Aquatic Resources Delineation Report
Mojave 68 Project
San Bernardino County, California

Prepared for

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EXECUTIVE SUMMARY

At the request Craig Wilde, Development Manager, Industrial Property Group, Inc. (Applicant), Huffman-Broadway Group, Inc. (HBG) conducted an investigation at the proposed Mojave 68 Project (Project) site to assess whether aquatic resources are present and potentially subject to US Army Corps of Engineers (Corps) and US Environmental Protection Agency (US EPA) jurisdiction under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) or Corps jurisdiction under Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. 403).

It was also requested that HBG determine whether or not aquatic resources potentially subject to Lahontan Water Board (Water Board) Section 401 of the CWA and the Porter-Cologne Act jurisdictions as Waters of the State (WOTS) and/or jurisdiction under California Department of Fish and Wildlife's (CDFW) Lake and Streambed Alteration Agreement Program (CFGC Sections 1600 to 1616) are present within the Project Site.

Data collection, analysis, identification, and delineation of aquatic resources potentially subject to CWA and RHA jurisdiction was conducted consistent with the pre-2015 Corps/US EPA regulatory regime in accordance with the 1986 Code of Federal Regulations (CFR) definitions of jurisdictional waters, the *Corps' 1987 Wetlands Delineation Manual* (Corps Delineation Manual), the Corps' *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (Regional Supplement)* and supporting Corps and US EPA guidance documents including *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*. The state Water Board's *Wetland Definition and Procedures for Discharges of Dredge of Fill Material to Waters of the State* was followed to determine the presence or absence of WOTS wetlands and other waters). The field study to determine the presence or absence of aquatic resources (lake or stream) subject to the CDFW Lake and Streambed Alteration Agreement Program relied on field observation of physical features that provide evidence of water flow through a bed and channel such as observed flowing water, sediment deposits and drift deposits and that the stream supports fish or other aquatic life. The presence of vegetation supported by the surface or subsurface flow was also considered.

The Applicant is requesting a Corps "Preliminary Jurisdictional Determination" (PJD) pursuant to applicable Corps guidance documents. The Applicant is planning to construct a warehouse project on a 68-acre Project Site. This report will be used by the Applicant for Project Site development planning purposes within the Project Area and to determine the need to pursue Project authorization from the Corps tp construct the Project.

The Project site is located approximately 5 miles NW of the City of Victorville (center); Approximately 3 miles south of George AFB, in Western San Bernardino County, California (Appendix A, Figures 1 - 3). The approximate center point is at Latitude 34.53183367° north and Longitude 117.38815444° west. The aquatic resources delineation Review Area includes the 68-acre Project Site, adjacent utility connection, and stormwater discharge points(Appendix A, Figures 1 - 3).

It was determined that aquatic resources are present within the Review Area that are potentially subject to Corps and USEPA Section 404 CWA jurisdiction. Appendix A, Figure 6 shows the aquatic resources potentially subject to Corps and USEPA Section 404 CWA jurisdiction. The following table provides a summary of these findings.

Aquatic Resources Potentially Subject to CWA Section 404 Jurisdiction					
Aquatic Resources ID	**WOTUS Definition**	**Size**		**Habitat Type**	**Cowardin Classification [1]**
		Acres	**Linear Feet**		
R1	PJD Delineation Request: Assumed Other Waters (Ephemeral Drainages with OHWMs Found)	0.05	1,939	Ephemeral Stream	Riverine Intermittent Streambed
R2		0.07	1,646	Ephemeral Stream	
Totals		**0.12**	**3,585**		
[1] Cowardin et al. 1979.					

It was also determined that the aquatic resources listed above are not subject to RHA Section 10 jurisdiction because they are non-tidal streams that are not on the Los Angeles District's Section 10 waters list.

1.0 INTRODUCTION

1.1 Purpose and Scope of Work

At the request Craig Wilde, Development Manager, Industrial Property Group, Inc. (Applicant), Huffman-Broadway Group, Inc. (HBG) conducted an investigation at the proposed Mojave 68 Project (Project) site to assess whether aquatic resources are present and potentially subject to US Army Corps of Engineers (Corps) and US Environmental Protection Agency (US EPA) jurisdiction under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) or Corps jurisdiction under Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. 403).

It was also requested that HBG determine whether or not aquatic resources potentially subject to Lahontan Water Board (Water Board) Section 401 of the CWA and the Porter-Cologne Act jurisdictions as Waters of the State (WOTS) and/or jurisdiction under California Department of Fish and Wildlife's (CDFW) Lake and Streambed Alteration Agreement Program (CFGC Sections 1600 to 1616) are present within the Project Site.

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The Applicant is requesting a Corps "Preliminary Jurisdictional Determination" (PJD) pursuant to applicable Corps guidance documents. The Applicant is planning to construct a warehouse project on a 68-acreProject Area. This report will be used by the Applicant for Project Site development planning purposes within the Review Area and to determine the need to pursue Project authorization from the Corps to construct the Project.

1.2 Project/Review Area Location

The Applicant is planning to construct a warehouse project on a 68-acre Project Site. The Review Area is located approximately 5 miles NW of the City of Victorville (center); Approximately 3 miles south of George AFB, in Western San Bernardino County, California (Appendix A, Figures 1 - 3). The approximate center point is at Latitude 34.53183367° north and

Longitude 117.38815444 ° west. The aquatic resources delineation Review Area includes the 68-acre Project Site, adjacent utility connection, and stormwater discharge points(Appendix A, Figures 1 - 3).

1.3 Directions to the Review Area

See Appendix B for driving directions.1.4 Contact Information

Table 1. Contact Information	
Applicant	**Wetland Consultant**
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1.5 Environmental Setting

This section presents background environmental information on the Review Area from published sources, which is augmented with observations made during the initial site reconnaissance.

1.5.1 Land Use

Detailed review of Google Earth Pro aerial photography and imagery from December 1985 to April 2023 shows that land use in the Review Area consists of undeveloped lands.

1.5.2 Topography

The Review Area landscape consists of alluvial fans and fan remnants slopes ranging from 0 to 5 percent (NRCS 2023). Elevation within the area of study ranges from approximately 3023 to 2089 feet MSL[1].

1.5.3 Geology

The Review Area consists of quaternary alluvium and marine deposits, unconsolidated, undifferentiated (USGS 2022).

1.5.4 Vegetation

The Review Area is located within the Mojave Basin and Range Level III Ecoregion of North America (https://www.epa.gov/eco-research/ecoregions-north-america). Sparse desert vegetation, predominantly creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*) dominate. Associated species include fourwing saltbrush (*Atriplex canescens),* desert holly *(Atriplex hymenelytra),* brittlebrush (*Encelia farinosa),* Mormon tea *(Ephedra nevadensis),*

[1] MSL = Mean Sea Level.

wolfberry (*Lycium andersonii)*, beavertail pricklypear (*Opuntia basilaris),* desert trumpet (*Eriogonum inflatum),* and wooly grass *(Dasyochloa pulchella)*.

1.5.5 Soils

Soil survey information for the Review Area was obtained the National Resources Conservation Service Web Soil Survey (NRCS 2022) (Appendix C). Five (5) different soil types plus standing water are mapped by NRCS within the Review Area as described in the table below.

Table 2. Summary of Pertinent Characteristics of Soils Mapped Onsite by NRCS Mojave 68 Project, San Bernardino County, CA

Soil Name	Landform/Parent Material	Typical Profile (inches)	Natural Drainage Class	Depth to Water Table	Frequency of Flooding/ Ponding
BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	Fan remnants/Alluvium derived from granite sources	H1 - 0 to 9 inches: loamy fine sand H2 - 9 to 43 inches: sandy clay loam H3 - 43 to 60 inches: sandy loam	Well drained	> 80”	None/None
CAJON SAND, 0 TO 2 PERCENT SLOPES	Alluvial fans/Alluvium derived from granite sources	H1 - 0 to 7 inches: sand H2 - 7 to 25 inches: sand H3 - 25 to 45 inches: gravelly sand H4 - 45 to 60 inches: stratified sand to loamy fine sand	Somewhat excessively drained	> 80”	None/None
HELENDALE LOAMY SAND, 2 TO 5 PERCENT SLOPES	Fan remnants/Alluvium derived from granite sources	H1 - 0 to 4 inches: loamy sand H2 - 4 to 30 inches: sandy loam H3 - 30 to 66 inches: sandy loam H4 - 66 to 99 inches: loamy sand	Well drained	> 80”	None/None
LAVIC LOAMY FINE SAND	Fan aprons, fan skirts/ Alluvium derived from granite sources	H1 - 0 to 10 inches: loamy fine sand H2 - 10 to 20 inches: loamy sand H3 - 20 to 49 inches: loam H4 - 49 to 60 inches: stratified sand to loamy sand	Moderately well drained	> 80”	None/None
ROSAMOND LOAM, SALINE-ALKALI	Fan skirts/ Alluvium derived from granite	H1 - 0 to 5 inches: loam H2 - 5 to 44 inches: stratified loam to silty clay loam H3 - 44 to 60 inches: stratified loamy coarse sand to loamy fine sand	Well drained	> 80”	Rare/None

