L&L ENVIRONMENTAL, INC.
REGULATORY SERVICES
BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

PRELIMINARY JURISDICTIONAL DELINEATION FOR TTM 20398, CITY OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA

±25.13-Acre Property, ±25.13 Acres Surveyed

APNs 3132-081-04, -05, -06, and -09, City of Adelanto, Section 18, Township 5 North, Range 5 West, USGS *Adelanto, CA* Quadrangle Map

Prepared For:

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Report Summary:

Two (2) jurisdictional drainages onsite are subject to Section 1602 of the California Fish and Game Code and may also be subject to Sections 404 and 401 of the Clean Water Act and/or Porter Cologne. These ephemeral drainages include 20,510 sq. ft. (0.47 acre) of combined CDFW streambed and wetland, of which 2,217 sq. ft. (0.05 acre) are possibly federal Waters of the U. S. (although, no clear downstream connection to navigable waters or qualifying federal wetlands was found). No federal wetlands are present. TTM 20398 will impact 0.43 acre of CDFW combined streambed/wetlands, of which 0.05 acre is possibly federal non-wetland Waters of the U. S. Consultation with CDFW, RWQCB, and USACE and permits are recommended.

Delineation Conducted By: Leslie Nay Irish, Ann Lopez, and Joshua Ball
Delineation Conducted On: October 29, 2021
Report Date: October 31, 2021

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MANAGEMENT SUMMARY

L&L Environmental, Inc. conducted a jurisdictional delineation on a ±23.46-acre proposed development site (TTM 20398) in the City of Adelanto, San Bernardino County, California. Offsite road improvements bring the total survey area to ±25.13 acres. The Project site consists of Assessor's Parcel Numbers (APNs) 3132-081-04, -05, -06, and -09.

United Engineering Group proposes to construct 89 residential units onsite.

The purpose of this work effort was to determine if drainages subject to local, state, or federal agencies are present onsite. The site is vacant land in the City of Adelanto, north of Seneca Road, west of Clydesdale Street, south of Cabrillo Street, and east of Calendula Road. Native vegetation is recovering, and the site contains rabbitbrush shrubland alliance (*Chrysothamnus*). On the eastern portion of the property creosote bush (*Larrea tridentata*) is also present.

L&L's regulatory analyst and wetland delineator, Leslie Irish, evaluated the site during a series of actions that included pre-survey research and data review followed by a field survey and post fieldwork analysis and mapping. Research consisted of a review of topographic maps, soils information, aerial photography, and fieldwork consisting of examination of vegetation, soils, and hydrology.

This report identifies two (2) jurisdictional drainages onsite subject to Section 1602 of the California Fish and Game Code. They may also be subject to Sections 404 and 401 of the Clean Water Act and/or Porter Cologne. These ephemeral drainages include 20,510 sq. ft. (0.47 acre) of combined CDFW streambed and wetland, of which 2,217 sq. ft. (0.05 acre) are possibly federal Waters of the U. S. (although, no clear downstream connection to navigable waters or qualifying federal wetlands was found). No federal wetlands are present.

TTM 20398 will avoid 0.04 acre of CDFW streambed, of which 0.003 acre is possibly Waters of the U. S. TTM 20398 will impact 0.43 acre of CDFW combined streambed/wetlands, of which 0.05 acre is possibly federal non-wetland Waters of the U. S. Consultation with CDFW, RWQCB, and USACE and permits are recommended.

All delineations are considered preliminary and subject to review by the regulatory agencies.

1.0) INTRODUCTION

The following report was prepared by L&L Environmental, Inc. (L&L) for United Engineering Group. It describes the results of a CEQA level jurisdictional delineation conducted on a proposed development site in the City of Adelanto in San Bernardino County, California and consists of a total of ±25.13 acres within APNs 3132-081-04, -05, -06, and -09 and associated offsite road improvement area.

Three (3) agencies generally regulate activities within streams, wetlands, and riparian areas in California: (1) the U. S. Army Corps of Engineers (USACE) regulates activities under Section 404 of the federal Clean Water Act; (2) the Regional Water Quality Control Board (RWQCB) regulates activities under Section 401 of the federal Clean Water Act and the State Porter-Cologne Water Quality Control Act; and (3) the California Department of Fish and Wildlife (CDFW) regulates activities under California Fish and Game Code Sections 1600-1616.

Sections 401 and 404 of the federal Clean Water Act applies to "Waters of the United States" (WoUS). Under the current and most recent administration, there have been changes to the definition of USACE jurisdictional waters. Notwithstanding those changes, the final determination and delineation of federal jurisdiction is made by the USACE and not by the project biologists. Therefore, fieldwork and documentation of the site conditions are done as a preliminary delineation until the USACE reviews and concurs with the results.

The RWQCB has jurisdiction over wetlands, WoUS, and Waters of the State under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne) under the California Water Code (§ 13000, et seq.) Permitting is required for activities that will result in a discharge of soils, nutrients, chemicals, detrital materials, or other pollutants into WoUS, Waters of the State, or adjacent wetlands that will affect water quality of those bodies and the watershed.

The CDFW, through provisions of the California Fish and Game Code (Sections 1600-1616), is empowered to issue agreements (“Lake and Streambed Alteration Agreements”) for projects that will adversely affect wildlife habitat associated with any river, stream, or lake edges. The Lake and Streambed Alteration Agreement will typically include required measures to mitigate impacts.

All delineations are considered preliminary and subject to review by the regulatory agencies.

2.0) LOCATION

The site is located in the City of Adelanto (Figure 1), north of Seneca Road, west of Clydesdale Street, south of Cabrillo Street, and east of Calendula Road. It is situated within Section 18, Township 5 North, Range 5 West, USGS *Adelanto, CA* Quadrangle Map (Figure 2). The site is generally bounded as follows: to the west by vacant land; to the east by residential housing, with Clydesdale Road beyond; to the north by vacant land and northwest by a solar plant; and to the southwest by vacant land and to the southeast by residential housing (Figure 3).

2.1) Proposed Project Description

The proposed project is an 89-lot residential subdivision, Tentative Tract Map (TTM) 20398.

2.2) Avoidance and Minimization Re-design

The jurisdictional delineation found two (2) drainage systems crossing the project area from south to north, one (1) on the eastern boundary and one (1) on the western boundary. These have been identified as Streambeds 1 and 2, respectively. TTM 20398 was revised to avoid, minimize, and recreate jurisdictional drainages or state streambeds. To accomplish this, Lot C was created in the northwest corner of the project (resulting in avoidance of impact to Streambed 2) and Lot B was created along the eastern boundary as replacement for impacted Streambed 1 within the Project. Lot A will contain a basin to clean urban runoff.

