



February 3, 2025

GFR HOMES

Attention: *Arlene Anaya*
434 North 2nd Avenue
Upland, California 91786

SUBJECT: Jurisdictional Delineation of State and Federal Waters Report for Tentative Tract Map No. 20707 Located in San Bernardino, San Bernardino County, California

Introduction

ELMT Consulting (ELMT) conducted a Delineation of State and Federal Jurisdictional Waters for Tentative Tract Map No. 20707 (project, project site), located in San Bernardino, San Bernardino County, California. This delineation was prepared in order to document the jurisdictional authority of the U.S. Army Corps of Engineers' (Corps), the Santa Ana Regional Water Quality Control Board's (Regional Board), and the California Department of Fish and Wildlife's (CDFW) pursuant to Sections 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Section 1600 of the Fish and Game Code. The fieldwork for this delineation was conducted on January 30, 2025.

This report explains the methodology utilized throughout the course of the delineation, defines the jurisdictional authority of the regulatory agencies, and documents the findings made by ELMT. This report presents ELMT's determination of jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance provided by the regulatory agencies.

Project Location

The project site is generally located north of Interstate 215, south of the San Bernardino National Forest, east of Interstate 15, and west of State Route 18 in the Verdemon area in the City of San Bernardino, San Bernardino County, California. The project site is depicted on San Bernardino North quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 35 of Township 2 north, Range 5 west. Specifically, the project site is located north of Meyers Road, at the terminus of Little League Drive within Assessor Parcel Numbers (APNs) 0348-121-14, 0348-121-27, 0348-121-28, 0261-011-02, and 0261-011-03, and -10. Refer to Exhibits 1-3 in Appendix A.

Project Description

The project proposes the development of TTM No. 20707, a residential subdivision encompassing approximately 107.7 acres in the Verdemon area of the City of San Bernardino. Refer to Attachment B, *Site Plan*.

Methodology

ELMT field staff conducted a thorough review of relevant literature and materials in order to preliminarily identify potential jurisdictional features occurring on or within the vicinity of the project site. In addition,

a field investigation was conducted to verify existing conditions and document the extent of jurisdictional features within the boundaries of the project site.

Literature Review

Prior to conducting the field visit, a review of relevant literature and materials was conducted in order to preliminarily identify potential jurisdictional features occurring on or within the vicinity of the project site. In addition, the following resources were reviewed prior to conducting the field investigation:

- CDFW's *A Review of Stream Processes and Forms in Dryland Watersheds* (2010);
- Corps Arid West Regional Supplement (Version 2.0) to the Corps of Engineers Wetland Delineation Manual (2008);
- Sackett v. EPA (2022) 143 S. Ct. 1322, 1366
- Corps Arid West Regional Wetland Plant List (2016);
- Federal Emergency Management Agency Flood Insurance Rate Map;
- Google Earth Aerials (1985 – 2024);
- State Wetland Definition and Procedures for Discharges of Dredge or Fill Material to Waters of the State (2021)
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report for Southwestern San Bernardino County;
- USDA NRCS Hydric Soils List of California;
- United States Fish and Wildlife Service National Wetlands Inventory; and
- Water Quality Control Plan for the Santa Ana River Basin.

Field Investigation

ELMT biologist Megan E. Peukert surveyed the project site on January 30, 2025, to verify existing conditions and document the extent of jurisdictional features (e.g., wetlands, streambed, and riparian vegetation) within the boundaries of the project site. While in the field, jurisdictional areas and associated plant communities were mapped onto a base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Common plant species observed during the field survey were identified by visual characteristics and morphology in the field, and recorded in a field notebook. Unusual and less familiar plants were identified in the laboratory using taxonomical guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual. Data points were obtained with a Garmin Map 62 Global Positioning System and used to record and identify jurisdictional boundaries, soils samples, and photograph locations. This data was then transferred via USB port as a .shp file and added to the project's jurisdictional map. The jurisdictional map and associated acreage amounts were prepared and quantified in ESRI ArcMap Version 10.

ELMT carefully assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology.

ELMT conducted a field delineation to determine the jurisdictional limits of the "waters of the United States", "waters of the State" and jurisdictional streambed (including potential wetlands), located within

the boundaries of the Project site. While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photographs, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the Project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo Version 10 software.

Literature Review

Watershed Review

The project site is located within the Upper Santa Ana Watershed (HUC 18070203). The Upper Santa Ana Watershed encompasses approximately 2,650 square miles across southern California. The primary hydrological feature in the Upper Santa Ana Watershed is the Santa Ana River, which drains into the Pacific Ocean. The Cajon Subbasin underlies Cajon Valley and Lone Pine Canyon, mostly in Cajon Pass, which is the boundary between the San Gabriel and San Bernardino Mountains. This subbasin is bound by the Upper Mojave River Valley Groundwater Basin on the north along a surface drainage divide and the Bunker Hill Subbasin of the Upper Santa Ana Valley Groundwater Basin on the south. The subbasin is bound by impermeable rocks of the San Gabriel Mountains on the west and the San Bernardino Mountains on the east. Cajon and Lone Pine Creeks drain the valley southward as tributaries to the Santa Ana River.

Aerial Photographs

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs (1985-20234) of the project as available from Google Earth Pro Imaging. Aerial photographs can be useful during the delineation process, as they often indicate the presence of drainage features and riverine habitat within the boundaries of the project site, if any.

According to the 1938 through 1959 aerial photographs, the majority of the project site supported agricultural land with access roads and sections of undeveloped land throughout. Between the years 1959 and 1968 the agricultural land became inactive and the project site remained virtually the same and somewhere between 1968 and 1980 the remainder of the project site experienced vegetation clearing with the exception of the northern extents which still supported undisturbed native plant communities. Development to the west and south of the site began in 1980 and has increased overtime with undeveloped land remaining to the north and east at present. Since 1980 to present the project site has remained virtually the same with more disturbance in the form of vegetation clearing, additional access roads, and other disturbances from adjacent development such as the water tower and dam to the north.

The eastern portion of the site supports a drainage feature, Drainage 1, that conveys flow from the mountains to the south and historically drained into the Cajon Wash. According to aerial photographs, on-site portions of the drainage feature has been impacted by vegetation clearing throughout with some areas remaining intact with native plant communities

Drainage 1 enters through the upper northern boundary of the site, exits through the eastern boundary of the site, and re-enters in the lower northern boundary where it eventually exits out of the southern boundary. Land surrounding on-site portions of Drainage 1 in the northern area are generally undisturbed and support natural plant communities consistent with other undisturbed areas nearby. Land surrounding on-site

portions of Drainage 1 in the southern area vary in disturbance and surrounding vegetation varies from displaying natural composition to atypical dominance of a limited number of perennial species with a consistent mixed understory. The latter is indicative of native plant communities in the area that have been allowed to revegetate naturally following complete vegetation removal.

USGS Topographic Quadrangle

The USGS 7.5 Minute Series Topographic Quadrangle maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within the project site.

The project site is depicted on the San Bernardino North quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Section 35 of Township 2 North, Range 5 West. According to the topographic map, the project site consists of vacant/undeveloped land, disturbed, and a network of access roads.

On-site elevation ranges from approximately 1,962 to 2,205 feet above mean sea level and the site generally sloping from north to south. The northern and eastern portions support steep slopes, ridgelines, shallow valleys and rolling hills.

Soils

Based on the NRCS USDA Web Soil Survey, the project site is underlain by Cieneba sandy loam (9 to 15 percent slopes), Hanford coarse sandy loam (9 to 15 percent slopes), Soboba gravelly loamy sand (0 to 9 percent slopes), and Tujunga gravelly loamy sand (0 to 9 percent slopes). Soils underlying the site vary from undisturbed to heavily disturbed due to historic and ongoing disturbances such as historical agricultural land use, disking, weed abatement, grading, unpaved access roads, surrounding development and construction. Refer to Exhibit 4, *Soils* in Attachment A.

ELMT reviewed the USDA NRCS Hydric Soils List of California in an effort to verify whether on-site soils are considered to be hydric¹. It should be noted that lists of hydric soils along with soil survey maps provide off-site ancillary tools to assist in wetland determinations, but they are not a substitute for field investigations. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. According to the hydric soils list, Soboba gravelly loamy sand (0 to 9 percent slopes) and Tujunga gravelly loamy sand (0 to 9 percent slopes) are listed as hydric for San Bernardino County Southwestern Part, California.

