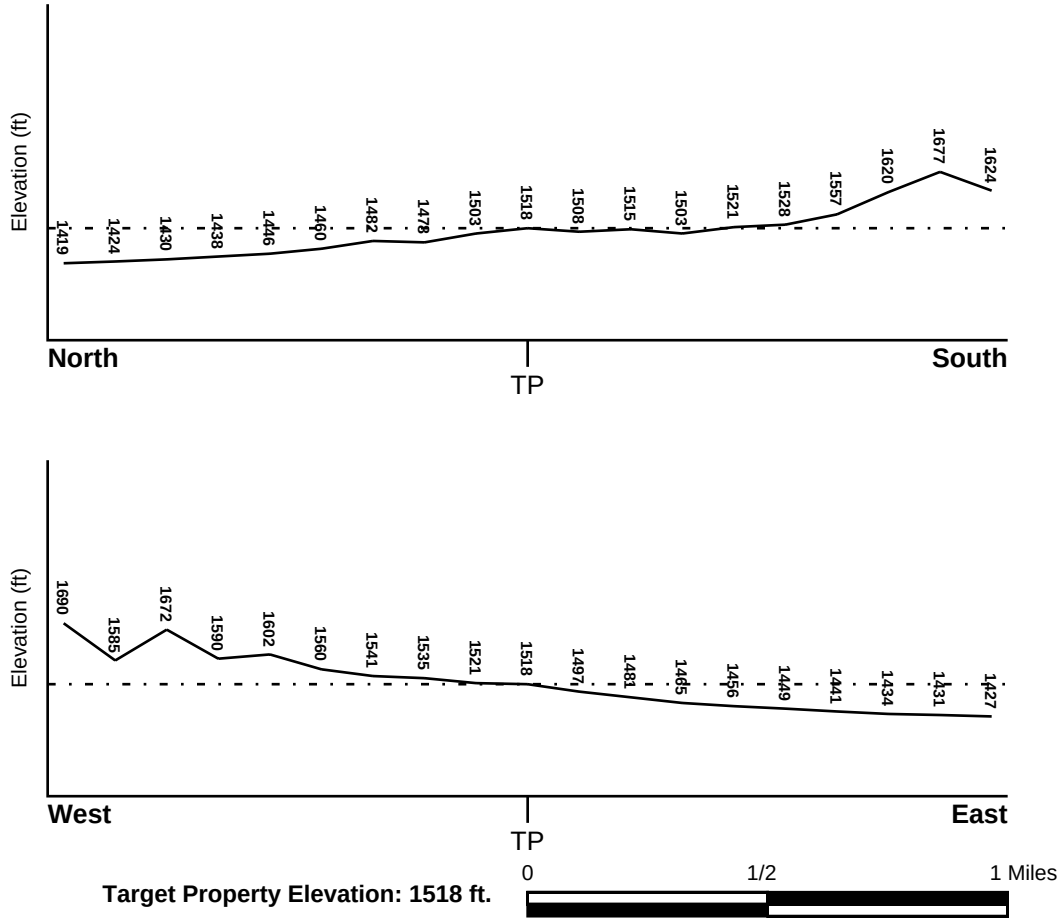
TOPOGRAPHIC INFORMATION

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 NE

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
06065C2055H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	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
Not Reported		

* ©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

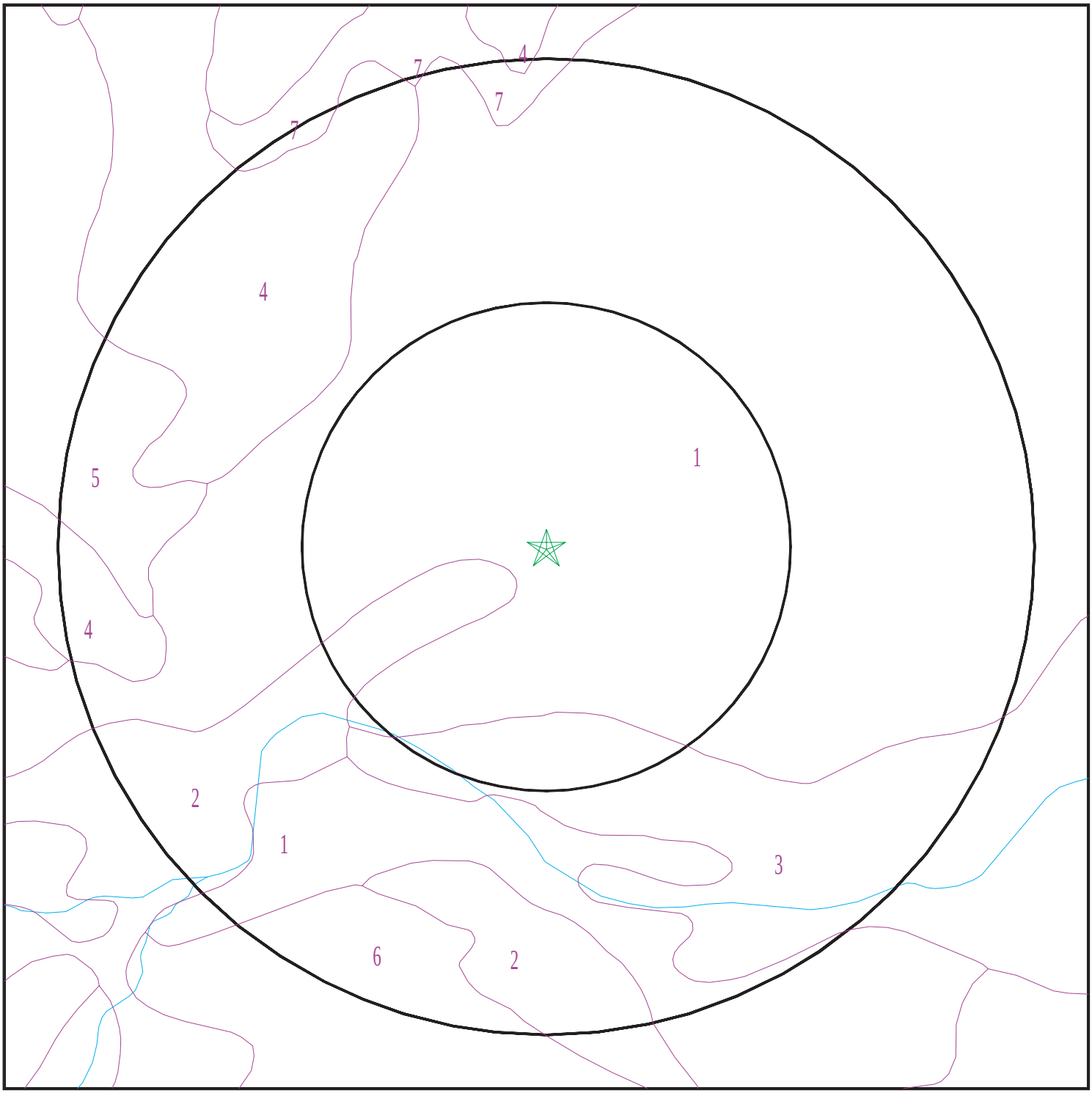
Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

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 - 6522877.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Menifee 27.5	CLIENT:	Geotek
ADDRESS:	Valley Boulevard/Troy Lane Sun City CA 92585	CONTACT:	Anna M. Scott
LAT/LONG:	33.730892 / 117.217106	INQUIRY #:	6522877.2s
		DATE:	June 04, 2021 1:46 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

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: AULD

Soil Surface Texture: clay

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: Low

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	27 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	27 inches	44 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	44 inches	48 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 2

Soil Component Name: AULD

Soil Surface Texture: clay

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: Low

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	27 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	27 inches	44 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	44 inches	48 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 3

Soil Component Name: WYMAN

Soil Surface Texture: 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

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not 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	14 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6
2	14 inches	35 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6
3	35 inches	50 inches	stratified loam to clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6
4	50 inches	59 inches	stratified loam to clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6

Soil Map ID: 4

Soil Component Name: CAJALCO

Soil Surface Texture: 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: Low

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	12 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	12 inches	18 inches	loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	18 inches	61 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 5

Soil Component Name: CAJALCO

Soil Surface Texture: 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: Low

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	12 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	12 inches	22 inches	loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	22 inches	61 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 6

Soil Component Name: LODO

Soil Surface Texture: gravelly 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: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 38 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	7 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 4 Min: 1.4	Max: Min:
2	7 inches	18 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 4 Min: 1.4	Max: Min:

Soil Map ID: 7

Soil Component Name: LAS POSAS

Soil Surface Texture: 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: Low

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	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

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		
2	11 inches	29 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	29 inches	53 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	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
1	USGS40000137574	1/4 - 1/2 Mile ENE
2	USGS40000137534	1/4 - 1/2 Mile East
A3	USGS40000137511	1/2 - 1 Mile East
C9	USGS40000137694	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

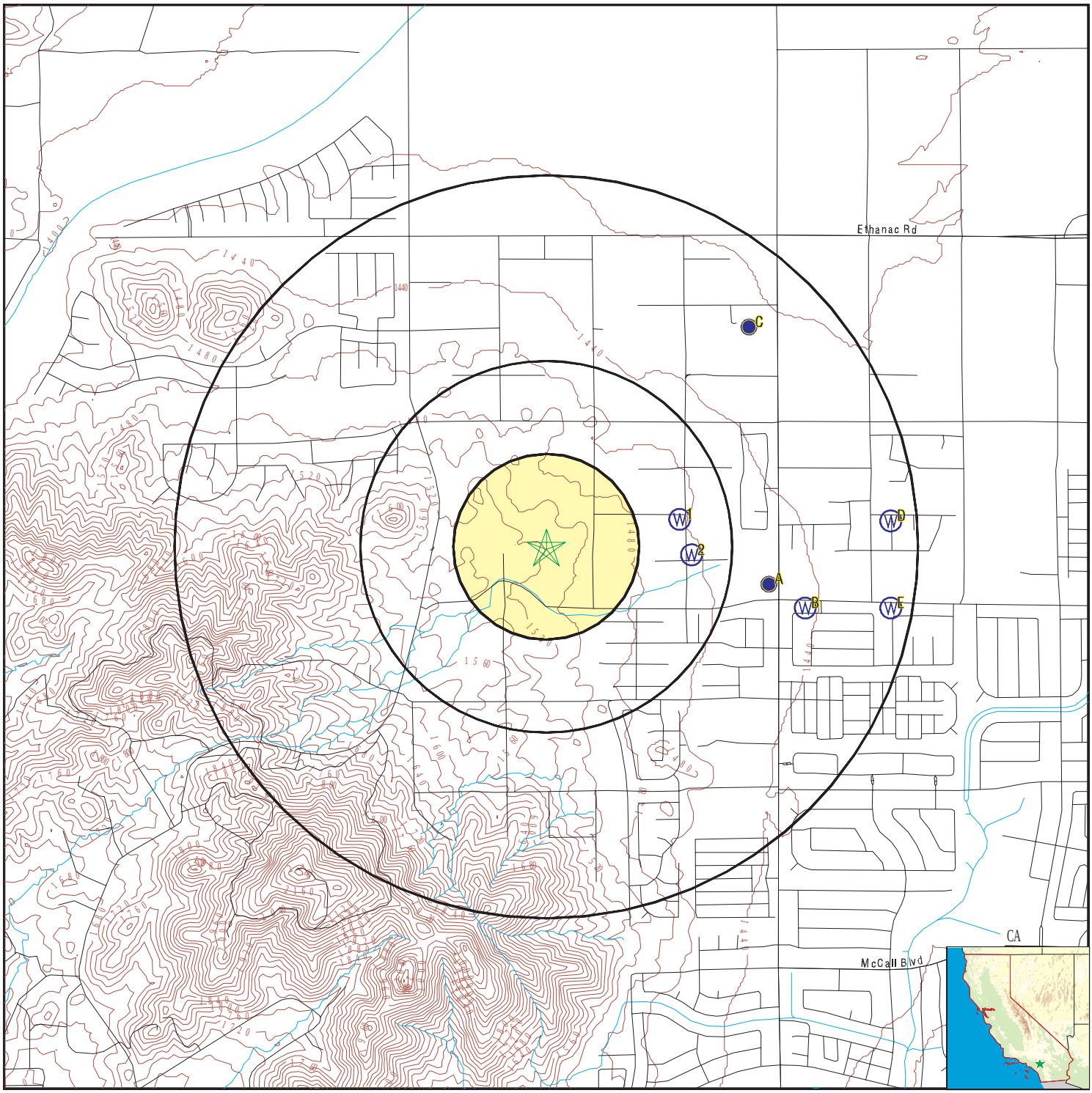
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A4	CAUSGSN00006828	1/2 - 1 Mile East
B5	CADWR0000037275	1/2 - 1 Mile ESE
B6	CADWR0000015790	1/2 - 1 Mile ESE
B7	CADWR0000024076	1/2 - 1 Mile ESE
C8	CADWR8000005253	1/2 - 1 Mile NE
D10	CADWR0000030101	1/2 - 1 Mile East
D11	CADWR0000021744	1/2 - 1 Mile East
E12	CADWR0000007196	1/2 - 1 Mile East
E13	CADWR0000034909	1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 6522877.2s



- 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

SITE NAME: Menifee 27.5	CLIENT: Geotek
ADDRESS: Valley Boulevard/Troy Lane Sun City CA 92585	CONTACT: Anna M. Scott
LAT/LONG: 33.730892 / 117.217106	INQUIRY #: 6522877.2s DATE: June 04, 2021 1:46 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
ENE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000137574**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	005S003W17Q001S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Other aquifers	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	198809
Well Depth:	210	Well Depth Units:	ft
Well Hole Depth:	210	Well Hole Depth Units:	ft

2
East
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000137534**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	005S003W17R002S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19920211	Well Depth:	220
Well Depth Units:	ft	Well Hole Depth:	220
Well Hole Depth Units:	ft		

A3
East
1/2 - 1 Mile
Lower

FED USGS **USGS40000137511**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	005S003W17R001S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	370
Well Depth Units:	ft	Well Hole Depth:	370
Well Hole Depth Units:	ft		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A4
East
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00006828**

Well ID:	USGS-334346117122101	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-334346117122101	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-334346117122101&store_num=		
GeoTracker Data:	Not Reported		

B5
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000037275**

Well ID:	05S03W21D001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	05S03W21D001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=05S03W21D001S&store_num=		
GeoTracker Data:	Not Reported		

B6
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000015790**

Well ID:	05S03W21D003S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	05S03W21D003S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=05S03W21D003S&store_num=		
GeoTracker Data:	Not Reported		

B7
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000024076**

Well ID:	05S03W21D002S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	05S03W21D002S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=05S03W21D002S&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C8
NE
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000005253**

State Well #:	05S03W17A001S	Station ID:	6316
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	San Jacinto	Well Completion Rpt #:	Not Reported

C9
NE
1/2 - 1 Mile
Lower

FED USGS **USGS40000137694**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	005S003W17A001S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19950206	Well Depth:	160
Well Depth Units:	ft	Well Hole Depth:	160
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1995-02-07
Feet below surface:	22	Feet to sea level:	Not Reported
Note:	Not Reported		

D10
East
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000030101**

Well ID:	05S03W16P001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	05S03W16P001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=05S03W16P001S&store_num=		
GeoTracker Data:	Not Reported		

D11
East
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000021744**

Well ID:	05S03W16P002S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	05S03W16P002S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=05S03W16P002S&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

E12
East
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000007196**

Well ID:	05S03W21C002S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	05S03W21C002S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=05S03W21C002S&store_num=		
GeoTracker Data:	Not Reported		

E13
East
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000034909**

Well ID:	05S03W21C001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	05S03W21C001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=05S03W21C001S&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92585	6	0

Federal EPA Radon Zone for RIVERSIDE County: 2

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 RIVERSIDE COUNTY, CA

Number of sites tested: 12

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.117 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.450 pCi/L	100%	0%	0%
Basement	1.700 pCi/L	100%	0%	0%

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.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

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.

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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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.

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

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX E

VAPOR ENCROACHMENT

Menifee 27.5
Valley Boulevard/Troy Lane
Sun City, CA 92585

Inquiry Number: 6522877.2s
June 9, 2021

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	**ES1**
Primary Map	**2**
Secondary Map	**3**
Map Findings	**4**
Record Sources and Currency	**GR-1**

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

The EDR Vapor Encroachment Worksheet enables EDR's customers to make certain online modifications that effects maps, text and calculations contained in this Report. As a result, maps, text and calculations contained in this Report may have been so modified. EDR has not taken any action to verify any such modifications, and this report and the findings set forth herein must be read in light of this fact. Environmental Data Resources shall not be responsible for any customer's decision to include or not include in any final report any records determined to be within the relevant minimum search distances.

This report contains information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANYSUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES.ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this report "AS IS". Any analyses, estimates, ratings, or risk codes provided in this report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can produce information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2021 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by EDR. The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Default Area of Concern (Miles)*	property	1/10	> 1/10
Federal NPL site list	1.0	0	0	0
Federal Delisted NPL site list	1.0	0	0	0
Federal CERCLIS list	0.5	0	0	0
Federal CERCLIS NFRAP site list	0.5	0	0	0
Federal RCRA CORRACTS facilities list	1.0	0	0	0
Federal RCRA non-CORRACTS TSD facilities list	0.5	0	0	0
Federal RCRA generators list	0.25	0	0	0
Federal institutional controls / engineering controls registries	0.5	0	0	0
Federal ERNS list	0.001	0	0	-
State- and tribal - equivalent NPL	1.0	0	0	0
State- and tribal - equivalent CERCLIS	1.0	0	0	1
State and tribal landfill and/or solid waste disposal site lists	0.5	0	0	0
State and tribal leaking storage tank lists	0.5	0	0	0
State and tribal registered storage tank lists	0.25	0	0	0
State and tribal institutional control / engineering control registries	not searched	-	-	-
State and tribal voluntary cleanup sites	0.5	0	0	0
State and tribal Brownfields sites	0.5	0	0	0

ADDITIONAL ENVIRONMENTAL RECORDS				
Local Brownfield lists	0.5	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites	0.5	0	0	0
Local Lists of Hazardous waste / Contaminated Sites	1.0	0	0	1
Local Lists of Registered Storage Tanks	0.25	0	0	0
Local Land Records	0.5	0	0	0
Records of Emergency Release Reports	0.5	0	0	0
Other Ascertainable Records	1.0	0	0	0

EDR HIGH RISK HISTORICAL RECORDS				
EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

*The Default Area of Concern may be adjusted by the environmental professional using experience and professional judgement. Each category may include several databases, and each database may have a different distance. A list of individual databases is provided at the back of this report.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

MENIFEE 27.5
VALLEY BOULEVARD/TROY LANE
SUN CITY, CA 92585

COORDINATES

Latitude (North):	33.730892 - 33° 43′ 51.211853″
Longitude (West):	117.217106 - 117° 13′ 1.5948486″
Elevation:	1518 ft. above sea level

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
ELEMENTARY SCHOOL NO. 14	FENCE POST DRIVE/RAM DRIVE	1/10 - 1/3 SW	▲ 1	8
ENVIROSTOR: ENVIROSTOR SCH: SCH				

ADDITIONAL ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
ELEMENTARY SCHOOL NO. 14	FENCE POST DRIVE/RAM DRIVE	1/10 - 1/3 SW	▲ 1	8
ENVIROSTOR: ENVIROSTOR SCH: SCH				

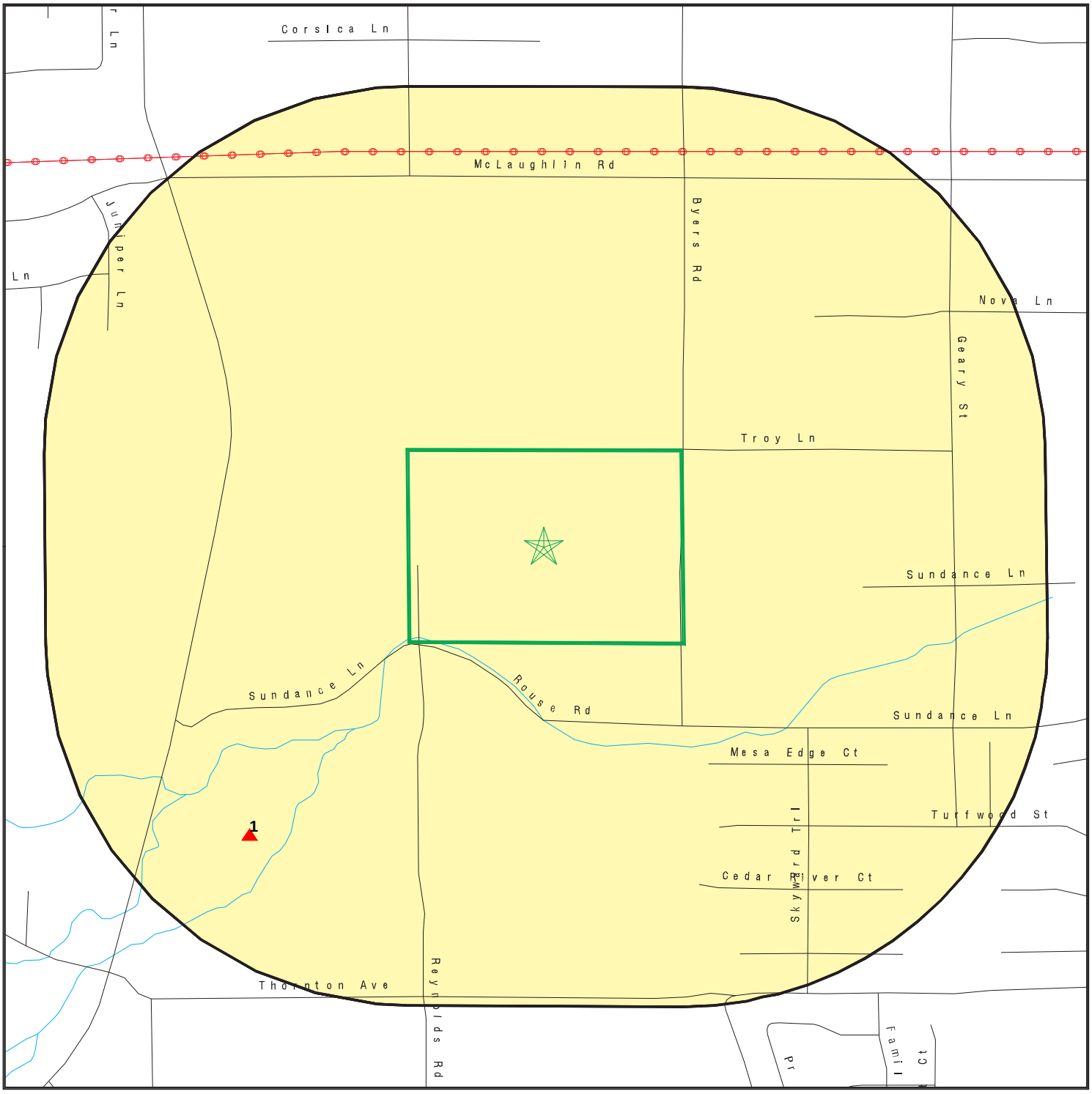
EDR HIGH RISK HISTORICAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