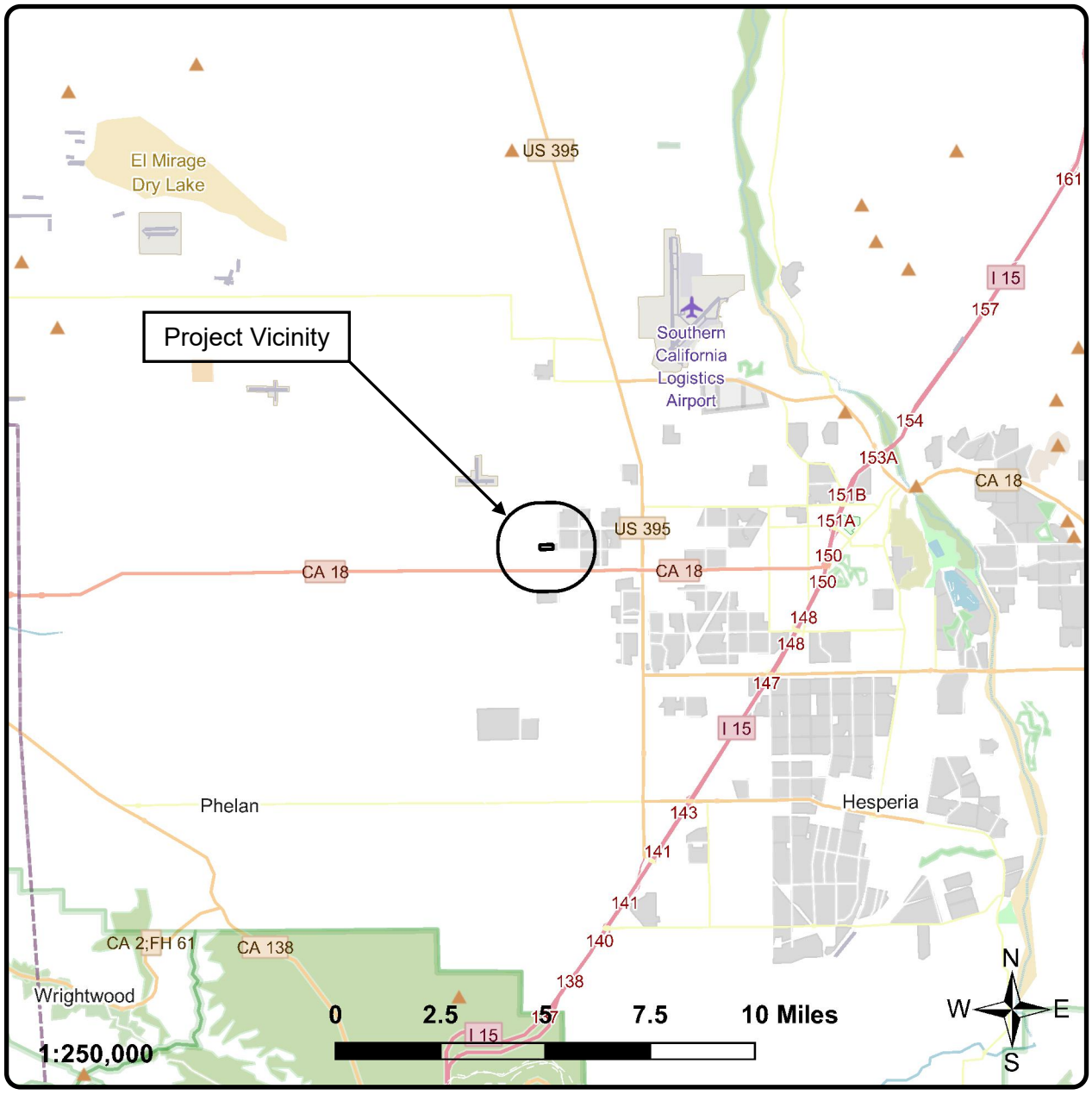

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Figure 1

Project Vicinity Map

TTM 20398, City of Adelanto
County of San Bernardino, California

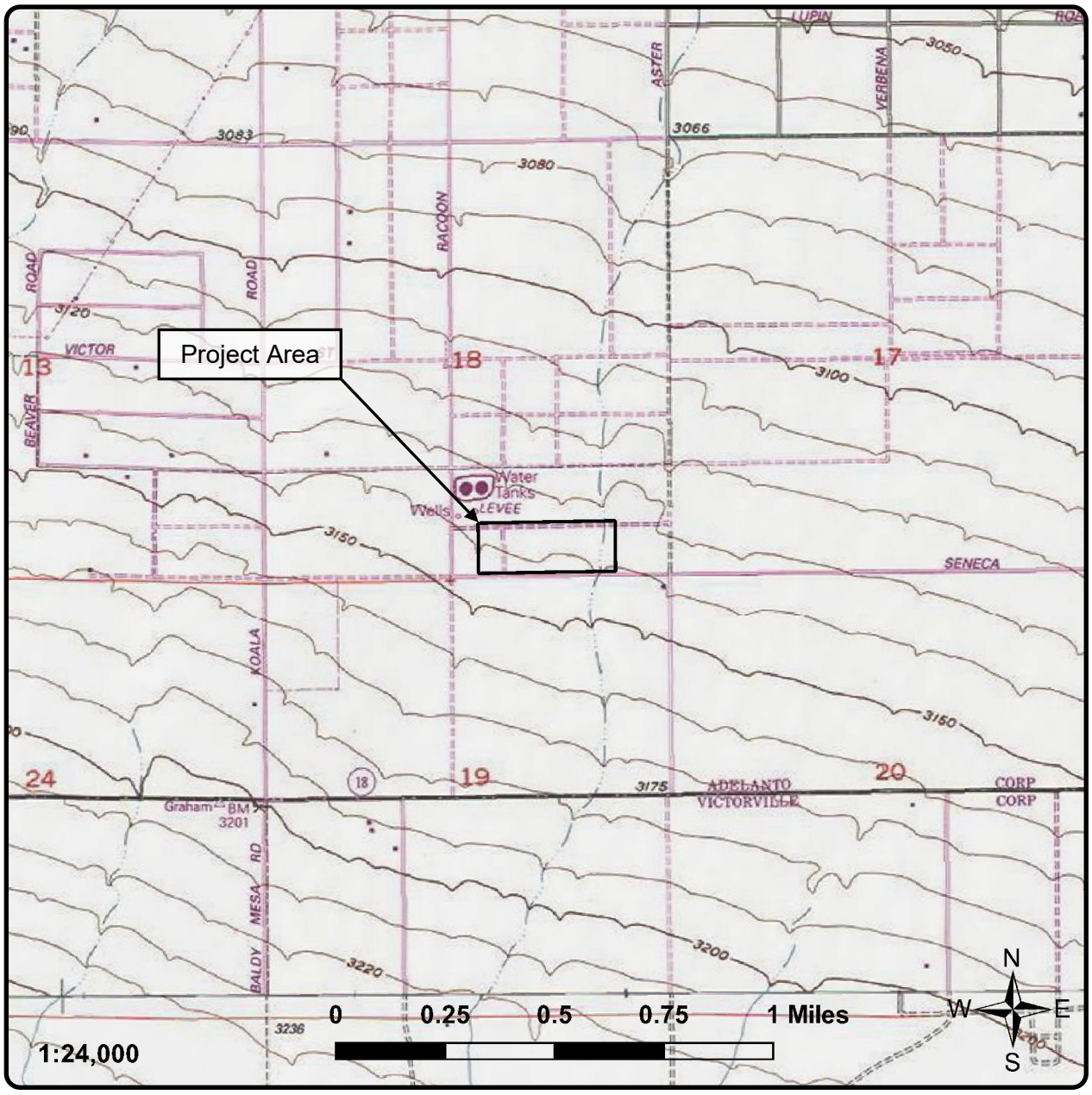

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Figure 2

Project Location Map
(USGS Adelanto [1993] quadrangle,
Section 18, Township 5 North, Range 5 West)

TTM 20398, City of Adelanto
County of San Bernardino, California

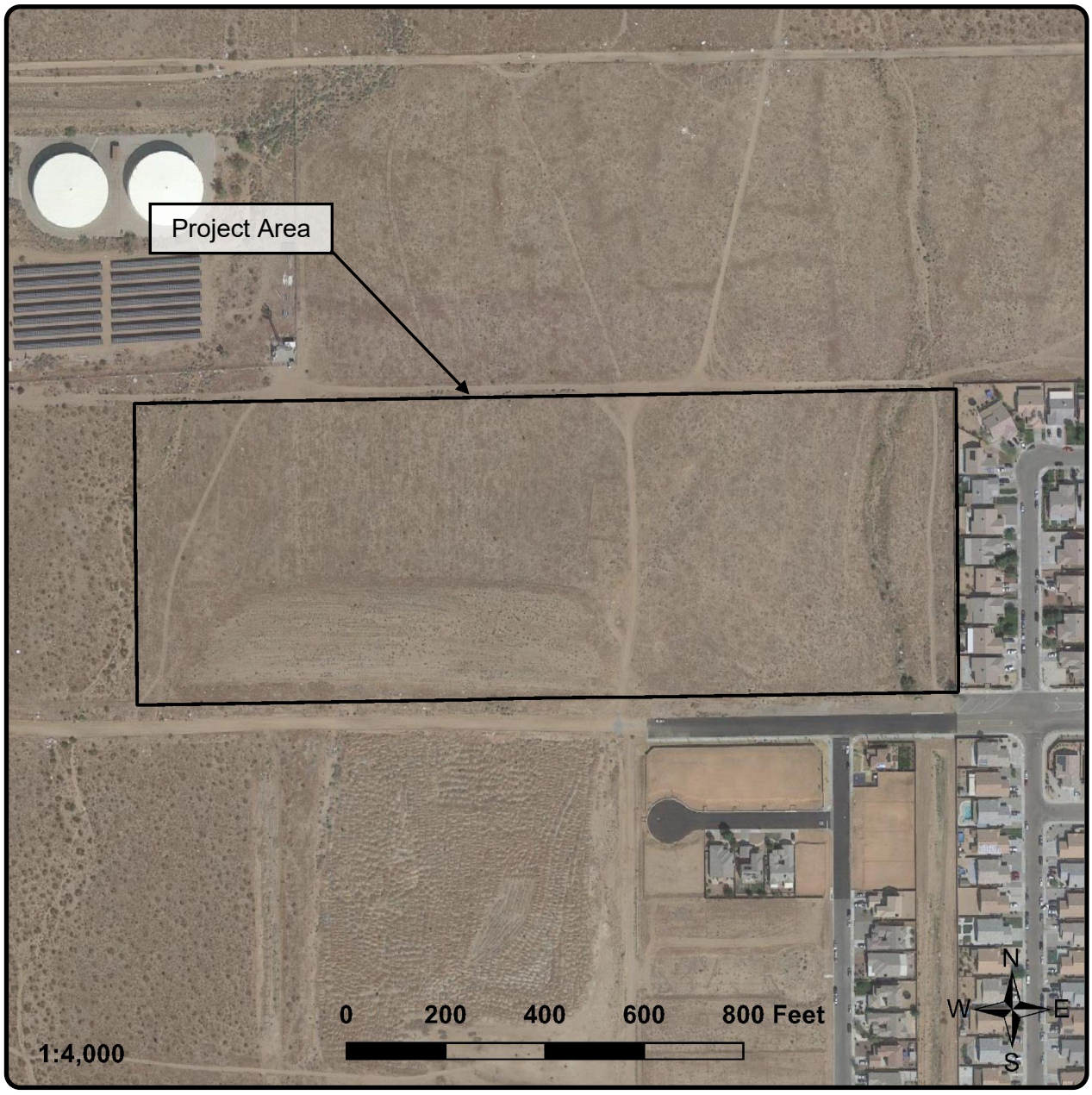

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Figure 3

Aerial Photograph
(Aerial obtained from Google Earth, October 2020)

TTM 20398, City of Adelanto
County of San Bernardino, California

3.0) METHODS

3.1) Pre-Survey Research Methods and Purpose

Potential for jurisdictional features (riparian/riverine) to occur onsite is assessed via aerial photography, topographic mapping, soil types, trends to hydric conditions, area hydrology, and prior wetlands inventory mapping, etc. Finally, the condition of area drainages is forecast based on available rainfall data.

Online data sources include wildlife agencies, California Native Plant Society (CNPS), California Natural Diversity Database (CNDDB), WebSoil, GlobeXplorer, Google Earth, 2016 Arid West Regional Wetland Plant List, Natural Resources Conservation Service, University of California at Davis, Agriculture and Natural Resources, California Soil Resources Lab, U. S. Department of the Interior Geological Survey and the following web pages:

- https://www.wunderground.com/dashboard/pws/KCAMONRO6
- http://wetland-plants.usace.army.mil/nwpl_static/v33/home/home.html
- http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx
- https://www.fws.gov/wetlands/Data/Mapper.html
- https://viewer.nationalmap.gov/basic/
- http://agacis.rcc-acis.org/?fips=06065
- FIRMette Map
- https://viewer.nationalmap.gov/basic/
- https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ca
- https://weatherspark.com/y/1975/Average-Weather-in-Victorville-California-United-States-Year-Round#:~:text=The%20hot%20season%20lasts%20for,low%20of%2068%C2%B0F
- https://www.nrcs.usda.gov, Natural Resources Conservation Service, Water and Climat Center.