National Wetlands Inventory

ELMT reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps. Based on this review, one (1) Riverine feature is mapped as entering the eastern side of the upper northern boundary of the site, transversing southeast exiting the eastern boundary, and re-entering the site in the lower northern boundary briefly until exiting out of the southern boundary. This mapped feature

¹ A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

corresponds to the blue line stream observed in the topographic map referenced above. This feature was observed during the field investigation and referred to as Drainage 1. Refer to Appendix D, *Documentation*.

Flood Zone

The Federal Emergency Management Act (FEMA) website was searched for flood data for the project site. Based on Flood Insurance Rate Map No. 06071C7930J, the project site is located within Zone X – areas determined to be outside the 0.2% annual chance floodplain. Refer to Attachment D, *Documentation*.

Jurisdictional Features

Drainage 1

Drainage 1 is an ephemeral drainage in the eastern portion of the project site. Drainage 1 originates off-site to the north. Once on-site, Drainage 1 conveys flows southeastward for approximately 502 linear feet before exiting the site out of the upper eastern boundary and continues adjacent to the site boundary until it re-enters from the lower northern boundary of the site. From lower northern boundary of the site Drainage 1 conveys flows south approximately 483 linear feet and exits the southern boundary. In total, Drainage 1 conveys flows for approximately 985 linear feet. The OHWM for Drainage 1 ranges from approximately 1 to 2 feet in width. Surface flows within with this feature is only provided by direct precipitation from storm events. It should be noted that multiple western Sycamores (*Platanus racemosa*) are present along the southern portion of Drainage 1.

Based on the proposed Site Plan in Attachment B, the northern portion of Drainage 1 occurs in the “Overflow Route” that will not be developed. However, the southern terminus of Drainage 1 will be impacted by project development.

Findings

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into “waters of the United States” pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the California Fish and Game Code. It should be noted that the project site is not located within the boundary of the California Coastal Commission.

United States Army Corps of Engineers

The onsite ephemeral drainage feature is a not relatively permanent, standing, or continuously flowing body of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336).

Federal Wetlands

In order to qualify as a wetland, a feature must exhibit all three wetland parameters (i.e., vegetation, soils, and hydrology) described in the Corps Arid West Regional Supplement. While Drainage 1 supports minimal riparian vegetation, it only conveys flows during and following storm events. This drainage does not hold water for long enough to create anaerobic conditions, ultimately forming hydric soils. An area

must exhibit all three wetland parameters described in the Corps Arid West Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field delineation, it was determined that no areas within the Project site met all three wetland parameters. Therefore, no jurisdictional wetland features exist within the Project site.

Regional Water Quality Control Board

Drainage 1 exhibits characteristics consistent with the Regional Board's methodology and would likely be considered jurisdictional waters of the State. Approximately 0.10 acres (985 linear feet) of non-wetland waters of the State occur on-site (refer to Exhibit 5 in Attachment A). Based on the proposed site plan, approximately 0.02 acre (293 linear feet) of Regional Board jurisdictional areas will be impacted from project implementation.

Jurisdictional Feature	Regional Board Jurisdiction	
	On-Site Jurisdiction Acreage (Linear Feet)	On-Site Impacts Acreage (Linear Feet)
Drainage 1	0.10 (985)	0.02 (293)
Total	0.10 (985)	0.02 (293)

State Wetlands

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation. Based on the results of the field delineation, it was determined that no areas within the project site meet the State Wetland Definition. Therefore, no state wetland features exist within the project site.

California Department of Fish and Wildlife

Drainage 1 exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed. Additionally, there are multiple western Sycamores present along drainage 1 with 0.09 acres of dripline that qualify under CDFW Jurisdiction. A total of 0.19 acre (985) of CDFW jurisdiction was documented onsite consisting of 0.10 acre of CDFW jurisdictional streambed, and 0.09 acre of associated CDFW vegetation (refer to Exhibit 5 in Attachment A). Based on the proposed site plan, approximately 0.07 acre (293 linear feet) of CDFW jurisdictional areas will be impacted from project implementation.

Jurisdictional Feature	CDFW Jurisdiction	
	On-Site Jurisdiction Acreage (Linear Feet)	On-Site Impacts Acreage (Linear Feet)
Drainage 1	0.19 (985)	0.07 (293)
Total	0.19 (985)	0.07 (293)

Conclusion and Recommendations

The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements.

United States Army Corps of Engineers

The Corps regulates discharges of dredged or fill materials into waters of the United States and wetlands pursuant to Section 404 of the CWA. No Corps jurisdictional areas were identified within the project site and a CWA Section 404 permit would not be required for the proposed project.

It recommended that the project applicant coordinate with the Corps to confirm existing site conditions and document the absence of Corps jurisdiction within the boundaries of the project site. The Corps may require an Approved Jurisdictional Determination (AJD) to be processed to confirm the absence of waters of the United States; however, they may waive the need for a AJD to be processed.

Regional Water Quality Control Board

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Any impacts to on-site jurisdictional areas will require a Report of Waste Discharge prior to project implementation. Therefore, it will be necessary for the applicant to acquire a Report of Waste Discharge Certification prior to impacts occurring within Regional Board jurisdictional areas. The Regional Board also requires that California Environmental Quality Act (CEQA) compliance be obtained prior to obtaining the Report of Waste Discharge Certification. A Regional Board Application fee is required with the application package and is calculated based on the acreage and linear feet of jurisdictional impacts.

California Department of Fish and Wildlife

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. A Section 1602 Streambed Alteration Agreement from the CDFW will be required for impacts to the onsite drainage features prior to project implementation. The notification is based on the term and cost of a Project. The Section 1602 Streambed Alteration Agreement will not be issued until all fees are paid to the CDFW. CDFW also requires that CEQA compliance be obtained prior to issuance of the Streambed Alteration Agreement.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions or require further information.