1.5.6 Climate

Based on WETS Station “VICTORVILLE, CA” precipitation and temperature data for the period of record (1971 – 2023), the average annual precipitation amount received approximately 10 miles from the site is approximately 5.70 inches with 5.20 inches received as rainfall and 0.50 inch received as snow. Average maximum and minimum precipitation amount range between 1.10 and 0.04 inches. The wettest months, in which average monthly rainfall exceeds 0.50

inches, are January, February, March, and December (0.98, 1.10, 0.89, and 0.89 inches) with the lowest average amount occurring in June (0.04 inches). Record data also indicates that the annual average daily temperature is 62.6° F. Average high and low temperatures range between 77.7° F and 45.8° F with the coldest months typically including January, February, and December where temperatures are in the mid to high 40s and the hottest months being July and August where temperatures are in the low 80s. The annual growing season with a 50% probability of having days above 32° F is 221 days (March 29 to November 5), and, with a 70% probability of having days above 32° F, is 234 days (March 23 to November 12) (Appendix D).

1.5.7 Hydrology

Watersheds. Review of the US Geological Survey (USGS) National Hydrography Dataset (NHD) Hydrologic Unit Code (HUC) data show that the Review Area primarily lies within the "Mojave" 8-digit HUC subbasin (18090208) and the "Burkhardt Lake-Mojave River" 12-digit HUC subwatershed (180902080706).

Direction of Surface Water Flow. Surface water which flows onsite is the direct result of precipitation. No evidence of groundwater discharges such as from springs or seeps was seen where observed. Drainage within the Review Area flows to the Northwest.

1.5.8 FEMA Flood Zone

The Review Area lies within the boundary of Flood Insurance Rate Map 06071C5795H, effective 08/28/2008. The Review Area is not located within a FEMA Flood Insurance Zone (FIZ).

1.5.9 NWI Mapping Data

A review of national Wetland Inventopry Mapping associated with the Review Area found no wetlands or deepwater habitats present (Appendix A, Figure 4a).

1.6 Disclaimer

Huffman-Broadway Group, Inc., and the Applicant have made a good-faith effort herein to thoroughly describe and document the presence of potential factors that the Corps may consider in asserting jurisdiction pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Nevertheless, the Applicant, reserves the right to challenge or seek revision to any areas over which the Corps may assert such jurisdiction, should such jurisdiction be further clarified or altered through formal guidance, assertions, or disclaimers of jurisdiction over other properties, court decisions, or other relevant actions.

2.0 DELINEATION METHOD

2.1 Overview of Sampling Methodology

HBG's investigation focused on identifying and mapping areas which meet the definitions of wetlands and other waters of the US under Section 404 of the Clean Water Act and navigable waters under Section 10 of the Rivers and Harbors Act of 1899 consistent with the pre-2015 Corps/US EPA regulatory regime; the Corps' *Delineation Manual*; the Corps' *Supplement*; and supporting guidance documents. The *Regional Supplement* was followed when determining the presence or absence of vegetation, soil, and hydrology indicators.

In preparation for detailed field investigations, HBG identified existing landforms that would likely contain potential aquatic resources (wetlands and other waters) within the Review Area by reviewing December 1985 to April 2023 aerial photography and imagery available online from Google Earth Pro; available online USGS National Hydrography Dataset (NHD) HUC 8 and HUC 12 watershed mapping; National Wetlands Inventory (NWI) mapping (Appendix A, Figure 4a); a NRCS Custom Soil Resources Report (Appendix C); USGS topographic mapping (7.5 Minute Series Quads for Adelanto), and Project/Review Area specific LIDAR topographic mapping.

HBG conducted field studies on March 2, 2023 to:

1. Determine the presence or absence of vegetation, hydric soil, and hydrology indicators of wetland conditions as defined by the Corps methodology;
2. Determine if field indicators of wetland conditions may be "significantly disturbed" or "naturally problematic;" and
3. Within any non-tidal drainage or depressional area found, determine if indicators of an ordinary high water mark (OHWM) are present and document the location(s) of the OHWM.

2.1.1 CWA Wetlands

Wetland identification and delineation followed the methods described in the *Regional Supplement*, Corps regulatory guidance documents, and Corps/US EPA 1986 regulations (33 CFR 328) that define CWA wetlands. Vegetation, soil, and hydrology observations were made at sampling locations determined to be representative of landform areas where the soils may potentially flood, pond, and/or saturate.

Vegetation was sampled first. Depending on the size of the vegetation community in relationship to a different abutting plant community or non-vegetated zone, dominant vegetation and the presence or absence of dominant wetland vegetation were determined based on approximately 1 meter by 1 meter sampling plots. Soil observations were made within soil pits dug using a shovel or holes dug with a hand auger. The soil pits and / or auger holes were dug to a depth of at least 10 inches (most often to 22 inches) where permissible. Where one or more hydric soil indicator(s) were encountered, a minimum of one soil pit was dug on the inside low-lying edge of a potential wetland area and one soil pit was dug on the outside upland margin of the potential wetland area. Observations for wetland hydrology indicators were made within the same sampling plot. Soil, vegetation, and hydrology observations were

recorded on Corps data forms (*Wetland Determination Data Form – Arid West Region*; Version 2.0) (Appendix E).

2.1.2 CWA Other Waters

Potential CWA other waters within the Review Area were identified in accordance with the 1986 regulatory definitions of non-tidal other WOTUS (33 CFR 328) and were determined (delineated) following the CWA definitions of an OHWM (33 CFR 328.3(e) and RGL 05-05(d)). Locations where other waters may potentially occur were first identified using USGS topographic mapping (Appendix A, Figure 2) and LIDAR topographic mapping. Field observations of physical features indicative of an OHWM such as bank scour, sediment lines, and debris lines were documented into the Project database. OHWM widths were measured at several representative locations along the linear reaches of each drainage (stream) and pond feature encountered. OHWM widths were measured to the nearest half foot. Automated drone mapping with high-resolution imagery was also utilized to identify readily observable indicators of surface water flow once adequate ground-truthed in-situ observations of surface water flow indicators had been made of within the Review Area. OHWM observation data were recorded on Corps data forms (Wetland Determination Data Form – Arid West Region; Version 2.0) (Appendix E) and OHWM widths recorded on a spreadsheet as shown in Appendix F. This data was also incorporated into the Project database using GIS software and geo-referenced in overlay fashion onto an orthorectified aerial photograph following national mapping standards (Appendix A, Figure 6).

2.1.3 RHA Navigable Waters

Potential RHA Navigable Waters were identified in accordance with the 1986 regulatory definition of the geographic and jurisdictional limits of non-tidal waters (33 CFR 329.11). Data were processed in the manner described in Section 2.1.2.

2.2 Rainfall Analysis

The Corps' Antecedent Precipitation Tool (APT) was used to assess precipitation conditions within the Review Area 90 days prior to the March 2, 2023 field investigation. The rainfall analysis followed the latest Corps guidance https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool. The purpose of the antecedent precipitation analysis was to aid in: (1) determining if the climatic/hydrologic conditions observed on the site are typical for the time of year in which field investigations were conducted (e.g., rainy season versus dry season); and (2) establishing whether observations made of surface and near-surface hydrology indicators or the lack thereof are the result of naturally problematic hydrology conditions (e.g., drought year, extreme precipitation/stormwater runoff event) preceding the field investigations. The APT assesses the presence of drought conditions and facilitates the comparison of recent rainfall conditions for a given location to the range of normal rainfall conditions that occurred during the preceding 30 years.