EDR RECOVERED GOVERNMENT ARCHIVES

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

PRIMARY MAP - 6522877.2S



0 300 1/3 1/2 Miles

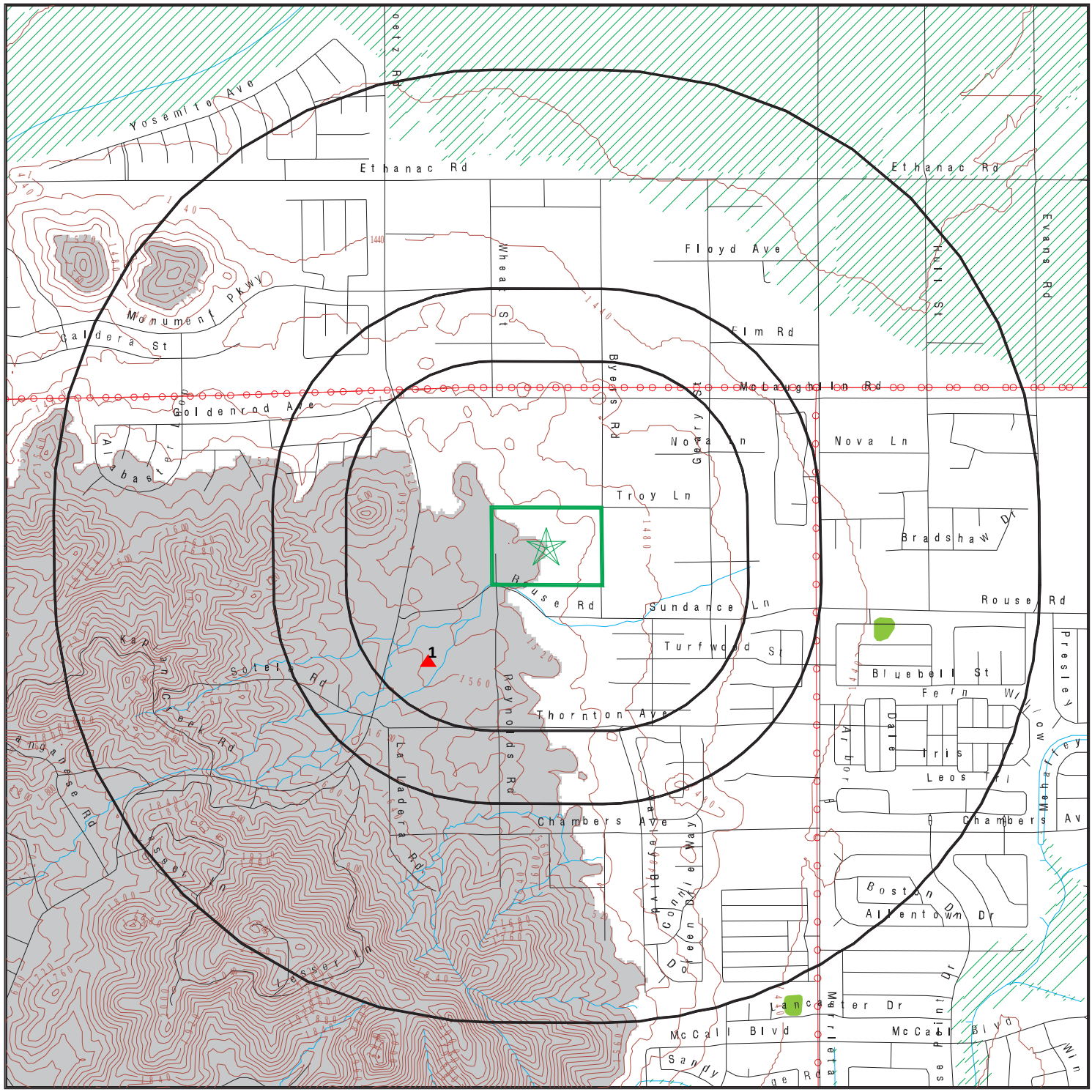
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- 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: Menifee 27.5	CLIENT: Geotek
ADDRESS: Valley Boulevard/Troy Lane Sun City CA 92585	CONTACT: Anna M. Scott
LAT/LONG: 33.730892 / 117.217106	INQUIRY #: 6522877.2s DATE: June 04, 2021 1:43 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

SECONDARY MAP - 6522877.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- 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
- Upgradient Area
- 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: Menifee 27.5	CLIENT: Geotek
ADDRESS: Valley Boulevard/Troy Lane Sun City CA 92585	CONTACT: Anna M. Scott
LAT/LONG: 33.730892 / 117.217106	INQUIRY #: 6522877.2s DATE: June 04, 2021 1:42 pm

Copyright © 2021 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**		EDR SITE ID NUMBER
◆ **MAP ID#**	Direction Distance Range (Distance feet / miles) Relative Elevation Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:
Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

ELEMENTARY SCHOOL NO. 14 FENCE POST DRIVE/RAM DRIVE, SUN CITY, CA, 92585		S108974351
▲ 1	SW 1/10 - 1/3 (1221 ft. / 0.231 mi.) 39 ft. Higher Elevation 1557 ft. Above Sea Level	State- and tribal - equivalent CERCLIS Local Lists of Hazardous waste / Contaminated Sites

Worksheet:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
ENVIRONMENTAL RECORDS						
Federal NPL site list						
US	NPL	National Priority List	EPA	04/27/2021	05/03/2021	05/19/2021
US	Proposed NPL	Proposed National Priority List Sites	EPA	04/27/2021	05/03/2021	05/19/2021
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
Federal CERCLIS list						
US	SEMS	Superfund Enterprise Management System	EPA	04/27/2021	05/03/2021	05/19/2021
Federal RCRA CORRACTS facilities list						
US	CORRACTS	Corrective Action Report	EPA	03/22/2021	03/23/2021	05/19/2021
Federal RCRA TSD facilities list						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
Federal RCRA generators list						
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
Federal institutional controls / engineering controls registries						
US	LUCIS	Land Use Control Information System	Department of the Navy	02/09/2021	02/11/2021	03/22/2021
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/22/2021	02/23/2021	05/19/2021
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/22/2021	02/23/2021	05/19/2021
Federal ERNS list						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	12/14/2020	12/15/2020	12/22/2020
State and tribal - equivalent NPL						
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	01/25/2021	01/26/2021	04/13/2021
State and tribal - equivalent CERCLIS						
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	01/25/2021	01/26/2021	04/13/2021
State and tribal landfill / solid waste disposal						
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	02/08/2021	02/09/2021	05/03/2021
State and tribal leaking storage tank lists						
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	11/12/2020	12/16/2020	03/12/2021
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/01/2020	12/16/2020	03/12/2021
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/09/2020	12/16/2020	03/12/2021
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	09/30/2020	12/22/2020	03/12/2021
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	10/02/2020	12/18/2020	03/12/2021
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/01/2020	12/16/2020	03/12/2021
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/07/2020	12/16/2020	03/12/2021
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victorv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
State and tribal registered storage tank lists						
CA	UST	Active UST Facilities	SWRCB	03/08/2021	03/09/2021	03/31/2021
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	03/05/2021	03/09/2021	04/01/2021
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/01/2020	12/16/2020	03/12/2021
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	10/02/2020	12/18/2020	03/12/2021
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	11/12/2020	12/16/2020	03/12/2021
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/09/2020	12/16/2020	03/12/2021
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/01/2020	12/16/2020	03/12/2021
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	09/30/2020	12/22/2020	03/12/2021
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	10/07/2020	12/16/2020	03/12/2021
US	FEMA UST	Underground Storage Tank Listing	FEMA	01/29/2021	02/17/2021	03/22/2021
State and tribal voluntary cleanup sites						
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	01/25/2021	01/26/2021	04/13/2021

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
State and tribal Brownfields sites						
CA	BROWNFIELDS	Considered Brownfieds Sites Listing	State Water Resources Control Board	12/17/2020	12/17/2020	03/09/2021
Other Records						
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2020	01/13/2021	03/22/2021
US	ROD	Records Of Decision	EPA	04/27/2021	05/03/2021	05/19/2021
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	04/27/2021	05/03/2021	05/19/2021
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
CA	SWRCY	Recycler Database	Department of Conservation	03/09/2021	03/09/2021	03/31/2021
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	SAN FRANCISCO AST	Aboveground Storage Tank Site Listing	San Francisco County Department of Public Hea	02/11/2021	02/11/2021	05/05/2021
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2019	12/01/2020	02/09/2021
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	12/07/2020	12/09/2020	03/02/2021
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	04/27/2021	05/03/2021	05/19/2021
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	12/14/2020	12/17/2020	03/12/2021
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/08/2017	09/11/2018	09/14/2018
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	Delisted NPL	National Priority List Deletions	EPA	04/27/2021	05/03/2021	05/19/2021
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	04/27/2021	05/03/2021	05/19/2021
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/22/2021	03/23/2021	05/19/2021
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	12/16/2020	12/17/2020	03/12/2021
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	12/07/2020	12/09/2020	03/02/2021
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	12/11/2020	12/11/2020	03/02/2021
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	02/11/2021	02/17/2021	04/05/2021
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	11/24/2020	11/30/2020	01/25/2021
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/01/2021	02/24/2021	05/19/2021
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	PRP	Potentially Responsible Parties	EPA	12/30/2020	01/14/2021	03/05/2021
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	SSTS	Section 7 Tracking Systems	EPA	01/20/2021	01/21/2021	03/22/2021
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	PADS	PCB Activity Database System	EPA	11/19/2020	01/08/2021	03/22/2021
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	03/08/2021	03/11/2021	05/11/2021
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	FINDS	Facility Index System/Facility Registry System	EPA	02/03/2021	03/03/2021	04/05/2021
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RMP	Risk Management Plans	Environmental Protection Agency	01/22/2021	02/18/2021	05/11/2021
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2017	06/22/2020	11/20/2020
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	10/15/2014
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	ABANDONED MINES	Abandoned Mines	Department of Interior	12/11/2020	12/11/2020	03/02/2021
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	12/31/2019	01/20/2021	04/08/2021
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	12/31/2020	01/20/2021	04/08/2021
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	12/17/2020	12/17/2020	03/09/2021
CA	CUPA LIVERMORE-PLEASANTON	CUPA Facility Listing	Livermore-Pleasanton Fire Department	05/01/2019	05/14/2019	07/17/2019
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	03/02/2021	03/03/2021	05/19/2021
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	03/01/2021	03/04/2021	05/20/2021
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	02/23/2021	02/25/2021	05/19/2021
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	02/26/2021	03/02/2021	05/19/2021
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2018	06/16/2020	08/28/2020
CA	ENF	Enforcement Action Listing	State Water Resoruces Control Board	12/31/2020	01/20/2021	04/09/2021
CA	Financial Assurance 1	Financial Assurance Information Listing	Department of Toxic Substances Control	01/25/2021	01/26/2021	04/13/2021
CA	Financial Assurance 2	Financial Assurance Information Listing	California Integrated Waste Management Board	02/08/2021	02/12/2021	05/05/2021
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	11/23/2020	11/23/2020	02/08/2021
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2019	04/15/2020	07/02/2020
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	02/16/2021	02/17/2021	05/10/2021
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	01/05/2021	01/05/2021	03/18/2021
CA	ICE	ICE	Department of Toxic Subsances Control	02/16/2021	02/17/2021	05/07/2021
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Qualilty Control Board	03/08/2021	03/09/2021	03/31/2021
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	03/01/2021	03/03/2021	05/20/2021
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/31/2021
CA	MINES	Mines Site Location Listing	Department of Conservation	03/08/2021	03/09/2021	03/30/2021
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	01/29/2021	03/03/2021	05/20/2021
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	02/08/2021	02/09/2021	05/04/2021
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	03/02/2021	03/03/2021	05/20/2021
CA	PROC	Certified Processors Database	Department of Conservation	03/09/2021	03/09/2021	03/31/2021
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	03/12/2021	03/16/2021	06/01/2021
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	01/25/2021	01/26/2021	04/13/2021

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	03/08/2021	03/09/2021	03/31/2021
CA	WASTEWATER PITS	Oil Wastewater Pits Listing	RWQCB, Central Valley Region	11/19/2019	01/07/2020	03/09/2020
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
CA	HWTS	Hazardous Waste Tracking System	Department of Toxic Substances Control	04/08/2021	04/09/2021	04/20/2021
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	PROJECT	Project Sites (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	CERS	CalEPA Regulated Site Portal Data	California Environmental Protection Agency	01/20/2021	01/20/2021	04/08/2021
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	03/08/2021	03/09/2021	03/30/2021
CA	WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021
CA	CERS TANKS	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	01/20/2021	01/20/2021	04/08/2021
CA	WDR	Waste Discharge Requirements Listing	State Water Resources Control Board	03/09/2021	03/09/2021	03/31/2021
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/17/2021	02/17/2021	03/22/2021
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	11/03/2020	11/17/2020	02/09/2021
CA	PFAS	PFAS Contamination Site Location Listing	State Water Resources Control Board	02/24/2021	02/24/2021	05/14/2021
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	01/02/2021	01/08/2021	03/22/2021
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
CA	CERS HAZ WASTE	CERS HAZ WASTE	CalEPA	01/20/2021	01/20/2021	04/08/2021
CA	CIWQS	California Integrated Water Quality System	State Water Resources Control Board	11/30/2020	12/01/2020	02/12/2021
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2018	07/02/2020	09/17/2020
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	03/08/2021	03/09/2021	03/30/2021

HISTORICAL USE RECORDS

US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
CA	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Resources Recycling and Recover		07/01/2013	01/13/2014
CA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board		07/01/2013	12/30/2013

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
COUNTY RECORDS						
CA	CS ALAMEDA	Contaminated Sites	Alameda County Environmental Health Services	01/09/2019	01/11/2019	03/05/2019
CA	UST ALAMEDA	Underground Tanks	Alameda County Environmental Health Services	03/17/2021	03/18/2021	03/25/2021
CA	CUPA AMADOR	CUPA Facility List	Amador County Environmental Health	02/02/2021	02/04/2021	04/23/2021
CA	CUPA BUTTE	CUPA Facility Listing	Public Health Department	04/21/2017	04/25/2017	08/09/2017
CA	CUPA CALVERAS	CUPA Facility Listing	Calveras County Environmental Health	12/15/2020	12/16/2020	12/24/2020
CA	CUPA COLUSA	CUPA Facility List	Health & Human Services	04/06/2020	04/23/2020	07/10/2020
CA	SL CONTRA COSTA	Site List	Contra Costa Health Services Department	01/25/2021	01/26/2021	04/16/2021
CA	CUPA DEL NORTE	CUPA Facility List	Del Norte County Environmental Health Divisio	12/17/2020	01/28/2021	04/16/2021
CA	CUPA EL DORADO	CUPA Facility List	El Dorado County Environmental Management Dep	02/09/2021	02/11/2021	05/05/2021
CA	CUPA FRESNO	CUPA Resources List	Dept. of Community Health	01/14/2021	01/15/2021	04/05/2021
CA	CUPA GLENN	CUPA Facility List	Glenn County Air Pollution Control District	01/22/2018	01/24/2018	03/14/2018
CA	CUPA HUMBOLDT	CUPA Facility List	Humboldt County Environmental Health	05/17/2021	05/18/2021	05/20/2021
CA	CUPA IMPERIAL	CUPA Facility List	San Diego Border Field Office	01/19/2021	01/20/2021	04/08/2021
CA	CUPA INYO	CUPA Facility List	Inyo County Environmental Health Services	04/02/2018	04/03/2018	06/14/2018
CA	CUPA KERN	CUPA Facility List	Kern County Public Health	10/29/2020	10/30/2020	01/15/2021
CA	UST KERN	Underground Storage Tank Sites & Tank Listing	Kern County Environment Health Services Depar	01/19/2021	01/21/2021	01/28/2021
CA	CUPA KINGS	CUPA Facility List	Kings County Department of Public Health	12/03/2020	01/26/2021	04/14/2021
CA	CUPA LAKE	CUPA Facility List	Lake County Environmental Health	02/10/2021	02/12/2021	03/11/2021
CA	CUPA LASSEN	CUPA Facility List	Lassen County Environmental Health	07/31/2020	08/21/2020	11/09/2020
CA	AOCONCERN	Key Areas of Concerns in Los Angeles County		03/30/2009	03/31/2009	10/23/2009
CA	HMS LOS ANGELES	HMS: Street Number List	Department of Public Works	01/11/2021	01/12/2021	03/25/2021
CA	LF LOS ANGELES	List of Solid Waste Facilities	La County Department of Public Works	01/11/2021	01/12/2021	03/26/2021
CA	LF LOS ANGELES CITY	City of Los Angeles Landfills	Engineering & Construction Division	01/01/2021	02/18/2021	05/10/2021
CA	LOS ANGELES AST	Active & Inactive AST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES CO LF METHANE	Methane Producing Landfills	Los Angeles County Department of Public Works	02/04/2021	04/16/2021	04/21/2021
CA	LOS ANGELES HM	Active & Inactive Hazardous Materials Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES UST	Active & Inactive UST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	SITE MIT LOS ANGELES	Site Mitigation List	Community Health Services	10/19/2020	01/12/2021	03/26/2021
CA	UST EL SEGUNDO	City of El Segundo Underground Storage Tank	City of El Segundo Fire Department	01/21/2017	04/19/2017	05/10/2017
CA	UST LONG BEACH	City of Long Beach Underground Storage Tank	City of Long Beach Fire Department	04/22/2019	04/23/2019	06/27/2019
CA	UST TORRANCE	City of Torrance Underground Storage Tank	City of Torrance Fire Department	09/11/2020	10/07/2020	12/23/2020
CA	CUPA MADERA	CUPA Facility List	Madera County Environmental Health	08/10/2020	08/12/2020	10/23/2020
CA	UST MARIN	Underground Storage Tank Sites	Public Works Department Waste Management	09/26/2018	10/04/2018	11/02/2018
CA	UST MENDOCINO	Mendocino County UST Database	Department of Public Health	12/21/2020	12/21/2020	03/10/2021
CA	CUPA MERCED	CUPA Facility List	Merced County Environmental Health	02/04/2021	02/09/2021	02/18/2021
CA	CUPA MONO	CUPA Facility List	Mono County Health Department	02/22/2021	03/02/2021	05/19/2021
CA	CUPA MONTEREY	CUPA Facility Listing	Monterey County Health Department	01/08/2021	01/12/2021	03/25/2021
CA	LUST NAPA	Sites With Reported Contamination	Napa County Department of Environmental Manag	01/09/2017	01/11/2017	03/02/2017
CA	UST NAPA	Closed and Operating Underground Storage Tank Sites	Napa County Department of Environmental Manag	09/05/2019	09/09/2019	10/31/2019
CA	CUPA NEVADA	CUPA Facility List	Community Development Agency	02/03/2021	02/04/2021	04/23/2021
CA	IND_SITE ORANGE	List of Industrial Site Cleanups	Health Care Agency	02/01/2021	02/04/2021	04/23/2021
CA	LUST ORANGE	List of Underground Storage Tank Cleanups	Health Care Agency	03/01/2021	05/03/2021	05/12/2021
CA	UST ORANGE	List of Underground Storage Tank Facilities	Health Care Agency	02/01/2021	02/02/2021	04/20/2021
CA	MS PLACER	Master List of Facilities	Placer County Health and Human Services	05/25/2021	05/26/2021	06/01/2021
CA	CUPA PLUMAS	CUPA Facility List	Plumas County Environmental Health	03/31/2019	04/23/2019	06/26/2019

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	LUST RIVERSIDE	Listing of Underground Tank Cleanup Sites	Department of Environmental Health	01/13/2021	01/14/2021	03/10/2021
CA	UST RIVERSIDE	Underground Storage Tank Tank List	Department of Environmental Health	01/13/2021	01/14/2021	03/10/2021
CA	CS SACRAMENTO	Toxic Site Clean-Up List	Sacramento County Environmental Management	02/18/2020	03/31/2020	06/15/2020
CA	ML SACRAMENTO	Master Hazardous Materials Facility List	Sacramento County Environmental Management	02/24/2020	03/31/2020	06/17/2020
CA	CUPA SAN BENITO	CUPA Facility List	San Benito County Environmental Health	04/28/2021	04/29/2021	05/03/2021
CA	PERMITS SAN BERNARDINO	Hazardous Material Permits	San Bernardino County Fire Department Hazardo	11/16/2020	11/18/2020	02/04/2021
CA	HMMD SAN DIEGO	Hazardous Materials Management Division Database	Hazardous Materials Management Division	03/02/2021	03/03/2021	05/21/2021
CA	LF SAN DIEGO	Solid Waste Facilities	Department of Health Services	10/01/2020	11/23/2020	02/08/2021
CA	SAN DIEGO CO LOP	Local Oversight Program Listing	Department of Environmental Health	07/14/2020	07/16/2020	09/29/2020
CA	SAN DIEGO CO SAM	Environmental Case Listing	San Diego County Department of Environmental	03/23/2010	06/15/2010	07/09/2010
CA	CUPA SAN FRANCISCO CO	CUPA Facility Listing	San Francisco County Department of Environmen	02/11/2021	02/11/2021	05/05/2021
CA	LUST SAN FRANCISCO	Local Oversite Facilities	Department Of Public Health San Francisco Cou	09/19/2008	09/19/2008	09/29/2008
CA	UST SAN FRANCISCO	Underground Storage Tank Information	Department of Public Health	02/11/2021	02/11/2021	05/05/2021
CA	UST SAN JOAQUIN	San Joaquin Co. UST	Environmental Health Department	06/22/2018	06/26/2018	07/11/2018
CA	CUPA SAN LUIS OBISPO	CUPA Facility List	San Luis Obispo County Public Health Departme	05/07/2021	05/11/2021	05/14/2021
CA	BI SAN MATEO	Business Inventory	San Mateo County Environmental Health Service	02/20/2020	02/20/2020	04/24/2020
CA	LUST SAN MATEO	Fuel Leak List	San Mateo County Environmental Health Service	03/29/2019	03/29/2019	05/29/2019
CA	CUPA SANTA BARBARA	CUPA Facility Listing	Santa Barbara County Public Health Department	09/08/2011	09/09/2011	10/07/2011
CA	CUPA SANTA CLARA	Cupa Facility List	Department of Environmental Health	02/24/2021	02/26/2021	05/19/2021
CA	HIST LUST SANTA CLARA	HIST LUST - Fuel Leak Site Activity Report	Santa Clara Valley Water District	03/29/2005	03/30/2005	04/21/2005
CA	LUST SANTA CLARA	LOP Listing	Department of Environmental Health	03/03/2014	03/05/2014	03/18/2014
CA	SAN JOSE HAZMAT	Hazardous Material Facilities	City of San Jose Fire Department	11/03/2020	11/05/2020	01/26/2021
CA	CUPA SANTA CRUZ	CUPA Facility List	Santa Cruz County Environmental Health	01/21/2017	02/22/2017	05/23/2017
CA	CUPA SHASTA	CUPA Facility List	Shasta County Department of Resource Manageme	06/15/2017	06/19/2017	08/09/2017
CA	LUST SOLANO	Leaking Underground Storage Tanks	Solano County Department of Environmental Man	06/04/2019	06/06/2019	08/13/2019
CA	UST SOLANO	Underground Storage Tanks	Solano County Department of Environmental Man	12/03/2020	12/03/2020	02/18/2021
CA	CUPA SONOMA	Cupa Facility List	County of Sonoma Fire & Emergency Services De	12/15/2020	12/16/2020	12/23/2020
CA	LUST SONOMA	Leaking Underground Storage Tank Sites	Department of Health Services	01/05/2021	01/06/2021	03/18/2021
CA	CUPA STANISLAUS	CUPA Facility List	Stanislaus County Department of Ennvironmenta	02/09/2021	02/11/2021	05/05/2021
CA	UST SUTTER	Underground Storage Tanks	Sutter County Environmental Health Services	03/01/2021	03/02/2021	05/19/2021
CA	CUPA TEHAMA	CUPA Facility List	Tehama County Department of Environmental Hea	01/13/2021	01/14/2021	04/06/2021
CA	CUPA TRINITY	CUPA Facility List	Department of Toxic Substances Control	01/19/2021	01/20/2021	04/08/2021
CA	CUPA TULARE	CUPA Facility List	Tulare County Environmental Health Services D	02/02/2021	02/04/2021	04/23/2021
CA	CUPA TUOLUMNE	CUPA Facility List	Divison of Environmental Health	04/23/2018	04/25/2018	06/25/2018
CA	BWT VENTURA	Business Plan, Hazardous Waste Producers, and Operating Unde	Ventura County Environmental Health Division	12/28/2020	01/29/2021	04/22/2021
CA	LF VENTURA	Inventory of Illegal Abandoned and Inactive Sites	Environmental Health Division	12/01/2011	12/01/2011	01/19/2012
CA	LUST VENTURA	Listing of Underground Tank Cleanup Sites	Environmental Health Division	05/29/2008	06/24/2008	07/31/2008
CA	MED WASTE VENTURA	Medical Waste Program List	Ventura County Resource Management Agency	03/29/2021	04/21/2021	04/23/2021
CA	UST VENTURA	Underground Tank Closed Sites List	Environmental Health Division	03/01/2021	03/09/2021	03/31/2021
CA	UST YOLO	Underground Storage Tank Comprehensive Facility Report	Yolo County Department of Health	12/21/2020	12/23/2020	01/04/2021
CA	CUPA YUBA	CUPA Facility List	Yuba County Environmental Health Department	04/21/2021	04/22/2021	05/12/2021

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX F

PROJECT TEAM QUALIFICATIONS

Edward H. LaMont, CEG, PG

Branch Manager

Areas of Expertise

Geotechnical Field Investigations
Grading and Earthwork Construction
Industry Standard of Care
Hillside, Liquefaction, Seismic Hazard, Fault Analyses and Forensic Studies.