Sincerely,



Thomas J. McGill, Ph.D.
Managing Director



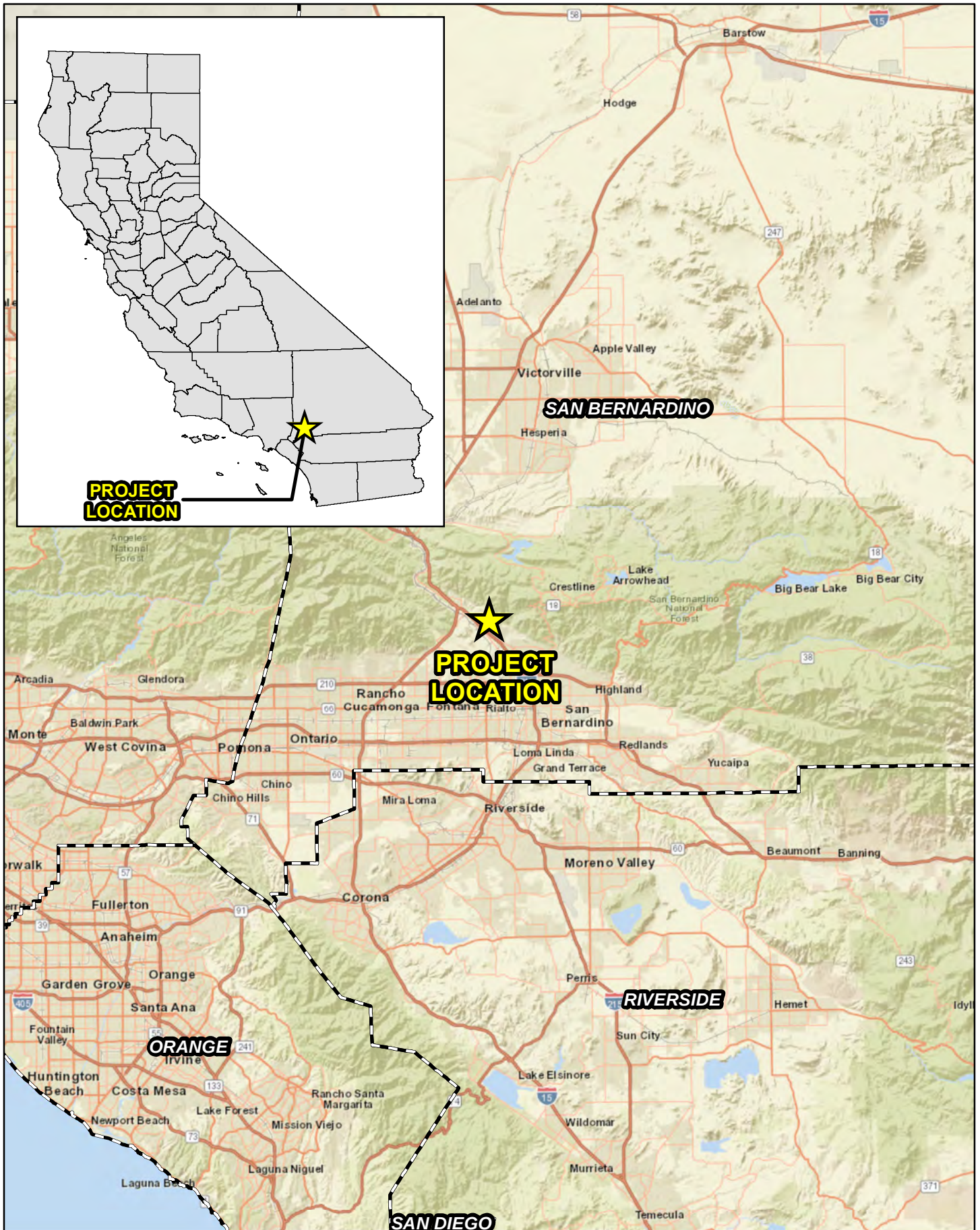
Travis J. McGill
Director

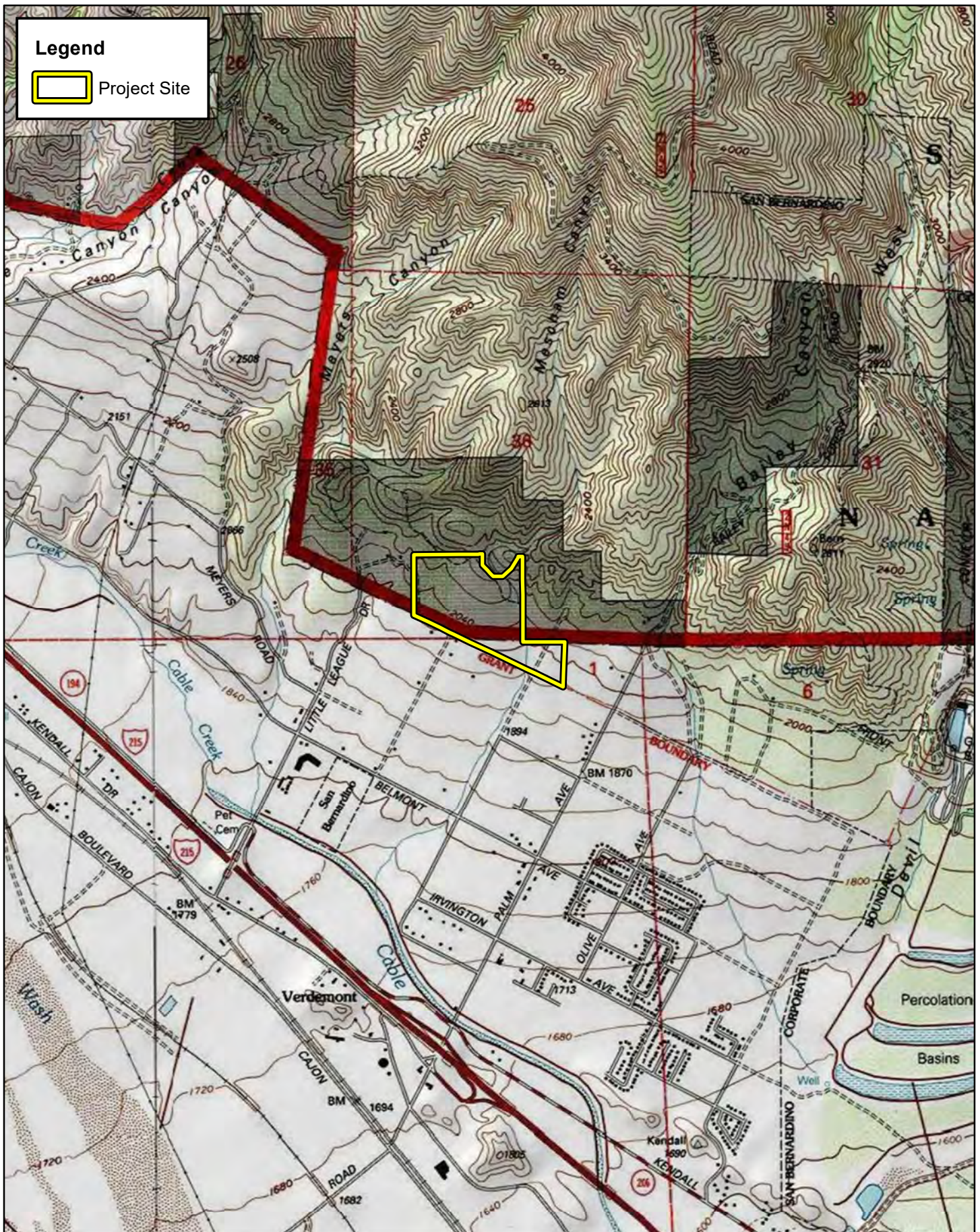
Attachments:

- A. *Project Exhibits*
- B. *Site Plan*
- C. *Site Photographs*
- D. *Documentation*
- E. *Methodology*