2.3 Mapping

2.3.1 CWA Wetland Observations

Wetland area and sample point locations were documented as polygonal and point features using ESRI Apps (Field Maps) in conjunction with a Trimble DA2 Global Positioning System (GPS) receiver with sub-meter accuracy after geo-processing. Soil, vegetation, and hydrology indicator data were collected at the sample point locations. The GPS data were incorporated into an HBG Project database using Geographic Information System (GIS) software and were geo-referenced in overlay fashion onto a digital USGS topographic base map (LIDAR) and an orthorectified digital aerial photograph (Appnedix A) following national mapping standards. Data overlays of indicator observations were mapped to assist in the analysis to determine if areas meet Corps technical criteria for wetlands (Corps' Delineation Manual). The geographic extent of areas identified as being potential wetlands/Corps jurisdictional waters were mapped and classified to the class level using the US Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

2.3.2 CWA OTHER WATERS OHWM OBSERVATIONS

OHWM field data were incorporated into the HBG Project database to assist in the analysis to determine if areas meet Corps technical criteria for jurisdictional waters. The geographic extent of areas identified as being potential other waters/Corps jurisdictional waters were mapped and classified to the class level using the US Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

Geomorphic indicators observed at representative upland/aquatic landforms were recorded on a field data form (Appendix E) developed for this study based on the indicators listed in the table below which are described by Lichvar and McColley 2008 as an aid in determining fluvial areas versus upland areas (abandoned relict channels) when making OHWM determinations. Documentation of physical indicators providing evidence of the presence of an aquatic resource area as opposed to upland area provided a technical basis for: (1) determining the presence or absence of an ephemeral drainage and (2) if present, determining if surface water flooding or ponding occurs to the extent that a water level mark is present.

Table 3. Physical Geomorphic Indicators of Upland and Active Watercourses*

Physical Indicators of Upland Landforms	Physical Indicators of Aquatic Landforms	
Av Horizon	***Bars: mud, sand & gravel***	Ripples
Biotic Soil Crust	Beach ridges	***Scour***
Biotubation	Bifurcated flow	Secondary channels
Caliche: coatings, layers, rubble	Biotic crusts	Secondary channel bypassing obstruction
Carbonate etching	Drainage swales	***Sediment sheets***
Clast / rock weathering	Crusts: carbonate, salt, & soda	Sand filled channels
Coppice dunes: active & relict	***Cut banks***	Scour holes downstream of obstructions
Deflated surfaces	Desiccation Mud: cracks, curls / drapes	Sediment plastering
Desert pavement	***Drift: organic***	Sediment ramps
Overturned rock	Exposed roots below intact soil layer	Sediment sorting

Table 3. Physical Geomorphic Indicators of Upland and Active Watercourses*		
Physical Indicators of Upland Landforms	**Physical Indicators of Aquatic Landforms**	
Relict bar & swale	Flow or streaming lineations	Sediment tails
Relict channel	***Headcuts***	Springs
Rock fracture in place	Imbricated gravel	Staining of rocks
Rock varnish	***Knick Points***	Stepped-bed morphology in gravel
Rock weathering	Levee Ridges: sand & gravel	Substrate staining
No flow or ponding indicators	Observed inundation: flooding, ponding, or substrate saturation	***Vegetation - channel alignment***
Rubified rock undersides		
Soil development	Out of channel flow	***Water-cut benches***
Surface rounding of landform	***Overturned rocks***	***Water level marks***
Woody debris in place	***Rills***	***Wrack: woody***
* Adapted from: *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual* (Lichvar and McColley 2008). ***ABC = Present in review area.***		

The methodology used to identify and define an OHWM within ephemeral drainages was based on the OHWM Field Guide (Lichvar and McColley 2008) and supporting Corps regulatory guidance documents. Physical features indicative of a high water mark, such as bank scour, sediment lines, and debris lines, were recorded Wetland Determination Data Form – Arid West Region; Version 2.0 in the hydrology indicator section. Physical indicators of upland and aquatic (ephemeral streams having an OHWM) landforms were also noted in the remarks section of the data sheet. For upland/former stream channels lacking OHWMs, these typically included one or more of the following: Av Horizon; coppice dunes: active & relict; relict bar & swale; relict channel; rock weathering; no flow or ponding indicators; soil development; surface rounding of landform; and woody debris in place. Streams with OHWM had indicators such as bars: mud, sand & gravel; cut banks; drift: organic; headcuts; knick points; overturned rocks; rills; scour; sediment sheets; vegetation - channel alignment; water-cut benches; water level marks; andwrack: woody.

2.3.3 RHA Navigable Waters OHWM Observations

OHWM field data were incorporated into the HBG Project database using GIS software to assist in the analysis to determine if areas meet Corps technical criteria for jurisdictional waters. The geographic extent of areas identified as being potential other waters/Corps jurisdictional waters were mapped and classified to the class level using the U.S. Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

2.4 Porter-Cologne Act

The state Water Board's *Wetland Definition and Procedures for Discharges of Dredge of Fill Material to Waters of the State* was followed to determine the presence or absence of WOTS wetlands and other waters. The field methodology used by the Water Board is the same as used by the Corps to define the boundaries of wetlands and the presence of an ordinary high water mark to define Other Waters.

2.5 LSAA Program

The field study to determine the presence or absence of aquatic resources (lake or stream) subject to the CDFW Lake and Streambed Alteration Agreement Program relied on field observation of physical features that provide evidence of water flow through a bed and channel such as observed flowing water, sediment deposits and drift deposits and that the stream supports fish or other aquatic life. The presence of vegetation supported by the surface or subsurface flow was also considered.

3.0 TECHNICAL FINDINGS

Section 3.1 discusses technical findings regarding the presence or absence of the vegetation, soil, and hydrology indicators of wetland conditions observed within the Review Area. Section 3.2 discusses technical findings regarding the presence of physical characteristics of the landward boundary of other waters as defined by an OHWM for non-tidal waters (Section 3.2.1).

Field data are presented on Wetland Determination Data Forms for the Arid West Region in Appendix E. The following table provides a summary of the field data provided in Appendix E with the locations of sample points shown on Appendix A, Figure 6. Appendix G provides surface flow mapping of Review Area tributaries to navigable waters. Appendix H provides representative Review Area photographs.

Table 4. Summary of Aquatic Resources Delineation Sampling Data
Mojave 68 Project, San Bernardino County, CA

Representative Sampling Point	Wetland Vegetation Indicators? (Y/N)	Wetland Soil Indicators? (Y/N)	Wetland Hydrology Indicators? (Y/N)	Wetland Criteria Met? (Y/N)	CWA Water Classification	NWI Classification*
S-01 – S-08	n/a	n/a	Yes – B1, B2, B3, B10	Y	Other Water	Riverine Intermittent Streambed / Flow: Intermittently Flooded

Key: *Wetland Vegetation Indicators*: OBL = Obligate Wetland, almost always occurs in wetlands; FACW = Facultative Wetland, usually occurs in wetlands, but may occur in non-wetlands; FAC = Facultative, occurs in wetlands or non-wetlands; FACU = Facultative Upland, usually occurs in non-wetlands, but may occur in wetlands; and UPL = Upland, almost never occurs in wetlands. *Wetland Soil Indicators*: N/A. *Wetland Hydrology Indicators*: B1 = Water marks; B2 = Sediment Deposits; B3 = Drift Deposits; B10 = Drainage Patterns. * Classified using the US Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

3.1 CWA Wetlands

3.1.1 Precipitation Analysis

According to APT analysis results, the field survey was conducted during a mild drought following a 90-day period of precipitation ranging from wet to normal to wet conditions (Appendix D).

3.1.2 Normal Circumstances

An assessment was conducted to determine if "Normal Circumstances" are present in the `Review Area. The Corps' Delineation Manual interprets "normal circumstances" as:

> the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed [7 CFR 12.31(b)(2)(i)] [Manual page 71].

The expired Corps Regulatory Guidance Letter (RGL 90-07) states:

> …. 4. The primary consideration in determining whether a disturbed area qualifies as a Section 404 wetland under "normal circumstances" involves an evaluation of the extent and relative permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation. In addition, consideration is given to the purpose and cause of the physical alterations to hydrology and vegetation. For example, we have always maintained that areas where individuals have destroyed hydrophytic vegetation in an attempt to eliminate the regulatory requirements of Section 404 remain part of the overall aquatic system and are subject to regulation under Section 404. In such a case, where the Corps can determine or reasonably infer that the purpose of the physical disturbance to hydrophytic vegetation was to avoid regulation, the Corps will continue to assert Section 404 jurisdictions. …..

Detailed review of Google Earth Pro aerial photography and imagery from December 1985 to April 2023 shows that land use in the Review Area consists of undeveloped lands. Roadway construction along Mojave Drive adjacent and upslope of the Review Area occurred sometime between 1994 and 2005 and consisted of infrastructure/flood control improvements such as detention basins and culverts. Throughout the roadway adjacent to the review area surface water flows to many drainages became blocked except where culverts were installed.

The roadway construction described above resulted in the permanent alteration of ephemeral stream flows across the Review Area. No evidence was found to reasonably infer that the purpose of the physical disturbance to hydrophytic vegetation or surface water hydrology was to avoid regulation. Based on consideration of the above, normal circumstances are determined to be present given the permanency of the roadway.