Education

Bachelor of Science in Geology, Cal State University, Northridge

Registrations

Registered Geologist, PG 6025
Certified Engineering Geologist, CEG 1892

Certifications

OSHA 40-Hr HAZWOPER Training
OSHA 8-Hour Refresher
First Aid/CPR

Professional Affiliations

Association of Engineering Geologist
South Coast Geological Society
San Diego Association of Geologist
Inland Geological Society
BIA Riverside
BIA San Diego

Professional Experience

Mr. LaMont has been involved with numerous public works, residential and commercial earthwork projects across the southern California area. Many residential, commercial and public works projects have been successfully completed across southern and central California. Projects include liquefaction and subsidence studies, fault evaluations, commercial, residential, federal, FEMA levee certifications and military construction projects. These projects have generally included preliminary geotechnical evaluations, slope stability studies, review and design recommendations, street improvements construction and testing services, and project management.

In addition, Mr. LaMont has performed governmental review of geotechnical reports for the County of Orange. Mr. LaMont has also completed geotechnical studies for the Riverside County Flood Control and Cities of Banning, Chino, Corona, Palm Springs, Lancaster and Victorville, to name a few.

Representative Project Experience

Project experience has included residential and commercial developments, for various land developers including Melia Homes, Meritage Homes, Frontier Enterprises, D·R·Horton, Beazer Homes, KB Home, Integral Communities, IntraCorp, Shopoff, Shea Homes, etc. Mr. LaMont has also completed geotechnical investigations and performed project management for numerous residential tracts and commercial facilities all across Southern California.

Professional History

Branch Manager/Principal Geologist - Riverside GeoTek, Inc., 2004 to present

Vice President, Principal Geologist - GeoSoils, Inc., Santa Ana, 2003 to 2004

Geotechnical Reviewer, Engineering Geologist - County of Orange, 2001 to 2003.

Project Geologist - GeoSoils, Inc., Santa Ana, California, 1994 to 2001.

Staff/Project Geologist - GeoSoils, Inc., Carlsbad, California, 1988 to 1994.

J. MICHAEL BATTEN, CAC, CEM, REPA

Principal/Environmental Services Manager

Education

BS in Geology, California State University, Fresno 1988

Registrations

- Certified Asbestos Consultant (CA #95-1721)
- Licensed Asbestos Abatement Consultant (NV #IJPM0655)
- Certified Environmental Manager (NV #1782)
- Asbestos Professional Inspector (IL #100-11092)
- Registered Environmental Property Assessor (#113162))
- Certified Lead Inspector Assessor (CA #4358)
- Certified Lead Inspector (EPA #LBP-I-1162326-1)
- Certified Lead Risk Assessor (EPA #LBP-R-1162326-1)

Certifications

- AHERA Certified Asbestos Building Inspector, Management Planner, Project Designer, & Contractor/Supervisor
- EPA Accredited Lead-based Paint Inspector & Risk Assessor
- OSHA HAZWOPER certified worker & supervisor
- OSHA Construction Safety & Health (10-Hour)

Affiliations

- American Society of Testing and Materials
- National Registry of Environmental Professionals

Professional Experience

Mr. Batten has over 30 years of environmental experience, throughout which he has conducted and managed numerous environmental investigations, assessments, and remediations. He has prepared several NEPA assessments, USEPA EIS, and CEQA EIR reports. In addition, Mr. Batten has extensive experience in conducting asbestos and lead-based paint surveys and preparing management plans, including remediation design, for asbestos and lead present in buildings.

Project Experience

- **Phase I Environmental Site Assessments:** Mr. Batten has conducted more than 2,000 Phase I Environmental Site Assessments in 27 states, including Brownfield studies under USEPA grants.
- **Phase II Environmental Site Assessments:** Mr. Batten has conducted more than 150 Phase II Environmental Assessments, including Brownfield studies under USEPA grants.
- **Site Characterizations and Remediations:** Mr. Batten has experience conducting numerous site characterizations and remediations, including obtaining regulatory closure.
- **NEPA Studies:** Mr. Batten has conducted more than 200 NEPA studies, including Environmental Assessments, Environmental Impact Reports/Environmental Impact Studies, in eight states. The agencies involved include USEPA, FCC, BLM, National Park Service, and California EPA.
- **Asbestos Services:** Mr. Batten has conducted over 600 asbestos surveys in several states. He has also prepared numerous Asbestos Management Plans, prepared design plans, and monitored numerous abatement projects.
- **Lead-Based Paint Services:** Mr. Batten has conducted numerous Lead-Based Paint surveys.
- **Landfills**: Mr. Batten has conducted investigations and overseen remediations on landfills in Fresno, California and Henderson, Nevada.
- **Other Services:** Mr. Batten has been called upon to conduct less usual services on occasion, including mold consultation and investigation, radon studies, vapor intrusion studies, and indoor air quality studies.

J. MICHAEL BATTEN, continued…

Professional History

Environmental Services Manager. GeoTek, Inc., 2001 to present.

Director of Environmental Services. ATC Associates, Inc., 1999 to 2001.

Director of Operations. Hygienetics Environmental Services, Inc., 1997 to 1999.

Project Manager. AllWest Environmental, Inc., 1996 to 1997.

Project Manager. Citadel Environmental Services, Inc., 2/1996 to 9/1996.

Project Manager. Boelter Environmental consultants, 3/1995 to 9/1995.

Senior Staff Geologist. Converse Consultants, 1992 to 1995.

Staff Geologist. Converse Environmental West, 1991 to 1992.

Project Geologist. Krazan and Associates, 1990 to 1991.

Environmental Technician. Krazan and Associates, 1989 to 1990.

National Registry of Environmental Professionals

For

Environmental Certifications

This is to Certify that

Michael J Batten

having sucessfully demonstrated to the Academic Board of this organization the required level of knowledge and ability, is here by awarded the distinction of

Registered Environmental Property Assessor

together with all rights, benefits and privileges attached thereto and that the name and title of the aforementioned registrant is today placed upon the register of the organization.

Given under our hands on this 15 day of June, 2013.

Richard A Young

Executive Director

NREP

113162

Registrant Number

This Certificate is the property of the National Registry of Environmental Professionals and must, upon demand, be returned.

United States Environmental Protection Agency

This is to certify that



J M Batten

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires March 14, 2022

LBP-I-I162326-2

Certification #

December 08, 2018

Issued On

Adrienne Priselac, Manager, Toxics Office

Land Division

United States Environmental Protection Agency

This is to certify that



J M Batten

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires March 14, 2022

LBP-R-I162326-2
Certification #

December 08, 2018
Issued On

Adrienne Priselac, Manager, Toxics Office
Land Division

STATE OF CALIFORNIA — Gavin Newsom, Governor

DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety and Health
Asbestos Certification & Training Unit
1750 Howe Avenue, Suite 460
Sacramento, CA 95825
(916) 574-2993 Office http://www.dir.ca.gov/dosh/asbestos.html acru@dir.ca.gov

505011721C 109 115

October 08, 2020

J. Michael Batten
8240 Edmond Street
Las Vegas NV 89139

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

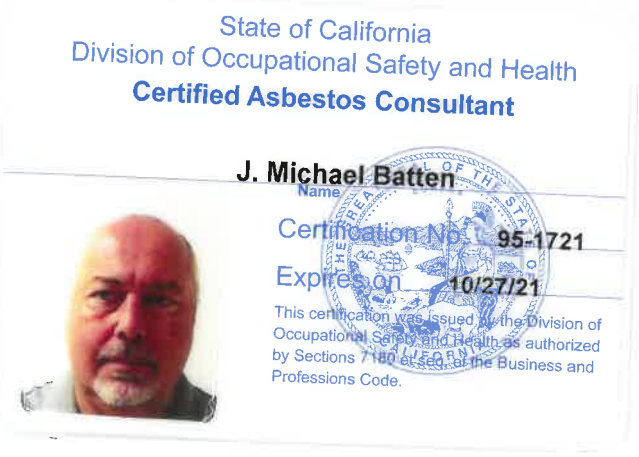
Please notify our office via U.S. Postal Service or other carrier of any changes in your mailing or work address within 15 days of the change.

Sincerely,

Jeff Ferrell
Senior Safety Engineer

Attachment: Certification Card

cc: File


State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Name J. Michael Batten

Certification No. 95-1721

Expires on 10/27/21

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

Renewal – Card Attached (Revised 06/2020)

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:	CERTIFICATE TYPE:	NUMBER:	EXPIRATION DATE:
 **Michael Batten**	Lead Inspector/Assessor	LRC-00002629	11/17/2021

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.dph.illinois.gov

MICHAEL BATTEN
8240 EDMOND STREET
LAS VEGAS, NV 89139

8/19/2020

ASBESTOS PROFESSIONAL LICENSE ID NUMBER: 11092

Enclosed is your Asbestos Professional License. Please note the expiration date on the card and in the image depicted below.

COPY OF THE ASBESTOS PROFESSIONAL LICENSE

Front of License

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
IDPH
PROTECTING HEALTH, IMPROVING LIVES

ASBESTOS PROFESSIONAL LICENSE

ID NUMBER	ISSUED	EXPIRES
100 - 11092	**8/19/2020**	05/15/2021

MICHAEL BATTEN
8240 EDMOND STREET
LAS VEGAS, NV 89139
Environmental Health



Back of License

ENDORSEMENTS	TC EXPIRES
INSPECTOR	8/10/2021

Alteration of this license shall result in legal action
This license issued under authority of the State of Illinois Department of Public Health
This license is valid only when accompanied by a valid training course certificate.

If you have any questions or need further assistance, contact the Asbestos Program at (217)782-3517 or fax (217)785-5897.

Our WEB address is: dph.illinois.gov/topics-services/environmental-health-protection/asbestos
EMAIL Address: dph.asbestos@illinois.gov

State of Nevada

Department of Conservation and Natural Resources

Division of Environmental Protection

This is to certify that

Michael J Batten

having given satisfactory evidence of the necessary qualifications as required by the Nevada Revised Statute 459.400 to 459.600, inclusive, and Nevada Administrative Code 459.970 to 459.9729, inclusive, has been granted certification as a

Environmental Manager

in the State of Nevada

In testimony whereof, witness the signature of the Administrator and the Seal of the State of Nevada.

1782

Certification Number

Greg Lovato, Administrator

8/31/2021

Expiration Date

State of Nevada Department of Business & Industry

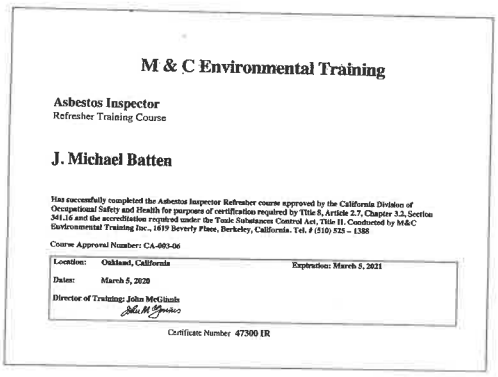
Industrial Relations (DIR)

STATE OF NEVADA
DEPARTMENT OF BUSINESS AND INDUSTRY
DIVISION OF INDUSTRIAL RELATIONS
Occupational Safety and Health Administration
Asbestos Control Program

Certifies That J. Michael Batten
Geotek Insite Inc.
is Licensed As Asbestos Abatement Consultant

License No. IJPM-655 Expiration Date 03/05/2021

Signature Of Licensee J. Michael Batten



M & C Environmental Training

Asbestos Inspector
Refresher Training Course

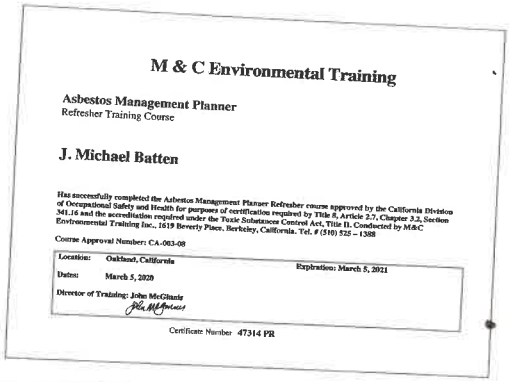
J. Michael Batten

Has successfully completed the Asbestos Inspector Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California. Tel. # (510) 525 – 1388

Course Approval Number: CA-003-06

Location: Oakland, California — Expiration: March 5, 2021
Dates: March 5, 2020
Director of Training: John McGinnis

Certificate Number 47300 IR



M & C Environmental Training

Asbestos Management Planner
Refresher Training Course

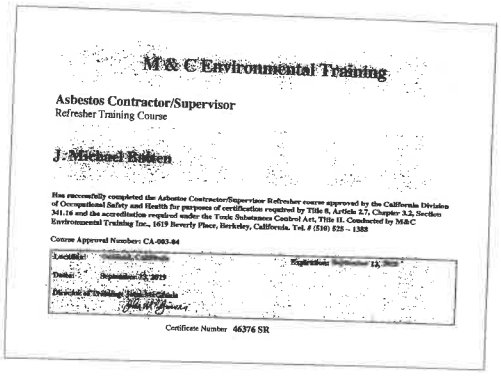
J. Michael Batten

Has successfully completed the Asbestos Management Planner Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California. Tel. # (510) 525 – 1388

Course Approval Number: CA-003-08

Location: Oakland, California — Expiration: March 5, 2021
Dates: March 5, 2020
Director of Training: John McGinnis

Certificate Number 47314 PR



M & C Environmental Training

Asbestos Contractor/Supervisor
Refresher Training Course

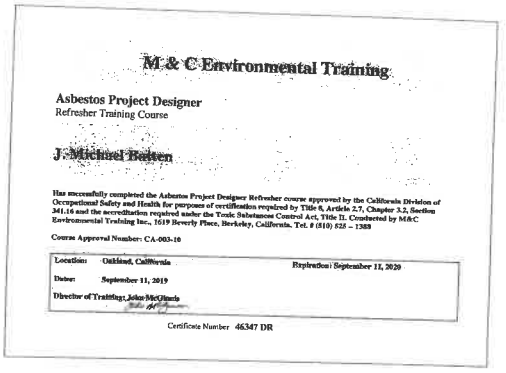
J. Michael Batten

Has successfully completed the Asbestos Contractor/Supervisor Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California. Tel. # (510) 525 – 1388

Course Approval Number: CA-003-04

Location: [illegible] — Expiration: [illegible]
Dates: September 11, 2019
Director of Training: John McGinnis

Certificate Number 46376 SR



M & C Environmental Training

Asbestos Project Designer
Refresher Training Course

J. Michael Batten

Has successfully completed the Asbestos Project Designer Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California. Tel. # (510) 525 – 1388

Course Approval Number: CA-003-10

Location: Oakland, California — Expiration: September 11, 2020
Dates: September 11, 2019
Director of Training: John McGinnis

Certificate Number 46347 DR



This is to Certify that
Michael Batten
Has Satisfactorily Completed Training in Accordance with Applicable Rules and Regulations
Asbestos Building Inspector Refresher
Completed: 3/19/2019 *Expires: 3/19/2020*
Certificate: BIR1903190998
2019
Occupational Training & Supply, Inc.
7233 Adams Street ♦ Willowbrook, IL 60527 ♦ (630) 655-3900



OSHA 002340551

U.S. Department of Labor
Occupational Safety and Health Administration

Michael Batten

has successfully completed a 10-hour Occupational Safety and Health Training Course in

Construction Safety & Health

Kenner Costen (Trainer) 12/12/09 (Date)

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

Not applicable

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

R 07 W | R 06 W | R 05 W | R 04 W | R 03 W | R 02 W | R 01 W | R 01 E | R 02 E | R 03 E | R 04 E | R 05 E

T 01 S | T 02 S | T 03 S | T 04 S | T 05 S | T 06 S | T 07 S | T 08 S

06	05	04	03	02	01
07	08	09	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

0.85 MiraLoma
0.61 RiversideNorth
0.54 RiversideSouth
0.68 PigeonPass
0.66 MorenoEast
0.85 Beaumont
0.88 PradoDam
0.51 Woodcrest
0.50 LakeMathews
0.68 PerrisReservoir
0.87 VistaGrandeGS
0.70 SanJacintoNWS
1.18 Idyllwild
0.58 SunCity
0.68 Winchester
0.90 HurkeyCreek
0.70 ElsinoreNWS
1.11 ElCarisoStation
0.77 WildomarLaCresta
0.52 SkinnerLake
0.65 Anza
0.77 SantaRosaPlateau
1.00 TemeculaNWS
0.64 AguangaValley

PROJECT SITE
D_{85}=0.57

Santa Ana River Watershed

Santa Margarita Watershed

Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name: SP2, Inc. | Date: 12/13/2021

Designed by: Hank Lozano | Case No: TBD

Company Project Number/Name: Menifee 27

BMP Identification

BMP NAME / ID: DMA 1

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E: D_{85} = 0.57 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
DMA 1-Res. Imperv.	*366282*	*Roofs*	*1*	*0.89*	*326723.5*			
DMA 1-Res. Pervious	*366282*	*Ornamental Landscaping*	*0.1*	*0.11*	*40458.8*			
DMA 1-Street/ Sidewalks	*260034*	*Concrete or Asphalt*	*1*	*0.89*	*231950.3*			
Openspace Landscaping	*144679*	*Ornamental Landscaping*	*0.1*	*0.11*	*15981*			

Extended Detention Basin Design Procedure	BMP Subarea No.	Legend:	Required Entries / Calculated Cells

Company Name: | Date:

Designed by: | County/City Case No.:

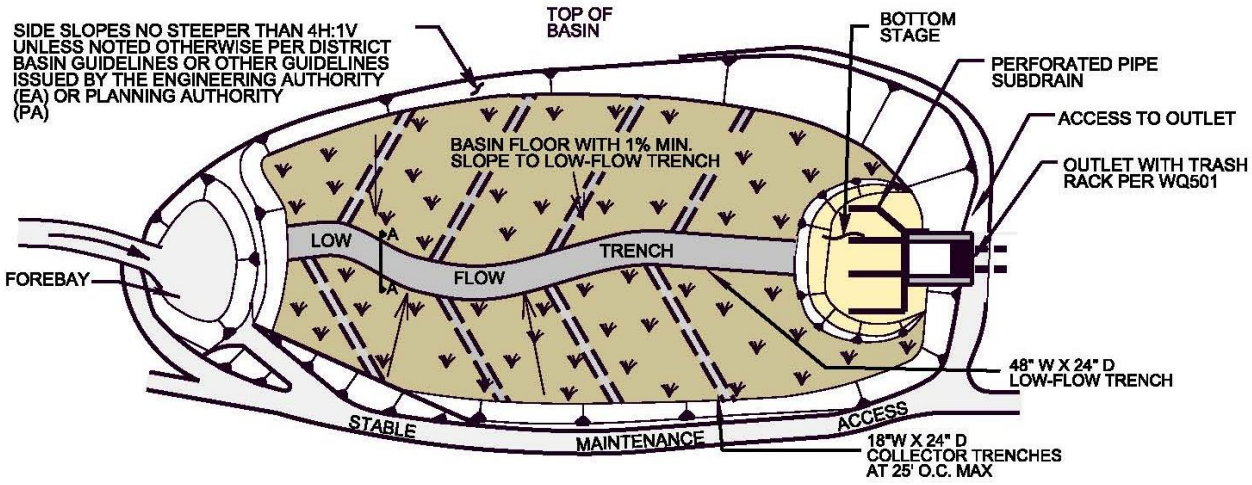
Design Volume

Tributary Area (BMP Subarea)	A_T =	26.108	acres
Enter V_{BMP}, determined from Section 2.1 of this Handbook	V_{BMP}=	29,218	ft^3

Basin Footprint

Overall Geometry

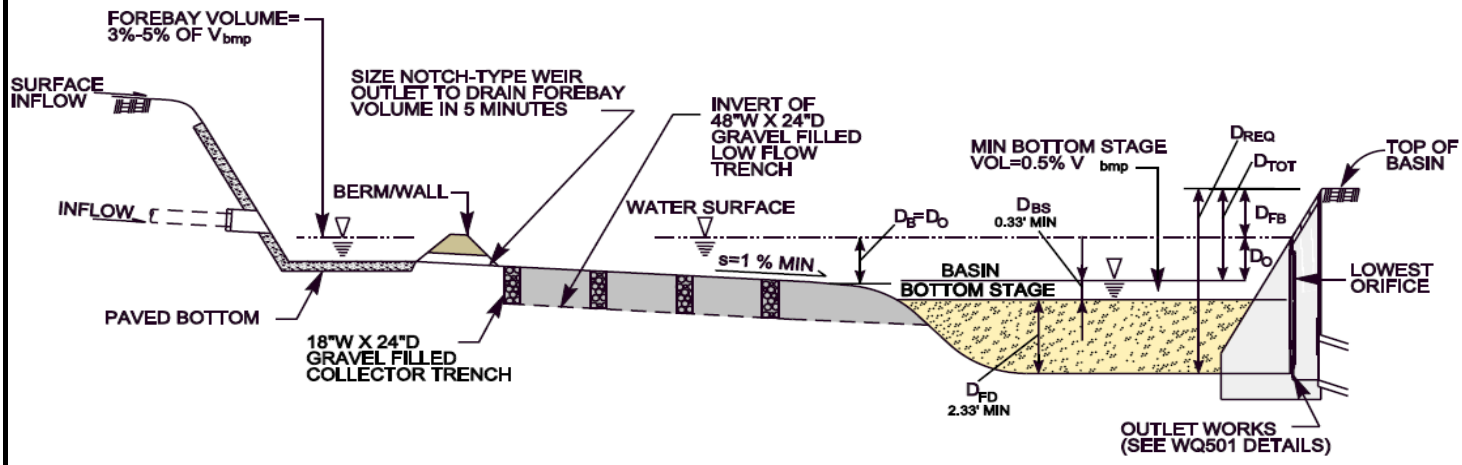
Length at Basin Bottom Surface	Length =	150	ft
Width at Basin Bottom Surface	Width =	80	ft
	Meets 1.5 : 1 requirement?	✓	
Side Slopes per "Basin Guidelines", Sect. 1.2	z =	4	:1
Proposed Basin Depth (with no freeboard)	D_B =	4.00	ft
Depth of freeboard (if used)	D_{FB} =	1.00	ft
Minimum Required Allowance for Total Depth (including proposed basin depth, freeboard, minimum depth of bottom stage (D_{BS}=0.33') and minimum filter depth (D_{FD}=2.33'))	D_{REQ} =	7.7	ft
Depth from design water surface elevation to lowest orifice	D_O =	4.0	ft



Basin Design

Basin Design

Proposed Total Basin Depth (proposed depth plus freeboard)	D_{TOT} =	5.00	ft
Basin Invert Longitudinal Slope	Slope =	1.00	%
Basin Invert Transverse Slope (1% min)	Slope =	1	%
Basin Volume	V_{Basin} =	100188	ft^3



Forebay Design

Forebay Volume (3 - 5% V_{BMP})	V_{FB} =	1295	ft^3
Forebay Depth (height of berm)	D_{FBY} =	1	ft
Minimum Forebay Surface Area	A_{FB} =	1295	ft^2
Rectangular weir (notch)	W =	6.00	in

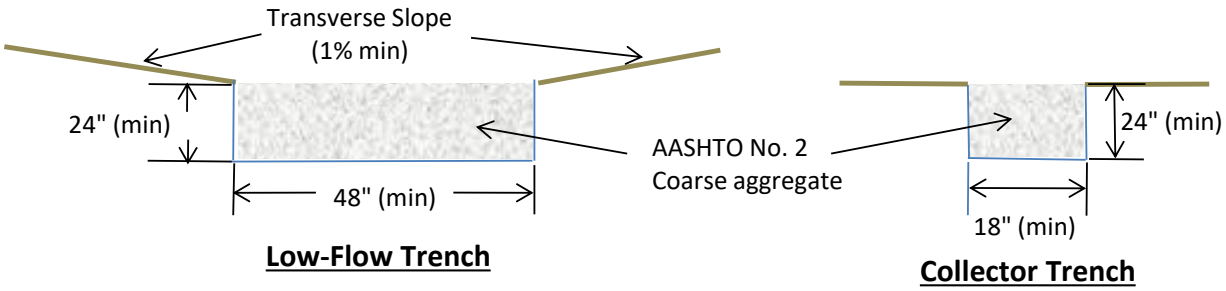
Dry Weather and Low-Flow Management

Low-Flow Trench (see graphic below)

Depth (24 inches minimum, gravel filled)	Depth =	24	inches
Width (48 inches minimum)	Width =	48	inches
Trench Invert Longitudinal Slope	Slope =	1	%

Collector Trenches (see graphic below)

Depth (24 inches minimum)	Depth =	24	inches
Width (18 inches minimum)	Width =	18	inches
Trench Invert Longitudinal Slope	Slope =	1	%
Spacing (25 feet on center maximum)	S =	15	feet



Low-Flow Trench **Collector Trench**

Bottom Stage (Sand Filter) Design

Depth of the Bottom Stage (4" minimum ponding)	D_{BS} =	6	in
Surface Area of Bottom Stage	A_{BS} =	350	ft^2
Dry Weather Ponded Volume (above sand layer)	V_{BS} =	175	ft^3

Is V_{BS} no less than 0.5% V_{BMP}? OK

Depth of ASTM-C33 sand (18 inch minimum)

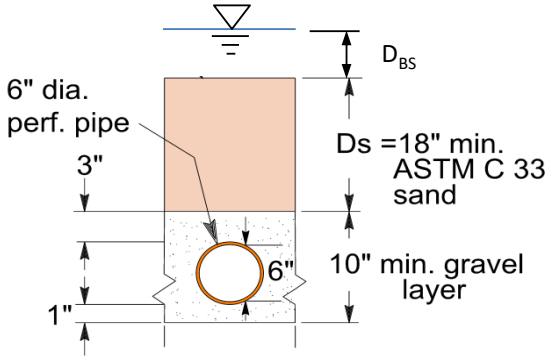
Ds = 18 inches

Diameter of Subdrains

ϕ = 6 in

Subdrain Spacing

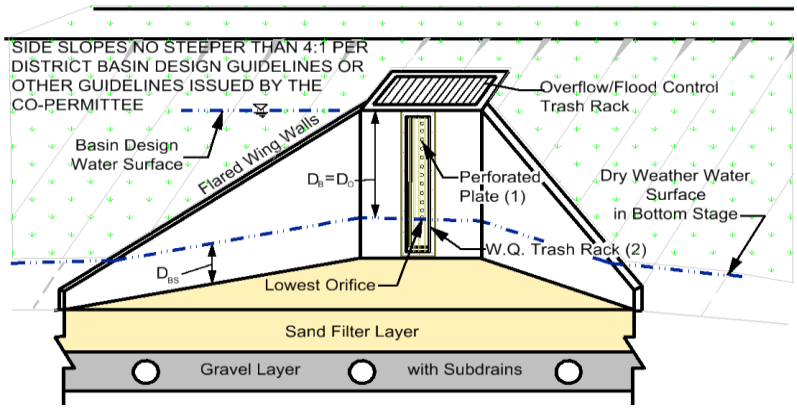
s = 10 ft. on center



Basin Outlet Design

Outlet Design

Assume an orifice area. Based on the information provided above, the spreadsheet provides discharge vs. stage data. Enter the volume vs. stage data for each interval. This information is used to route the volume through the basin. The size of the orifice is acceptable when the data shows that less than 50% of V_{BMP} has drained in 24 hours, and that 100% drawdown occurs within 72 hours.