Attachment A

Project Exhibits







Legend

 Project Site



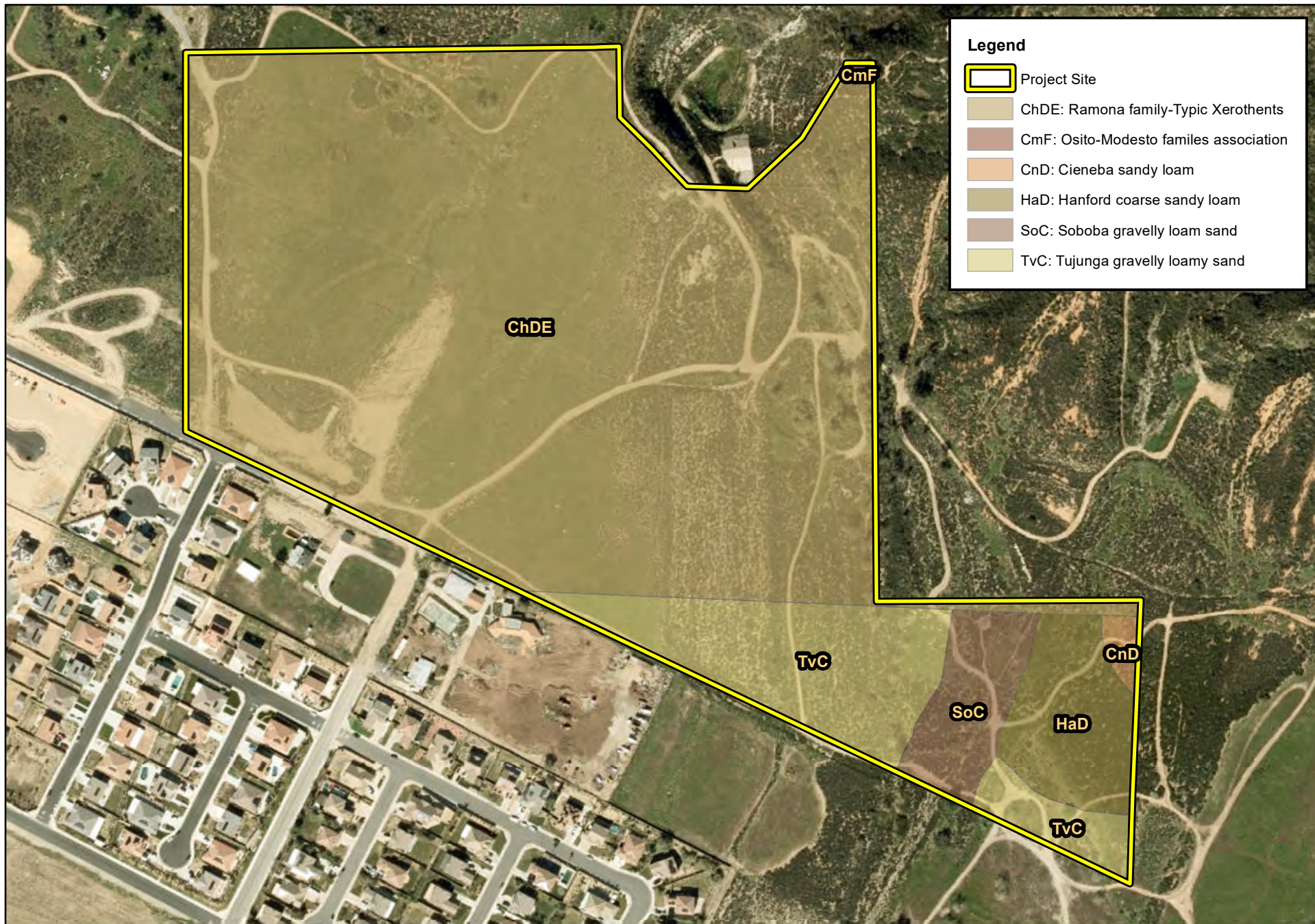
0 125 250 500
Feet

Source: ESRI Aerial Imagery, San Bernardino County

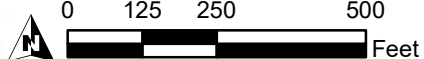
TENTATIVE TRACT MAP NO. 20707

Project Site

Exhibit 3



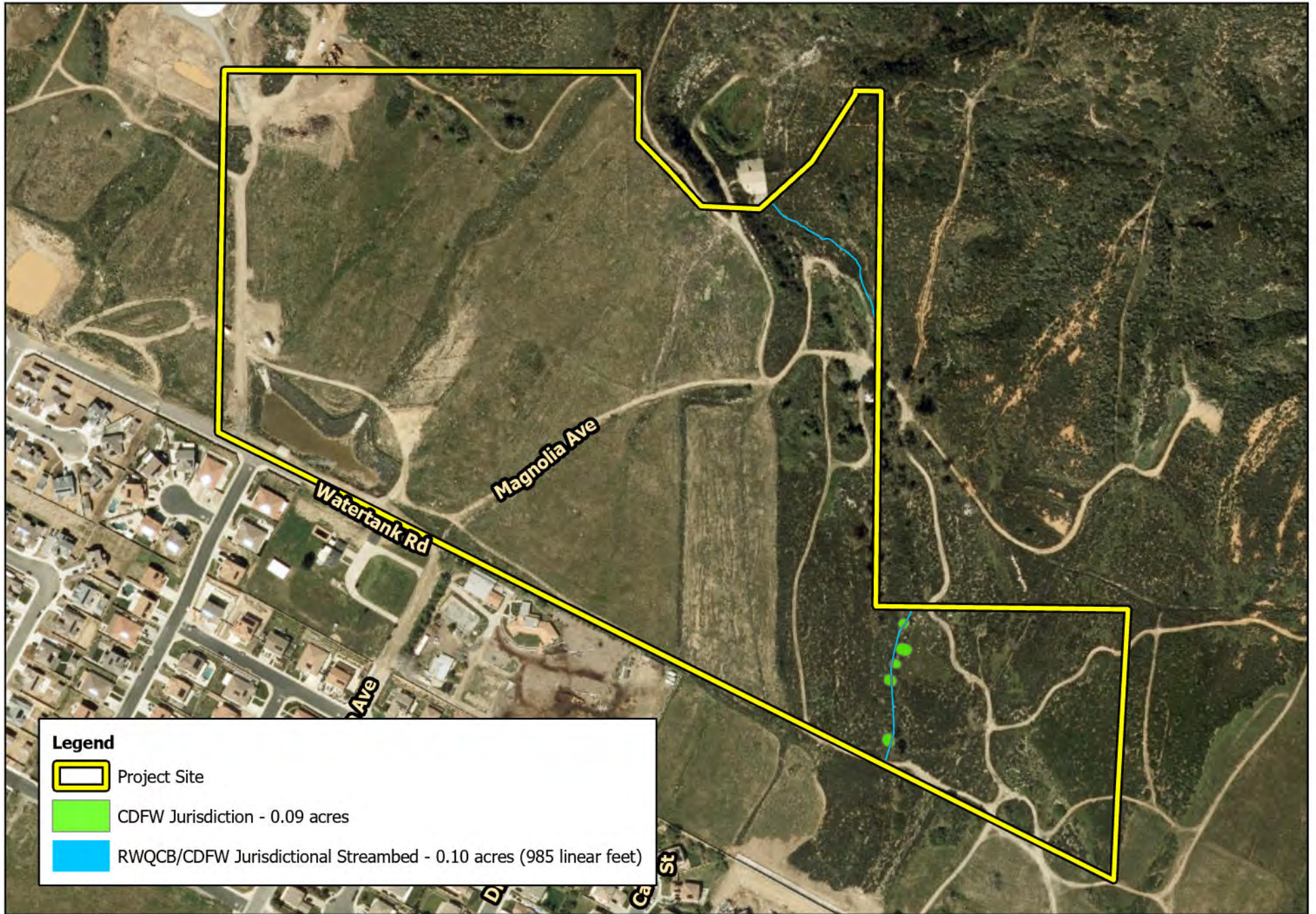
TENTATIVE TRACT MAP NO. 20707



Source: ESRI Aerial Imagery, Soil Survey Geographic Database, San Bernardino County

Soils

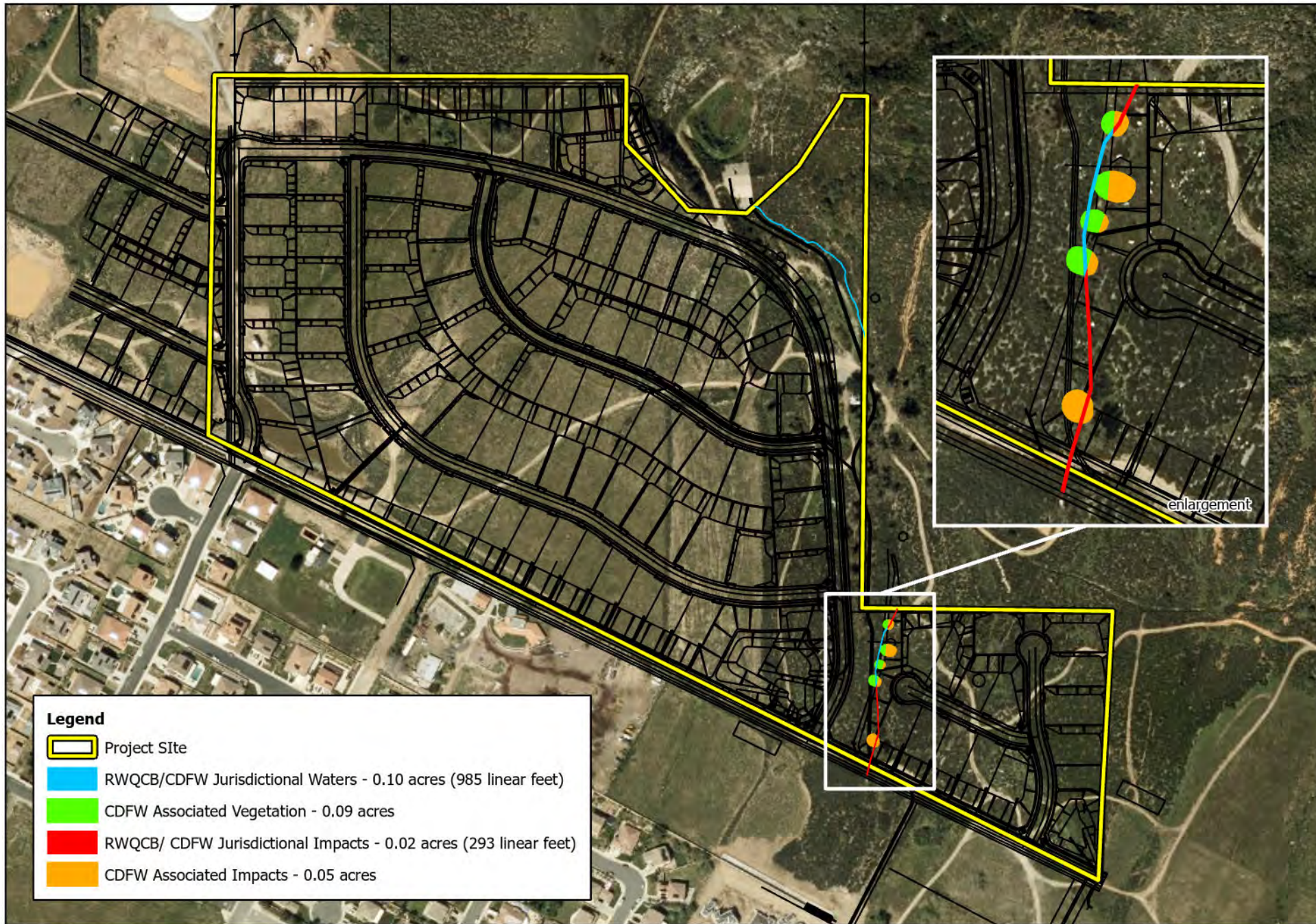
Exhibit 4



TENTATIVE TRACT MAP NO. 20707

Jurisdictional Areas

Exhibit 5



Attachment B

Site Plan

SOURCE OF TOPOGRAPHY

DIGITAL AERIAL TOPOGRAPHY WAS
PREPARED BY:
DIGITAL MAPPING INC.