3.1.3 Field Indicators of Wetland Vegetation

Vegetation conditions were determined to not be significantly disturbed[2] throughout the Review Area. The dominant vegetation was determined to not be naturally problematic.[3] No dominant hydrophytic vegetation was found.

3.1.4 Field Indicators of Hydric Soils

Soil conditions were determined to not be significantly disturbed over the Review Area. Soils were determined to not be naturally problematic. Soils within the Review Area were all found to be well drained. The NRCS Custom Soil Resources Report in Appendix C provides detailed soil mapping and soils descriptions. Onsite examination found that the NRCS soil mapping provided in the report is relatively accurate. No hydric soil indicators were found.

[2] Disturbed areas consist of sites where vegetation, soil, or hydrology indicators may be impacted (obscured or absent) due to recent human activities or natural events.

[3] Naturally problematic refers to a problem area that are naturally occurring wetland types that lack indicators of hydrophytic vegetation, hydric soil, or wetland hydrology periodically due to normal seasonal or annual variability, or permanently due to the nature of the soils or plant species on the site.

3.1.5 Field Indicators of Wetland Hydrology Conditions

Review Area wetland hydrology conditions were determined to not be significantly disturbed given the length of time since the above described roadway was constructed which included storm water management features. Based on review of APT data (Appendix D), field indicators of wetland hydrology conditions observed (B1 – Water Marks; B2 - Sediment Deposits; B3 – Drift Deposits; B10 – Drainage Patterns) were determined to not be naturally problematic, but representative of a typical year. Evidence of surface water flow was found within stream having an OHWM as discussed below.

3.2 CWA Other Waters and RHA Navigable Waters

3.2.1 Field Indicators of Ordinary High Water

The presence of an OHWM provides a technical basis for (a) determining the presence of a potential CWA Section 404 WOTUS and RHA Section 10 Waters, and (b) defining the geographic extent of potential CWA WOTUS and RHA Navigable Waters. For non-tidal WOTUS, federal jurisdiction based on 1986 regulations extends to the ordinary high water mark (OHWM) when no adjacent wetlands are present (33 CFR 328.4(c)(1)).

The Corps definition of OHWM based on 1986 regulations applies to "WOTUS" under the Clean Water Act (CWA) (33 CFR 328.3(e)) and to "navigable waters of the United States" under the Rivers and Harbors Act (RHA) (33 CFR 329.11(a)(1)). These definitions are identical, and define OHWMs as observable physical features, such as "a clean, natural line impressed on the bank" that result from fluctuations of water. The frequency and/or duration of such fluctuations is not defined. Importantly, however, the definitions state that the OHWM also is established by "other appropriate means that consider the characteristics of the surrounding areas" (citations above) (i.e, stream gauge data).

The following describes indicators of an OHWM in ephemeral streams and field indicators in relict channels where no OHWM was observed within the Review Area.

Streams With Observable Physical Features. OHWMs were observed within streams at eight sample point locations within the Review Area (Appendix A, Figure 6). Physically, ephemeral streams exhibited bed and bank characteristics. Appendix A, Figure 6 shows locations where streams having an OHWM were identified and measured. Flow indicators within these streams included at least two or more of the following: sand & gravel bars; cut banks; drift: organic; headcuts; knick points; overturned rocks; rills; scour; sediment sheets; vegetation - channel alignment; water-cut benches; water level marks; and wrack: woody. Appendix F provides OHWM widths and latitude/longitude locations where OHWM determinations were made within the Review Area. Appendix E provides field data sheets (see sample points S-01 – S-08).

3.2.2 Flow Duration Classification

As indicated in the section above, the Review Area is within the USGS HUC 8 subbasin Mojave (18090208). Appendix A, Figures 1 and 2 show the Review Area location within the USGS HUC 12 subwatershed Burkhardt Lake-Mojave River (180902080706) and USGS National Hydrography Dataset mapping of photo-interpreted surface water flow patterns. Ephemeral

streams within the approximate Review Area direct stormwater flows to the northeast and are intercepted by municipal development (Victorville, CA).

Streams

Ephemeral drainage features occur within the Review Area that have a readily observable bed and bank. These drainage features were found to be dry during the March 2, 2023 field inspection. Each had observable field indicators of past surface water flow events as described above in Section 3.2.1. These indicators provide evidence that the drainages direct stormwater water flows through the Review Area. OHW widths range from approximately 1 foot to 1.75 feet between channel OHWMs. Review of Google Earth Pro aerial imagery from December 1985 to April 2023 showed no water within these drainages. During onsite inspections conducted as part of this study, no flowing water was observed.

Based on these observations which were made following normal and wet rainfall months it is highly likely the streams within the Review Area function to convey flows in direct response to precipitation (e.g., rain or snow fall) and therefore are classified as having ephemeral flow characteristics. Note: the National Wetland Inventory describes this condition as intermittently flooded.

3.3 Porter-Cologne Act

No wetlands meeting the wetlands delineation criteria as defined by the Corps were indetified. Other Waters were found onsite which consisted of ephemeral drainage channels with readily observable OHWMs (see Section 3.2.1).

3.4 LSAA Program

No lakes were identified within the Review Area. Ephemeral drainage channels were identified within the Review Area. These streams had a bed and bank with indicators of active surface water flow (see Section 3.2.1). There was evidence of flow which exceeded the OHWM used by the Corps and Water Board for defining the extent of their regulatory jurisdiction. This area beyond the OHWM was included in the documentation of the geographic reach of CDFW LSAA jursdiction.

4.0 AQUATIC RESOURCES POTENTIALLY SUBJECT TO CORPS, WATER BOARD, AND CDFW JURISDICTION

This section presents the findings of this delineation with respect to the identification and geographic extent of aquatic resources found that meet the technical criteria for either wetlands or other types of aquatic resources that potentially could be regulated by the Corps and the US EPA as a water of the US under Section 404 of the CWA.

4.1 Potential CWA Wetlands

No areas within the Review Area that would "potentially" meet the Corps' and US EPA's technical wetland criteria were identified based on an analysis of the technical findings in Sections 3.1.3 – 3.1.5. This analysis consisted of determining whether there was a collective presence of hydric soil, wetland hydrology, and hydrophytic vegetation as required by the Corps Delineation Manual. All sample areas were found to lack vegetation and soils indicators of wetland conditions.

4.2 Potential CWA Other Aquatic Resources

Based on an analysis of the technical findings in Section 3.2.1, aquatic resources were identified within the Review Area that did not satisfy the Corps and US EPA technical wetland criteria but had wetland hydrology indicators including ordinary high water marks. The locations of these potential "other CWA waters" are shown on Appendix A, Figure 6. It should also be noted that the ephemeral streams found in the Project Site continue to flow beyond the Review Area to the Mojave River (Appendix G). Based on these findings the streams found to have an OHWM as defined by observable physical features resulting from fluctuations of water is categorized as the following potential WOTUS:

Tributaries of intrastate waters (33 CFR Section 328.3(a) (3))
The following table summarizes the types of aquatic resources identified within the Review Area having an OHWM based on Corps delineation methodology

Table 5. Summary of the Types of Aquatic Resources Identified Within the Review Area that are Potentially Subject to CWA Section 404 Jurisdiction
Mojave 68 Project, San Bernardino County, CA

Aquatic Resources ID	WOTUS Definition	Size		Habitat Type	Cowardin Classification [1]
		Acres	Linear Feet		
R1	PJD Delineation Request: Assumed Other Waters (Ephemeral Drainages with OHWMs Found)	0.05	1,939	Ephemeral Stream	Riverine Intermittent Streambed
R2		0.07	1,646	Ephemeral Stream	
Totals		**0.12**	**3,585**		

[1] Cowardin et al. 1979.

5.0 AQUATIC RESOURCES POTENTIALLY SUBJECT TO RHA SECTION 10 JURISDICTION

This section presents the findings of this delineation with respect to the identification and geographic extent of aquatic resources found that potentially meet the technical criteria for aquatic resources that potentially could be regulated by the Corps under Section 10 of the RHA as navigable waters.

5.1 Potential RHA Section 10 Aquatic Resources

Based on an analysis of the technical findings in Section 3.2.1, aquatic resources (streams) were also identified within the Review Area that had an ordinary high water mark and therefore were considered potentially Subject to RHA Section 10 Jurisdiction.

The following table summarizes the types of aquatic resources identified within the Review Area potentially Subject to RHA Section 10 Jurisdiction.