Flow Rate, Q (cfs)

$$Q=CA[2g(H-H_o)]^{0.5}$$

Discharge Coefficient,

Default, C = 0.66

Other, C =

Orifice Area (ft^2)

Orifice Diameter, d; number of orifices per row, n; and number of orifice rows, N (from the bottom up).

d = 2.5 inches

n = 1 per row

N = 1 rows

Aeff = 0.034 ft^2 per row

or

Aeff = 4.906 in^2 per row

From outflow hydrograph, the time where 50% of V_{BMP} has drained from the basin (24 hour minimum):

Time (50%) = 25.07 hrs

OK

From outflow hydrograph, the time where 100% V_{BMP} has drained from the basin(within 72 hours):

Time (100 %) = 70.19 hrs

OK

Headwater Elev. / Stage (ft)	Discharge (cfs)	Volume (acre-ft)	Δt (hrs.)
0	0.0000	0.0000	
0.33	0.1041	0.110	25.56
0.67	0.1474	0.240	12.51
1.00	0.1805	0.360	8.86
1.33	0.2083	0.490	8.09
1.67	0.2330	0.640	8.22
2.00	0.2552	0.780	6.94
2.33	*0.2756*	*0.930*	
2.67	*0.2947*	*1.100*	
3.00	*0.3126*	*1.260*	
3.33	*0.3295*	*1.440*	
3.67	*0.3456*	*1.620*	
4.00	*0.3609*	*1.810*	
4.33		*2.000*	
4.67		*2.210*	
5.00			
5.33			
5.67			
6.00			
6.33			
6.67			
7.00			
7.33			
7.67			
8.00			
8.33			
8.67			
9.00			
9.33			
9.67			
10.00			
		∑ =	70.19

Notes:

Appendix 7: Hydromodification

Supporting Detail Relating to Hydrologic Conditions of Concern

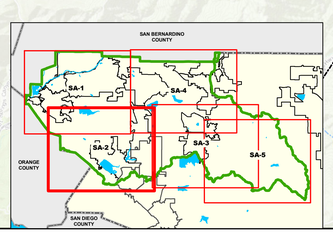
NPDES MUNICIPAL PERMIT
SANTA ANA RIVER WATERSHED
EXHIBIT SA-2
(LAKE ELSINORE, CANYON LAKE, PERRIS, MENIFEE, WILDOMAR AREAS)

- CITY MS4 FACILITIES
- COUNTY MS4 FACILITIES
- RCFC&WCD MS4 FACILITIES
- OTHER FACILITIES
- MAJOR OUTFALL SITES
- SAR CORE MONITORING STATIONS
- SANTA ANA RIVER WATERSHED BOUNDARY
- SANTA MARGARITA RIVER MS4 PERMIT AREA BOUNDARY
- LANDFILL SITES
- SEWAGE TREATMENT PLANTS
- SANTA ANA RIVER/SAN JACINTO RIVER
- BLUE LINE STREAMS
- RIVERSIDE COUNTY BOUNDARY
- INCORPORATED AREAS
- FREEWAYS/HIGHWAYS
- PRIMARY STREETS

N

0 0.5 1 1.5 2 MILES

UPDATED NOVEMBER 2018

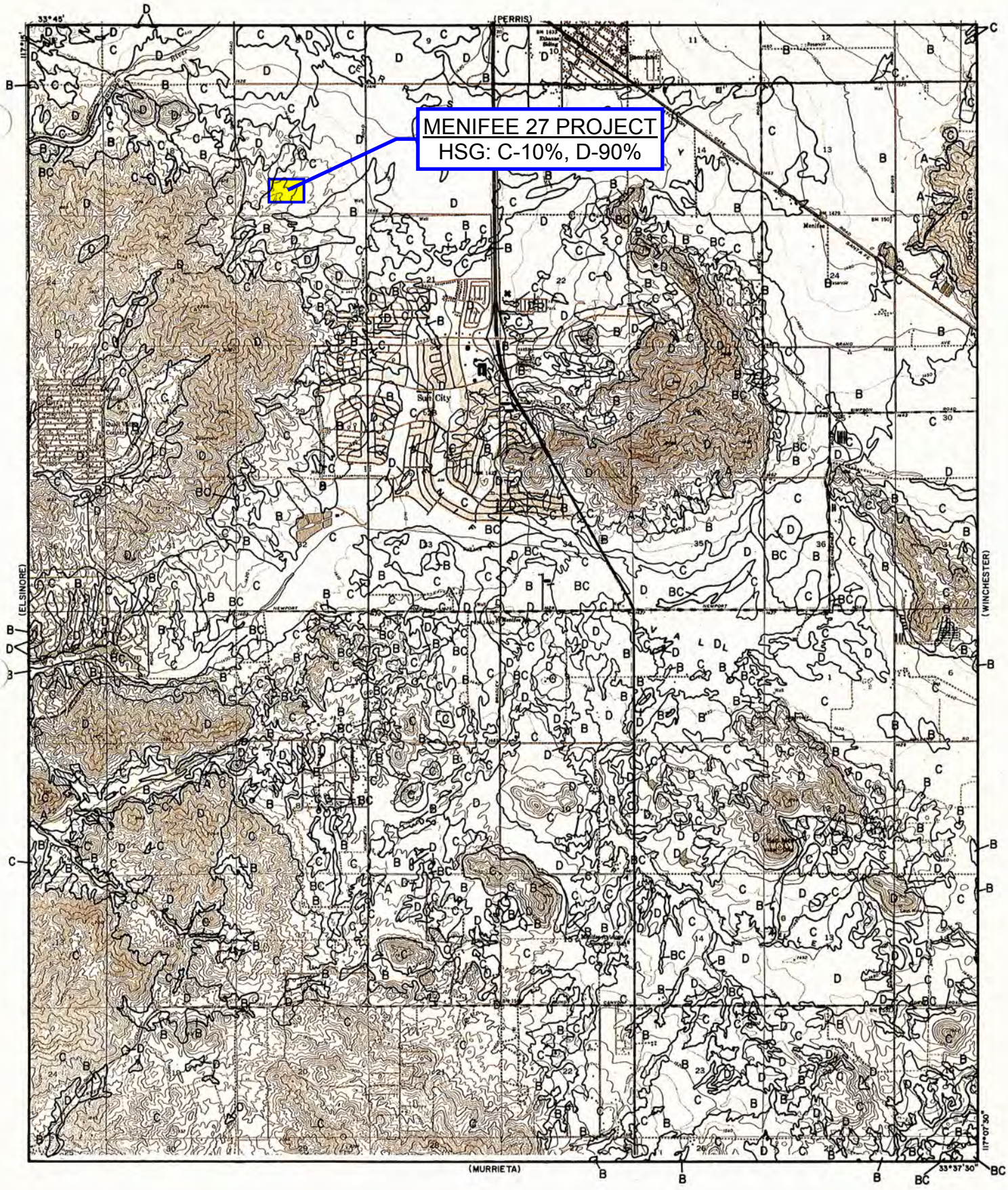


CORONA
PERRIS
LAKE ELSINORE
CANYON LAKE
MENIFEE
WILDOMAR
TEMESCAL VALLEY
GAVILAN PLATEAU
RIVERSIDE COUNTY
ORANGE COUNTY
Project Location
SEE FOOTNOTE 1
SEE FOOTNOTE 1

FOOTNOTE:
1) MS4 PERMIT AREA REMOVED FROM REGION 8 BASED ON JURISDICTIONAL AREA SWAP AGREEMENT BETWEEN REGION 8 AND REGION 9

The graphical and tabular information shown on this document may be derived from a variety of public agency and/or private commercial sources such as Riverside County Transportation and Land Management Agency, Thomas Brothers Mapping, the Stephen P. Teale Data Center, GIS Technology Center, State of California, the United States Geologic Survey and the United States National Atlas. These sources may possess varying levels of accuracy and precision and this product is meant only as a guide to the relative position and scale of the depicted features. This GIS document is in no case to be interpreted as fundamental or decisive for purposes of land surveying, field engineering, plan drafting, code enforcement, land boundary determination and/or land acquisition.

SAR-2018 ArcMap_MS4 Maps_Map2.mxd



LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC & WCD

HYDROLOGY MANUAL

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR ROMOLAND

PLATE C-1.42

Search

Clear | Search

Basic Search

Enter keywords: Hydraulic soils group

Advanced Search

Clear | Search

"Hydraulic soils group": 9 matches.

- *No match.*
- **Ecological Site Assessment**
  - *No match.*
- **Ecological Sites**
  - *No match.*
- **Soil Reports** 4 matches
  - Matched the Report Description 4 matches
    - AOI Inventory:Water Quality Index (WQIag) Soil Factors
    - Soil Physical Properties:Engineering Properties
    - Soil Physical Properties:Physical Soil Properties
    - Waste Management:Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge
- **Shopping Cart**

Soil Reports

Open All | Close All

- AOI Inventory
- Disaster Recovery Planning
- Land Classifications
- Land Management
- Soil Chemical Properties
- Soil Erosion
- Soil Health
- **Soil Physical Properties**
  - Engineering Properties
    - View Description | View Soil Report
    - **Options**
      - Include minor soils? ☐
    - View Description | View Soil Report
    - Fragments on the Soil Surface
    - Particle Size and Coarse Fragments
    - Physical Soil Properties
- Soil Qualities and Features
- Vegetative Productivity
- Waste Management
- Water Features
- Water Management
- Wildlife Management

Soil Map

Scale (not to scale)



Warning: Soil Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Map 1:15,800. The design of map units and the level of detail shown in the resulting soil map are depend

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of map could have been shown at a more detailed scale.

Report — Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Western Riverside Area, California

Western Riverside Area, California

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		
					Unified	AASHTO	>10 inches	3-10 inches	
			In				*L-R-H*	*L-R-H*	*L*
AuC—Auld clay, 2 to 8 percent slopes									
Auld	85	C	0-28	Clay	CH	A-7	0- 0- 0	0- 0- 0	1 1 1
			28-44	Loam	CL	A-6	0- 0- 0	0- 0- 0	1 1 1
			44-48	Weathered bedrock	—	—	—	—	
AuD—Auld clay, 8 to 15 percent slopes									
Auld	85	C	0-28	Clay	CH	A-7	0- 0- 0	0- 0- 0	1 1 1
			28-44	Loam	CL	A-6	0- 0- 0	0- 0- 0	1 1 1
			44-48	Weathered bedrock	—	—	—	—	
CaD2—Cajalco fine sandy loam, 8 to 15 percent slopes, eroded									
Cajalco	85	C	0-13	Fine sandy loam	SM	A-2, A-4	0- 0- 0	0- 0- 0	1 1 1
			13-22	Loam, clay loam	CL	A-6	0- 0- 0	0- 0- 0	1 1 1
			22-62	Weathered bedrock	—	—	—	—	
CbD2—Cajalco rocky fine sandy loam, 5 to 15 percent slopes, eroded									

Western Riverside Area, California									
Cajalco	75	D	0-13	Fine sandy loam	SM	A-2, A-4	0- 0- 0	0- 0- 0	1 1 1
			13-18	Loam, clay loam	CL	A-6	0- 0- 0	0- 0- 0	1 1 1
			18-62	Weathered bedrock	—	—	—	—	
WyC2—Wyman loam, 2 to 8 percent slopes, eroded									
Wyman	85	C	0-14	Loam	CL-ML, ML	A-4	0- 0- 0	0- 0- 0	1 1 1
			14-36	Clay loam, loam	CL	A-6	0- 0- 0	0- 0- 0	1 1 1
			36-50	Stratified loam to clay loam	CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	1 1 1
			50-60	Stratified loam to clay loam	CL, CL-ML	A-4, A-6	0- 0- 0	0- 0- 0	1 1 1

Description — Engineering Properties

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

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.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

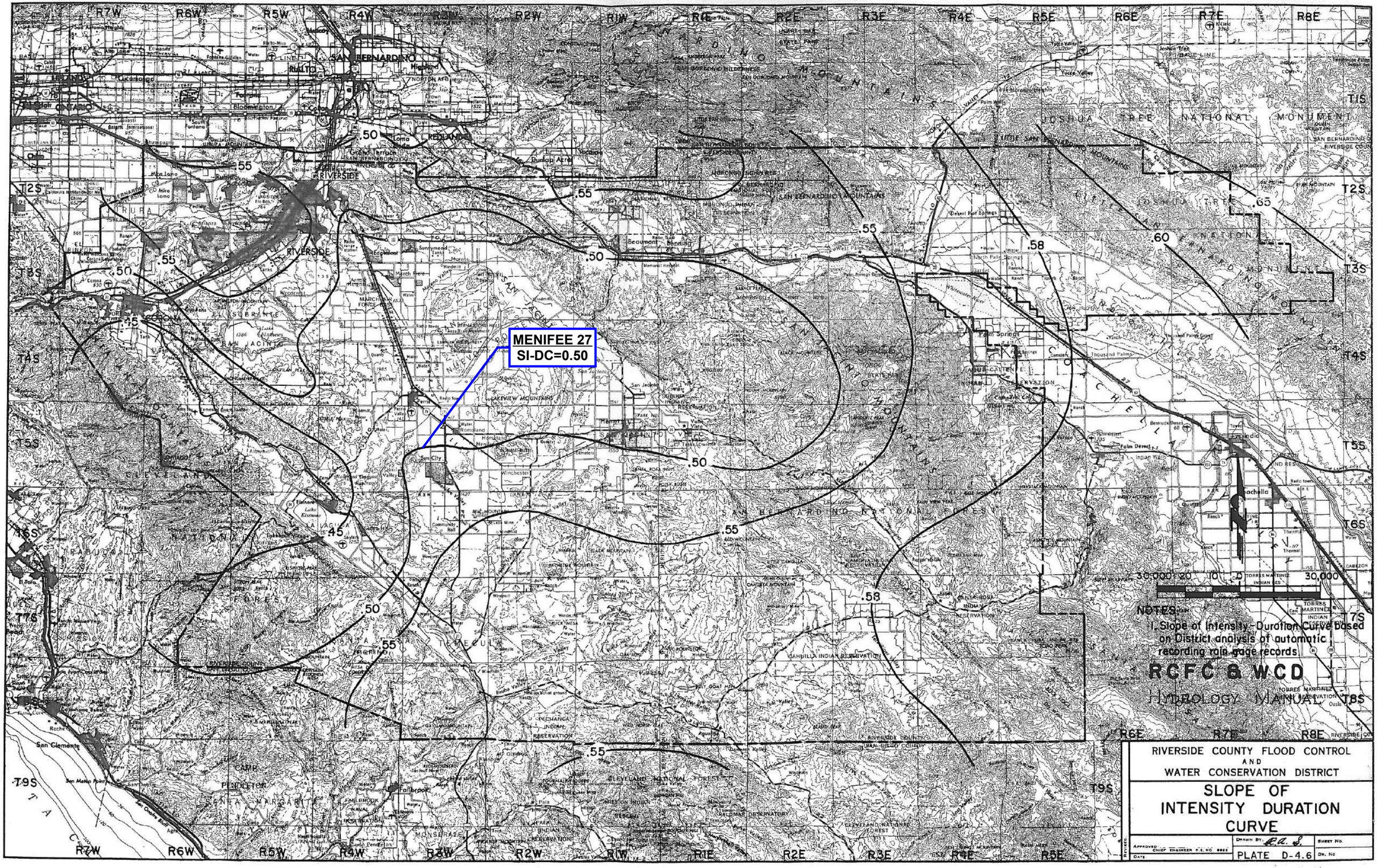
Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House


MENIFEE 27
SI-DC=0.50
.50
.55
.45
.58
.60
.63
NOTES:
1. Slope of Intensity-Duration Curve based on District analysis of automatic recording rain gage records
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
SLOPE OF INTENSITY DURATION CURVE
PLATE D-4.6

MENIFEE 27
2-yr; 1-hr=0.49 in/hr

NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI – California, 1973

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

2-YEAR — 1-HOUR PRECIPITATION

PLATE D-4.3

MENIFEE 27
100-yr; 1-hr=1.28 in/hr

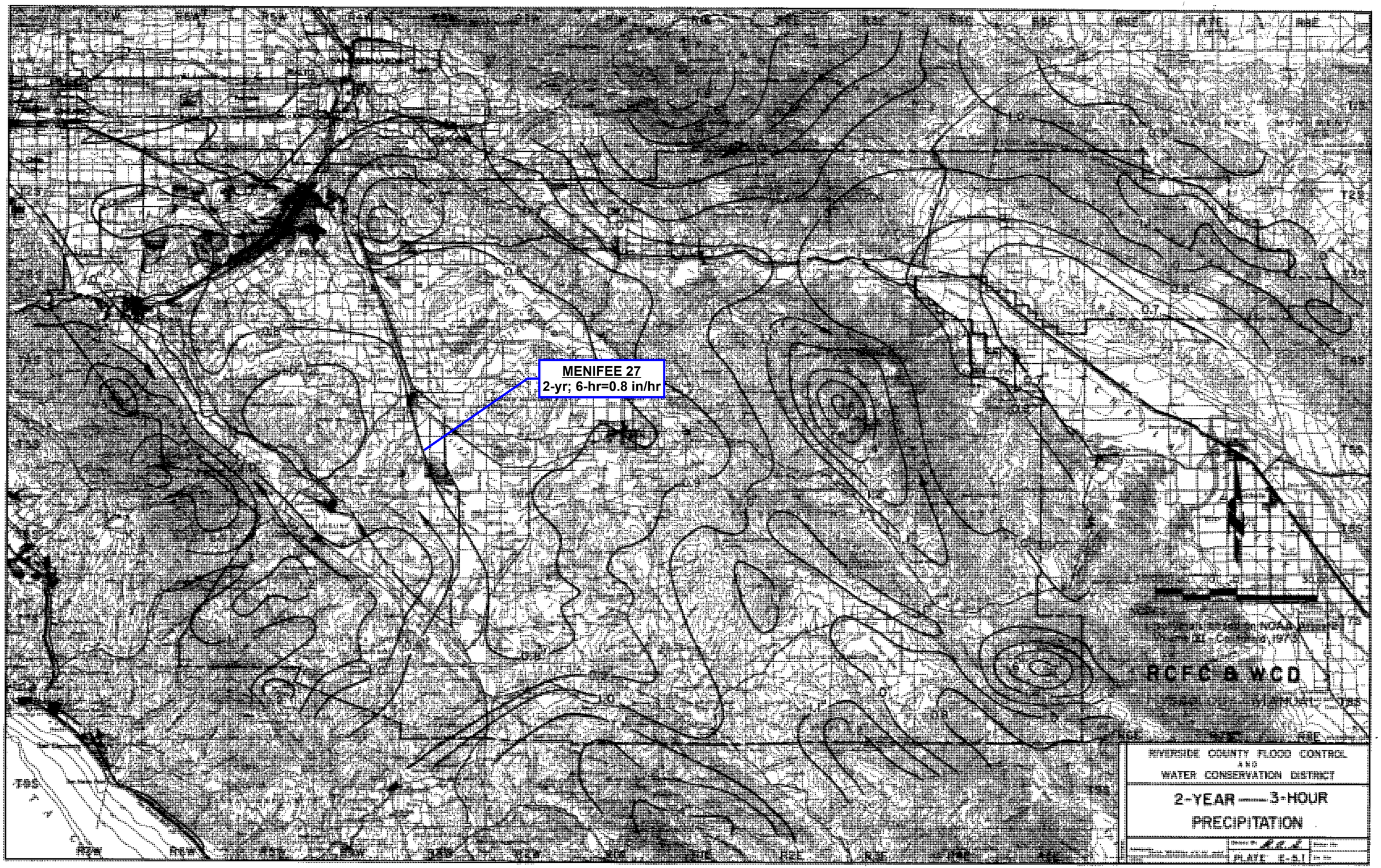
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI – California, 1973

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100-YEAR — 1-HOUR PRECIPITATION

APPROVED CHIEF ENGINEER R.E. NO. 6822 — DATE
DRAWN BY R.A.S. — SHEET NO. PLATE D-4.4 — DR. NO.
REVISED


MENIFEE 27
2-yr; 6-hr=0.8 in/hr
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
2-YEAR — 3-HOUR
PRECIPITATION
PLATE E-5.1

MENIFEE 27
100-yr; 6-hr=1.93 in/hr

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

100-YEAR — 3-HOUR
PRECIPITATION

PLATE E-5.2

MENIFEE 27
2-yr; 6-hr=1.14 in/hr

RCFC & WCD

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

2-YEAR — 6-HOUR PRECIPITATION

PLATE E-5.3

MENIFEE 27
100-yr; 6-hr=2.6 in/hr

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

100-YEAR — 6-HOUR PRECIPITATION

PLATE E-5.4

MENIFEE 27
2-yr; 24-hr=1.9 in/hr

NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973.