A.P.N.

0348-121-14, 0348-121-27, 0261-011-10
0261-011-03, 0261-011-02, 0348-121-28

BASIS OF BEARINGS

THE CENTERLINE OF LITTLE LEAGUE
DRIVE BEING N27°48'02"E PER
PARCEL MAP NO. 1466, M.B. 14/69.

SITE ACREAGE

107.7 ACRES GROSS

OWNERS/APPLICANT:

OWNER: 17329 LLC
434 N. 2nd Ave, Upland, CA 91786
CONTACT: Felizardo Robles Jr.
Phone Number: 951-314-1879

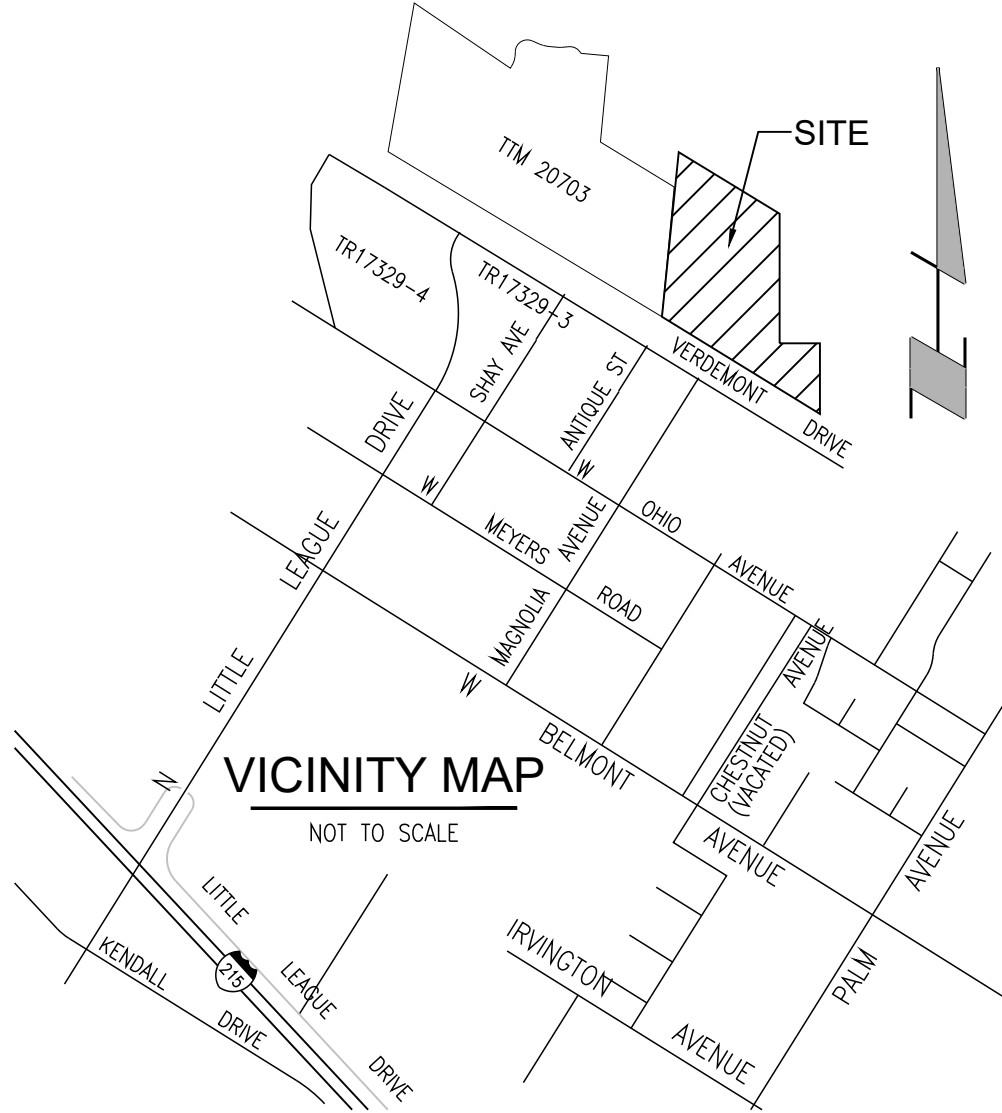
APPLICANT: JEC ENTERPRISES INC.
434 N. 2nd Ave, Upland, CA 91786
CONTACT: ARLENE ANAYA
909-949-1400 X106

SOILS ENGINEER:

GEOTEK, INC.
1548 NORTH MAPLE STREET
CORONA, CA 92880
951-710-1160

CONTACTS:
EDWARD H. LoMONT
ROBERT R. RUSSELL

TENTATIVE TRACT MAP No. 20707



UTILITIES:

WATER & SEWER
CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT
ATTN: MATTHEW LITCHFIELD
P.O. BOX 710
SAN BERNARDINO, CA 92402
(951) 384-6391

GAS:
SOUTHERN CALIFORNIA GAS COMPANY
ATTN: DEVEY JENKINS
1918 LUGONIA AVENUE
REDLANDS, CA 92373
(951) 335-7926

TELEPHONE:
VERIZON
ATTN: JEFF BOLTER
1980 ORANGE TREE LANE, SUITE 100
REDLANDS, CA 92374
(951) 748-6642

SCHOOL DISTRICT:
SAN BERNARDINO UNIFIED
SCHOOL DISTRICT
ATTN: MICHAEL PEREZ
777 NORTH "T" STREET
SAN BERNARDINO, CA 92401
(951) 381-1239

ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
ATTN: STEPHANIE RODRIGUEZ
287 TENNESSEE STREET
REDLANDS, CA 92373
(951) 307-6791