3.2) Field Survey Methods and Purpose

Site boundaries were investigated to identify areas where water is received onto the property or transmitted offsite to downstream resources. These areas were then walked, measured, and assessed via three (3) criteria to determine presence or absence of evidence of flow, hydrophilic vegetation, or hydric soil conditions. Where evidence of flow was present, combined with or without hydrophytes, soils were examined for anoxic conditions. Soils identified as suitable for development of hydric conditions were given special attention. Soil color characteristics were

evaluated using a “Munsell color chart” and all data were reported on appropriate Arid West Wetland Determination Data Forms (WD). The hydrology criterion is satisfied by the observation of standing or flowing water or combination of secondary indicators. The soil condition is satisfied by the development of saturated soils with anoxic conditions. The vegetation criterion is satisfied if half or more of the dominant plant species within a feature are ranked as "obligate wetland," "facultative wetland," or "facultative" species (OBL, FACW, or FAC, respectively, see Table 1) for federal jurisdiction. The presence of any of these species for facultative species is an indicator of state wetlands. The presence of woody facultative species is also considered riparian and non-vegetated or upland vegetated drainages is considered riverine by some jurisdictions. A Wetland Data Point (WDP) was collected for each test pit location and a WD Form was completed.

During our analysis, L&L personnel used the following indicators of wetlands vegetation:

Table 1. Summary of wetlands vegetation indicator categories.

Indicator Status	Symbol	Definitions
Obligate	OBL	Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.
Facultative Wetland	FACW	Usually occur in wetlands but may occur in non-wetlands. These plants predominantly occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
Facultative	FAC	Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.
Facultative Upland	FACU	Usually occur in non-wetlands but may occur in wetlands. These plants predominantly occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
Upland	UPL	Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

Nomenclature Used

Terminology has changed over the years. Toward greater clarity and understanding, L&L uses terms in this report that follow CDFW and RWQCB guidelines both published and expressed.

We also describe linear drainage features or channels as Streambeds (CDFW) and State Waters (RWQCB) and Wetlands as habitat areas meeting any one (1) of the three (3) criteria of appropriate hydrology, hydric soils, or hydrophilic vegetation.

4.0) RESULTS

Field work was conducted on Friday October 29, 2021 and six (6) person hours were expended. The survey was conducted under clear sky, with 47% humidity and a wind of 5 mph (WSW). During the site visit two (2) drainages/streambeds were identified within the property boundary, one (1) on the eastern boundary and one (1) on the western boundary.

4.1) Soils and Topography

Topographically, the site is relatively flat (0-2% slope) with a southeast to northwest trend in elevation decline. Elevation onsite ranges between approximately 3,470 feet above mean sea level (AMSL) along the southern boundary and 3,430 feet AMSL at the northeastern corner. Soil Survey Geographic (SSURGO) Database shapefiles and Web-Soils identify soils onsite as Bryman Loamy Fine Sand (Figure 4). Depth to Water Table is >200 centimeters. The Project is located on the summit of an alluvial fan remnant, with zero chance of flooding or ponding. It is in Hydrologic Soil Group C and has a hydric rating of zero (Table 2).

Table 2. Mapped soils.

Map Unit Symbol	Map Unit Name	Hydric Rating
105	Bryman Loamy Fine Sand (0-2% slopes)	0

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support growth and reproduction of hydrophytic vegetation (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx).

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric or nonhydric soil more specific information, such as the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties described in "Soil Taxonomy" (Soil Survey Staff 1999), "Keys to Soil Taxonomy" (Soil Survey Staff 2014), and the "Soil Survey Manual" (Soil Survey Division Staff 2017). If soils are wet for long enough to be considered

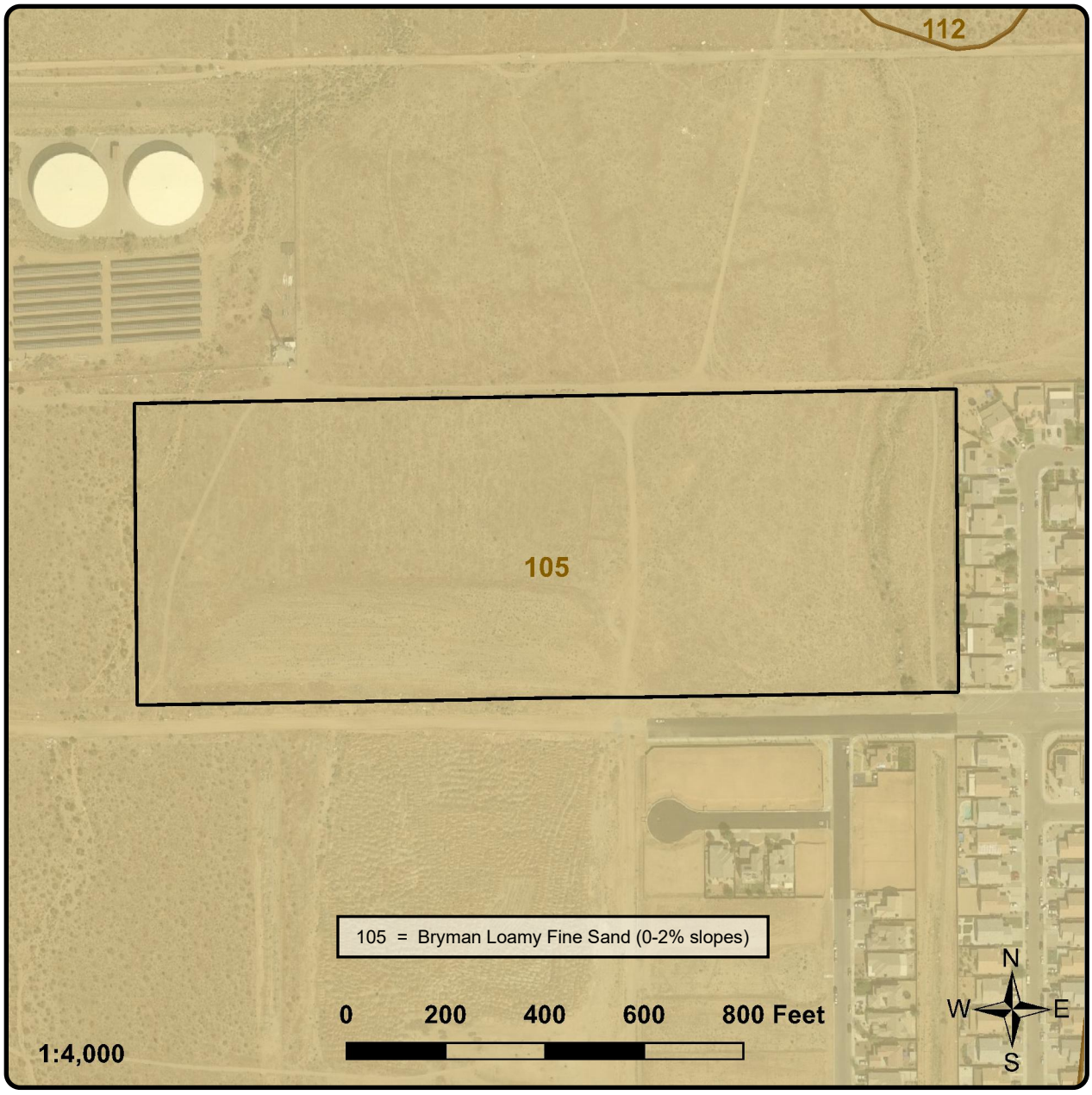

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Figure 4

Soils Map

(Aerial obtained from Google Earth, October 2020, USDA Nat. Res. Cons. Serv. SSURGO Data)

TTM 20398, City of Adelanto
County of San Bernardino, California

hydric, they should exhibit certain properties easily observed in the field. These visible properties are indicators of hydric soils and are specified in "Field Indicators of Hydric Soils in the United States" (Vasilas, Hurt, and Noble 2010). Minor inclusions of Cajon sandy soils may be present with similar ratings.

The survey was conducted just after a major rain event (see precipitation in Section 4.4.2). Soils were moist and a distinct water mark was present.

4.2) Vegetation

The entire project site has been historically cleared and rabbitbush is reestablishing itself, particularly along drainages where water is more plentiful. Willow, cottonwood, and mulefat are present in portions of the drainage. Shrub density remains low. Joshua tree was not observed on any portion of the site.

4.3) Developed and Disturbed Lands

The Project is in an area with rapidly developing small lot residential housing. Anthropogenic disturbances present in the area include household debris and landscape materials deposition, soils and construction materials deposition, and historic clearing of the land. Other disturbances include a storm drain headwall and outlets, paved and unimproved roads, and a fire hydrant. Two (2) water storage tanks and a small solar panel field are present in a fenced area adjacent to the northwest corner of the Project.

4.4) Precipitation Data and Analysis

4.4.1) Climate and Growing Season

Climate and growing season data are from a nearby location in Victorville, as the project is situated near the boundary of Victorville and Adelanto. The hot season in Victorville lasts for 3.3 months, from June 7 to September 17, with an average daily high temperature above 89° F. On average, the hottest day of the year is July 25, with an average high of 98° F and low of 68° F.

The cool season lasts for 3.3 months, from November 19 to February 29, with an average daily high temperature below 65° F. On average, the coldest day of the year is December 24, with an average low of 34° F and high of 56° F. The growing season in Victorville typically lasts for 8.6 months (265 days), from around March 1 to around November 21, rarely starting before January 28 or after April 5 and rarely ending before October 30 or after December 14.

4.4.2) Precipitation

Information is not available from Natural Resources Conservation Service Wetlands Climate Tables (NRCS WETS) for Adelanto, San Bernardino County; the nearest station is Victorville, San Bernardino County, CA. The project area had 0.28 inch of rain during July, no precipitation during August, and 0.23 inch of rain in September. L&L delineators concluded from this information that if hydric conditions were to exist onsite some form of evidence would be present during the field surveys.

A rain event occurred on Tuesday October 26, 2021 with varying amounts of rainfall. NRCS WETS has not reported the totals yet, but https://forecast.weather.gov/ reports rainfalls from Tuesday in the area of Victorville as between 0.36 and 0.37 inch.