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

2-YEAR — 24-HOUR PRECIPITATION

APPROVED: CHIEF ENGINEER R.E. NO. 8822 DATE	DRAWN BY R.A.S.	SHEET NO.
REVISED:	PLATE E-5.5	DR. NO.

MENIFEE 27
100-yr; 24-hr=4.8 in/hr

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

100-YEAR — 24-HOUR PRECIPITATION

PLATE E-6.6

(Method obtained from Urban Hydrology for Small Watersheds TR-55, Chapter 2 - Estimating Runoff, pg. 2-1)

HCOC RUNOFF VOLUME

FOR 2-YR 24-HR STORM EVENT

PROJECT: Menifee_27

Hydrologic Soils Group: C *(per RCFC&WCD Hydrology Manual)*

2-Year, 24 hr Rainfall (P): 1.9 in

Total Site Area: 25.45 acres

Protected Site Area: 0.00 acres

Managed Area: 25.45 acres

Existing Conditions:

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	Ia (0.2*S) (in)	$Q_{in/ft}$ Runoff[1]	Q Runoff[2] (ft)[3]
Fallow Condition[1]	C	110,875	2.55	90	1.11	0.22	1.01	9,326
Fallow Condition[1]	D	997,872	22.91	92	0.87	0.17	1.15	95,449
TOTAL:		1,108,747	25.45					**104,775**

1 RCFC&WCD Hydrology Manual indicates C & d Hydraulic Soils GroupS

Developed Conditions:

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	Ia (0.2*S) (in)	$Q_{in/ft}$ Runoff[1]	Q Runoff[2] (ft)[3]
Pervious : Residential Landscaping [GOOD][1]	C	39,229	0.90	69	4.49	0.90	0.18	597
Pervious : Residential Landscaping [GOOD][1]	D	353,061	8.11	75	3.33	0.67	0.33	9,800
Residential Lot Impervious	C, D	479,465	11.01	98	0.20	0.04	1.68	66,937
Streets & Sudewalks	C, D	236,992	5.44	98	0.20	0.04	1.68	33,086
TOTAL:		1,108,747	25.45					**110,420**

1 See footnote under Existing Conditions table above.

2·Year Volume Increase (ft^3): 123

2· Year Volume Increase = Developed Conditions Runoff Volume - Existing Conditions Runoff Volume

1. Runoff (in) = Q = (P - 0.2S)^2 / (P+ O.8S) where

P = 2·Year Rainfall (in)

S = (1000 / CN)-10

*Ia = 0.2 * S (Initial Absorbtion)*

2. Runoff Volume (CF) = Q x Area x 1/12

Q = Runoff (in)

Area = land use area (sq. ft)

Note: Runoff Volume must be calculated for EACH land use type/condition and HSGI.

The use of a weighted CN value for volume calculations is not acceptable.

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet (also see instructions in Section G of the WQMP Template):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your WQMP Exhibit.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in your WQMP. Use the format shown in Table G.1on page 23 of this WQMP Template. Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternative BMPs for those shown here.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☒ **A. On-site storm drain inlets**	☒ **Locations of inlets.** **(shown on Rough Grading Plans)**	☒ **Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.**	☒ **Maintain and periodically repaint or replace inlet markings.** ☒ **Provide stormwater pollution prevention information to new site owners, lessees, or operators.** ☒ **See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**
☐ **B. Interior floor drains and elevator shaft sump pumps**		☐ **State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.**	☐ **Inspect and maintain drains to prevent blockages and overflow.**
☐ **C. Interior parking garages**		☐ **State that parking garage floor drains will be plumbed to the sanitary sewer.**	☐ **Inspect and maintain drains to prevent blockages and overflow.**

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **D1.** Need for future indoor & structural pest control		☐ Note building design features that discourage entry of pests.	☐ Provide Integrated Pest Management information to owners, lessees, and operators.
☒ **D2.** Landscape/ Outdoor Pesticide Use	☒ Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. ☐ Show self-retaining landscape areas, if any. ☐ Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)	State that final landscape plans will accomplish all of the following. ☐ Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. ☒ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater by following manufacturers guidelines. ☒ pollution. Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated ☒ soil conditions. ☒ Consider using pest-resistant plants, especially adjacent to hardscape. To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	☒ Maintain landscaping using minimum or no pesticides. ☒ See applicable operational BMPs in **"What you should know for…..Landscape and Gardening"** at http://rcflood.org/stormwater/**Error! Hyperlink reference not valid.** Provide IPM information to new ☐ owners, lessees and operators.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **E.** Pools, spas, ponds, decorative fountains, and other water features.	☐ Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)	If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	☐ See applicable operational BMPs in "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/
☐ **F.** Food service	☐ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. ☐ On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	☐ Describe the location and features of the designated cleaning area. ☐ Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	☐ See the brochure, "The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ Provide this brochure to new site owners, lessees, and operators.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

☐ **G.** Refuse areas	☐ Show where site refuse and recycled materials will be handled and stored securely for pickup. See local municipal requirements for sizes and other details of refuse areas. ☐ If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area.	☐ State how site refuse will be handled and provide supporting detail to what is shown on plans. ☐ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	☐ State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. See Fact Sheet WM-4 "Spill Prevention and Control" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☐ **H.** Industrial processes.	☐ Show process area.	☐ If industrial processes are to be located on site, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system."	☐ See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com See the brochure "Industrial & Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities" at http://rcflood.org/stormwater/

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **I.** Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	☐ Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. ☐ Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. ☐ Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of Hazardous Materials Programs for: ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release (CalARP) ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank www.cchealth.org/groups/hazmat	☐ See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials " in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☐ **J.** Vehicle and Equipment Cleaning	☐ **Show on drawings as appropriate:** **(1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.** **(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).** **(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.** **(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.**	☐ **If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.**	**Describe operational measures to implement the following (if applicable):** ☐ **Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.** Refer to "Outdoor Cleaning Activities and Professional Mobile Service Providers" for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/ ❑**Car dealerships and similar may rinse cars with water only.**

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **K.** Vehicle/Equipment Repair and Maintenance	☐ Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. ☐ Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. ☐ Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	☐ State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. ☐ State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. ☐ State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	In the Stormwater Control Plan, note that all of the following restrictions apply to use the site: ☐ No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. ☐ No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. ☐ No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment. Refer to "Automotive Maintenance & Car Care Best Management Practices for Auto Body Shops, Auto Repair Shops, Car Dealerships, Gas Stations and Fleet Service Operations". Brochure can be found at http://rcflood.org/stormwater/ Refer to Outdoor Cleaning Activities and Professional Mobile Service Providers for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **L.** Fuel Dispensing Areas	☐ Fueling areas[6] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. ☐ Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1].] The canopy [or cover] shall not drain onto the fueling area.		☐ The property owner shall dry sweep the fueling area routinely. ☐ See the Fact Sheet SD-30 , "Fueling Areas" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

[6] The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☐ **M.** Loading Docks	☐ Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer. ☐ Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. ☐ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		☐ Move loaded and unloaded items indoors as soon as possible. ☐ See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **N.** Fire Sprinkler Test Water		☐ Provide a means to drain fire sprinkler test water to the sanitary sewer.	☒ See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
O. Miscellaneous Drain or Wash Water or Other Sources ☐ Boiler drain lines ☐ Condensate drain lines ☐ Rooftop equipment ☐ Drainage sumps ☒ Roofing, gutters, and trim. ☐ Other sources		☐ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ☐ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ☐ Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ☐ Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. ☒ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. Include controls for other sources as specified by local reviewer.	

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ **P.** Plazas, sidewalks, and parking lots.			☒ Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Use absorbent to collect fluids, oil and greases and dispose of properly to prevent entry into the storm drain system. In the event washwater is required, it is to be contained and collected without entering the storm drain system.

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

Operation and Maintenance Plan for the Stormwater Quality BMP Facilities
for
Tentative Tract Map 38128

April 28, 2022

I. PURPOSE

The primary purpose of this Operations & Maintenance Plan (O&M Plan) shall be to provide a routine maintenance program that maintains the treatment facilities effectiveness.

II. COVERAGE AREA

This project will utilize 1 primary treatment facility type located on-site:

1. Extended Detention Basin "A" – Located at northeast corner or project.

This facility treats stormwater runoff from the site and outlets into the future drainage system of the development to the north of this project. Ultimately, the runoff drains to the San Jacinto River through a series of drainage paths, County of Riverside and various City maintained drainage systems, and Canyon Lake before ending up at Lake Elsinore.

III. ROUTINE MAINTENANCE ACTIVITIES

Primary maintenance activities include vegetation management, trash and sediment removal, irrigation maintenance and storm drain outlet inspections. Although mosquito abatement is a concern, the basins and swales are designed to fully drain within 24-72 hours and not include permanent pools or standing water. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1 below.

NOTE: Landscape Maintenance Plan should also be reviewed for consistency with vegetation maintenance and any applicable needs for specific plants, shrubs or trees.

Table 1 Routine Maintenance Activities for Basins & Swales		
No.	**Maintenance Task**	**Frequency of Task**
1	Conduct annual vegetation management during the summer, removing weeds and harvesting vegetation. Remove all grass cuttings and other green waste.	Once a year
2	Trim vegetation at beginning and end of wet season to prevent establishment of woody vegetation, and for aesthetics and mosquito control.	Twice a year (spring and fall)
3	Evaluate health of vegetation and remove or replace any dead or dying plants. Remove all green waste and dispose of properly.	Twice a year
4	If turf grass is included in basin/swale design, conduct regular mowing and remove all grass cuttings. Avoid producing ruts when mowing.	As necessary to not allow grass over-growth
7	Remove accumulated trash and debris from the middle and end of the wet season and dispose of trash and debris properly.	Twice a year (January and April)
8	Irrigate during dry weather.	Per Landscape Plans
9	Inspect basins and swales using the attached inspection checklists.	Quarterly, or as needed

IV. PROHIBITIONS

The use of pesticides and quick release fertilizers shall be minimized, and the principles of integrated pest management (IPM) followed:

1. Employ non-chemical controls (biological, physical and cultural controls) before using chemicals to treat a pest problem.
2. Prune plants properly and at the appropriate time of year.
3. Provide adequate irrigation for landscape plants. Do not over water.
4. Limit fertilizer use unless soil testing indicates a deficiency. Slow-release or organic fertilizer is preferable. Check with municipality for specific requirements.
5. Pest control should avoid harming non-target organisms, or negatively affecting air and water quality and public health. Apply chemical controls only when monitoring indicates that preventative and non-chemical methods are not keeping pests below acceptable levels. When pesticides are required, apply the least toxic and the least persistent pesticide that will provide adequate pest control. Do not apply pesticides on a prescheduled basis.
6. Sweep up spilled fertilizer and pesticides. Do not wash away or bury such spills.
7. Do not over apply pesticide. Spray only where the infestation exists. Follow the manufacturer's instructions for mixing and applying materials.
8. Only licensed, trained pesticide applicators shall apply pesticides.

9. Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging pesticides into runoff. With the exception of pre-emergent pesticides, avoid application if rain is expected.

10. Unwanted/unused pesticides shall be disposed as hazardous waste.

Standing water shall not remain in the treatment and/or hydromodification management measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the City of Beaumont for the appropriate contact for Mosquito Abatement, as needed for assistance. Mosquito larvicides shall be applied only when absolutely necessary and then only by a licensed professional or contractor. Contact information for the Riverside County Environmental Health – Vector Control is provided below.

Riverside County Department of Environmental Health – Vector Control

Downtown Riverside Office
3880 Lemon Street, 2nd Floor
Riverside, CA 92501
Phone: (951) 955-8980
Emergency After Hours: (951) 782-2968
http://www.rivcoeh.org/opencms/rivcoeh/ProgServices/Food_Program/Vector.html

V. INSPECTIONS

The attached Inspection and Maintenance Checklists shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Basin Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season

Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance Is Performed**
General				
Trash & Debris	• Trash and debris accumulated in basin. • Visual evidence of dumping.			Trash and debris cleared from site and disposed of properly.
Poisonous Vegetation and noxious weeds	Poisonous or nuisance vegetation or noxious weeds, e.g., morning glory, English ivy, reed canary grass, Japanese knotweed, purple loosestrife, blackberry, Scotch broom, poison oak, stinging nettles, or devil's club.			Use Integrated Pest Management techniques to control noxious weeds or invasive species.
Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants.			No contaminants or pollutants present.
Rodent Holes	If facility acts as a dam or berm, any evidence of rodent holes, or any evidence of water piping through dam, berm or into slopes via rodent holes.			The design specifications are not compromised by holes. Any rodent control activities are in accordance with applicable laws and do not affect any protected species.
Insects	Insects such as wasps and hornets interfere with maintenance activities.			Insects do not interfere with maintenance activities.

Basin & Swales Inspection and Maintenance Checklist

Date of Inspection:_____

Property Address: _____

Treatment Measure No.:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance Is Performed**
Tree/Brush Growth and Hazard Trees	• Growth does not allow maintenance access or interferes with maintenance activity. • Dead, diseased, or dying trees/shrubs.			• Trees do not hinder maintenance activities. • Remove hazard trees as approved by the City. (Use a certified Arborist to determine health of tree or removal requirements).
Drainage time	Standing water remains in basin more than five days.			Correct any circumstances that restrict the flow of water from the system. Restore drainage to design condition. If the problem cannot be corrected and problems with standing water recur, then mosquitoes should be controlled with larvicides, applied by a licensed pesticide applicator.
Outfall structure	Debris or silt build-up obstructs an outfall structure.			Remove debris and/or silt build-up and dispose of properly.
Side Slopes				
Erosion	• Eroded over 2 in. deep where cause of damage is still present or where there is potential for continued erosion. • Any erosion on a compacted berm embankment.			Cause of erosion is managed appropriately. Side slopes or berm are restored to design specifications, as needed.
Storage Area				
Sediment	Accumulated sediment >10% of designed basin depth or affects inletting or outletting condition of the facility.			Sediment cleaned out to designed basin shape and depth; basin reseeded if necessary to control erosion. Sediment disposed of properly.
Liner (If Applicable)	Liner is visible and has more than three 1/4-inch holes in it.			Liner repaired or replaced. Liner is fully covered.
Emergency Overflow / Spillway and Berms				
Settlement	Berm settlement 4 inches lower than the design elevation.			Dike is built back to the design elevation.

Basin & Swales Inspection and Maintenance Checklist

Date of Inspection:_____

Property Address: _____

Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Needed? (Y/N)	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Tree Growth	Tree growth on berms or emergency spillway >4 ft in height or covering more than 10% of spillway.			• Trees should be removed. If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored. • A civil engineer should be consulted for proper berm/spillway restoration.
Emergency Overflow/ Spillway	Rock is missing and soil is exposed at top of spillway or outside slope.			Rocks and pad depth are restored to design standards.
Debris Barriers (e.g., Trash Racks)				
Trash and Debris	Trash or debris is plugging openings in the barrier.			Trash or debris is removed and disposed of properly.
Damaged/ Missing Bars	Bars are missing, loose, bent out of shape, or deteriorating due to excessive rust.			Bars are repaired or replaced to allow proper functioning of trash rack.
Inlet/Outlet Pipe	Debris barrier is missing or not attached to pipe.			Debris barrier is repaired or replaced to allow proper functioning of trash rack.
Fencing and Gates				
Missing or broken parts	Any defect in or damage to the fence or gate that permits easy entry to a facility.			Fencing and gate are restored to design specifications.
Deteriorating Paint or Protective Coating	Part or parts that have a rusting or scaling condition that has affected structural adequacy.			Paint or protective coating is sufficient to protect structural adequacy of fence or gate.
Flow Duration Control Outlet (if included in design to meet Hydromodification Management Standard)				
Risers, orifices and screens	Any debris or clogging			Restore unobstructed flow through discharge structure; to meet original design; dispose of debris properly.
Drawdown time	Noticeable ponding exceeding 72-hours after a design storm event			Restore infiltration and ponded waters permeate. Scarification should only be performed when there are signs of clogging rather than on a routine basis. Always remove deposited sediments before scarification and use a hand-guided rotary tiller.
Swales (in addition to general items listed above)				

Basin & Swales Inspection and Maintenance Checklist

Date of Inspection:_____

Property Address: _____

Treatment Measure No.:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance Is Performed**
Impeded Flow	Twice annually at beginning and end of wet season. After heavy runoff. Visible blockage or impediments.			Trash and debris cleared from swale and disposed of properly especially prior to mowing.
Landscaping or Vegetative Overgrowth	Twice annually at beginning and end of wet season or as needed for aesthetics.			Maintained flow and healthy vegetation.
Miscellaneous				
Miscellaneous	Any condition not covered above that needs attention to restore infiltration basin to design conditions.			Meets the design specifications.

Drainage System Maintenance SC-44



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff and stormwater that may contain certain pollutants. The protocols in this fact sheet are intended to reduce pollutants reaching receiving waters through proper conveyance system operation and maintenance.

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	
Bacteria	✓
Oil and Grease	
Organics	

Approach

Pollution Prevention

Maintain catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Suggested Protocols

Catch Basins/Inlet Structures

- Staff should regularly inspect facilities to ensure compliance with the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC34 Waste Handling and Disposal).

CASQA California Stormwater Quality Association

- Clean catch basins, storm drain inlets, and other conveyance structures before the wet season to remove sediments and debris accumulated during the summer.
- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes if necessary with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed. Do not dewater near a storm drain or stream.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect and pump flushed effluent to the sanitary sewer for treatment whenever possible.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge to reach the storm drain system when cleaning a storm drain pump station or other facility.
- Conduct routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.

Open Channel

- Modify storm channel characteristics to improve channel hydraulics, increase pollutant removals, and enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a Steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies (SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS.

Illicit Connections and Discharges

- Look for evidence of illegal discharges or illicit connections during routine maintenance of conveyance system and drainage structures:
  - Is there evidence of spills such as paints, discoloring, etc?

- Are there any odors associated with the drainage system?
- Record locations of apparent illegal discharges/illicit connections?
- Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
- Eliminate the discharge once the origin of flow is established.

- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Inspect and clean up hot spots and other storm drainage areas regularly where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Allow only properly trained individuals to handle hazardous materials/wastes.
- Have staff involved in detection and removal of illicit connections trained in the following:
  - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).

- OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and Federal OSHA 29 CFR 1910.146).
- Procedural training (field screening, sampling, smoke/dye testing, TV inspection).

Spill Response and Prevention

- Investigate all reports of spills, leaks, and/or illegal dumping promptly.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags) or dig up, remove, and properly dispose of contaminated soil.
- Refer to fact sheet SC-11 Spill Prevention, Control, and Cleanup.

Other Considerations (Limitations and Regulations)

- Clean-up activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and prohibition against disposal of flushed effluent to sanitary sewer in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Local municipal codes may include sections prohibiting discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget.
- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The primary cost is for staff time. Cost depends on how aggressively a program is implemented. Other cost considerations for an illegal dumping program include:
  - Purchase and installation of signs.
  - Rental of vehicle(s) to haul illegally-disposed items and material to landfills.
  - Rental of heavy equipment to remove larger items (e.g., car bodies) from channels.
  - Purchase of landfill space to dispose of illegally-dumped items and material.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.
- Teams of at least two people plus administrative personnel are required to identify illicit discharges, depending on the complexity of the storm sewer system.
- Arrangements must be made for proper disposal of collected wastes.
- Technical staff are required to detect and investigate illegal dumping violations.

Supplemental Information

Further Detail of the BMP

Storm Drain Flushing

Flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in storm drainage systems. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as an open channel, another point where flushing will be initiated, or the sanitary sewer and the treatment facilities, thus preventing resuspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. Deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, thereby releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce impacts of stormwater pollution, a second inflatable device placed well downstream may be used to recollect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to recollect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75% for organics and 55-65% for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm sewer flushing.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line:
http://www.epa.gov/npdes/menuofbmps/poll_16.htm

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

3.6 Extended Detention Basin

Type of BMP	LID - Biotreatment
Treatment Mechanisms	Sedimentation, Infiltration, Biofiltration, Evapotranspiration, and Evaporation
Minimum Tributary Drainage Area	5 acres
Other Names	Enhanced Water Quality Basin

Overview

The Extended Detention Basin (EDB) is designed to detain the design volume of stormwater, V_{BMP}, and maximize opportunities for volume losses through infiltration, evaporation, evapotranspiration and surface wetting. Additional pollutant removal is provided through sedimentation, in which pollutants can attach to sediment accumulated in the basin through the process of settling. Stormwater enters the EDB through a *forebay* where any trash, debris, and sediment accumulate for easy removal. Flows from the forebay enter the basin which is vegetated with native grasses that enhance infiltration and evapotranspiration, and which is interspersed with gravel-filled trenches that help further enhance infiltration. Water that does not get infiltrated or evapotranspired is conveyed to the *bottom stage* of the basin. At the bottom stage of the basin, low or incidental dry weather flows will be treated through a sand filter and collected in a subdrain structure. Any additional flows will be detained in the basin for an extended period by incorporating an outlet structure that is more restrictive than a traditional detention basin outlet. The restrictive outlet structure extends the drawdown time of the basin which further allows particles and associated pollutants to settle out before exiting the basin, while maximizing opportunities for additional incidental volume losses.

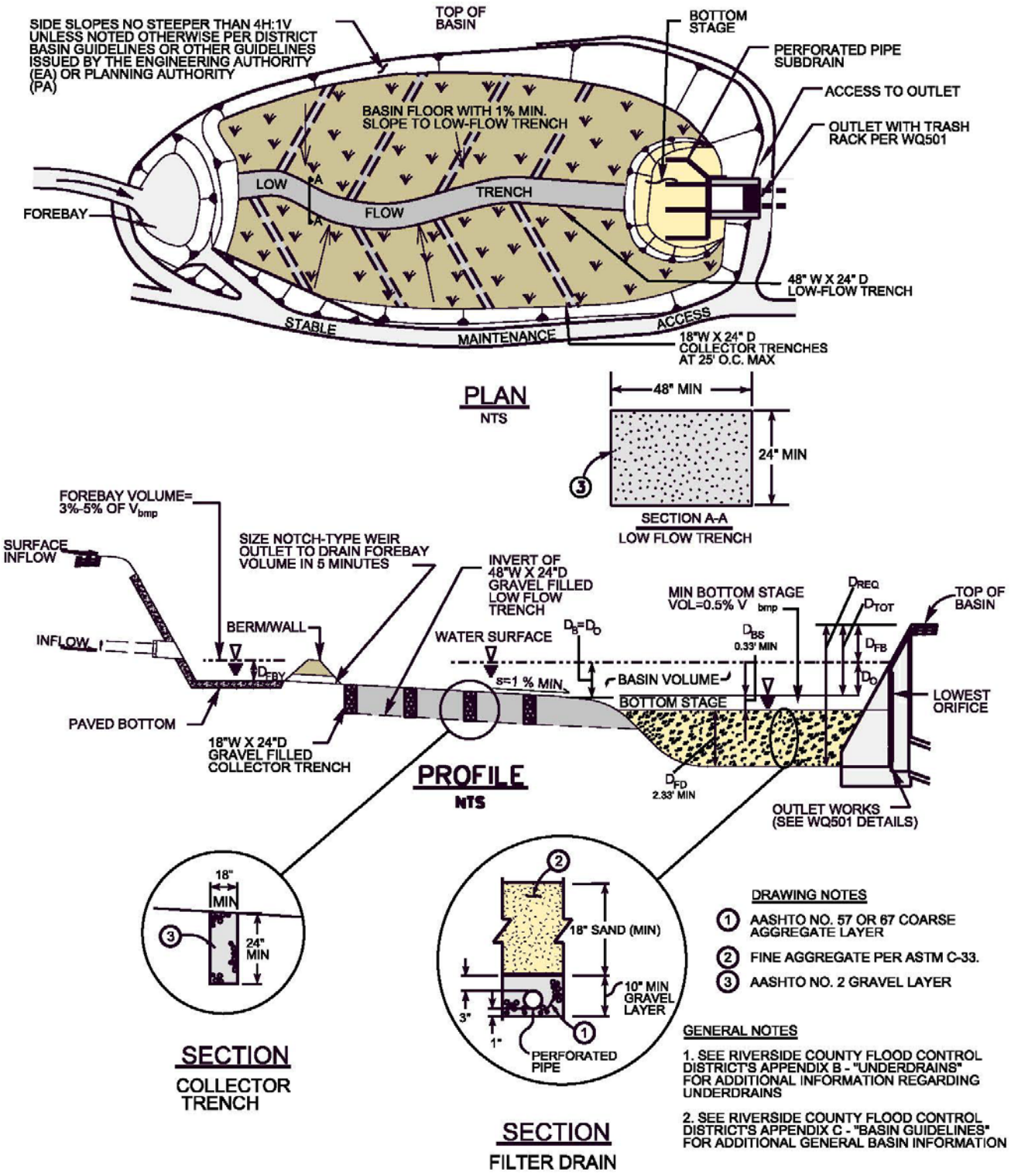


Figure 1 – Extended Detention Basin

Siting Considerations

Soils: EDBs can be used with almost all soils and geology. However, pollutant removal effectiveness is greatly improved when the underlying soil permits at least some infiltration.