LEGAL DESCRIPTION

PARCEL 1: APN: 0348-121-14
BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, SAID CORNER BEING ALSO THE SOUTHEAST CORNER OF LOT 1 OF SAID SECTION, THENCE WEST ALONG THE SOUTH LINE OF SAID LOT 1, 85 FEET TO AN INTERSECTION OF SAID SOUTH LINE WITH THAT CERTAIN LINE COMMONLY KNOWN AS THE PERRIN LINE, AS SHOWN ON GOVERNMENT PLAT THEREOF, APPROVED JUNE 24, 1898, THENCE NORTH 64° WEST ALONG SAID PERRIN LINE, 145 FEET TO THE TRUE POINT OF BEGINNING, THENCE CONTINUING ALONG THE SAID PERRIN LINE NORTH 64° WEST, 740 FEET TO A POINT, THENCE NORTH 292°22' FEET, MORE OR LESS, TO THE NORTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 36, THENCE EAST ALONG SAID NORTH LINE, 665.1 FEET, MORE OR LESS, TO A POINT DUE NORTH OF THE TRUE POINT OF BEGINNING, THENCE SOUTH 297°43' FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING, EXCEPTING THEREFROM THE INTEREST AS CONVEYED BY HELEN WOLCOW, A WIDOW, TO THE CITY OF SAN BERNARDINO, A MUNICIPAL CORPORATION, BY DEED RECORDED SEPTEMBER 3, 1985, AS INSTRUMENT NO. 88-214224, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:
ALL THAT PORTION OF THE SOUTHWESTERNLY 60.00 FEET OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, AND THE SOUTHWESTERNLY 60.00 FEET OF GOVERNMENT LOT 2, SECTION 1, TOWNSHIP 1 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE U.S. GOVERNMENT TOWNSHIP PLAT THEREOF, LYING NORTHEASTERLY OF, ADJACENT TO AND MEASURED AT RIGHT ANGLES TO THAT CERTAIN LINE COMMONLY KNOWN AS THE PERRIN LINE AS SHOWN ON GOVERNMENT PLAT THEREOF, APPROVED JUNE 24, 1898, LYING BETWEEN THE NORTHEASTERLY PROLONGATION OF THE SOUTHEASTERLY LINE OF CHESTNUT AVENUE, 60.00 FEET WIDE, AS DELINEATED ON THE MAP OF RIVINGTON LAND AND WATER COMPANY SUBDIVISION, AS PER PLAT THEREOF RECORDED IN BOOK 1 OF RECORD OF SURVEYS, PAGE 32, RECORDS OF THE COUNTY RECORDER OF SAID COUNTY AND BETWEEN THE EAST LINE OF THE PROPERTY CONVEYED TO RICHARD P. SCHMITZ, ET AL., BY DEED RECORDED FEBRUARY 19, 1970 IN BOOK 7392, PAGE 128, OFFICIAL RECORDS OF SAID COUNTY RECORDER,
ALSO EXCEPTING THEREFROM THE INTEREST AS CONVEYED BY JUANITA POLLARD TO THE CITY OF SAN BERNARDINO, A MUNICIPAL CORPORATION, BY DEED RECORDED SEPTEMBER 3, 1985, AS INSTRUMENT NO. 88-214224, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:
ALL THAT PORTION OF THE SOUTHWESTERNLY 60.00 FEET OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, AND THE SOUTHWESTERNLY 60.00 FEET OF GOVERNMENT LOT 2, SECTION 1, TOWNSHIP 1 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE U.S. GOVERNMENT TOWNSHIP PLAT THEREOF, LYING NORTHEASTERLY OF, ADJACENT TO AND MEASURED AT RIGHT ANGLES TO THAT CERTAIN LINE COMMONLY KNOWN AS THE PERRIN LINE AS SHOWN ON GOVERNMENT PLAT THEREOF, APPROVED JUNE 24, 1898, LYING BETWEEN THE NORTHEASTERLY PROLONGATION OF THE SOUTHEASTERLY LINE OF CHESTNUT AVENUE, 60.00 FEET WIDE, AS DELINEATED ON THE MAP OF RIVINGTON LAND AND WATER COMPANY SUBDIVISION, AS PER PLAT THEREOF RECORDED IN BOOK 1 OF RECORD OF SURVEYS, PAGE 32, RECORDS OF THE COUNTY RECORDER OF SAID COUNTY AND BETWEEN THE EAST LINE OF THE PROPERTY CONVEYED TO RICHARD P. SCHMITZ, ET AL., BY DEED RECORDED FEBRUARY 19, 1970 IN BOOK 7392, PAGE 128, OFFICIAL RECORDS OF SAID COUNTY RECORDER,
ALSO EXCEPTING THEREFROM THE INTEREST AS CONVEYED BY MARLENE MYER MONTOYA TO THE CITY OF SAN BERNARDINO, A MUNICIPAL CORPORATION, BY DEED RECORDED SEPTEMBER 3, 1985, AS INSTRUMENT NO. 88-214224, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:
ALL THAT PORTION OF THE SOUTHWESTERNLY 60.00 FEET OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, AND THE SOUTHWESTERNLY 60.00 FEET OF GOVERNMENT LOT 2, SECTION 1, TOWNSHIP 1 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE U.S. GOVERNMENT TOWNSHIP PLAT THEREOF, LYING NORTHEASTERLY OF, ADJACENT TO AND MEASURED AT RIGHT ANGLES TO THAT CERTAIN LINE COMMONLY KNOWN AS THE PERRIN LINE AS SHOWN ON GOVERNMENT PLAT THEREOF, APPROVED JUNE 24, 1898, LYING BETWEEN THE NORTHEASTERLY PROLONGATION OF THE SOUTHEASTERLY LINE OF CHESTNUT AVENUE, 60.00 FEET WIDE, AS DELINEATED ON THE MAP OF RIVINGTON LAND AND WATER COMPANY SUBDIVISION, AS PER PLAT THEREOF RECORDED IN BOOK 1 OF RECORD OF SURVEYS, PAGE 32, RECORDS OF THE COUNTY RECORDER OF SAID COUNTY AND BETWEEN THE EAST LINE OF THE PROPERTY CONVEYED TO RICHARD P. SCHMITZ, ET AL., BY DEED RECORDED FEBRUARY 19, 1970 IN BOOK 7392, PAGE 128, OFFICIAL RECORDS OF SAID COUNTY RECORDER.

PARCEL 2: APN: 0348-121-27-000

THAT PORTION OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO UNITED STATES GOVERNMENT SURVEY, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SAID SECTION 36, SAID CORNER BEING ALSO THE SOUTHEAST CORNER OF LOT 1 OF SAID SECTION, THENCE WEST ALONG THE SOUTH LINE OF SAID LOT 1, 540 FEET TO THE TRUE POINT OF BEGINNING, SAID TRUE POINT OF BEGINNING BEING ALSO THE SOUTHWEST CORNER OF THE LAND CONVEYED TO GEO GUZZETTA, ET UX., BY DEED RECORDED FEBRUARY 4, 1938 IN BOOK 1269, PAGE 72, OF OFFICIAL RECORDS,
THENCE CONTINUING WEST ALONG THE SOUTH LINE OF SAID LOT 1, 295 FEET TO AN INTERSECTION OF SAID SOUTH LINE WITH THAT CERTAIN LINE COMMONLY KNOWN AS THE PERRIN LINE AS SHOWN ON GOVERNMENT PLAT THEREOF, APPROVED JUNE 24, 1898,
THENCE NORTH 64° WEST ALONG SAID PERRIN LINE, 145 FEET, THENCE NORTH 297°43' FEET, MORE OR LESS, TO A POINT IN THE NORTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 36, THENCE SOUTH 297°43' FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING, EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF SAN BERNARDINO BY DEED RECORDED MAY 16, 1980 AS INSTRUMENT NO. 80-18647, OF OFFICIAL RECORDS, ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF SAN BERNARDINO IN DEED RECORDED APRIL 5, 2007, AS INSTRUMENT NO. 2007-0210277, OF OFFICIAL RECORDS.

PARCEL 2A:

A NON-EXCLUSIVE EASEMENT FOR INGRESS, EGRESS, ROAD, PUBLIC UTILITIES AND INCIDENTAL PURPOSES, TOGETHER WITH THE RIGHT TO DEDICATE FOR PUBLIC USE, OVER AND ACROSS THE SOUTHWESTERNLY, SOUTHERLY AND WESTERLY 60 FEET OF THE FOLLOWING DESCRIBED PROPERTY:
BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, THENCE WEST 540 FEET, THENCE RUNNING NORTH TO THE NORTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 36, THENCE RUNNING EAST 540 FEET TO THE CENTER OF SAID SECTION 36, THENCE SOUTH TO THE POINT OF BEGINNING, ALSO ALL THAT PORTION OF LOT 2, SECTION 1, TOWNSHIP 1 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO GOVERNMENT SURVEY, LYING NORTH OF THE PERRIN LINE, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, THENCE RUNNING WEST 540 FEET, THENCE RUNNING SOUTH 64° EAST ALONG THE PERRIN LINE, 599.84 FEET, THENCE NORTH 408.9 FEET TO THE POINT OF BEGINNING.

PARCEL 3: APN: 0261-011-02-000

THAT PORTION OF GOVERNMENT LOT 2, SECTION 1, TOWNSHIP 1 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:
BEGINNING AT THE MOST WESTERLY CORNER OF SAID GOVERNMENT LOT NO. 2, THENCE EAST ALONG THE NORTHERLY LINE OF SAID GOVERNMENT LOT NO. 2, 238 FEET, THENCE SOUTH 141 FEET TO THE NORTHERLY LINE OF THE MUSCUPALE RANCHO, THENCE ALONG SAID NORTHERLY LINE NORTH 64° WEST 321.4 FEET TO THE POINT OF BEGINNING.

PARCEL 4: APN: 0261-011-03-000

THAT PORTION OF GOVERNMENT LOT NO. 2, SECTION 1, TOWNSHIP 1 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTH CORNER OF SAID GOVERNMENT LOT NO. 2, THENCE SOUTH 64° EAST ALONG SAID LINE, 688.8 FEET TO A POINT SOUTH OF THE POINT OF BEGINNING, THENCE NORTH 705.51 FEET TO THE POINT OF BEGINNING.

PARCEL 5: APN: 0261-011-02-000

ALL THAT PORTION OF LOT 2 IN SECTION 1, TOWNSHIP 1 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND APPROVED BY THE SURVEYOR GENERAL, DATED JUNE 24, 1898, LYING NORTH OF THE PERRIN LINE, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, THENCE WEST 540 FEET, THENCE RUNNING NORTH TO THE NORTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 36, THENCE RUNNING EAST 540 FEET TO THE CENTER OF SAID SECTION 36, THENCE SOUTH TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF SAN BERNARDINO BY DEED RECORDED MAY 16, 1980 AS INSTRUMENT NO. 80-18647, OF OFFICIAL RECORDS, ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF SAN BERNARDINO IN DEED RECORDED APRIL 5, 2007, AS INSTRUMENT NO. 2007-0210277, OF OFFICIAL RECORDS.