.APPLE AND LUCERNE VALLEYS...

ID	STATION	PRECIP(IN)	ELEVATION(FT)
GNTC1	GRANITE MOUNTAIN RAWS	0.55	4720
OGDC1	ORO GRANDE	0.40	2798
DKWC1	DESERT KNOLLS WASH	0.39	2808
VLFC1	VICTORVILLE LANDFILL	0.37	2959
SDVSW	VICTORVILLE SOUTHWEST	0.36	3170
MVDC1	MOJAVE FORKS DAM	0.36	2449
ANWC1	ANTELOPE CREEK WASH	0.27	3103
ADTC1	ADELANTO	0.27	2896
MVHC1	HELENDALE	0.26	2428
HES1	HESPERIA	0.20	3055
APLC1	APPLE VALLEY	0.15	2762

&&

NOTICE...THIS REPORT CONTAINS PROVISIONAL DATA FROM AUTOMATED GAUGES. THE ACCURACY OF THIS DATA HAS NOT BE VERIFIED.

*STATIONS ABOVE THE FREEZING LEVEL MAY NOT SHOW ACCURATE ACCUMULATING PRECIPITATION.

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Table 3. Precipitation and NRCS WETS July – September. Climatological Data from Victorville. (http://agacis.rcc-acis.org

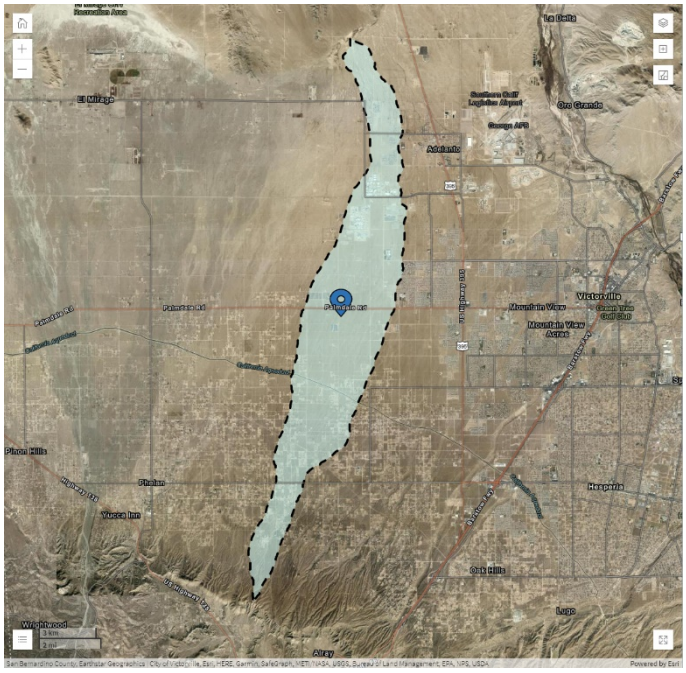
Date	Max Temp	Min Temp	Avg Temp	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2021-07-01	99	64	81.5	42	32	0	M	M
2021-07-02	97	64	80.5	41	31	0	M	M
2021-07-03	96	68	82	42	32	0	M	M
2021-07-04	99	61	80	40	30	0	M	M
2021-07-05	98	61	79.5	40	30	0	M	M
2021-07-06	96	62	79	39	29	0	M	M
2021-07-07	102	72	87	47	37	0	M	M
2021-07-08	104	79	91.5	52	42	0	M	M
2021-07-09	106	75	90.5	51	41	0	M	M
2021-07-10	104	75	89.5	50	40	0	M	M
2021-07-11	109	76	92.5	53	43	0	M	M
2021-07-12	109	77	93	53	43	0	M	M
2021-07-13	106	79	92.5	53	43	0	M	M
2021-07-14	99	75	87	47	37	0	M	M
2021-07-15	93	71	82	42	32	0	M	M
2021-07-16	94	66	80	40	30	0	M	M
2021-07-17	97	67	82	42	32	0	M	M
2021-07-18	100	72	86	46	36	0	M	M
2021-07-19	99	69	84	44	34	0	M	M
2021-07-20	100	73	86.5	47	37	0	M	M
2021-07-21	100	75	87.5	48	38	0	M	M
2021-07-22	100	75	87.5	48	38	0	M	M
2021-07-23	100	73	86.5	47	37	0	M	M
2021-07-24	94	67	80.5	41	31	0	M	M
2021-07-25	94	71	82.5	43	33	0	M	M
2021-07-26	99	68	83.5	44	34	0.28	M	M
2021-07-27	89	66	77.5	38	28	0	M	M
2021-07-28	94	71	82.5	43	33	0	M	M
2021-07-29	98	72	85	45	35	0	M	M
2021-07-30	98	73	85.5	46	36	0	M	M
2021-07-31	96	72	84	44	34	0	M	M
Average|Sum	**99**	**70.6**	**84.8**	**1398**	**1088**	**0.28**	**M**	**M**

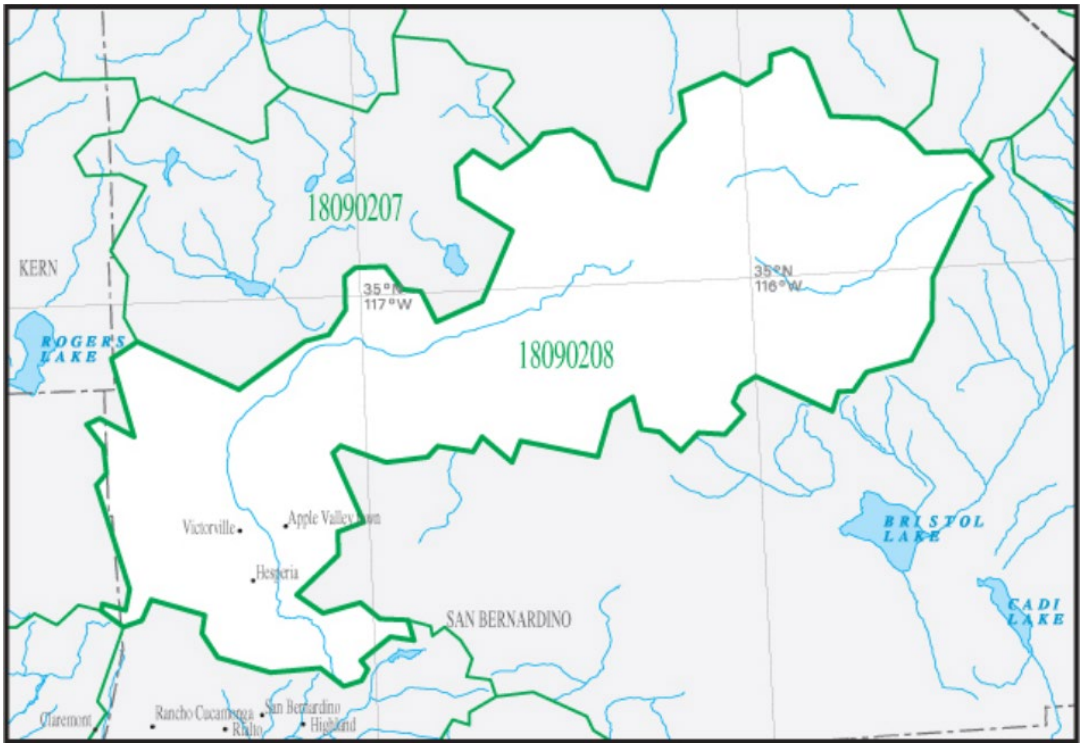
Date	Max Temp	Min Temp	Avg Temp	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2021-08-01	96	72	84	44	34	0	M	M
2021-08-02	99	67	83	43	33	0	M	M
2021-08-03	101	64	82.5	43	33	0	M	M
2021-08-04	104	71	87.5	48	38	0	M	M
2021-08-05	106	73	89.5	50	40	0	M	M
2021-08-06	105	70	87.5	48	38	0	M	M
2021-08-07	99	60	79.5	40	30	0	M	M
2021-08-08	99	66	82.5	43	33	0	M	M
2021-08-09	100	67	83.5	44	34	0	M	M
2021-08-10	100	68	84	44	34	0	M	M
2021-08-11	99	77	88	48	38	0	M	M
2021-08-12	98	73	85.5	46	36	0	M	M
2021-08-13	98	73	85.5	46	36	0	M	M
2021-08-14	99	73	86	46	36	0	M	M
2021-08-15	98	73	85.5	46	36	0	M	M
2021-08-16	105	74	89.5	50	40	0	M	M
2021-08-17	100	75	87.5	48	38	0	M	M
2021-08-18	93	64	78.5	39	29	0	M	M
2021-08-19	81	61	71	31	21	0	M	M
2021-08-20	85	58	71.5	32	22	0	M	M
2021-08-21	90	60	75	35	25	0	M	M
2021-08-22	90	58	74	34	24	0	M	M
2021-08-23	91	58	74.5	35	25	0	M	M
2021-08-24	93	64	78.5	39	29	0	M	M
2021-08-25	95	68	81.5	42	32	0	M	M
2021-08-26	96	67	81.5	42	32	0	M	M
2021-08-27	100	61	80.5	41	31	0	M	M
2021-08-28	100	66	83	43	33	0	M	M
2021-08-29	102	69	85.5	46	36	0	M	M
2021-08-30	100	73	86.5	47	37	0	M	M
2021-08-31	100	78	89	49	39	0	M	M
Average|Sum	**97.5**	**67.8**	**82.6**	**1332**	**1022**	**0**	**M**	**M**