Tributary Area: EDBs should only be used where the tributary drainage area is at least 5 acres, since meeting the draw-down requirements (discussed below) for smaller areas would result in very small outlet orifice diameters which would be prone to clogging.

Proximity to Receiving Waters: All site runoff must be treated to the MEP with appropriate BMPs *before* being discharged into Receiving Waters; as such the EDB cannot be constructed in-line within Receiving Waters.

Setbacks: Due to the infiltration characteristics incorporated into the EDB design, the lowest pervious point (beneath the filter drain) of the extended detention facility should be a minimum of 10' above the seasonal high groundwater table. All other setbacks shall be in accordance with applicable standards of the "Basin Guidelines" (Appendix C) or other guidelines issued by the Engineering Authority (EA).

Basin Guidelines: See Section 1 of the "Basin Guidelines" (Appendix C) for additional requirements (i.e., fencing, maintenance access, etc.) that may be required by the Engineering Authority (EA).

Landscaping Requirements

Basin vegetation provides erosion protection, enhances evapotranspiration and infiltration, and improves pollutant removal. The upper stage basin surface, berms and side slopes shall be planted with native grasses. Proper landscape management is also required to ensure that the vegetation does not contribute to water pollution through the use of pesticides, herbicides, or fertilizers. Landscaping shall be in accordance with applicable standards of the "Basin Guidelines" (Appendix C) or other guidelines issued by the EA.

Maintenance Guidelines

Schedule	Inspection and Maintenance Activity
During every scheduled maintenance check (per below), and *as needed* at other times	• Maintain vegetation as needed. Use of fertilizers, pesticides and herbicides should be strongly avoided to ensure they don't contribute to water pollution. If appropriate native plant selections and other IPM methods are used, such products shouldn't be needed. If such projects are used: o Care should be taken to avoid contact with the low-flow or other trenches, and the media filter in the bottom stage. o Products shall be applied in accordance with their labeling, especially in relation to application to water, and in areas subjected to flooding. o Fertilizers should not be applied within 15 days before, after, or during the rainy season. • No ponded water should be present for more than 72 hours to avoid nuisance or vector problems. No algae formation should be visible. Correct problems as needed.
Annually. If possible, schedule these inspections before the beginning of the rain season to allow for any repairs to occur before rains occur.	• Remove debris and litter from the entire basin • Inspect hydraulic and structural facilities. Examine the outlet for clogging, the embankment and spillway integrity, as well as damage to any structural element. • Check for erosion, slumping and overgrowth. Repair as needed. • Inspect sand media at the filter drain to verify it is allowing acceptable infiltration. **Scarify top 3 inches by raking the filter drain's sand surface annually.** • Check the media filter underdrains (via the cleanout) for damage or clogging. Repair as needed. • Remove accumulated sediment and debris from the forebay, and ensure that the notch weir is clear and will allow proper drainage. • Check gravel filled low flow and collector trenches for sediment buildup and repair as needed.
Every 5 years or sooner (depending on whether observed drain times to empty the basin are less than 72 hours).	• Remove the top 3 inches of sand from the filter drain and backfill with 3 inches of new sand to return the sand layer to its original depth. When scarification or removal of the top 3 inches of sand is no longer effective, remove and replace sand filter layer.
Whenever substantial sediment accumulation has occurred.	• Remove accumulated sediment from the bottom of the basin. Removal should extend to original basin depth.

EXTENDED DETENTION BASIN BMP FACT SHEET

Design Summary

Design Parameter	Extended Detention Basin
Drawdown time (total)	72 hours [2,3]
Minimum drawdown time for 50% V_{BMP}	24 hours [2]
Minimum tributary area	5 acres [2]
Outlet erosion control	Energy dissipaters to reduce velocities[1]
Forebay volume	3 to 5 % of V_{BMP} [3]
Basin Invert Longitudinal Slope (min.)	1%
Basin Invert Transverse (cross) Slope (min)	1%
Low-flow trench width (min.)	48 inches
Low-flow trench depth (min.)	24 inches
Slope of low-flow trench along bottom excavated Surface (max.)	1%
Slope of gravel collector trenches along bottom excavated surface (max.)	1 %
Length to width ratio (min.)	1.5:1
Basin depth (min.)	1 foot [3]
Bottom stage volume	0.5 % of V_{BMP} [3]
Bottom stage depth (min)	0.33 feet [3]
Filter drain depth (min)	2.33 feet [3]

1. **Ventura County's Technical Guidance Manual for Stormwater Quality Control Measures**
2. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**
3. **Denver, Colorado's UDFCD Drainage Criteria Manual, Volume 3**

Note: The information contained in this BMP Factsheet is intended to be a summary of design considerations and requirements. Additional information which applies to all detention basins may be found in the "Basin Guidelines" (Appendix C). In addition, information herein may be superseded by other guidelines issued by the Engineering Authority.

Design Procedure

These steps correspond to and provide a description of the information required in the EDB Design Worksheet.

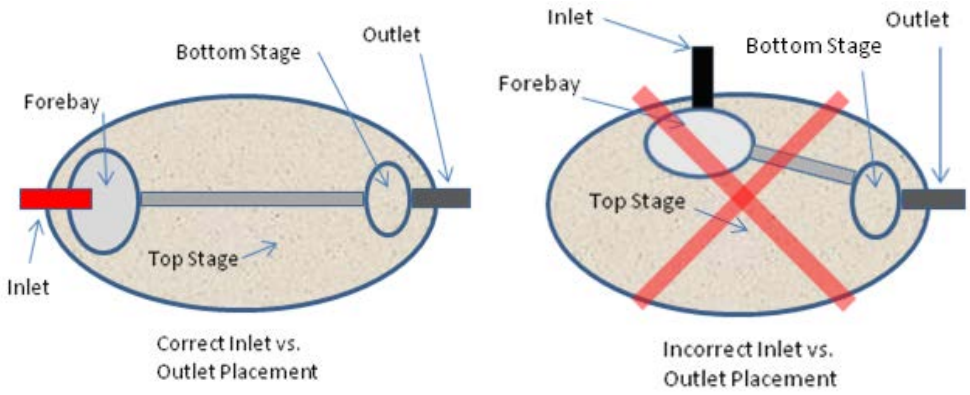
1. Find the Design Volume, V_{BMP}.

a) Enter the tributary area, A_T to the BMP. The minimum tributary area is 5 acres.

b) Enter the Design Volume, V_{BMP}, determined from Section 2.1 of this Handbook.

2. Basin Footprint

a) Enter the length and width of the EDB. The length shall be measured between the inlet to the basin and the outlet structure; and the width shall be measured at the widest point of the basin invert. The length to width ratio should be 1.5:1 or longer to prevent short-circuiting and increase the overall effectiveness of the BMP.



b) Enter the internal basin side slopes. See the "Basin Guidelines" (Appendix C) for side slope requirements. If variable internal side-slopes are used, enter the steepest slope that will be used.

c) Using Figure 1 as a guide, enter the proposed basin depth, D_B, and the freeboard depth, D_{FB}. Based on the information provided, the spreadsheet will calculate the minimum total depth required, D_{REQ}, for this BMP. D_{REQ} is the depth from the bottom of the underdrain layer in the bottom stage (see step 5c), to the top of the freeboard. This calculated minimum required depth can be used to determine if enough elevation difference is available within the design topography to allow for use of this BMP.

d) Additionally, the basin depth D_B is equal to $D_{O,}$ which is the depth from the design pond water surface elevation to the lowest orifice in the outlet structure. D_O is confirmed by the spreadsheet and is used in the Basin Outlet Design described in step 6 below. It should be noted that this lowest orifice is a critical elevation in the design of this BMP. The Volume of the Basin V_{Basin} described in step 3d) is the volume of water above this lowest orifice. This lowest-orifice also represents the dry weather ponded water surface discussed in step 5c below. Below this elevation there must be a minimum of a 4-inch drop down to the surface of the Sand Filter in the bottom stage.

3. Basin Design

a) The Total Basin Depth, D_{TOT}, is calculated automatically, and is the sum of the basin depth D_B plus the freeboard depth D_{FB}.

b) Enter the longitudinal slope of the basin invert. This slope must be at least 1% and is measured along the low flow trench between the forebay and the bottom stage. Note that the surface of the sand layer in the bottom stage must be level (see Figure 1).

c) Enter the transverse slope of the basin invert. This transverse (cross sectional) slope must be at least 1% sloped toward the low flow trench.

d) Enter the Volume of the Basin, V_{Basin}. This volume must be the actual volume of water held within the basin as substantiated by modeling or appropriate volumetric calculations, and must be equal to or greater than V_{BMP}. This volume must be held above the lowest orifice in the Basin Outlet Design described in step 6 below.

4. Forebay Design

All flows must enter the basin through the forebay. The forebay provides a location for the settlement and collection of larger particles, and any other trash or debris. A relatively smooth and level concrete bottom surface should be provided to facilitate mechanical removal of any accumulated sediment, trash and debris.



Figure 2: Forebay filled with storm water

a) Enter the Forebay Volume VFB. This volume must be from 3 to 5 percent of V_{BMP}.

b) A rock or concrete berm must be constructed to detain water before it drains into the basin. The top of the berm shall be set no higher than the invert of the inlet conveyance. Enter the Forebay Depth, D_{FBY}.

c) The spreadsheet will calculate the minimum surface area of the forebay, A_{FB}, based on the provided Forebay Volume and Depth. Ensure that the plans provide for a forbay area at least this large.

d) Although the forebay will be well submerged in the design event, a full height rectangular notch-type weir shall be constructed through the berm to prevent permanent ponding in the forebay, and allow water to slowly and fully drain to the main body of the basin. This notch should be offset from the inflow streamline to prevent low-flows from short circuiting. Enter the width, W, of this rectangular notch weir. The width shall not be less than 1.5 inches to prevent clogging. Additionally,

immediately outside the notch construct a minimum 1-foot by 1-foot gravel pad to prevent vegetative growth within the basin invert from blocking the notch.

5. Dry Weather and Low-Flow Management

The basin shall have both a low-flow gravel trench and a network of gravel collector trenches across the invert of the basin, as well as a bottom stage sand filter to treat low flows and dry weather flows (see Figure 1).

a) Low Flow Trench: The low-flow gravel trench conveys flow from the forebay to the bottom stage, while allowing for maximum incidental infiltration and volume loss. The trench shall be a minimum of 48 inches wide by 24 inches deep. This trench shall be unlined and backfilled with AASHTO No. 2 gravel (or similar) to the finished surface of the basin invert, and shall not use underdrains. The bottom excavated surface of the low-flow trench shall be 1 percent or flatter to promote infiltration.



Figure 3: Gravel filled low-flow trench

b) Collector Trenches: Gravel collector trenches beneath the top stage shall be arranged as illustrated in Figure 1 of Appendix C with minimal slope (1% maximum) along their bottom excavated surface to promote infiltration, and must extend from the low-flow trench to the toe of the basin side slopes. They shall be a minimum of 18-inches wide by 24-inches deep, unlined and backfilled with AASHTO No. 2 gravel (or similar) to the finished basin invert surface. The gravel collector trenches shall not use underdrains and shall be constructed with a maximum spacing of 25 feet, center to center. See Figure 1 of Appendix C.

c) Bottom Stage: A depressed sand filter drain area, referred to as the bottom stage, must be constructed adjacent to the outlet structure to treat any dry weather flows. To ensure that dry weather flows are treated through the sand filter and not discharged through the orifice plate, the top surface of the sand filter must be depressed at least 4 inches below the lowest orifice in the outlet structure. This depressed area will create a micro pool of water that is then filtered down through the sand filter and out through underdrains. Based on the minimum dimensions described below, the minimum depth of excavation below the lowest orifice in the outlet structure is 2.33 feet.

   i. Enter the Depth of the bottom stage, D_{BS}. As mentioned above, this depth must be at least 4 inches, and extend down below the lowest orifice in the outlet structure.

   ii. Enter the area of the bottom stage, A_{BS}.

iii. Based on the D_{BS} and A_{BS} entered, the spreadsheet will calculate V_{BS}. This volume is the volume of ponded water that will be held below the lowest orifice in the outlet structure, and above the surface of the sand filter. This volume must be at least 0.5% of V_{BMP}.

iv. Enter the thickness of the ASTM C-33 sand layer that will be provided, D_S. A minimum thickness of 18 inches is required.

v. Below the sand layer, a minimum 10-inch thick layer of gravel shall be installed with underdrains to drain the water that has been treated through the sand filter. The underdrains shall connect into the outlet structure. See Appendix B for standard underdrain construction. Enter the diameter of the underdrain pipe (minimum 6" dia.), and the spacing of the underdrains. The maximum spacing of the underdrains is 20 feet on center, however where the area of the bottom stage is particularly small (less than 500 square feet), the underdrain pipes shall be placed at no more than a 10-foot separation on center.

6. Basin Outlet Design

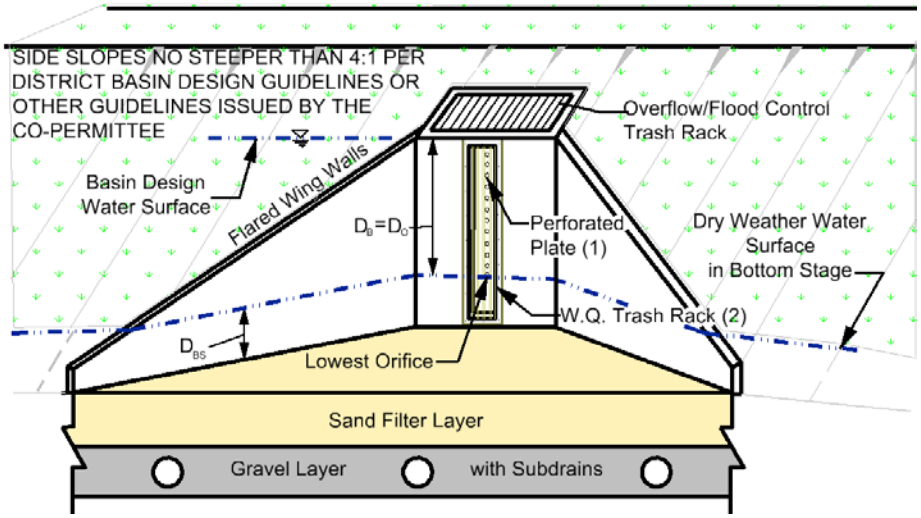


Figure 4: Basin Outlet Structure with Bottom Stage Shown

Outlet structures for publicly maintained basins shall conform to District Standard Drawings WQ501 unless approved in advance by the local Engineering Authority (EA). This standardization is to provide for efficient maintenance. The basin outlet should be sized to release the design volume, VBMP, within a 72-hour period but 50 percent of VBMP within 24 hours. This is an iterative design process where an appropriate control orifice can be selected using the following steps:

a. Develop a Stage vs. Discharge Curve for the Outlet Structure

Estimate the orifice size and outlet plate configuration (number per row, etc.). Based on D_O provided in the Basin Footprint section, the spreadsheet will automatically generate the stage vs. discharge relationship for this outlet:

$$Q = C*A*[2*g*(H-H_o)]^{0.5}$$

Where:

Q = discharge (ft^3/s)

C = orifice coefficient

A = area of the orifice (ft)

g = gravitational constant (32.2 ft2/s)

H = water surface elevation (ft)

H_o = orifice elevation (ft)

The lowest orifice shall be located with its centerline at the top of the bottom stage; at least 4 inches above the surface of the sand filter drain. To help avoid clogging, the minimum orifice diameter is limited to 3/8 inch. Since the 1/4 inch thickness of the orifice plate will be less than the orifice diameter, a value for C of 0.66 may be used. If another value for C is used, justification may be required.

b. Develop a Discharge/Volume vs. Stage Table for the Basin

Based on the shape and size of the basin, develop a relationship between the stage and the volume of water in the basin. Since the orifice spacing is 4 inches on center for the standard orifice plate, the stage intervals must also be 4 inches. Enter the basin volume at each interval starting at the centerline of the lowest orifice.

c. Route the Design Volume through the Basin

The spreadsheet assumes that the Design Volume, $V_{BMP,}$ enters the basin instantaneously and as such, no inflow/outflow hydrograph is necessary. The drawdown time for each stage becomes:

$$\Delta t = V_i/Q$$

Where:

Δt = drawdown time for each stage

V_i = the volume at each stage

Q = the flow rate corresponding to the headwater elevation at each stage.

The spreadsheet automatically determines the drawdown time from the sum of the Δt values for each stage. If the orifice size and plate configuration estimate meets the

hydraulic retention time requirements (50% of the volume empties in not less than 24 hours, 100% of the volume empties in no more than 72 hours), the outlet is correctly sized. If these requirements are not met, select a new orifice size or configuration and repeat the process starting at Step 6a.

7. Outlet Protection

To prevent the orifices from clogging, trash racks are required where perforated vertical outlet control plates are used. This allows for easier access to outlet orifices for inspection and cleaning. Trash racks shall be sized to prevent clogging of the primary water quality outlet without restricting the hydraulic capacity of the outlet control orifices. The orifice plate shall be protected with a trash rack conforming to Standard Drawing WQ501 (at end of this section) with at least six square feet of open surface area or 25 times the total orifice area, whichever is greater. The rack shall be adequately secured to prevent it from being removed or opened when maintenance is not occurring.

Overflow Structure Similar to Standard Drawing Number WQ 501
(Photo courtesy of Colorado Association of Stormwater Floodplain Managers)



Trash rack with screen



8. Overflow Outlet

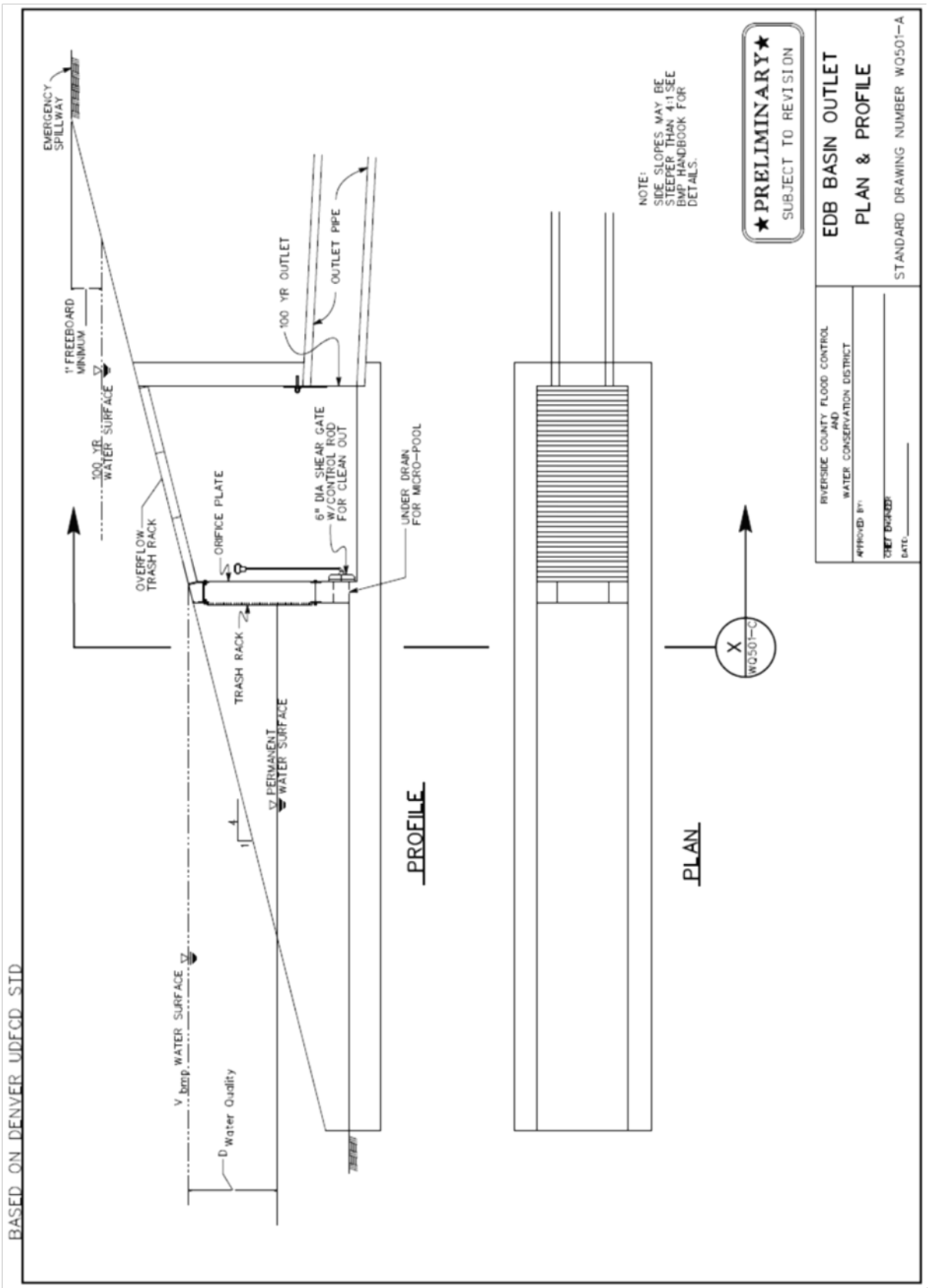
Overflow outlets for publicly maintained basins shall conform to Standard Drawing WQ501 (at end of this section) unless approved in advance by the Engineering Authority (EA).