Table 6. Summary of Aquatic Resources Identified Within the Review Area that are Potentially Subject to RHA Section 10 Jurisdiction Mojave 68 Project, San Bernardino County, CA

Aquatic Resource ID #	Acres	Linear ft.	Habitat Type	Cowardin Wetland Classification [2]
R1 and R2 [1]	0.12	3,585	Ephemeral Drainage	Riverine Ephmeral Streambed

[1] See Appendix E data. See Appendix F data table. [2] Cowardin et al. 1979

5.2 Other Factors Considered in RHA Section 10 Analysis

As described by Corps regulation 33 CFR 322.1, Section 10 of the RHA of 1899 (33 U.S.C. 403) authorizes the Corps to regulate certain structures or work in or affecting navigable waters. Navigable waters are defined in 33 CFR 329.4:

> Navigable waters of the US are those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or might be susceptible for use to transport interstate or foreign commerce.

Three factors must be examined when determining whether a waterbody is a navigable water (33 CFR 329.5): "… (a) past, present, or potential presence of interstate or foreign commerce: (b) physical capabilities for use by commerce…, and (c) defined geographic limits of the waterbody (i.e., presence of an OHWM)."

Given that an OHWM was determined present for the aquatic resources identified as "ephemeral streams" one of the following criteria must be met before a water is determined to be subject to Section 10 RHA jurisdiction:

1. RHA Tidal water is subject to the ebb and flow of the tide
2. RHA Non-tidal water is on the district's Section 10 waters list

Based on these criteria not being met it was determined that the ephemeral streams found within the Review Area are not subject to RHA Section 10 jurisdiction because they are non-tidal streams and are not on the Los Angeles District's Section 10 waters list.

6.0 AQUATIC RESOURCES POTENTIALLY SUBJECT TO CWA SECTION 401 AND PORTER-COLOGNE ACT JURISDICTIONS

No wetlands meeting the wetlands delineation criteria as defined by the Corps were indetified. Other Waters were found onsite. The table below summarizes aquatic resources found within the Review Area that are potetntailly subject to Water Board jurisdiction as Other Waters.

Table 7. Summary of the Types of Aquatic Resources Identified Within the Review Area that are Potentially Subject to Water Board Jurisdiction Mojave 68 Project, San Bernardino County, CA

Aquatic Resources ID	WOTUS Definition	Size		Habitat Type	Cowardin Classification [1]
		Acres	Linear Feet		
R1	PJD Delineation Request: Assumed Other Waters (Ephemeral Drainages with OHWMs Found)	0.05	1,939	Ephemeral Stream	Riverine Intermittent Streambed
R2		0.07	1,646	Ephemeral Stream	
Totals		**0.12**	**3,585**		

[1] Cowardin et al. 1979.

7.0 AQUATIC RESOURCES POTENTIALLY SUBJECT TO CDFW LSAA PROGRAM JURISDICTION

No lakes were identified within the Review Area. Ephemeral drainage channels were identified within the Review Area which are potentially subject to CDFW LSAA program jursdiction as streams. The table below summarizes aquatic resources found in the Review Area that are potetntailly subject to CDFW jurisdiction as Streams.

Table 8. Aquatic Resources Potentially Subject to CDFW LSAA Jurisdiction
Mojave 68 Project, San Bernardino County, CA

Aquatic Resources ID	CDFW Waters Type	Size		Hydrologic Flow Regime	Cowardin Classification [1]
		Acres	Linear Feet		
R1	Stream	0.16	1,939	Ephemeral Stream	Riverine Intermittent Streambed
R2	Stream	0.13	1,646	Ephemeral Stream	
Totals		**0.29**	**3,585**		

[1] Cowardin et al. 1979. CDFW = California Department of Fish and Wildlife

8.0 REFERENCES

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Appendix A

Figures

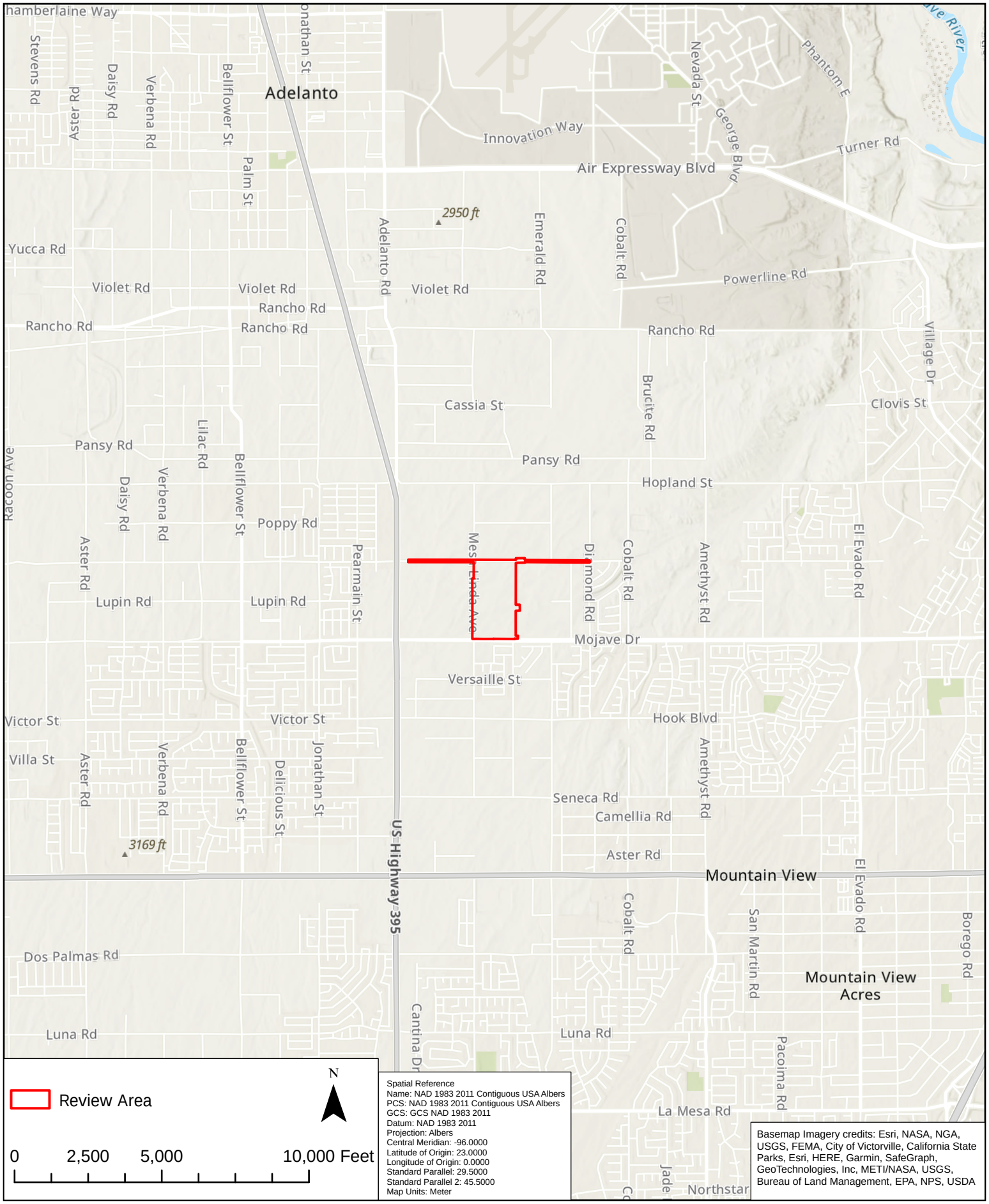

Figure 1. Review Area Location

Mojave 68 Project
San Bernardino County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