Date	Max Temp	Min Temp	Avg Temp	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2021-09-01	95	64	79.5	40	30	0	M	M
2021-09-02	93	58	75.5	36	26	0	M	M
2021-09-03	92	57	74.5	35	25	0	M	M
2021-09-04	92	62	77	37	27	0	M	M
2021-09-05	94	60	77	37	27	0	M	M
2021-09-06	99	69	84	44	34	0	M	M
2021-09-07	102	70	86	46	36	0	M	M
2021-09-08	105	70	87.5	48	38	0	M	M
2021-09-09	104	72	88	48	38	0	M	M
2021-09-10	99	71	85	45	35	0.23	M	M
2021-09-11	98	69	83.5	44	34	0	M	M
2021-09-12	95	62	78.5	39	29	0	M	M
2021-09-13	98	60	79	39	29	0	M	M
2021-09-14	97	61	79	39	29	0	M	M
2021-09-15	93	56	74.5	35	25	0	M	M
2021-09-16	93	58	75.5	36	26	0	M	M
2021-09-17	91	57	74	34	24	0	M	M
2021-09-18	91	65	78	38	28	0	M	M
2021-09-19	86	54	70	30	20	0	M	M
2021-09-20	85	53	69	29	19	0	M	M
2021-09-21	88	55	71.5	32	22	0	M	M
2021-09-22	91	62	76.5	37	27	0	M	M
2021-09-23	93	65	79	39	29	0	M	M
2021-09-24	84	59	71.5	32	22	0	M	M
2021-09-25	91	61	76	36	26	0	M	M
2021-09-26	90	65	77.5	38	28	0	M	M
2021-09-27	88	59	73.5	34	24	0	M	M
2021-09-28	90	57	73.5	34	24	0	M	M
2021-09-29	79	55	67	27	17	0	M	M
2021-09-30	78	46	62	22	12	0	M	M
Average|Sum	**92.5**	**61.1**	**76.8**	**1110**	**810**	**0.23**	**M**	**M**

4.4.3) Watershed

The project area is located within watershed 180902080502 (https://mywaterway.epa.gov/community/180902080502/overview). It is a narrow watershed extending from the base of the mountains toward Fremont Wash. Drainages to and from the site are blocked in places, so direct connection with Fremont Wash is not present. However, extremely high precipitation would result in runoff flowing toward and entering Fremont Wash, which continues on toward Mojave River. The wash and river are both currently ephemeral. High precipitation would result in Mojave River flows entering a basin where water either soaks into the ground or evaporates. No portions of the Mojave River or Fremont Wash are traditionally navigable waters (https://water.usgs.gov/wsc/cat/18090208.html).





4.5) Jurisdictional Drainages

Two (2) shallow bedded channels are present on the Project, one (1) along the eastern boundary and one (1) crosses the northwestern corner. Soils within the channel bed are mineral sands with little to no organic content. Vegetation in the channels ranges from unvegetated or upland vegetated to cottonwood/willow wetland. At the time of the field survey, soils were damp from a recent rain event and showed signs of primary and secondary indicators of flow. Test pits were conducted where vegetation or cracked soils indicated potential for hydric conditions in the soil. Neither of the drainages met all three (3) criteria necessary for federal wetland status. Drainage 1 (CDFW Streambed 1) met the criterion for wetland vegetation in a portion of its length.

See also RWQCB/State Waters and Nexus sections below.

4.5.1) CDFW Streambed 1

Streambed 1 covers 647 linear feet and contains upland associated species, such as rabbitbush, bursage, mustard, and nonnative annuals, but is unvegetated throughout most of its length. However, the southern ±30% of the streambed contains cottonwood/willow/tamarisk/ mulefat wetlands in patchy cover and without a well-developed understory.

Wetland areas of the drainage have a maximum width of <40 feet and non-wetland areas where braiding is present have a maximum width of <50 feet. We measured CDFW as the width of the top of channel or the outside of the dripline of woody facultative species. We also averaged into CDFW jurisdiction certain upland plants that showed obvious dependance on the water in the streambed.

At the time of the survey soils were damp from a recent heavy above average rain event. Soils showed indicators for secondary hydrology but failed the anoxic conditions test. Streambed 1 contains wetland indicators sufficient for wetlands status under CDFW standards.

4.5.2) CDFW Streambed 2

Streambed 2 covers 105 linear feet and ranges between 2 and 20 feet in width. The streambed contains upland associated species, such as rabbitbush, bursage, mustard, nonnative annuals, but is unvegetated throughout most of its length. We counted the top of bank (or watermark in low profile areas) and the outside dripline of any overhanging vegetation in the channel, including an average of upland species showing obvious dependance on water within the

streambed. Streambed 2 is more arid than Streambed 1 and contains creosote bush and desert tea. This drainage also contains scattered creosote bush.

At the time of the survey soils were somewhat damp from a recent heavy above average rain event. Soils showed indicators for secondary hydrology but failed the anoxic conditions test and did not contain wetland indicator species. Streambed 2 lacks all three (3) criteria for wetland status under CDFW standards.

On the day of the field visit Streambed 2 appeared to terminate at the property line near the road and just south of the water district tank facility with solar panels. At this point, water slows, spreads, and percolates into the ground. A test pit was conducted near the road; however, there was no sign of subsurface water nor anoxic conditions. Google Earth includes images that appear to show the streambed continuing on north of the Water District parcel, but no evidence was present on the ground within the Project boundary on the day of the field visit. Streambed 2 does not contain facultative or wetland indicator species. Streambed 2 contains no CDFW wetland.

Table 4. CDFW Streambeds.

Streambed	LF	Average Width (ft.)	Square Feet (acres)	Type of Waters	Longitude	Latitude	HGM Code	Comment
1	647	29	18,910 (0.43)	Streambed /wetland	117.437490	34.515031	Riverine	Headwall
2	105	15	1,600 (0.04)	Streambed	117.442214	34.515335	Riverine	-
Total	752		20,510 (0.47)					

4.5.3) Non-wetland Waters of the U. S. 1

Non-wetland Waters of the U. S. 1 is 647 feet long with an average width of 3.25 feet, ranging between 1 and 5 feet in width. Test pits were conducted throughout its length near facultative vegetation, with negative findings for anoxic conditions. The channel bed showed signs of recent rain, with primary and secondary indicators of hydrology. At the time of the field survey soils were damp and beds and banks were present. The feature lacks the combined three (3) criteria necessary for federal wetland status. Waters of the U. S. 1 is not a federal wetland.

4.5.4) Non-wetland Waters of the U. S. 2

Non-wetland Waters of the U. S. 2 is 105 feet long with an average width of 1.1 feet, ranging between 10 inches and 1.5 feet in width. Test pits were conducted throughout its length near

facultative vegetation, with negative findings for anoxic conditions. The channel bed showed signs of recent rain, with primary and secondary indicators of hydrology. At the time of the field survey soils were somewhat damp and beds and banks were present. The feature lacks the combined three (3) criteria necessary for federal wetland status. Waters of the U. S. 2 is not a federal wetland.

Table 5. Non-wetland Waters of the U. S.

USACE Waters	LF	Average Width (ft.)	Square Feet (acres)	Type of Waters	Longitude	Latitude	HGM Code	Comment
1	647	3.25	2,102 (0.05)	Non-wetland	117.437490	34.515031	Riverine	Headwall
2	105	1.1	115 (0.003)	Non-wetland	117.442214	34.515335	Riverine	-
Total	752		2,217 (0.05)					

4.5.5) RWQCB/State Waters

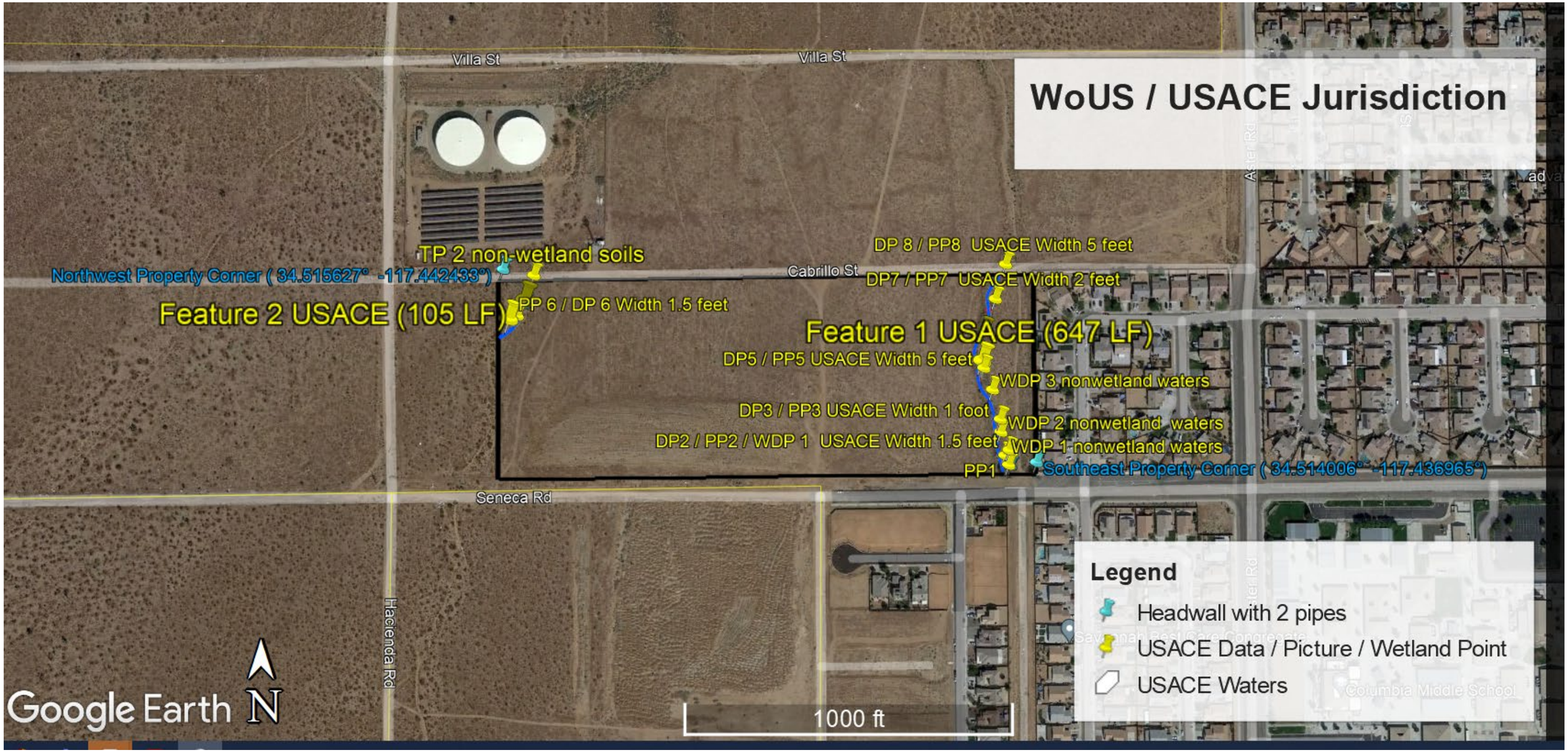
Under current guidance, the Regional Water Quality Control Board (RWQCB) will take control of all drainage features meeting the definition of Waters of the U. S. (Federal Waters) and any federal wetlands. In some cases, they will exert jurisdiction over CDFW drainages as well, depending on the applicability of the features to newly published guidance. For the purposes of this project we assumed that RWQCB would take jurisdiction if the USACE indicated that Waters of the U. S. are present.