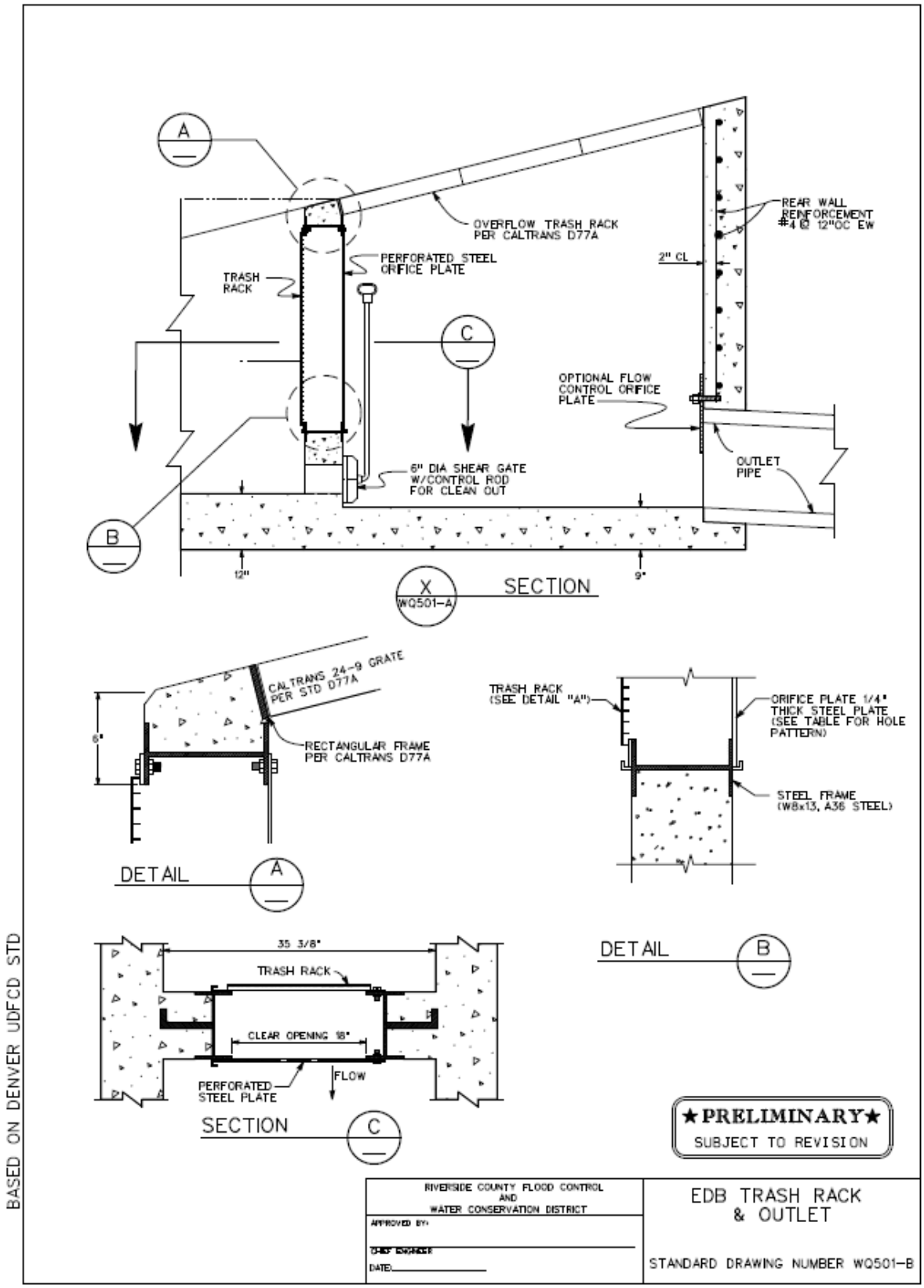
9. Embankment

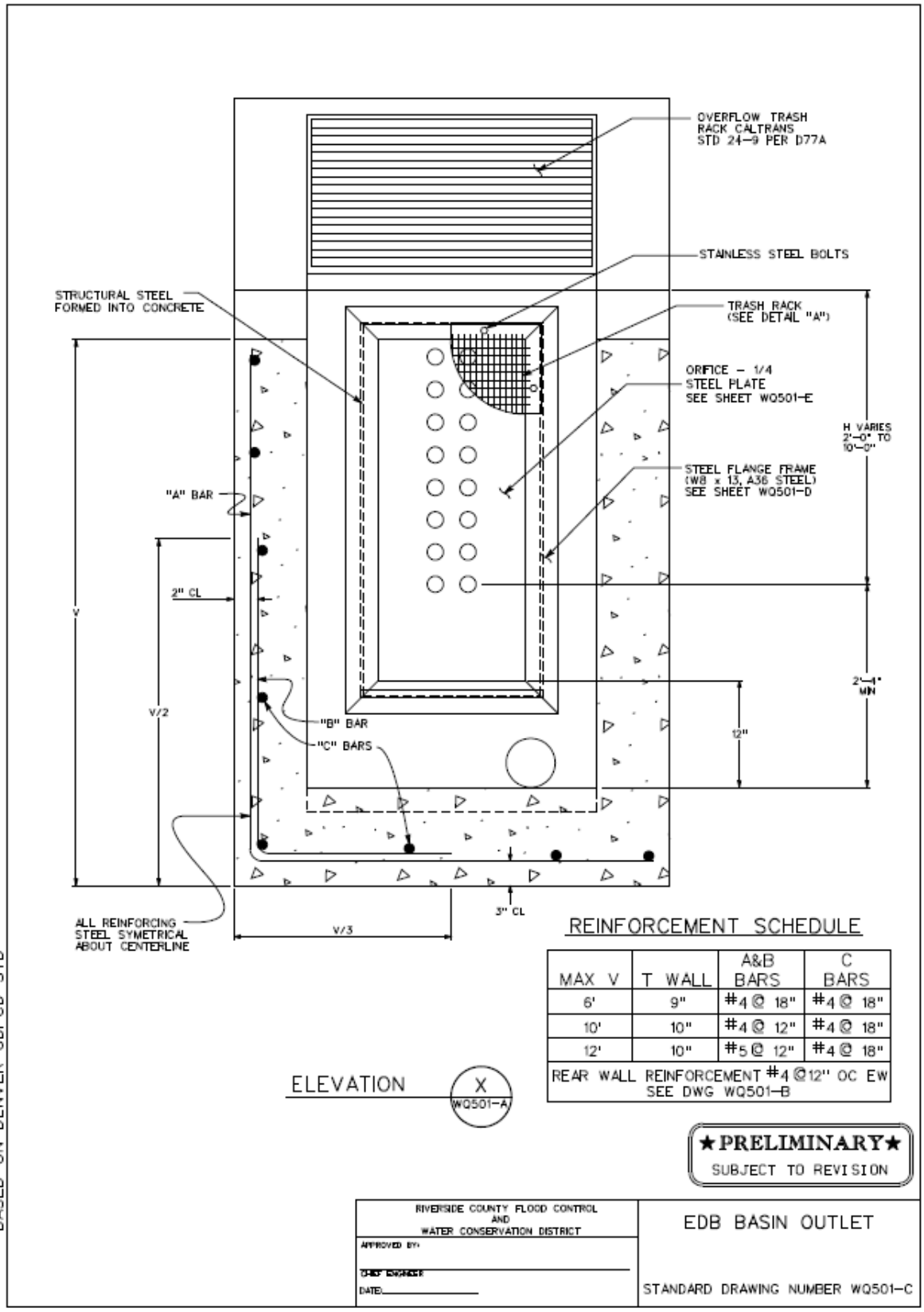
Embankments shall be designed in accordance with applicable standards of Riverside County Flood Control District's "Basin Guidelines" (Appendix C) or other guidelines issued by the Engineering Authority (EA). Where applicable, embankment designs must additionally conform to the requirements of the State of California Division of Safety of Dams.

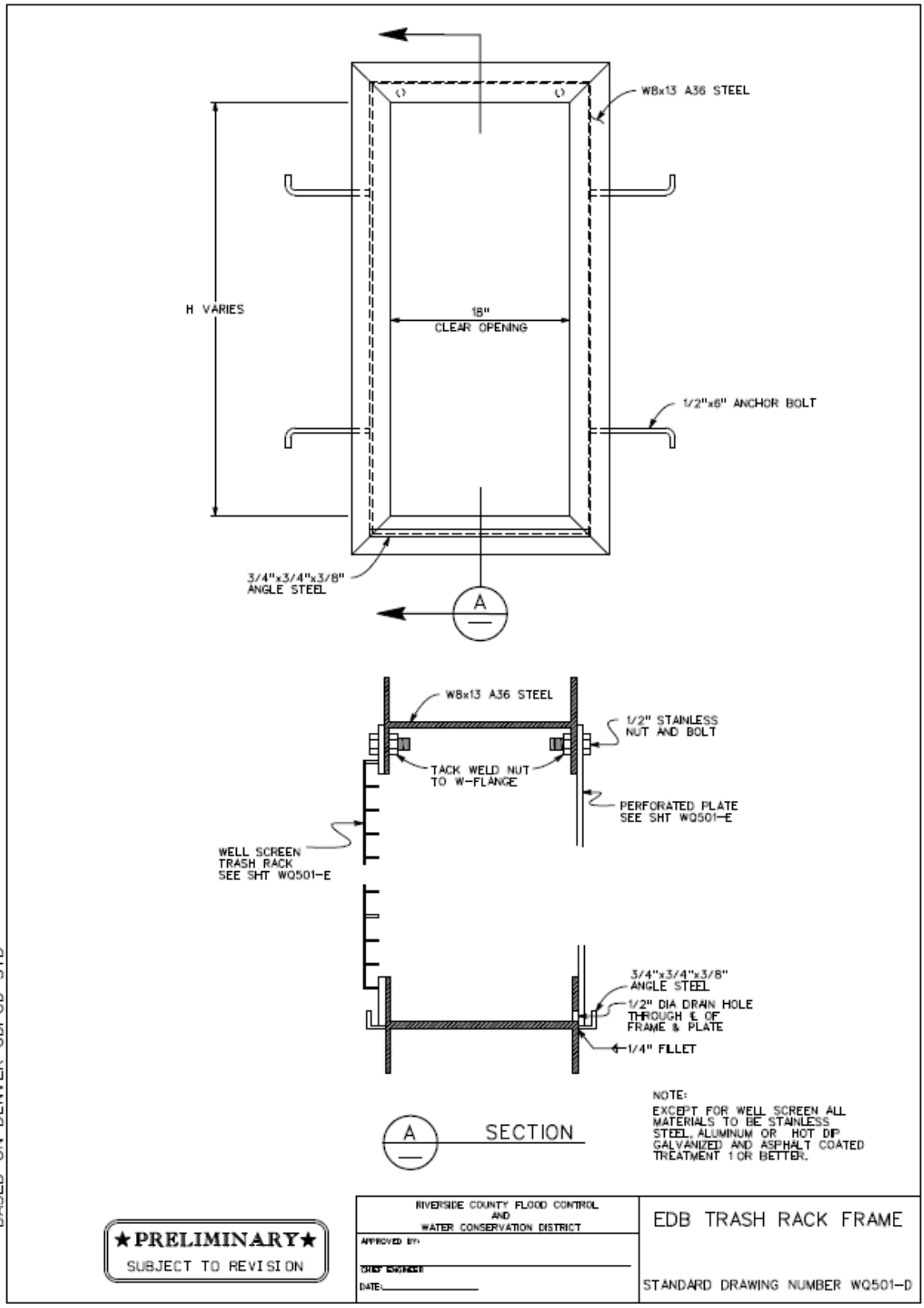
10. Spillway and Overflow Structures

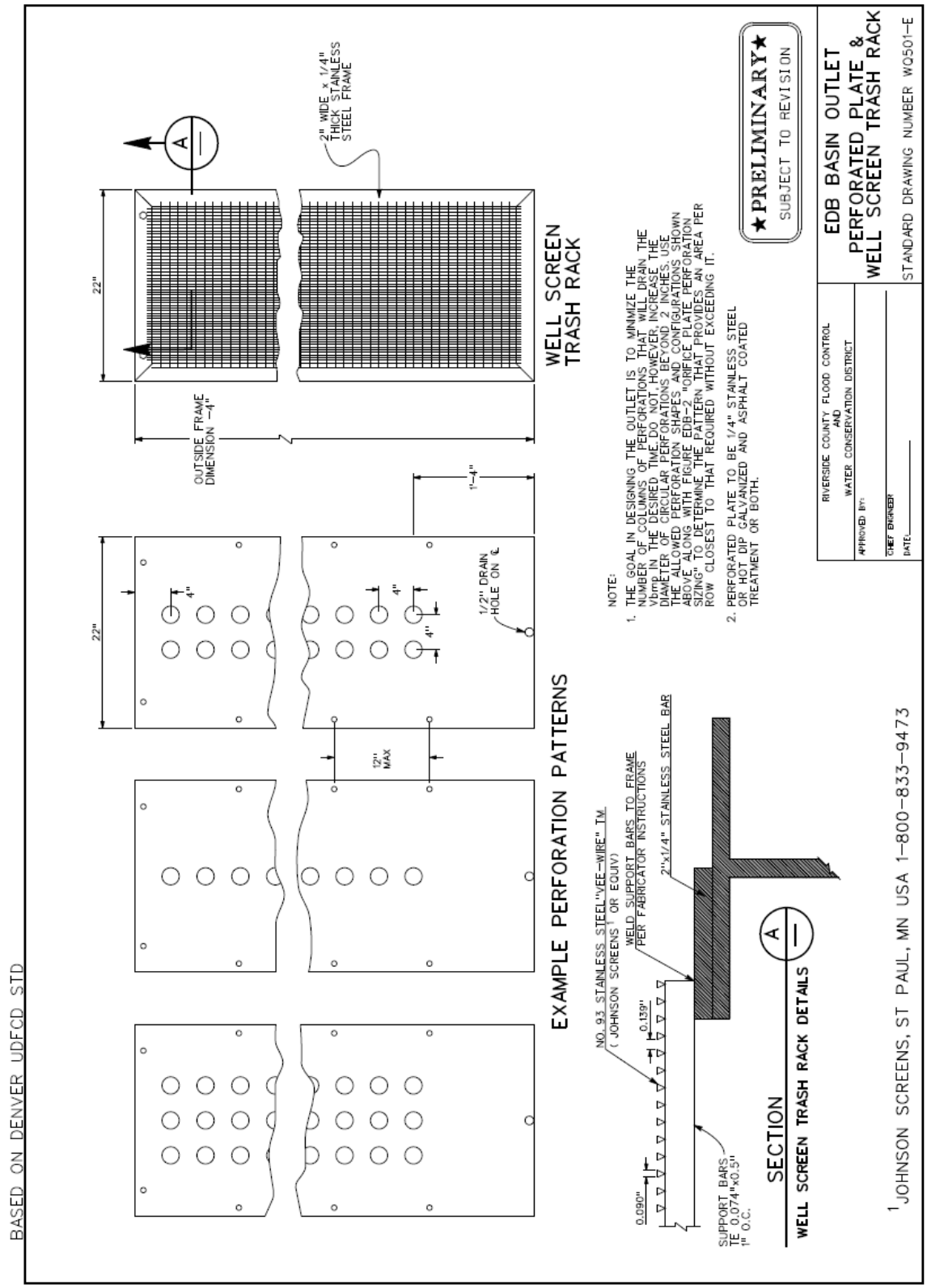
Spillway and overflow structures should be designed in accordance with applicable standards of the "Basin Guidelines" (Appendix C) or other guidelines issued by the Engineering Authority (EA).

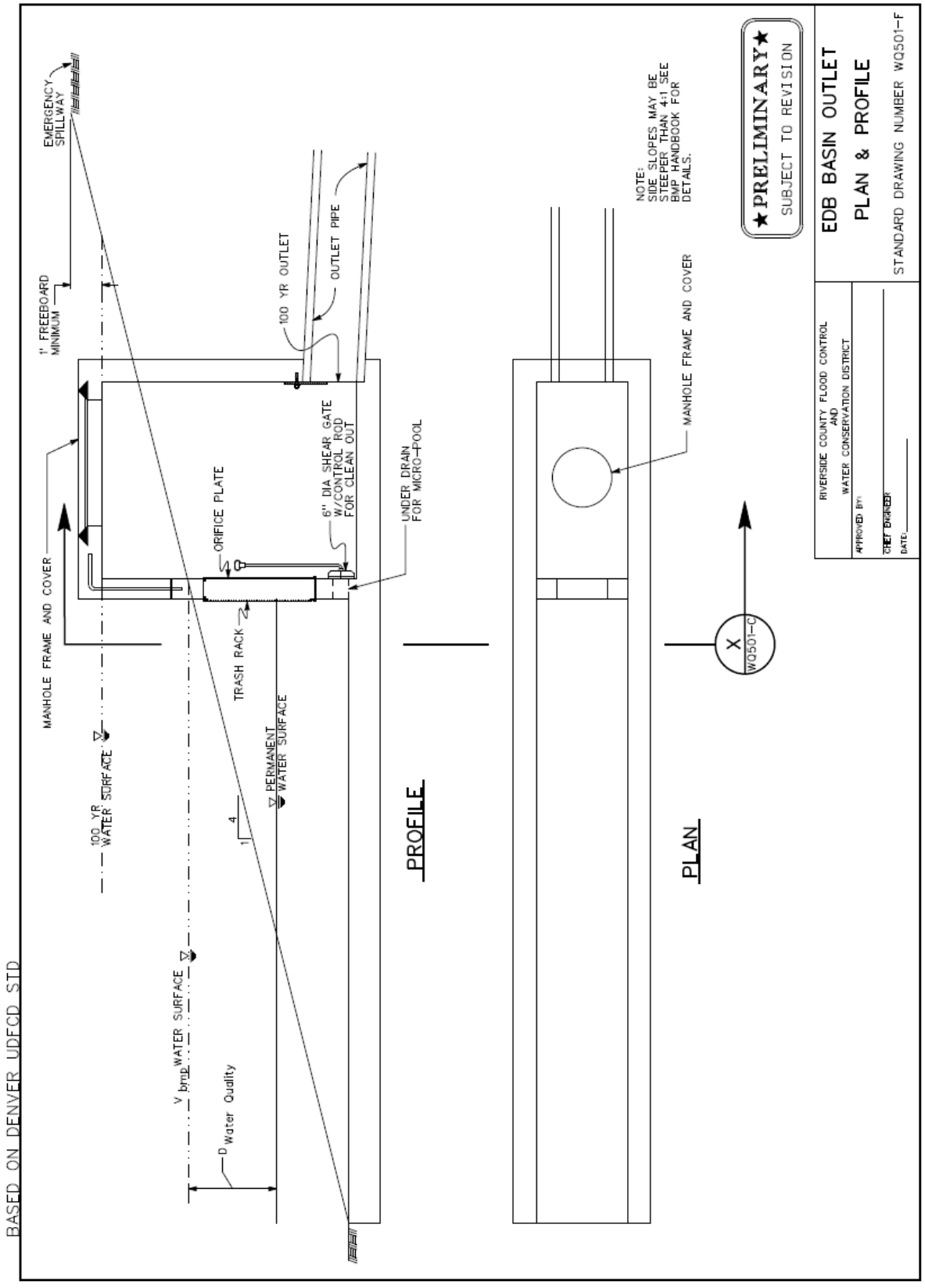

EDB BASIN OUTLET
PLAN & PROFILE
STANDARD DRAWING NUMBER WQ501-A
★PRELIMINARY★
SUBJECT TO REVISION
NOTE:
SIDE SLOPES MAY BE STEEPER THAN 4:1 SEE BMP HANDBOOK FOR DETAILS.
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EMERGENCY SPILLWAY
1' FREEBOARD MINIMUM
100 YR WATER SURFACE
100 YR OUTLET
OUTLET PIPE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
UNDER DRAIN FOR MICRO-POOL
OVERFLOW TRASH RACK
ORIFICE PLATE
TRASH RACK
PERMANENT WATER SURFACE
WATER SURFACE
D Water Quality
PROFILE
PLAN
X
WQ501-C
BASED ON DENVER UDFCD STD

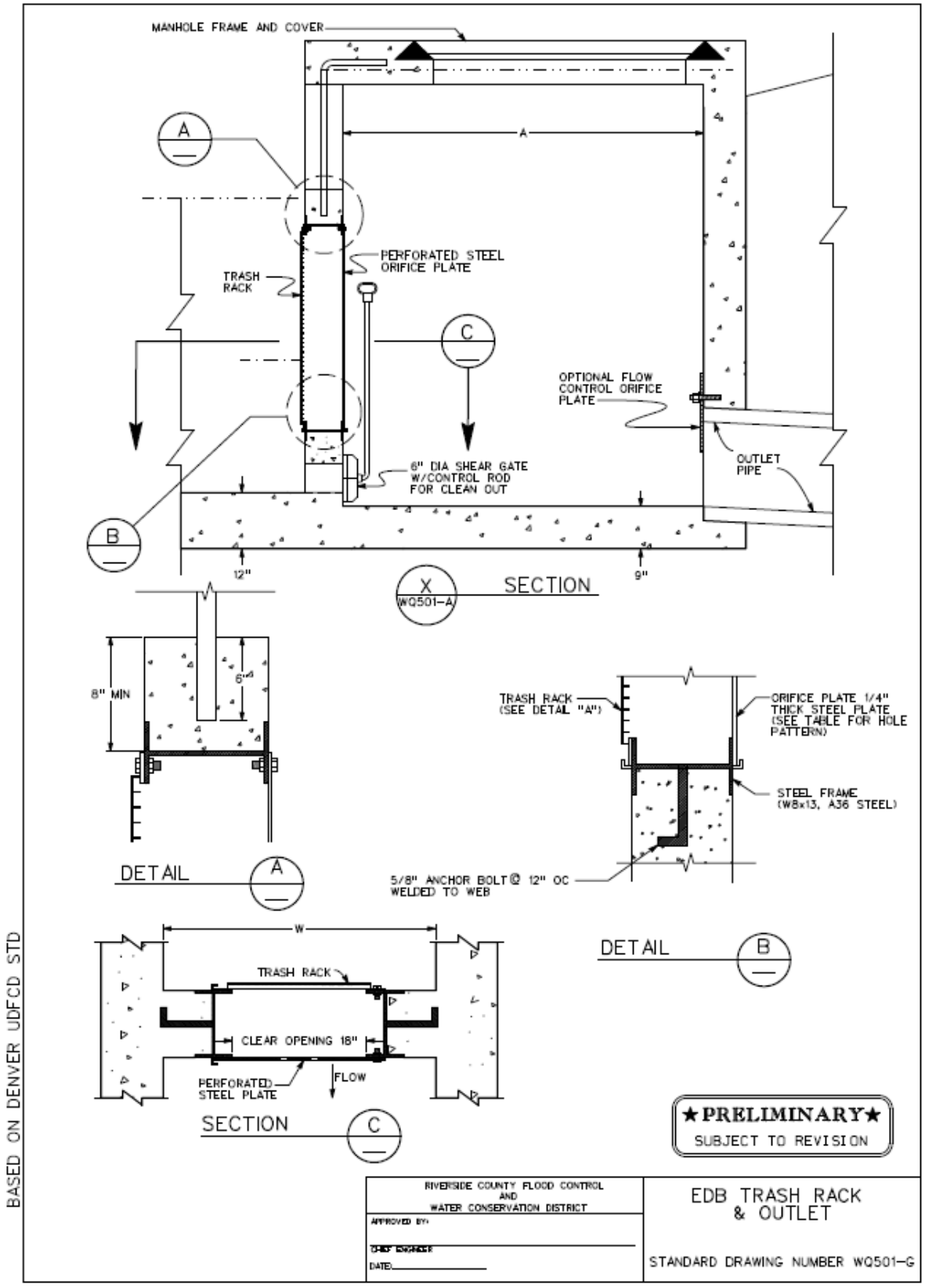

A
B
C
OVERFLOW TRASH RACK PER CALTRANS D77A
REAR WALL REINFORCEMENT #4 @ 12"OC EW
PERFORATED STEEL ORIFICE PLATE
TRASH RACK
2" CL
OPTIONAL FLOW CONTROL ORIFICE PLATE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
OUTLET PIPE
12"
9"
X
WQ501-A
SECTION
CALTRANS 24-9 GRATE PER STD D77A
6"
RECTANGULAR FRAME PER CALTRANS D77A
DETAIL A
TRASH RACK (SEE DETAIL "A")
ORIFICE PLATE 1/4" THICK STEEL PLATE (SEE TABLE FOR HOLE PATTERN)
STEEL FRAME (W8x13, A36 STEEL)
DETAIL B
35 3/8"
TRASH RACK
CLEAR OPENING 18"
FLOW
PERFORATED STEEL PLATE
SECTION C
★PRELIMINARY★
SUBJECT TO REVISION
BASED ON DENVER UDFCD STD
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
DATE:
EDB TRASH RACK & OUTLET
STANDARD DRAWING NUMBER WQ501-B