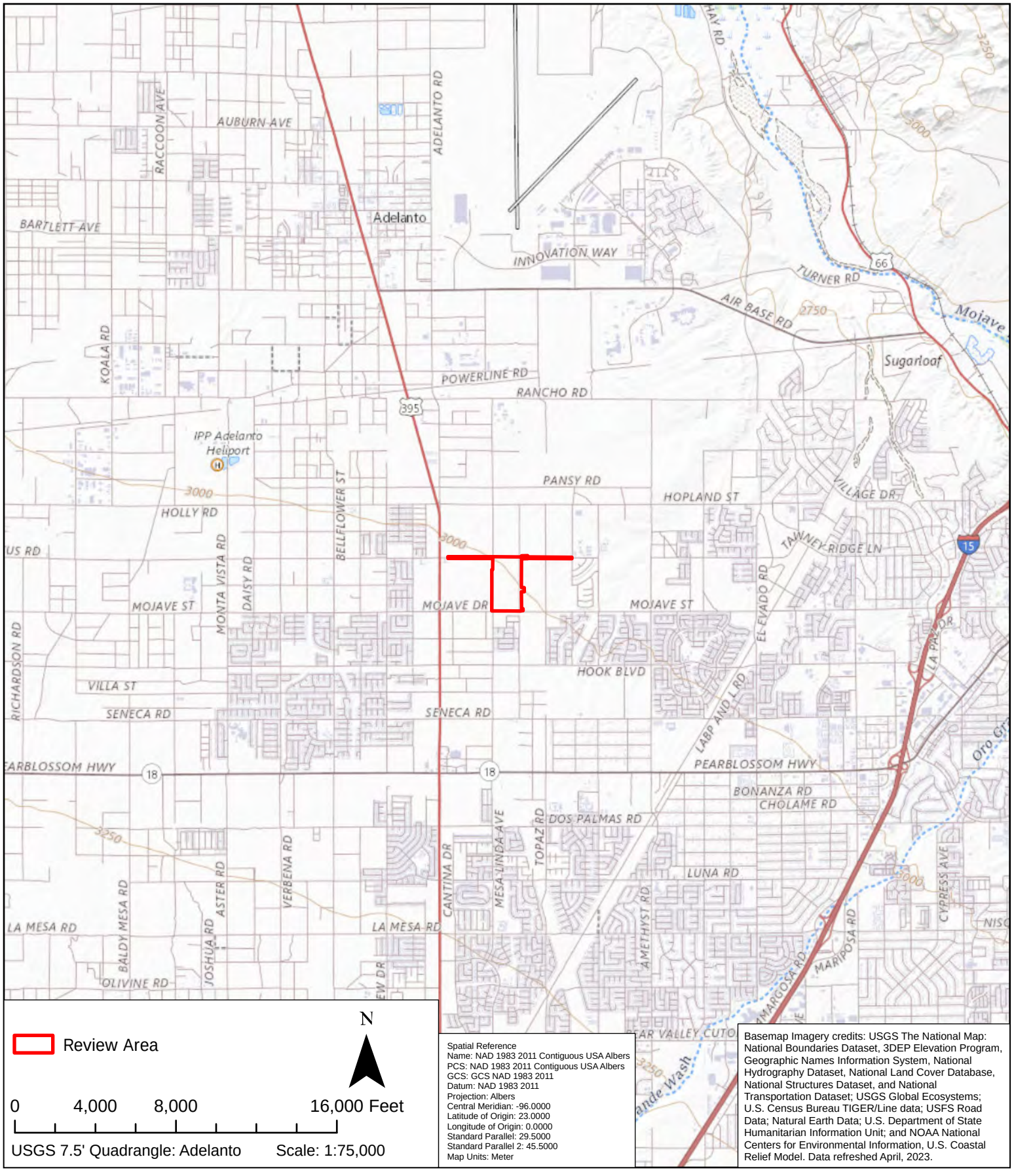

Figure 2. USGS Topographic Map of the Review Area

Mojave 68 Project
San Bernardino County, California

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ENVIRONMENTAL REGULATORY CONSULTANTS
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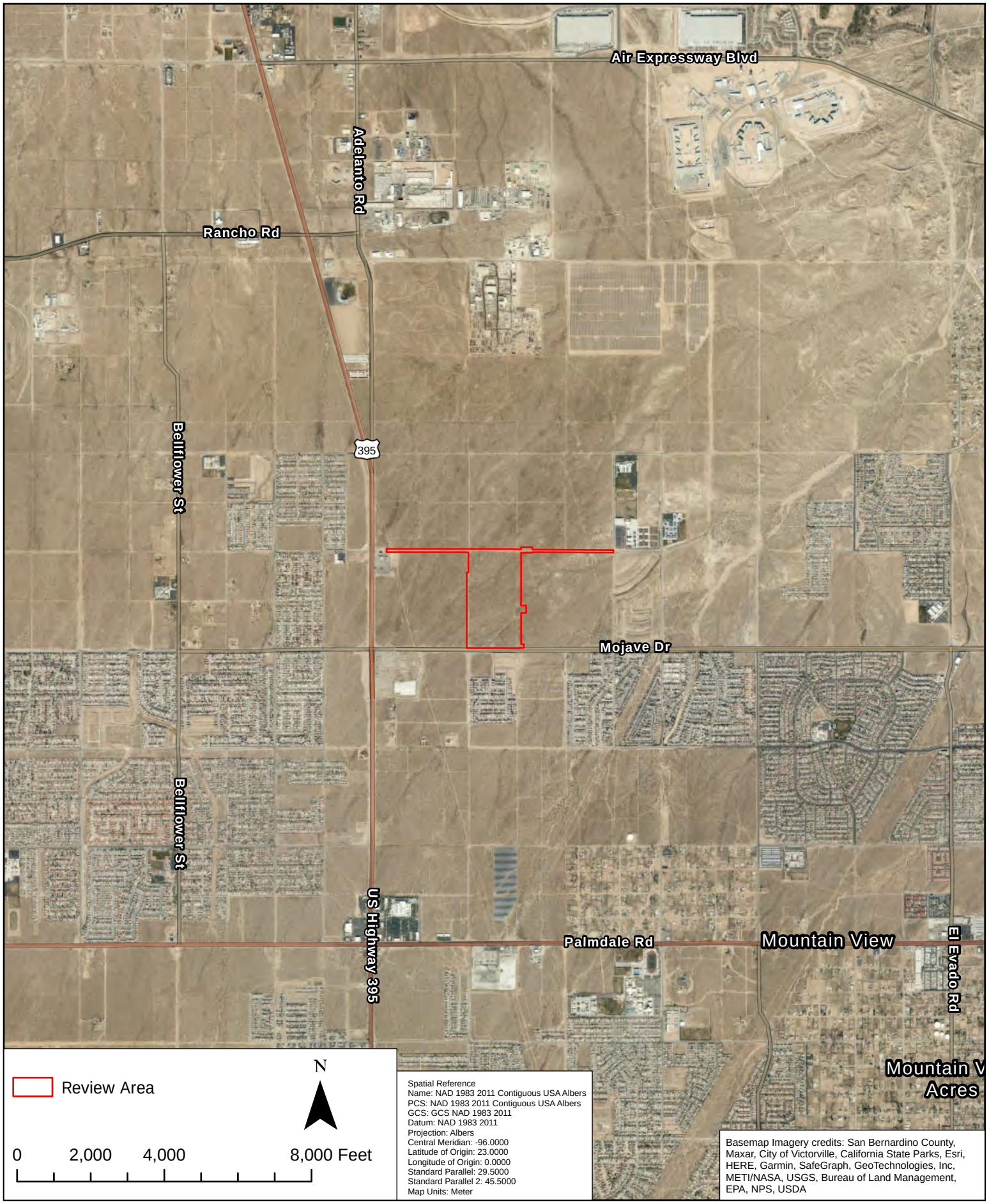