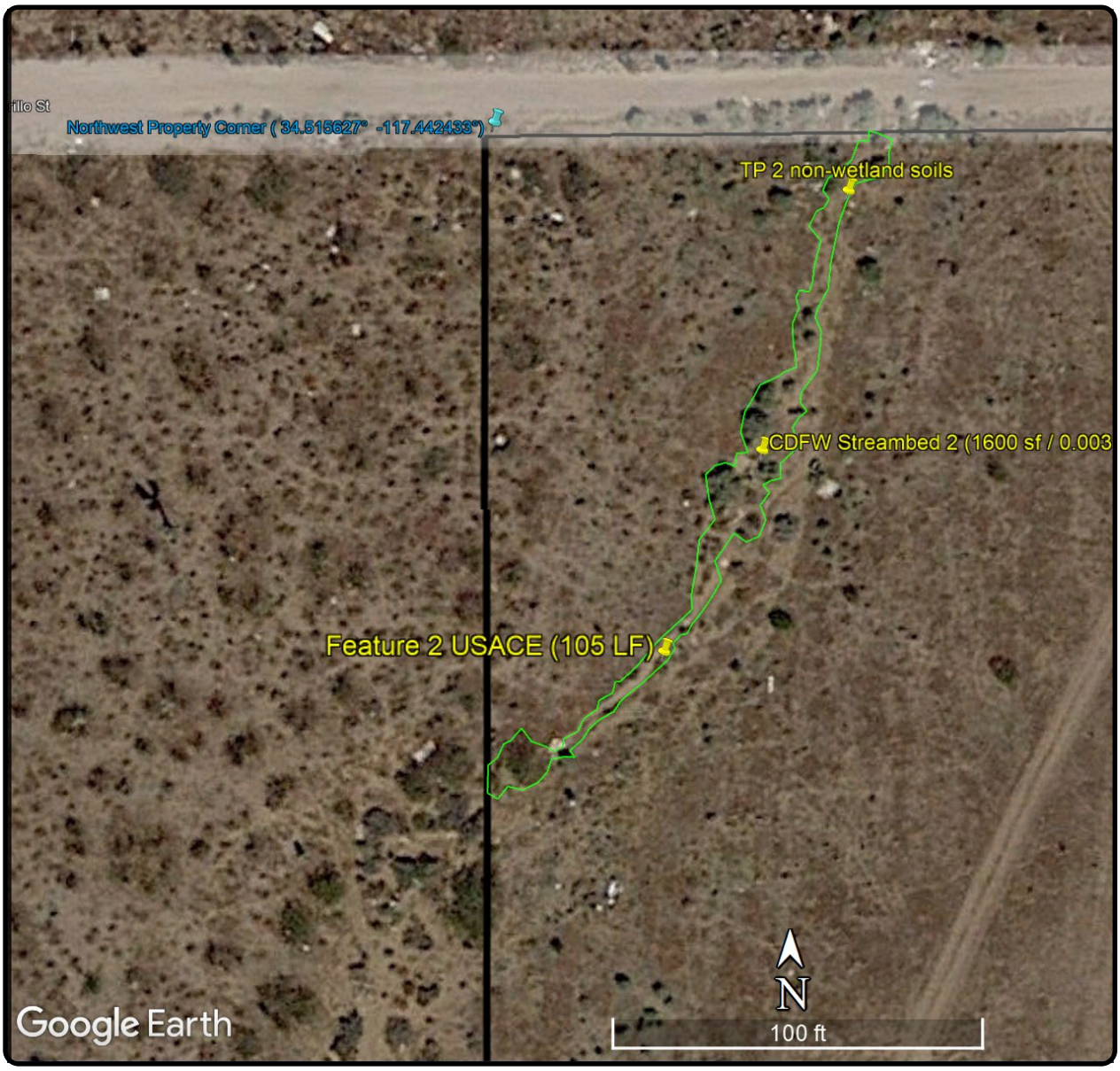
4.5.6) Nexus

Recent legislative and court actions as well as executive orders have changed how regulations are applied to jurisdictional features. While a feature may exhibit the hydrology indicators for status as a federal drainage or “Water” it may not exhibit downstream connectivity. Such is the case for areas exhibiting clear “beds and banks” onsite. While indications of flow are present, no clear downstream connection to navigable waters or qualifying federal wetlands was found. Lack of connectivity to navigable waters would eliminate jurisdiction of the Army Corps of Engineers and, therefore, could also eliminate jurisdiction of the Regional Water Quality Control board under Clean Water Act Sections 404 and 401. When 404/401 does not apply the Board (RWQCB) can assert jurisdiction over federal wetlands under state laws/guidance and they can assert control over surface drainages under Porter Cologne.

Consultation with the USACE and RWQCB will be necessary to determine which portions of the project they may control and, therefore, which (if any) permits would be required.


Cabrillo St
Cabrillo St
Cabrillo St
CDFW Streambed 2 (1600 sf / 0.001 ac)
CDFW Streambed 1 (18,910 sf / 0.43 ac)
Clydesdale St
Headwall with 2 pipes
Seneca Rd
CDFW Jurisdiction
N
700 ft
Google Earth
Legend
CDFW Streambed
CDFW Streambed
Headwall with 2 pipes


WoUS / USACE Jurisdiction
Villa St
Villa St
Cabrillo St
Seneca Rd
Hacienda Rd
Apple Rd
TP 2 non-wetland soils
Northwest Property Corner (34.515627° -117.442433°)
Feature 2 USACE (105 LF)
PP 6 / DP 6 Width 1.5 feet
DP 8 / PP8 USACE Width 5 feet
DP7 / PP7 USACE Width 2 feet
Feature 1 USACE (647 LF)
DP5 / PP5 USACE Width 5 feet
WDP 3 nonwetland waters
DP3 / PP3 USACE Width 1 foot
WDP 2 nonwetland waters
DP2 / PP2 / WDP 1 USACE Width 1.5 feet
WDP 1 nonwetland waters
PP1
Southeast Property Corner (34.514006° -117.436965°)
Legend
Headwall with 2 pipes
USACE Data / Picture / Wetland Point
USACE Waters
1000 ft
Google Earth
N



L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

UEGX-21-873
October 2021

Figure 7

CDFW / State Waters
(Photo obtained from Google Earth, August 2018)

TTM 20398, City of Adelanto
County of San Bernardino, California

L&L Environmental, Inc.

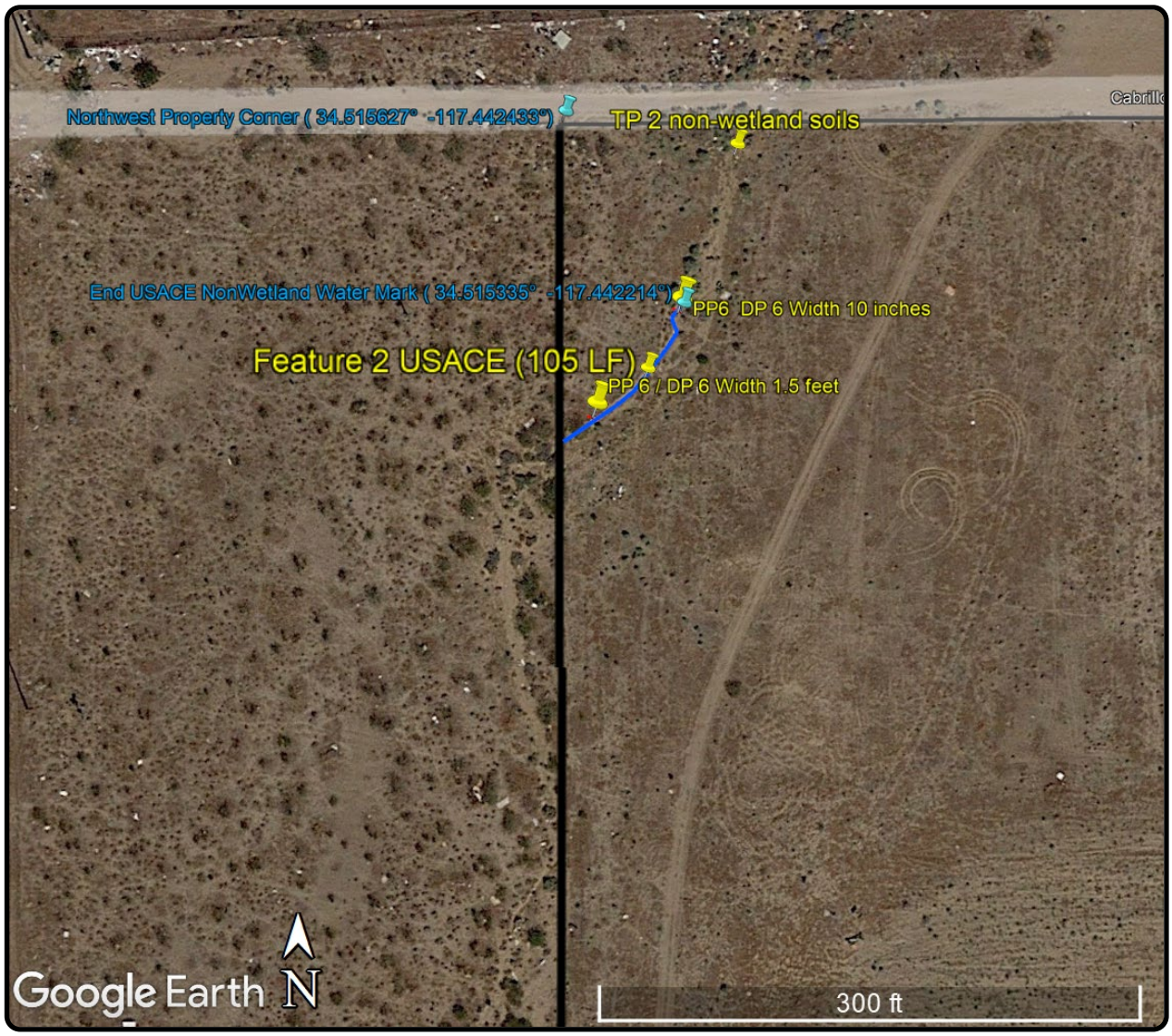
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

UEGX-21-873
October 2021

Figure 8

CDFW / State Waters
(Photo obtained from Google Earth, August 2018)

TTM 20398, City of Adelanto
County of San Bernardino, California



L&L Environmental, Inc.