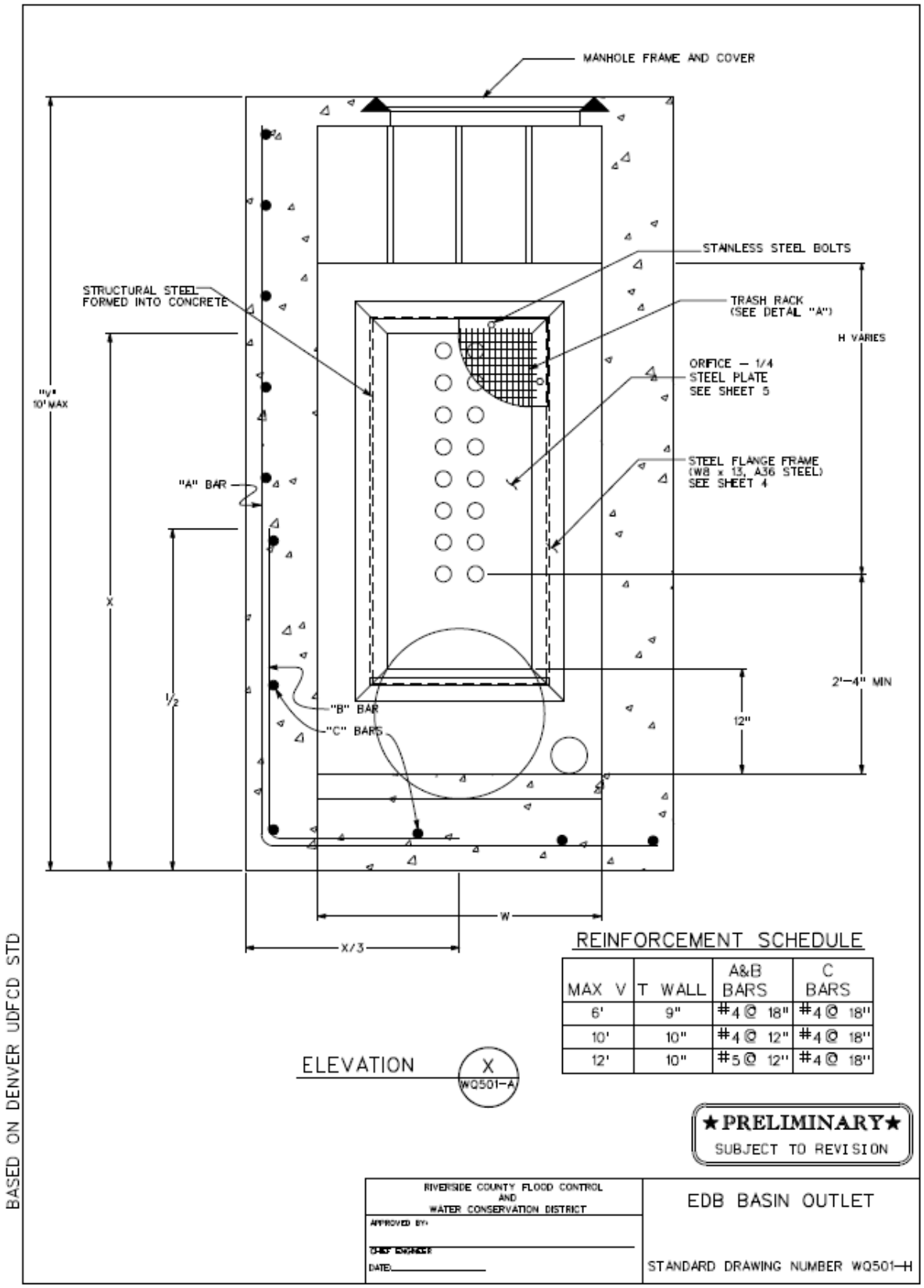

OVERFLOW TRASH RACK CALTRANS STD 24-9 PER D77A
STAINLESS STEEL BOLTS
STRUCTURAL STEEL FORMED INTO CONCRETE
TRASH RACK (SEE DETAIL "A")
ORIFICE - 1/4 STEEL PLATE SEE SHEET WQ501-E
H VARIES 2'-0" TO 10'-0"
STEEL FLANGE FRAME (W8 x 13, A36 STEEL) SEE SHEET WQ501-D
"A" BAR
2" CL
V
V/2
"B" BAR
"C" BARS
2'-4" MIN
12"
3" CL
ALL REINFORCING STEEL SYMETRICAL ABOUT CENTERLINE
V/3
BASED ON DENVER UDFCD STD
REINFORCEMENT SCHEDULE
MAX V | T WALL | A&B BARS | C BARS
6' | 9" | #4 @ 18" | #4 @ 18"
10' | 10" | #4 @ 12" | #4 @ 18"
12' | 10" | #5 @ 12" | #4 @ 18"
REAR WALL REINFORCEMENT #4 @12" OC EW SEE DWG WQ501-B
ELEVATION X WQ501-A
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB BASIN OUTLET
STANDARD DRAWING NUMBER WQ501-C


W8x13 A36 STEEL
H VARIES
18"
CLEAR OPENING
1/2"x6" ANCHOR BOLT
3/4"x3/4"x3/8"
ANGLE STEEL
A
W8x13 A36 STEEL
1/2" STAINLESS
NUT AND BOLT
TACK WELD NUT
TO W-FLANGE
PERFORATED PLATE
SEE SHT WQ501-E
WELL SCREEN
TRASH RACK
SEE SHT WQ501-E
3/4"x3/4"x3/8"
ANGLE STEEL
1/2" DIA DRAIN HOLE
THROUGH ℄ OF
FRAME & PLATE
1/4" FILLET
A
SECTION
NOTE:
EXCEPT FOR WELL SCREEN ALL
MATERIALS TO BE STAINLESS
STEEL, ALUMINUM OR HOT DIP
GALVANIZED AND ASPHALT COATED
TREATMENT 1 OR BETTER.
BASED ON DENVER UDFCD STD
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB TRASH RACK FRAME
STANDARD DRAWING NUMBER WQ501-D

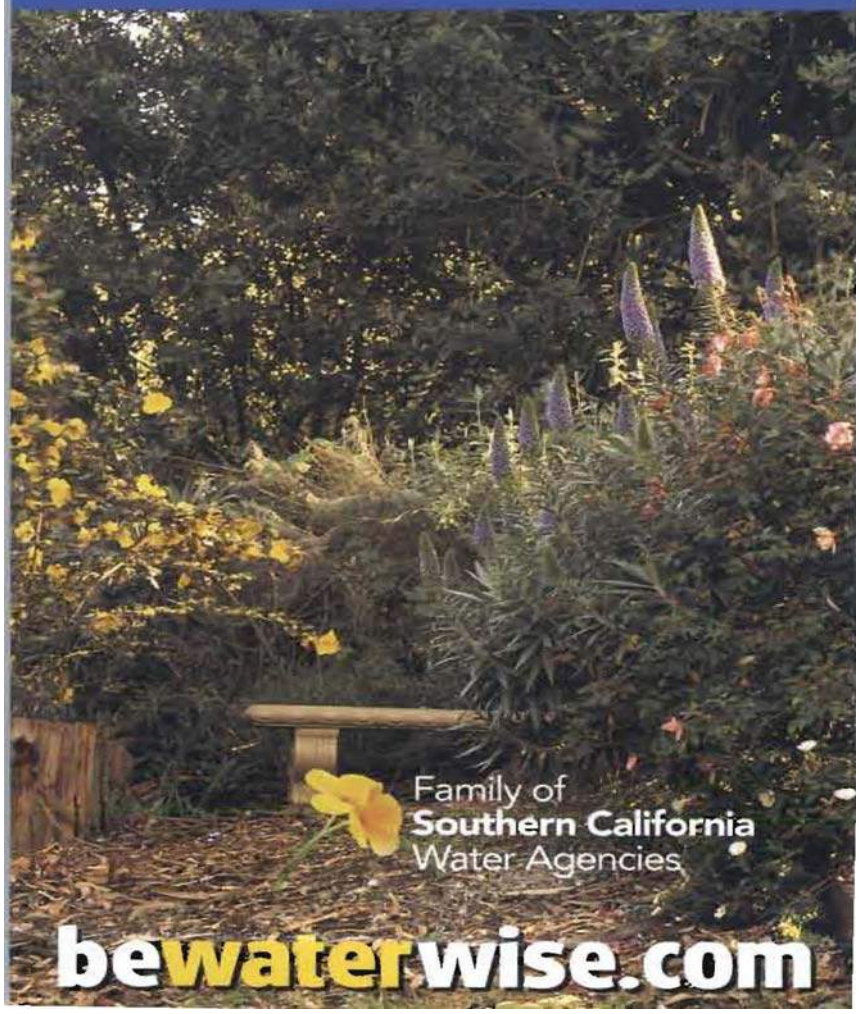

BASED ON DENVER UDFCD STD
WELL SCREEN TRASH RACK
2" WIDE x 1/4" THICK STAINLESS STEEL FRAME
22"
OUTSIDE FRAME DIMENSION -4"
EXAMPLE PERFORATION PATTERNS
4"
1/2" DRAIN HOLE ON ℄
12" MAX
1'-4"
NOTE:
1. THE GOAL IN DESIGNING THE OUTLET IS TO MINIMIZE THE NUMBER OF COLUMNS OF PERFORATIONS THAT WILL DRAIN THE VOLUME WITHIN THE WQCV IN 40 HOURS. HOWEVER, INCREASING THE DIAMETER OF CIRCULAR PERFORATIONS BEYOND 2 INCHES, USE THE ALLOWED PERFORATION SHAPES AND CONFIGURATIONS SHOWN ABOVE ALONG WITH FIGURE EDB-2 "ORIFICE PLATE PERFORATION SIZING" TO DETERMINE THE PATTERN THAT PROVIDES AN AREA PER ROW CLOSEST TO THAT REQUIRED WITHOUT EXCEEDING IT.
2. PERFORATED PLATE TO BE 1/4" STAINLESS STEEL OR HOT DIP GALVANIZED AND ASPHALT COATED TREATMENT OR BOTH.
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB BASIN OUTLET
PERFORATED PLATE & WELL SCREEN TRASH RACK
STANDARD DRAWING NUMBER WQ501-E
NO. 93 STAINLESS STEEL "VEE-WIRE" TM (JOHNSON SCREENS[1] OR EQUIV)
WELD SUPPORT BARS TO FRAME PER FABRICATOR INSTRUCTIONS
2"x1/4" STAINLESS STEEL BAR
0.139"
0.090"
SUPPORT BARS TE 0.074"x0.5" 1" O.C.
SECTION
WELL SCREEN TRASH RACK DETAILS
[1] JOHNSON SCREENS, ST PAUL, MN USA 1-800-833-9473


EDB BASIN OUTLET
PLAN & PROFILE
STANDARD DRAWING NUMBER WQ501-F
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
NOTE:
SIDE SLOPES MAY BE STEEPER THAN 4:1 SEE BMP HANDBOOK FOR DETAILS.
EMERGENCY SPILLWAY
1' FREEBOARD MINIMUM
100 YR OUTLET
OUTLET PIPE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
ORIFICE PLATE
UNDER DRAIN FOR MICRO-POOL
MANHOLE FRAME AND COVER
TRASH RACK
PERMANENT WATER SURFACE
100 YR WATER SURFACE
WATER SURFACE
V bmp
D Water Quality
4
1
PROFILE
PLAN
MANHOLE FRAME AND COVER
X
WQ501-C
BASED ON DENVER UDFCD STD


MANHOLE FRAME AND COVER
A
A
PERFORATED STEEL ORIFICE PLATE
TRASH RACK
C
OPTIONAL FLOW CONTROL ORIFICE PLATE
OUTLET PIPE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
B
12"
9"
X
WQ501-A
SECTION
8" MIN
6"
DETAIL A
TRASH RACK (SEE DETAIL "A")
ORIFICE PLATE 1/4" THICK STEEL PLATE (SEE TABLE FOR HOLE PATTERN)
STEEL FRAME (W8x13, A36 STEEL)
5/8" ANCHOR BOLT @ 12" OC WELDED TO WEB
DETAIL B
W
TRASH RACK
CLEAR OPENING 18"
PERFORATED STEEL PLATE
FLOW
SECTION C
★PRELIMINARY★
SUBJECT TO REVISION
BASED ON DENVER UDFCD STD
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
DATE:
EDB TRASH RACK & OUTLET
STANDARD DRAWING NUMBER WQ501-G


MANHOLE FRAME AND COVER
STAINLESS STEEL BOLTS
STRUCTURAL STEEL FORMED INTO CONCRETE
TRASH RACK (SEE DETAIL "A")
H VARIES
ORIFICE – 1/4 STEEL PLATE SEE SHEET 5
"y" 10' MAX
STEEL FLANGE FRAME (W8 x 13, A36 STEEL) SEE SHEET 4
"A" BAR
X
1/2
"B" BAR
"C" BARS
2'–4" MIN
12"
W
X/3
BASED ON DENVER UDFCD STD
REINFORCEMENT SCHEDULE
MAX V
T WALL
A&B BARS
C BARS
6' 9" #4 @ 18" #4 @ 18"
10' 10" #4 @ 12" #4 @ 18"
12' 10" #5 @ 12" #4 @ 18"
ELEVATION X WQ501-A
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB BASIN OUTLET
STANDARD DRAWING NUMBER WQ501–H

10 Ways to Save Water Outdoors



TIP #1 The average homeowner uses twice the amount of water needed to keep plants healthy. Use the watering calculator and index at **bewaterwise.com** to know exactly how much water your plants need.

TIP #2 Check your sprinkler system for leaks, overspray and broken sprinkler heads. Update with drip or other more water-efficient sprinklers where appropriate.

TIP #3 This fall, plant a portion of your garden with beautiful native and California Friendly plants. Browse the plant database at **bewaterwise.com** to find just the right look for your outdoor spaces.

TIP #4 Reduce the amount of water-thirsty grass. Keep only what you need and replace the rest with less-thirsty plants or permeable paving.

TIP #5 For the grass you keep, set your lawnmower blade higher.

TIP #6 Adjust your sprinkler timer downward in September. Plants need less water when days are shorter.

TIP #7 Use a broom instead of the hose for cleaning sidewalks and patios.

TIP #8 Mulch! A layer of bark, gravel, compost, sawdust or low-growing groundcover evens out soil temperature and allows better water retention.

TIP #9 Check the list of invasive plants that hurt our environment at **caleppc.org** and remove any from your garden.

TIP #10 Share these tips with your gardener, neighbors and friends. Water conservation should be a part of every Southern Californian's lifestyle, but that doesn't mean we can't have lush and beautiful outdoor spaces.

bewaterwise.com

After the Storm

A Citizen's Guide to Understanding Stormwater

WHEN IT RAINS IT DRAINS

THE YEAR OF CLEAN WATER
Celebration & Recommitment

EPA United States Environmental Protection Agency

EPA 833-B-03-002

January 2003

Internet Address (URL) ● HTTP://www.epa.gov
Recycled/Recyclable ● Printed With Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper

For more information contact:

or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

What is stormwater runoff?



Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.



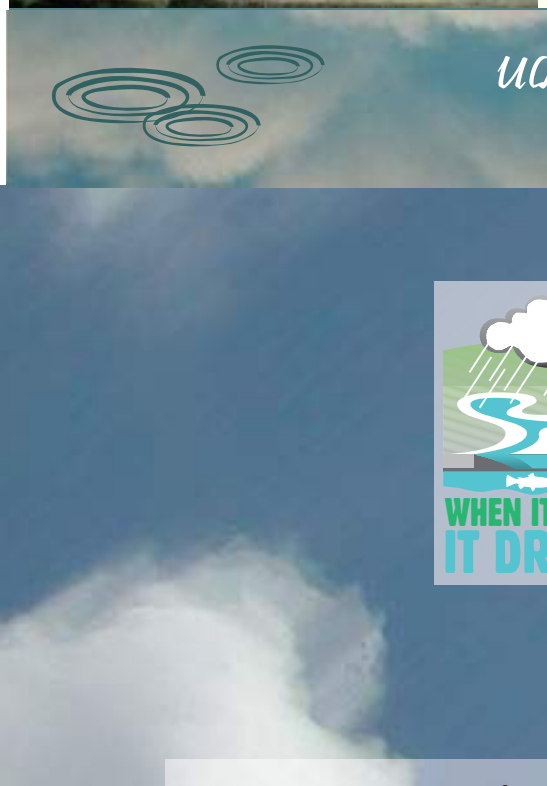
Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

Why is stormwater runoff a problem?



- Pollutants in stormwater runoff can harm fish, plants, and animals living in waterbodies.
- Pollutants in stormwater runoff can make waterbodies unsafe for swimming and fishing.
- Stormwater runoff can change the temperature of waterbodies, which can kill fish and other aquatic organisms.
- Stormwater runoff can increase the rate of streambank erosion.
- Stormwater runoff can cause flooding.
- Stormwater runoff can damage aquatic habitats.
- Stormwater runoff can wash trash into waterbodies.

The effects of pollution



Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.



Stormwater Pollution Solutions



Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care



Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Septic systems



Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Auto care



Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste



Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.



Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.



Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.



Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.



Commercial

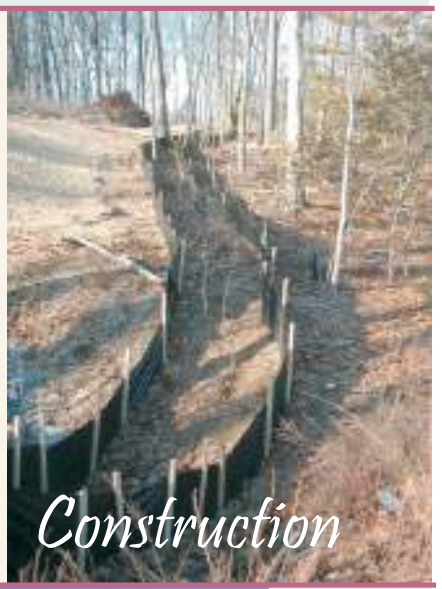
Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

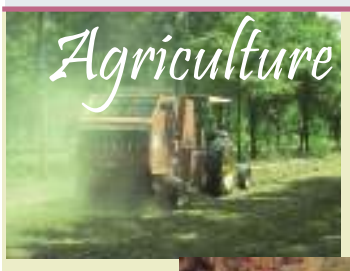
- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

Construction

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.



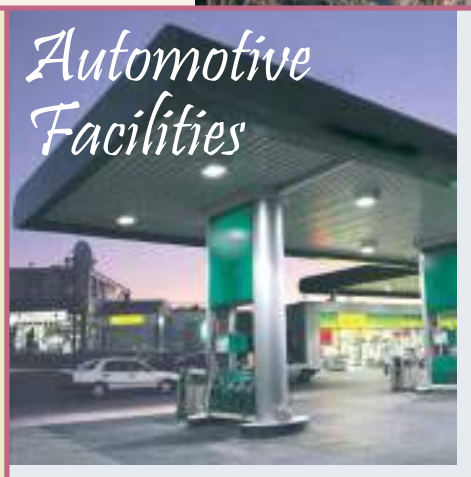


Agriculture

Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.



- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.



Automotive Facilities

Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.



Forestry

Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.

Helpful telephone numbers and links:

Riverside County Stormwater Protection Partners

Flood Control District	(951) 955-1200
County of Riverside	(951) 955-1000
City of Banning	(951) 922-3105
City of Beaumont	(951) 769-8520
City of Calimesa	(909) 795-9801
City of Canyon Lake	(951) 244-2955
Cathedral City	(760) 770-0327
City of Coachella	(760) 398-4978
City of Corona	(951) 736-2447
City of Desert Hot Springs	(760) 329-6411
City of Eastvale	(951) 361-0900
City of Hemet	(951) 765-2300
City of Indian Wells	(760) 346-2489
City of Indio	(760) 391-4000
City of Lake Elsinore	(951) 674-3124
City of La Quinta	(760) 777-7000
City of Menifee	(951) 672-6777
City of Moreno Valley	(951) 413-3000
City of Murrieta	(951) 304-2489
City of Norco	(951) 270-5607
City of Palm Desert	(760) 346-0611
City of Palm Springs	(760) 323-8299
City of Perris	(951) 943-6100
City of Rancho Mirage	(760) 324-4511
City of Riverside	(951) 361-0900
City of San Jacinto	(951) 654-7337
City of Temecula	(951) 694-6444
City of Wildomar	(951) 677-7751

REPORT ILLEGAL STORM DRAIN DISPOSAL
1-800-506-2555 or e-mail us at
fcnpdes@rcflood.org

- Riverside County Flood Control and Water Conservation District
  www.rcflood.org

Online resources include:

- California Storm Water Quality Association
  www.casqa.org
- State Water Resources Control Board
  www.waterboards.ca.gov
- Power Washers of North America
  www.thepwna.org

Stormwater Pollution

What you should know for...

Outdoor Cleaning Activities and Professional Mobile Service Providers



Storm drain pollution prevention information for:

- Car Washing / Mobile Detailers
- Window and Carpet Cleaners
- Power Washers
- Waterproofers / Street Sweepers
- Equipment cleaners or degreasers and all mobile service providers

Do you know where street flows actually go?

Storm drains are NOT connected to sanitary sewer systems and treatment plants!



The primary purpose of storm drains is to carry *rain* water away from developed areas to prevent flooding. Pollutants discharged to storm drains are transported directly into rivers, lakes and streams. Soaps, degreasers, automotive fluids, litter and a host of materials are washed off buildings, sidewalks, plazas and parking areas. Vehicles and equipment must be properly managed to prevent the pollution of local waterways.

Unintentional spills by mobile service operators can flow into storm drains and pollute our waterways. **Avoid mishaps.** *Always* have a **Spill Response Kit** on hand to clean up unintentional spills. Only emergency **Mechanical** repairs should be done in City streets, using drip pans for spills. **Plumbing** should be done on private property. Always store chemicals in a leak-proof container and keep covered when not in use. **Window/Power Washing** waste water shouldn't be released into the streets, but should be disposed of in a sanitary sewer, landscaped area or in the soil. Soiled **Carpet Cleaning** wash water should be filtered before being discharged into the sanitary sewer. Dispose of all filter debris properly. **Car Washing/Detailing** operators should wash cars on private property and use a regulated hose nozzle for water flow control and runoff prevention. Capture and dispose of waste water and chemicals properly. Remember, storm drains are for receiving rain water runoff only.

REPORT ILLEGAL STORM DRAIN DISPOSAL
1-800-506-2555



Help Protect Our Waterways!

Use these guidelines for Outdoor Cleaning Activities and Wash Water Disposal

Did you know that disposing of pollutants into the street, gutter, storm drain or body of water is *PROHIBITED* by law and can result in stiff penalties?

Best Management Practices

Waste wash water from Mechanics, Plumbers, Window/Power Washers, Carpet Cleaners, Car Washing and Mobile Detailing activities may contain significant quantities of motor oil, grease, chemicals, dirt, detergents, brake pad dust, litter and other materials.

Best Management Practices, or BMPs as they are known, are guides to prevent pollutants from entering the storm drains. ***Each of us*** can do our part to keep stormwater clean by using the suggested BMPs below:

Simple solutions for both light and heavy duty jobs:

Do...consider dry cleaning methods first such as a mop, broom, rag or wire brush. Always keep a spill response kit on site.

Do...prepare the work area before power cleaning by using sand bags, rubber mats, vacuum booms, containment pads or temporary berms to keep wash water away from the gutters and storm drains.

Do...use vacuums or other machines to remove and collect loose debris or litter before applying water.

Do...obtain the property owner's permission to dispose of ***small amounts*** of power washing waste water on to landscaped, gravel or unpaved surfaces.

Do...check your local sanitary sewer agency's policies on wash water disposal regulations before disposing of wash water into the sewer. (See list on reverse side)

Do...be aware that if discharging to landscape areas, soapy wash water may damage landscaping. Residual wash water may remain on paved surfaces to evaporate. Sweep up solid residuals and dispose of properly. Vacuum booms are another option for capturing and collecting wash water.

Do...check to see if local ordinances prevent certain activities.

Do not let...wash or waste water from sidewalk, plaza or building cleaning go into a street or storm drain.



Report illegal storm drain disposal
Call Toll Free
1-800-506-2555

Using Cleaning Agents

Try using biodegradable/phosphate-free products. They are easier on the environment, but don't confuse them with being toxic free. Soapy water entering the storm drain system can impact the delicate aquatic environment.



When cleaning surfaces with a ***high-pressure washer*** or ***steam cleaner***, additional precautions should be taken to prevent the discharge of pollutants into the storm drain system. These two methods of surface cleaning can loosen additional material that can contaminate local waterways.

Think Water Conservation

Minimize water use by using high pressure, low volume nozzles. Be sure to check all hoses for leaks. Water is a precious resource, don't let it flow freely and be sure to shut it off in between uses.

Screening Wash Water

Conduct thorough dry cleanup before washing exterior surfaces, such as buildings and decks ***with loose paint***, sidewalks or plaza areas. Keep debris from entering the storm drain after cleaning by first passing the wash water through a "20 mesh" or finer screen to catch the solid materials, then dispose of the mesh in a refuse container. Do not let the remaining wash water enter a street, gutter or storm drain.

Drain Inlet Protection & Collection of Wash Water

- Prior to any washing, block all storm drains with an impervious barrier such as sandbags or berms, or seal the storm drain with plugs or other appropriate materials.
- Create a containment area with berms and traps or take advantage of a low spot to keep wash water contained.
- Wash vehicles and equipment on grassy or gravel areas so that the wash water can seep into the ground.
- Pump or vacuum up all wash water in the contained area.

Concrete/Coring/Saw Cutting and Drilling Projects

Protect any down-gradient inlets by using dry activity techniques whenever possible. If water is used, minimize the amount of water used during the coring/drilling or saw cutting process. Place a barrier of sandbags and/or absorbent berms to protect the storm drain inlet or watercourse. Use a shovel or wet vacuum to remove the residue from the pavement. Do not wash residue or particulate matter into a storm drain inlet or watercourse.