Figure 3. Aerial Image of the Review Area

Mojave 68 Project
San Bernardino County, California

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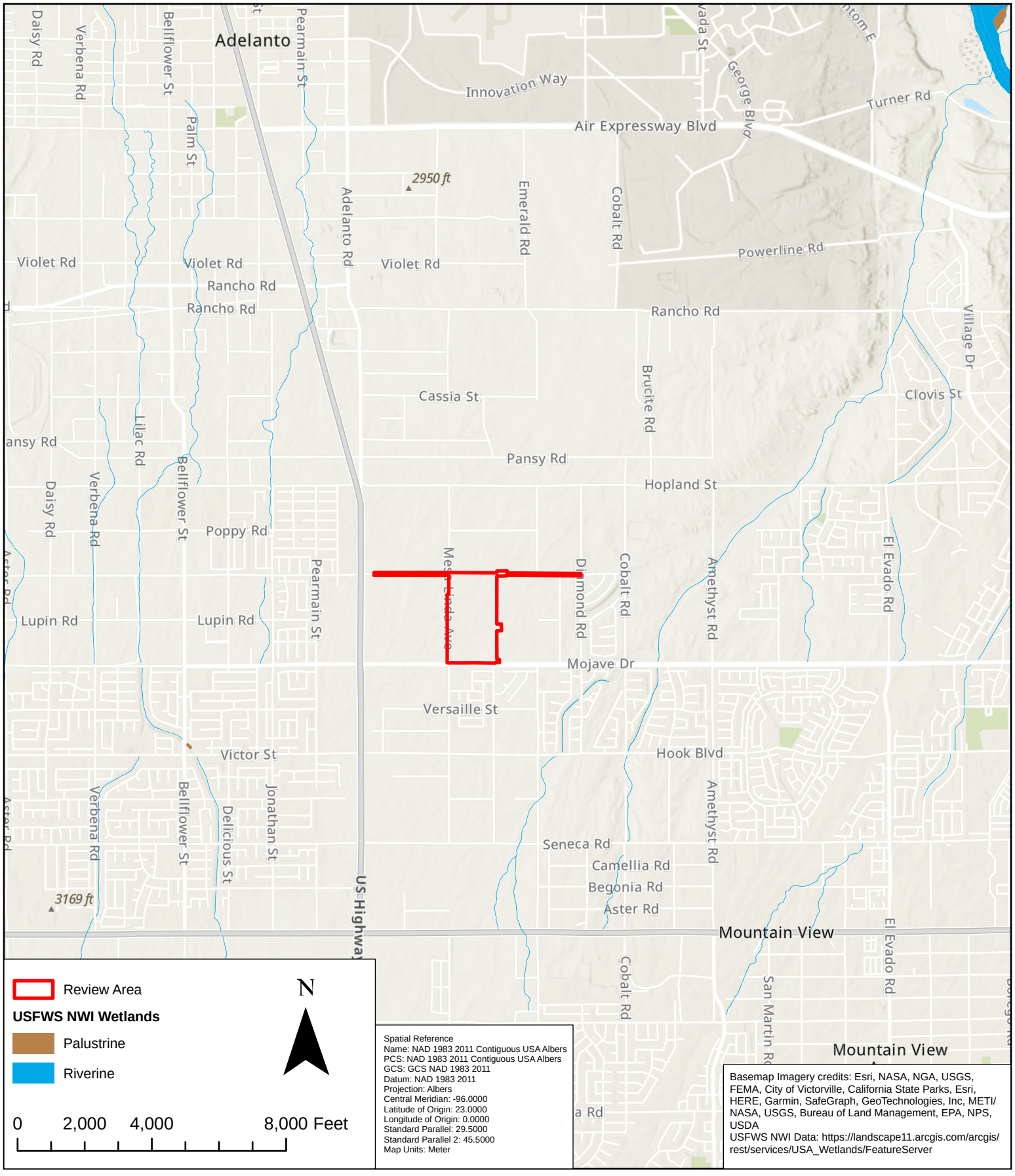

Figure 4a. USFWS National Wetlands Inventory Mapping

Mojave 68 Project
San Bernardino County, California

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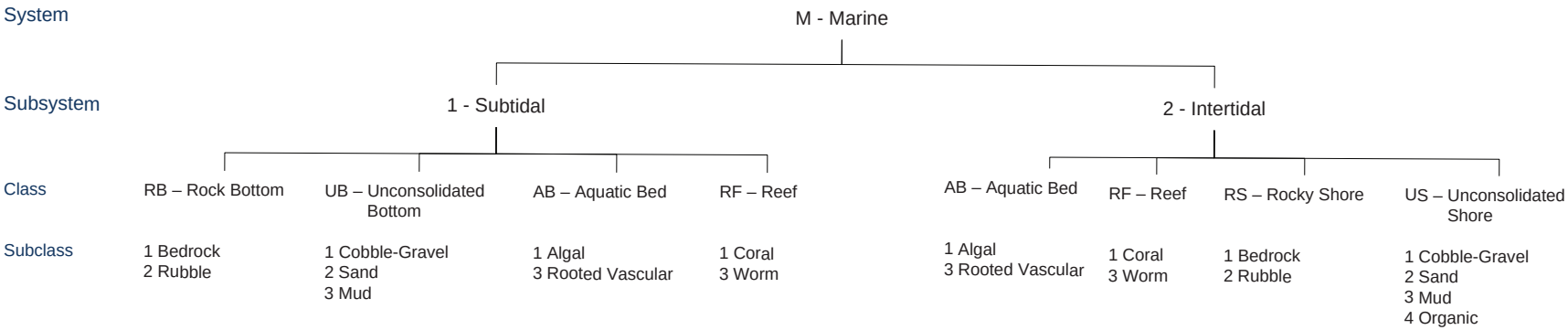
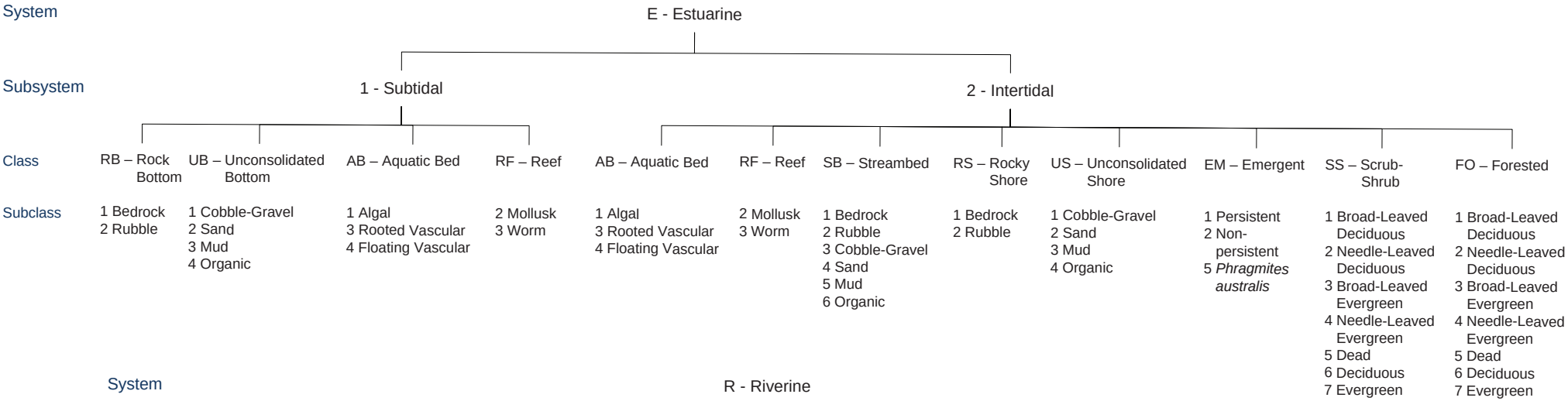
NWI Wetlands and Deepwater Map Code Diagram