PARCEL 7:

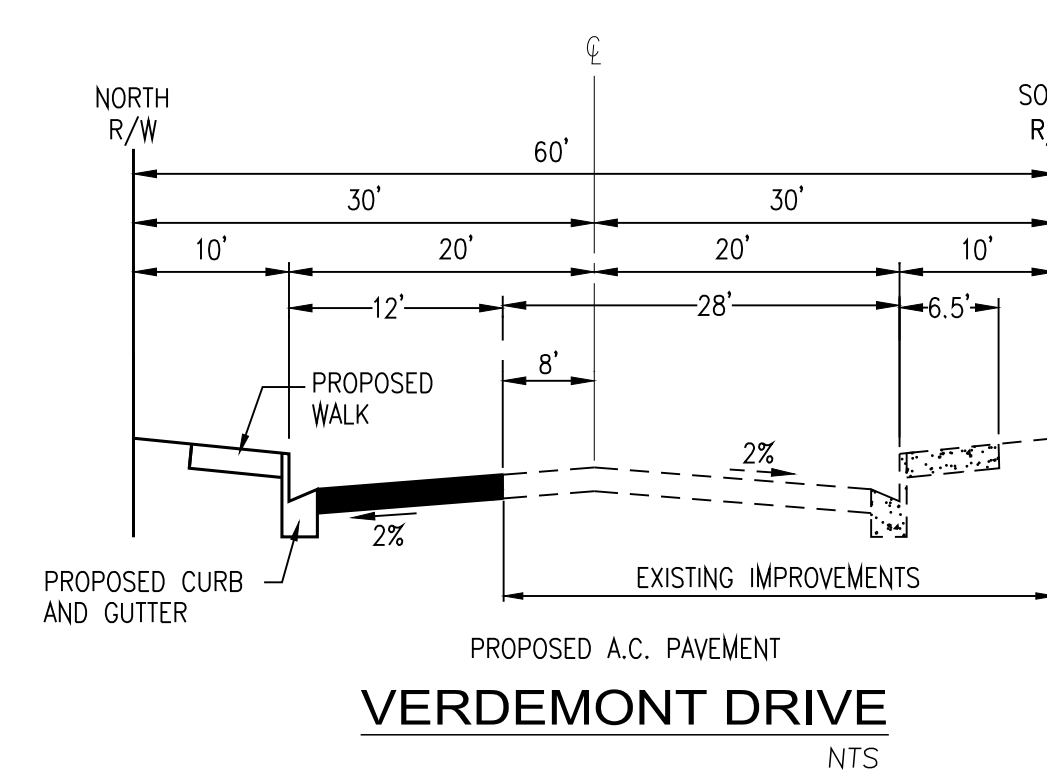
A NON-EXCLUSIVE EASEMENT AND RIGHT TO DEDICATE FOR THE PURPOSES OF INGRESS AND EGRESS, ROADWAY, PUBLIC UTILITIES AND INCIDENTAL PURPOSES, OVER AND ACROSS THE SOUTHWESTERNLY AND SOUTHERLY 60 FEET OF THAT PORTION SOUTHWEST 1/4 OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SAID SECTION 36, SAID CORNER BEING ALSO THE SOUTHEAST CORNER OF LOT 1 OF SAID SECTION, THENCE WEST ALONG THE SOUTH LINE OF SAID LOT 1, 540 FEET TO THE TRUE POINT OF BEGINNING, SAID TRUE POINT OF BEGINNING BEING ALSO THE SOUTHWEST CORNER OF THE LAND CONVEYED TO GEO GUZZETTA, ET UX., BY DEED RECORDED FEBRUARY 4, 1938, IN BOOK 1269, PAGE 72, OF OFFICIAL RECORDS OF SAID COUNTY.

THENCE NORTH 64° WEST ALONG SAID PERRIN LINE, 145 FEET, THENCE NORTH 257°43' FEET, MORE OR LESS, TO A POINT IN THE NORTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 36, THENCE EAST ALONG SAID NORTH LINE, 440 FEET, MORE OR LESS, TO THE NORTHWEST CORNER OF THE HEREBEFORE REFERRED TO LAND OF GUZZETTA, THENCE SOUTH ALONG THE WEST LINE OF SAID GUZZETTA LAND, 2.842 FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING.

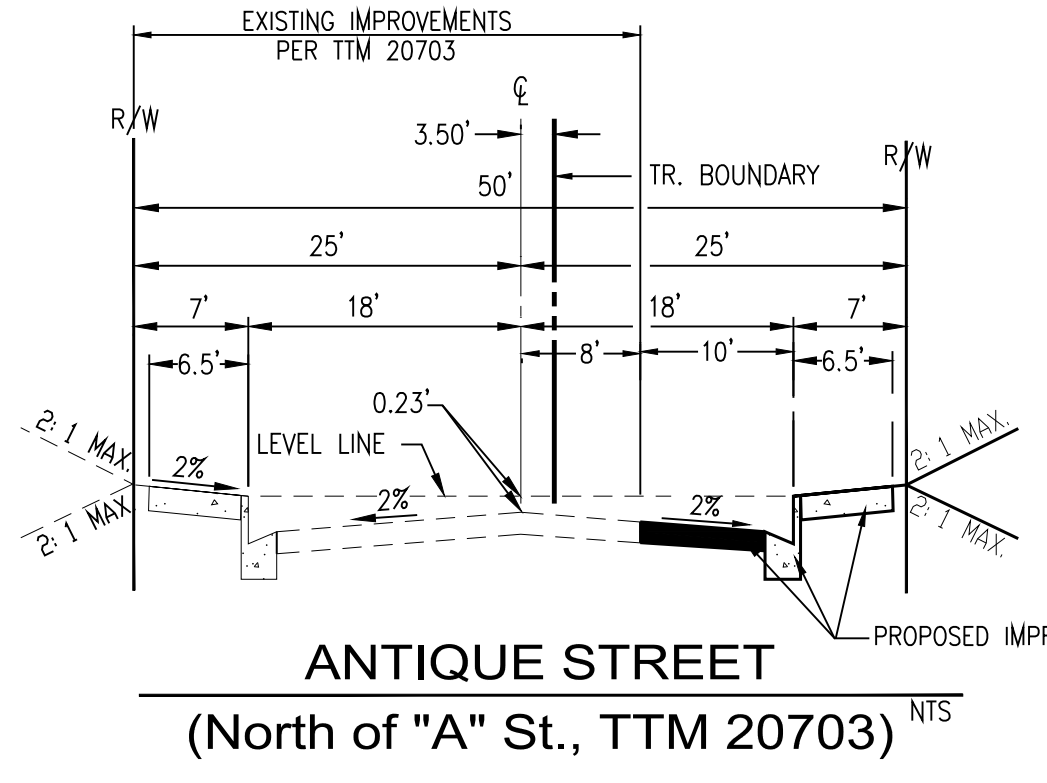
THENCE NORTH 408.9 FEET TO THE NORTHERLY LINE OF THE MUSCUPALE RANCHO, THENCE RUNNING WEST 540 FEET, THENCE SOUTH 141 FEET, THENCE RUNNING SOUTH 64° EAST ALONG PERRIN LINE, 599.84 FEET, THENCE NORTH 408.8 FEET TO THE POINT OF BEGINNING.

THENCE NORTH 408.8 FEET TO THE POINT OF BEGINNING.