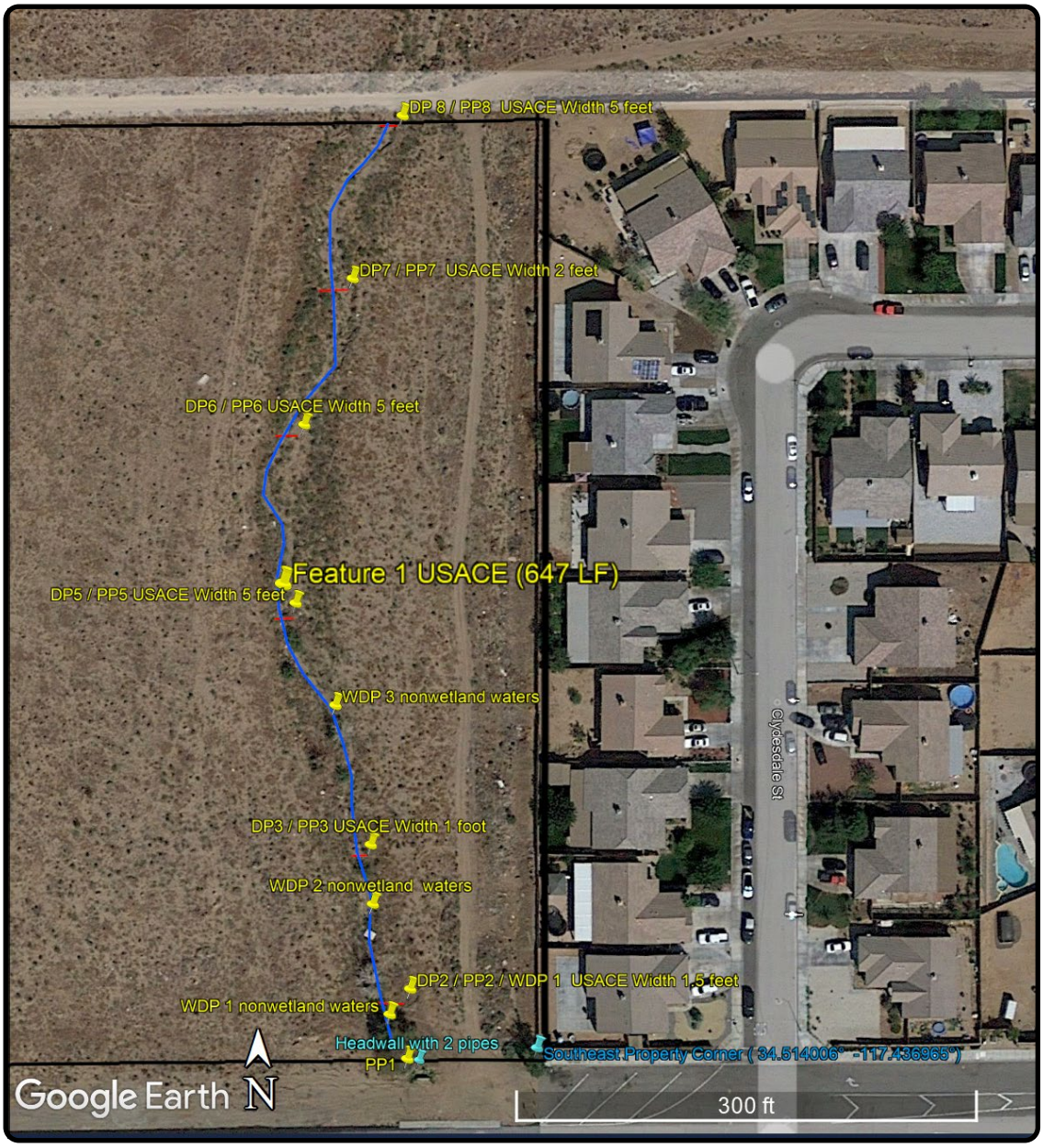
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

UEGX-21-873
October 2021

Figure 9

USACE Waters
(Photo obtained from Google Earth, August 2018)

TTM 20398, City of Adelanto
County of San Bernardino, California



L&L Environmental, Inc.

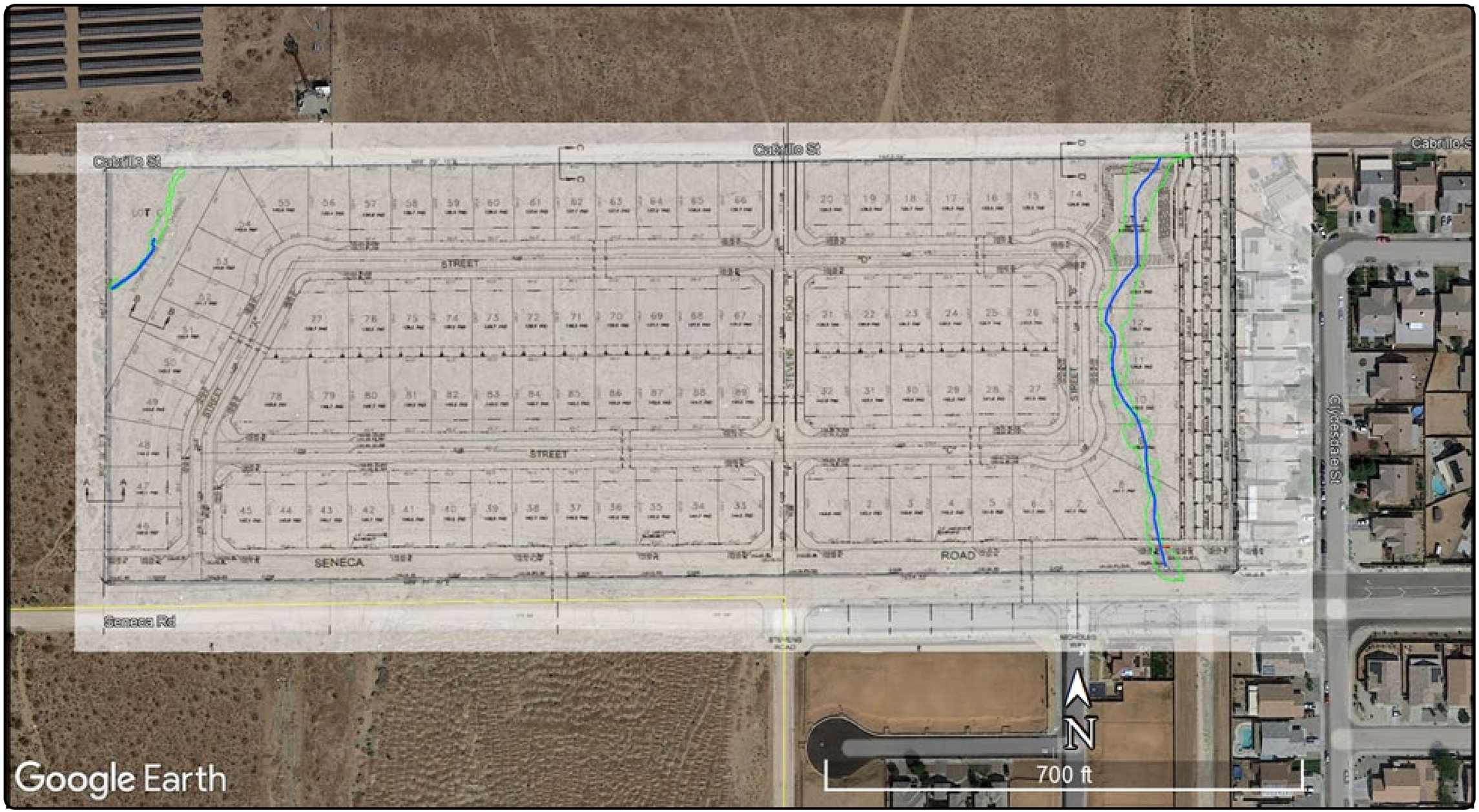
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

UEGX-21-873
October 2021

Figure 10

USACE Waters
(Photo obtained from Google Earth, August 2018)

TTM 20398, City of Adelanto
County of San Bernardino, California


Cabrillo St
Cabrillo St
STREET
STREET
STREET
SENECA
ROAD
Seneca Rd
N
700 ft
Google Earth

5.0) CONCLUSIONS

Under current guidance, the Regional Water Quality Control Board (RWQCB) will claim jurisdiction over all drainage features meeting the definition of Waters of the U. S. (Federal Waters) and any federal wetlands. In some cases, they will exert jurisdiction over CDFW drainages as well, depending on the applicability of the features to newly published guidance. For the purposes of this project we assumed that RWQCB would claim jurisdiction if the USACE indicated that Waters of the U. S. are present.

Recent legislative, court, and executive actions have changed how regulations are applied to jurisdictional features. While a feature may exhibit the hydrology indicators for status as a federal drainage or "Water" it may not exhibit downstream connectivity. Lack of connectivity to navigable waters would eliminate jurisdiction of the Army Corps of Engineers and, therefore, also eliminate jurisdiction of the Regional Water Quality Control board under Clean Water Act Sections 404 and 401. When 404/401 does not apply, the Board (RWQCB) can assert jurisdiction over federal wetlands (not present on site) under state laws/guidance and they can assert control over surface drainages under Porter Cologne.

Wetland areas exhibiting any one (1) of the three (3) parameters (water modified soils, facultative vegetation, or surface water) fall under CDFW jurisdiction. Federal wetlands must exhibit all three (3) parameters.

All jurisdictional determinations are considered preliminary until verified by the agencies.

Consultation with the USACE and RWQCB will be necessary to determine which portions of the project they may control and, therefore, which (if any) permits would be required.

L&L found jurisdictional "CDFW streambeds" present within the Project that are planned for impact. Of these streambed areas, portions also fit the definition of "State and Federal Waters." While no federal wetlands are present, CDFW wetlands are located in portions of Streambed 1.

"Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state (Water Code Section 13050[e]). Federal "waters" are subject to the Clean Water Act and controlled by the U. S. Army Corps of Engineers under Section 404 and consequently they are also subject to Section 401 and the control of the Regional Water Quality Control Board.

Total Resources

L&L found 20,510 square feet (0.47 acre) of combined CDFW streambed and wetland present within the Project (Table 4 and Figures 5, 7, and 8), of which 2,217 square feet (0.05 acre) are possibly federal waters; however, no clear downstream connection to navigable waters or qualifying federal wetlands was found (Table 5 and Figures 6, 9, and 10). No federal wetlands are present.

Re-design for Avoidance and Minimization of Impact to Streambed 2

TTM 20398 (Figure 11) was designed to eliminate impacts to Streambed 2, which is possibly Waters of the U. S. The 0.03 acre of CDFW streambed and possibly 0.003 acre of Waters of the U. S. will be avoided according to the available plan.

Planned Impacts to Streambed 1

TTM 20398 (Figure 11) will impact 0.43 acre of CDFW combined streambed/wetlands within Streambed 1 and 0.003 acre of possibly federal non-wetland Waters of the U. S., that may also be subject to regulation by the RWQCB. The plan indicates total streambed area present will not be reduced, but temporary impacts will occur and it will be shifted east so that flows will run along the eastern project boundary. As a result, consultation with CDFW, RWQCB, and USACE is required and a 1602 (Streambed Alteration Agreement) is required. Section 404/401 Clean Water Act permits may also be required; however, if not, a State Porter Cologne permit may be required.

Table 6. Planned CDFW Streambed Impacts.

Streambed	LF	Average Width (ft.)	Square Feet (acres)	Type of Waters	Longitude	Latitude	HGM Code	Comment
1	647	29	18,910 (0.43)	Streambed /wetland	117.437490	34.515031	Riverine	Headwall

Table 7. Planned Non-wetland Waters of the U. S. Impacts.

USACE Waters	LF	Average Width (ft.)	Square Feet (acres)	Type of Waters	Longitude	Latitude	HGM Code	Comment
1	647	3.25	2,102 (0.05)	Non-wetland	117.437490	34.515031	Riverine	Headwall

APPENDIX A – Species List

Table 8. List of plant species identified This list does not include all landscape ornamental shrubs/annuals associated with the onsite residence. * = non-native
Plants Observed Onsite (N=17)
Adelanto, San Bernardino County, California
October 2021

Scientific Name	Common Name	Wetland Status
VASCULAR PLANTS		
DICOTYLEDONS		
Gymnosperms		
EPHEDRACEAE	EPHEDRA FAMILY	
Ephedra sp.	Desert tea	---
Angiosperms		
ASTERACEAE	ASTER FAMILY	
Ambrosia dumosa	White bur-sage, burrobush	---
Ambrosia salsola (Hymenoclea salsola)	Common burrobrush, cheesebush	---
Ericameria nauseosa (Chrysothamnus nauseosus)	Common rabbitbrush	---
Gutierrezia sarothrae	Matchweed	---
BORAGINACEAE	BORAGE OR WATERLEAF FAMILY	
Cryptantha species	Unid. cryptantha	---
BRASSICACEAE	MUSTARD FAMILY	
* *Brassica tournefortii*	Sahara mustard, wild turnip	---
CHENOPODIACEAE	GOOSEFOOT FAMILY	
* *Salsola tragus*	Russian thistle	FACU
SALICACEAE	WILLOW FAMILY	
Populus fremontii ssp. Fremontii	Fremont conttonwood	FAC
Salix species	Unid. willow	FACW
SOLANACEAE	NIGHTSHADE FAMILY	---
Datura wrightii	Jimsonweed	---
ZYGOPHYLLACEAE	CALTROP FAMILY	
Larrea tridentata	Creosote bush	---

APPENDIX B – Site Photos

Ground Level Photos

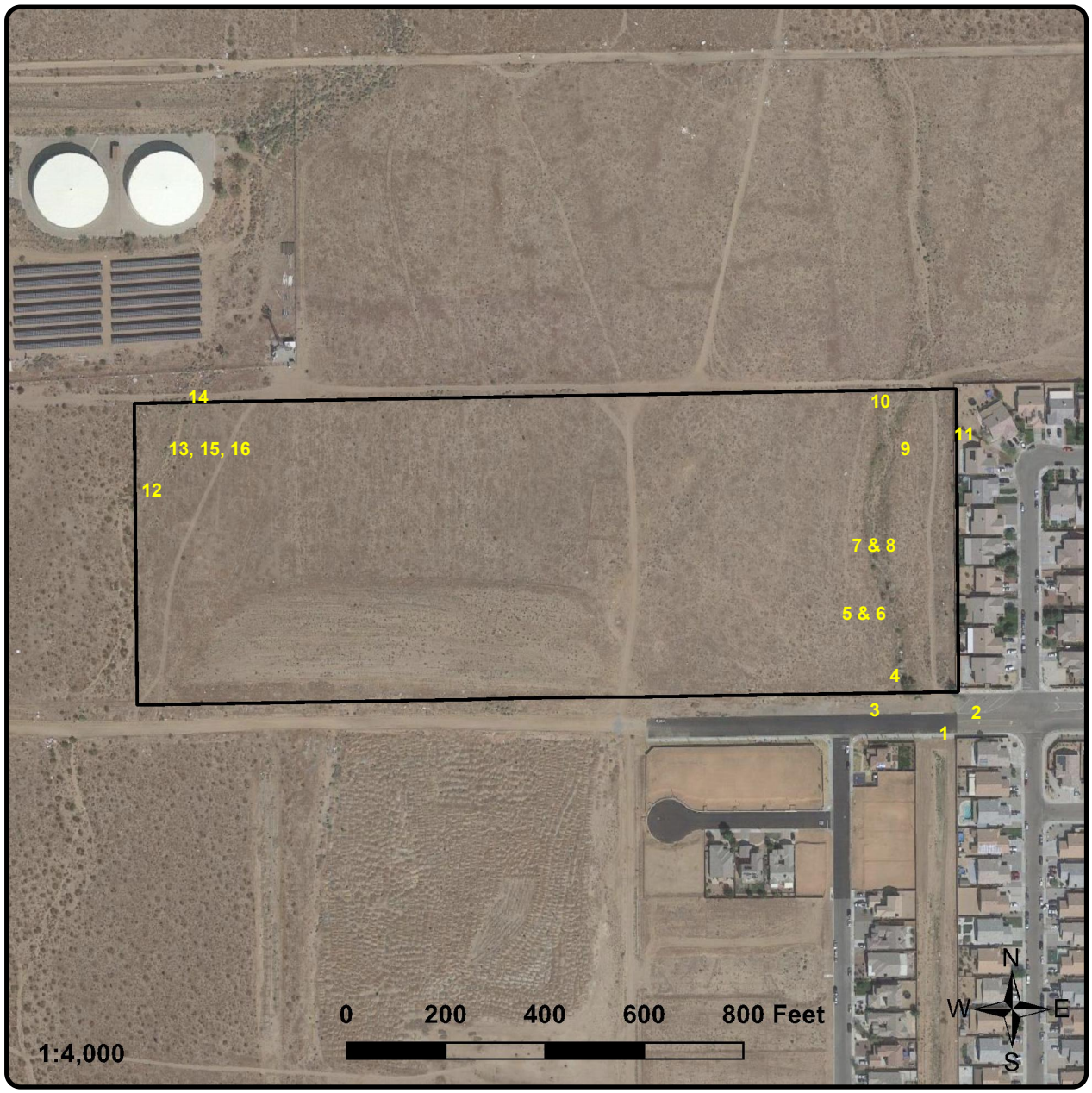


Photo 1 Looking north from southwest corner

Photo 2 – Looking west towards D-1

Photo 3 Headwall at D-1

Photo 4 Test Pit D-1 (south)

Photo 5 Looking north D-1

Photo 6 Test Pit D-1

Photo 7 Looking north, D-1 State Wetland

Photo 8 D-1 example of unvegetated drainag

Photo 9 D-1

Photo 10 Northern property boundary, looking west

Photo 11 Western property boundary looking south

Photo 12 northern section of D-1

Photo 13 northern section of D-2

Photo 14 Northwest property boundary looking west

Photo 15 Test Pit, D-2 (north)

Photo 16 surface of ground, D-2 (north)

APPENDIX C – Certification

Certification: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: October 31, 2021 SIGNED: 

Leslie Irish, Principal, L&L Environmental, Inc.
909-335-9897

1) Fieldwork Performed By:

Leslie Irish
Name

2) Fieldwork Performed By:

Ann Lopez
Name

1) Fieldwork Performed By:

Joshua Ball
Name

2) Fieldwork Performed By:

_____
Name

Check here _____ if adding any additional names / signatures below or on other side of page.

APPENDIX D – Literature Citations and References

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