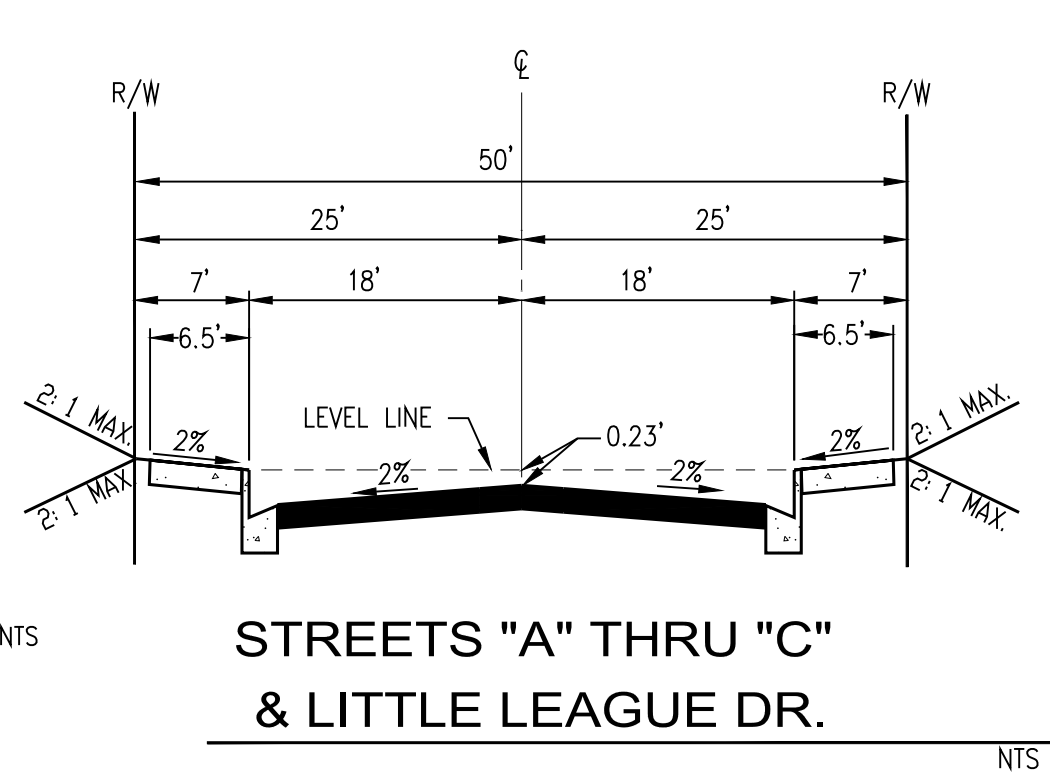
THENCE WEST ALONG THE SOUTH LINE OF SAID LOT 1, 540 FEET TO THE TRUE POINT OF BEGINNING, SAID TRUE POINT OF BEGINNING BEING ALSO THE SOUTHWEST CORNER OF THE LAND CONVEYED TO GEO GUZZETTA, ET UX., BY DEED RECORDED FEBRUARY 4, 1938, IN BOOK 1269, PAGE 72, OF OFFICIAL RECORDS OF SAID COUNTY.



VERDEMONTE DRIVE
NTS



ANTIQUE STREET
(North of "A" St., TTM 20703)
NTS



STREETS "A" THRU "C"
& LITTLE LEAGUE DR.
NTS

DRAFT



ENGINEER

BONADIMAN
JOSEPH E. BONADIMAN & ASSOCIATES, INC.
ENGINEERS • CIVIL • SURVEYING • PLANNING

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FAX: (909) 381-1721
www.bonadiman.com

JAMES T. STANLEY, R.C.E. C-70944, EXP. 6-30-25, DATE: 4-26-2024

Attachment C

Site Photographs



Photograph 1: From the upper northern boundary of the project site where the drainage feature (Drainage 1) enters the site, looking downstream.



Photograph 2: Near the eastern boundary of the project site looking northwest upstream Drainage 1, which flows adjacent to a hillside and between a dense Riverside Sage Scrub plant community.



Photograph 3: Near the eastern boundary of the project site looking south downstream Drainage 1.



Photograph 4: From the eastern boundary of the project site where Drainage 1 flows out of the boundary looking northwest upstream.



Photograph 5: From the lower portion of the northern boundary of the project site looking south downstream Drainage 1.



Photograph 6: From the middle of the lower portion of Drainage 1 looking downstream.



Photograph 7: From the middle of the lower portion of Drainage 1 looking upstream.



Photograph 8: From the southern boundary of the project site looking upstream Drainage 1.

Attachment D

Documentation



U.S. Fish and Wildlife Service

National Wetlands Inventory

TTM 20707



February 4, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (CBFEs) shown on this map apply only to landward of 0.9 North American Vertical Datum of 1988 (NAVD83). Users of the FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11 North. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRM for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NCEM, NAD83
National Geodetic Survey
5500-11 4500
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at 301.713.3242.

Base map information shown on this FIRM was provided in digital format by the San Bernardino County GIS Department, United States Geological Survey, the Bureau of Land Management, the United States Department of Agriculture, and the National Geodetic Survey. The imagery was flown by U.S. Department of Agriculture Farm Service Agency in 2012 and was produced with a 1-meter ground sampling distance.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contain authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limits locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the major map sheets, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information and questions about this map, available products associated with this FIRM including historic versions of the FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Service Center website at <http://www.fema.gov> (1-877-336-2827) or visit the FEMA Map Service Center website at <http://www.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information Exchange.

ATTENTION: The levee, dike, or other structure that impacts flood hazards inside this boundary has not been shown to comply with Section 55.10 of the NFIP Regulations. As such, this FIRM panel will be revised at a later date to update the flood hazard information associated with this structure.

The flood hazard data inside this boundary on the FIRM panel has been published from the previous effective (historic) FIRM for this area, after being converted from NGVD29 to NAVD83.

ACCREDITED LEVEE NOTES TO USERS: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent annual-chance level) and Emergency Action Plan, in the levee systems shown as providing protection for areas on this panel. To mitigate flood risk in medium risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA website at <http://www.fema.gov> and/or contact their local community.

San Bernardino County Unincorporated Areas 060270

City of San Bernardino 060281

City of San Bernardino 060281

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San Bernardino County Unincorporated Areas 060270

San Bernardino County Unincorporated Areas 060270

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The National Flood Insurance Act of 1968 requires that the 1% annual chance flood be used to determine the base flood elevation. The base flood elevation is the minimum elevation of the 1% annual chance flood.

ZONE A
No Base Flood Elevations determined.

ZONE AE
Base Flood Elevations determined.

ZONE AH
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of actual flood ponding, depths also determined.

ZONE AR
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently abandoned. Zone AR indicates that the former flood control system is being retained to provide protection from the 1% annual chance or greater flood.

ZONE ARS
Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood height.

OTHER FLOOD AREAS

ZONE X
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with change areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE D
Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

MAP REQUISITES

Refer to Map Repository List on Map Index

EFFECTIVE DATE OF COUNTRYWISE FLOOD INSURANCE RATE MAP
August 28, 2008

EFFECTIVE DATES OF REVISIONS TO THIS PANEL
September 2, 2018 - to change Base Flood Elevations, to add Base Flood Elevations, to change Special Flood Hazard Areas, to add Special Flood Hazard Areas, to change zone designations, to incorporate previously added Letters of Map Change, and to reflect updated geographic information.

For community map website history, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6623.

MAP SCALE 1" = 1000'

NFIP

PANEL 7930J

FIRM

FLOOD INSURANCE RATE MAP

SAN BERNARDINO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 7930 OF 9400
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS	NUMBER	PANEL	SHEET
SAN BERNARDINO COUNTY	060270	7930	1
SAN BERNARDINO COUNTY	060281	7930	2

Notes to User: This map is shown as being protected from the 1% annual chance flood by a flood control system. Encroachment or failure of any levee system is possible. For additional information, see the "Accredited Levee Notes" in the Notes to Users.

MAP NUMBER 06071C7930J

MAP REVISED SEPTEMBER 2, 2016

Federal Emergency Management Agency

Attachment E

Methodology

WATERS OF THE UNITED STATES

Section 404 of the Clean Water Act

In accordance with the Revised Definition of “Waters of the United States”; Conforming (September 8, 2023), “waters of the United States” are defined as follows:

(a) ***Waters of the United States*** means:

(1) Waters which are:

- (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (ii) The territorial seas; or
- (iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under [paragraph \(a\)\(5\)](#) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

- (i) Waters identified in [paragraph \(a\)\(1\)](#) of this section; or
- (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not “waters of the United States” even where they otherwise meet the terms of [paragraphs \(a\)\(2\)](#) through [\(5\)](#) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

- (4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
- (5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
- (6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
- (7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
- (8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

- (1) **Wetlands** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
- (2) **Adjacent** means having a continuous surface connection
- (3) **High tide line** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.
- (4) **Ordinary high water mark** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- (5) **Tidal waters** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). This document is one of a series of Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology are examined using the methodology listed below and documented on Corps wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- ◆ *Tree Stratum*: Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- ◆ *Sapling/shrub stratum*: Consists of woody plants less than 3 inches DBH, regardless of height;
- ◆ *Herb stratum*: Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- ◆ *Woody vines*: Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.¹ Hydrophytic vegetation is present if any of the indicators are satisfied.

Indicator 1 – Dominance Test

¹ Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also known as the “50/20 rule”) of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- ◆ *Obligate Wetland (OBL)*: Plants that almost always occur in wetlands;
- ◆ *Facultative Wetland (FACW)*: Plants that usually occur in wetlands, but may occur in non-wetlands;
- ◆ *Facultative (FAC)*: Plants that occur in wetlands and non-wetlands;
- ◆ *Facultative Upland (FACU)*: Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- ◆ *Obligate Upland (UPL)*: Plants that almost never occur in wetlands.

Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.² The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

All Soils

“All soils” refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

Sandy Soils

“Sandy soils” refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

² According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

Loamy and Clayey Soils

“Loamy and clayey soils” refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

SWANCC WATERS

The term “isolated waters” is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.