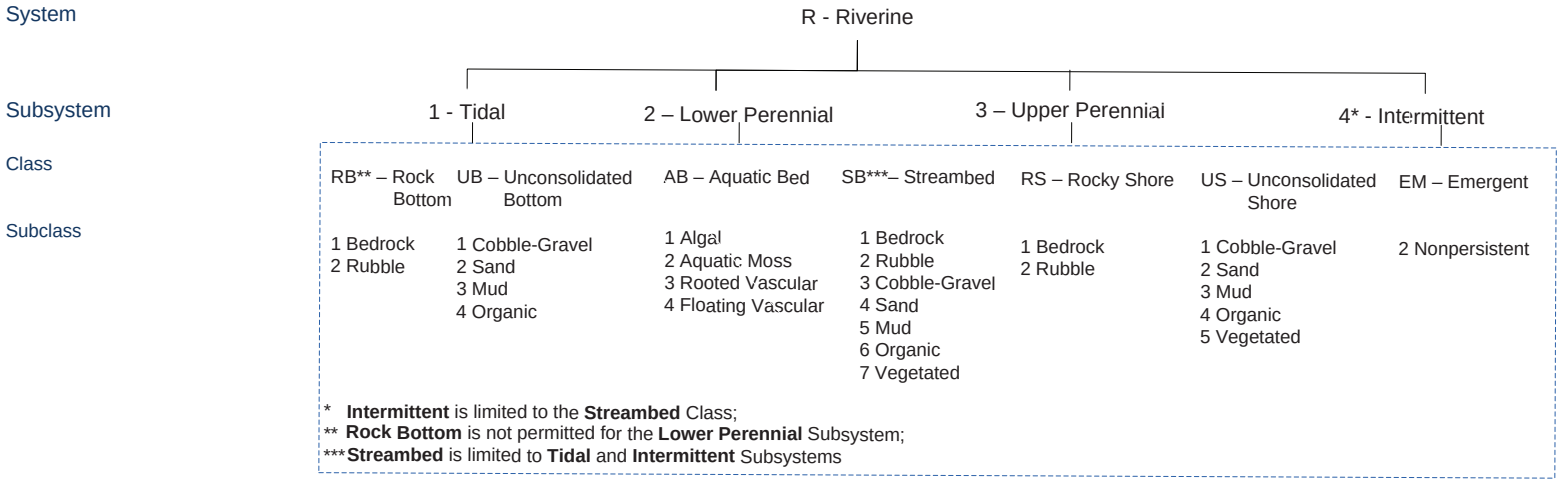
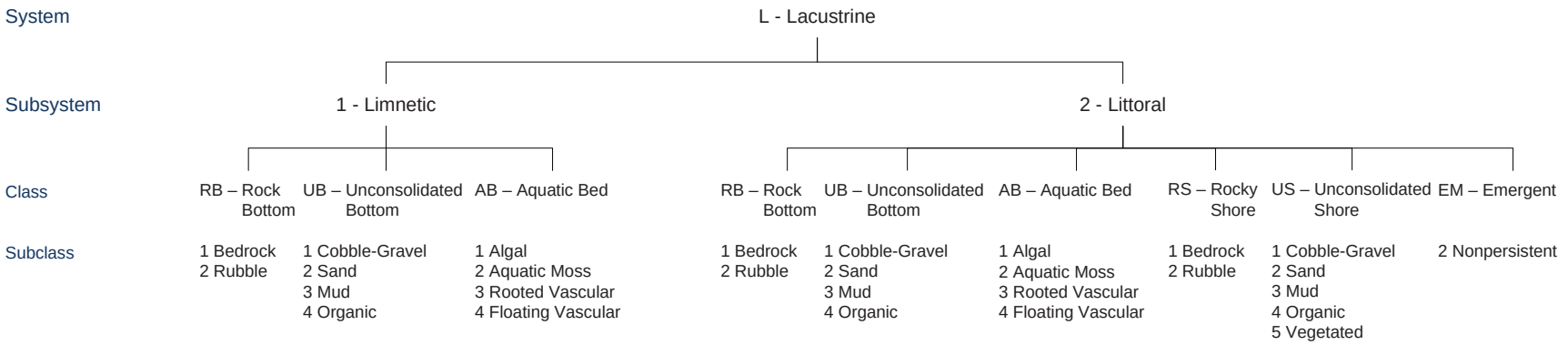
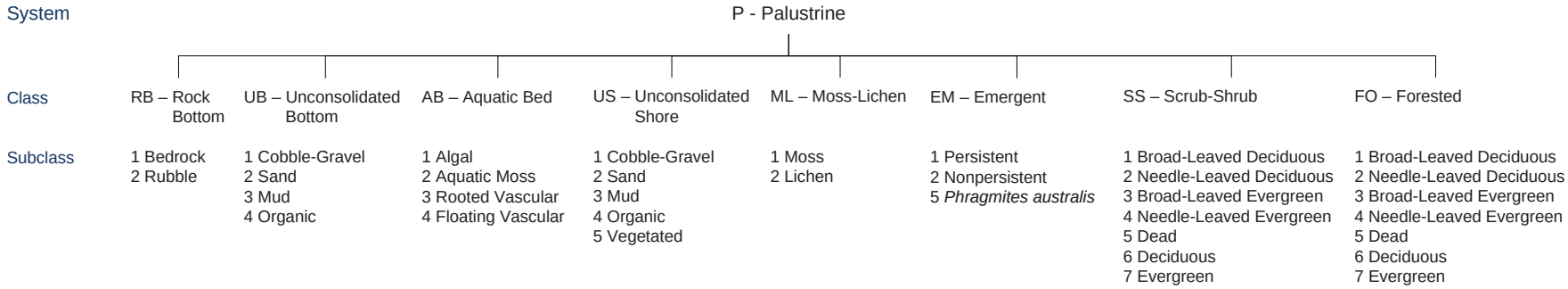


Figure 4b. NWI Wetlands and Deepwater Code Map Diagram, Part 1

Classification of Wetlands and Deepwater Habitats of the United States, Cowardin *et al*. 1979

NWI Wetlands and Deepwater Map Code Diagram





MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy.

Water Regime			Special Modifiers	Water Chemistry		Soil
Nontidal	**Saltwater Tidal**	**Freshwater Tidal**		**Halinity/Salinity**	**pH Modifiers for Fresh Water**	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded- Fresh Tidal	b Beaver	1 Hyperhaline / Hypersaline	a Acid	g Organic
B Seasonally Saturated	M Irregularly Exposed	Q Regularly Flooded-Fresh Tidal	d Partly Drained/Ditched	2 Euhaline / Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	R Seasonally Flooded-Fresh Tidal	f Farmed	3 Mixohaline / Mixosaline (Brackish)	i Alkaline	
D Continuously Saturated	P Irregularly Flooded	T Semipermanently Flooded-Fresh Tidal	m Managed	4 Polyhaline		
E Seasonally Flooded / Saturated		V Permanently Flooded-Fresh Tidal	h Diked/Impounded	5 Mesohaline		
F Semipermanently Flooded			r Artificial Substrate	6 Oligohaline		
G Intermittently Exposed			s Spoil	0 Fresh		
H Permanently Flooded			x Excavated			
J Intermittently Flooded						
K Artificially Flooded						

Figure 4c. NWI Wetlands and Deepwater Code Map Diagram, Part 2

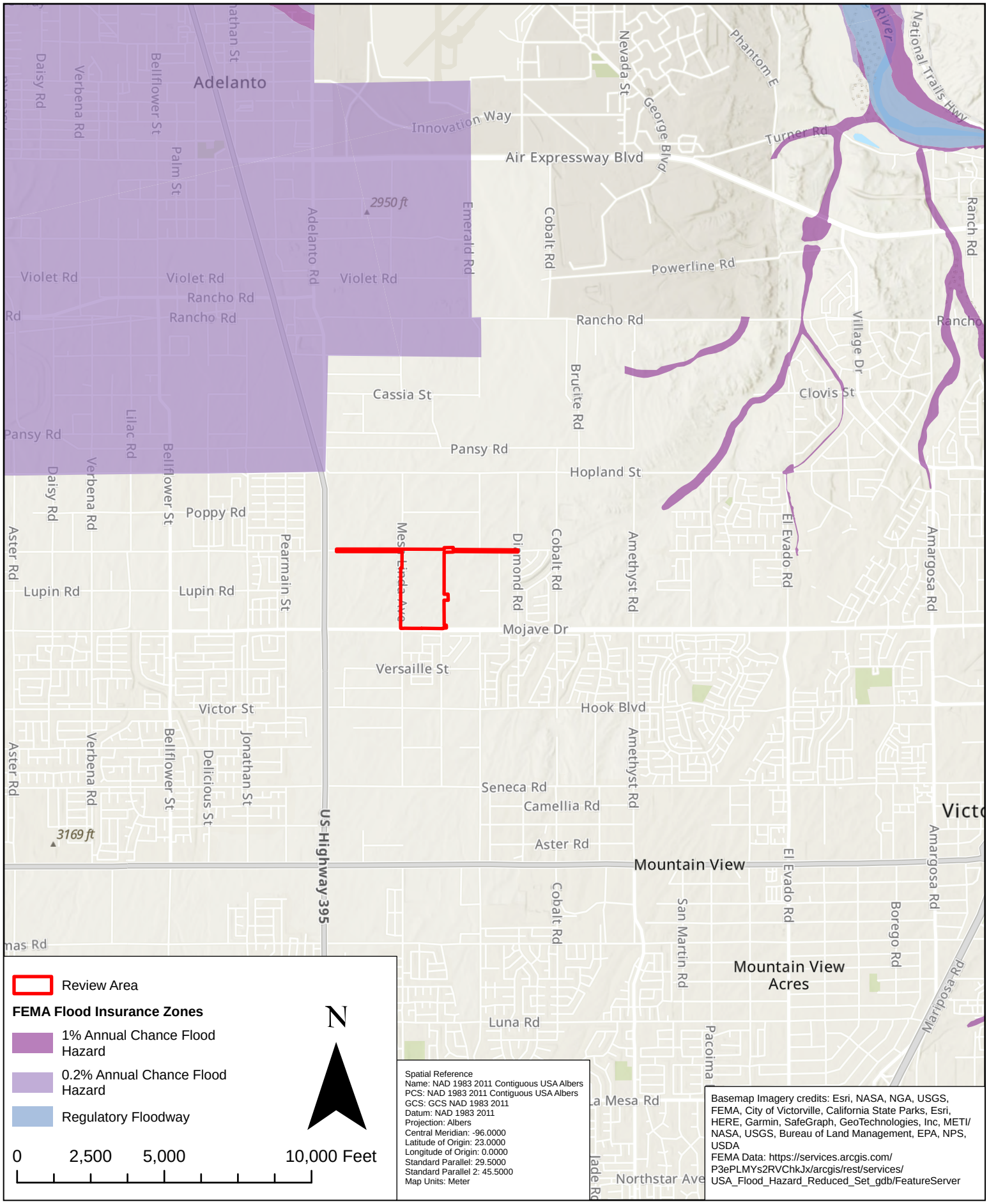


Figure 5. FEMA Flood Zone Mapping

Mojave 68 Project
San Bernardino County, California

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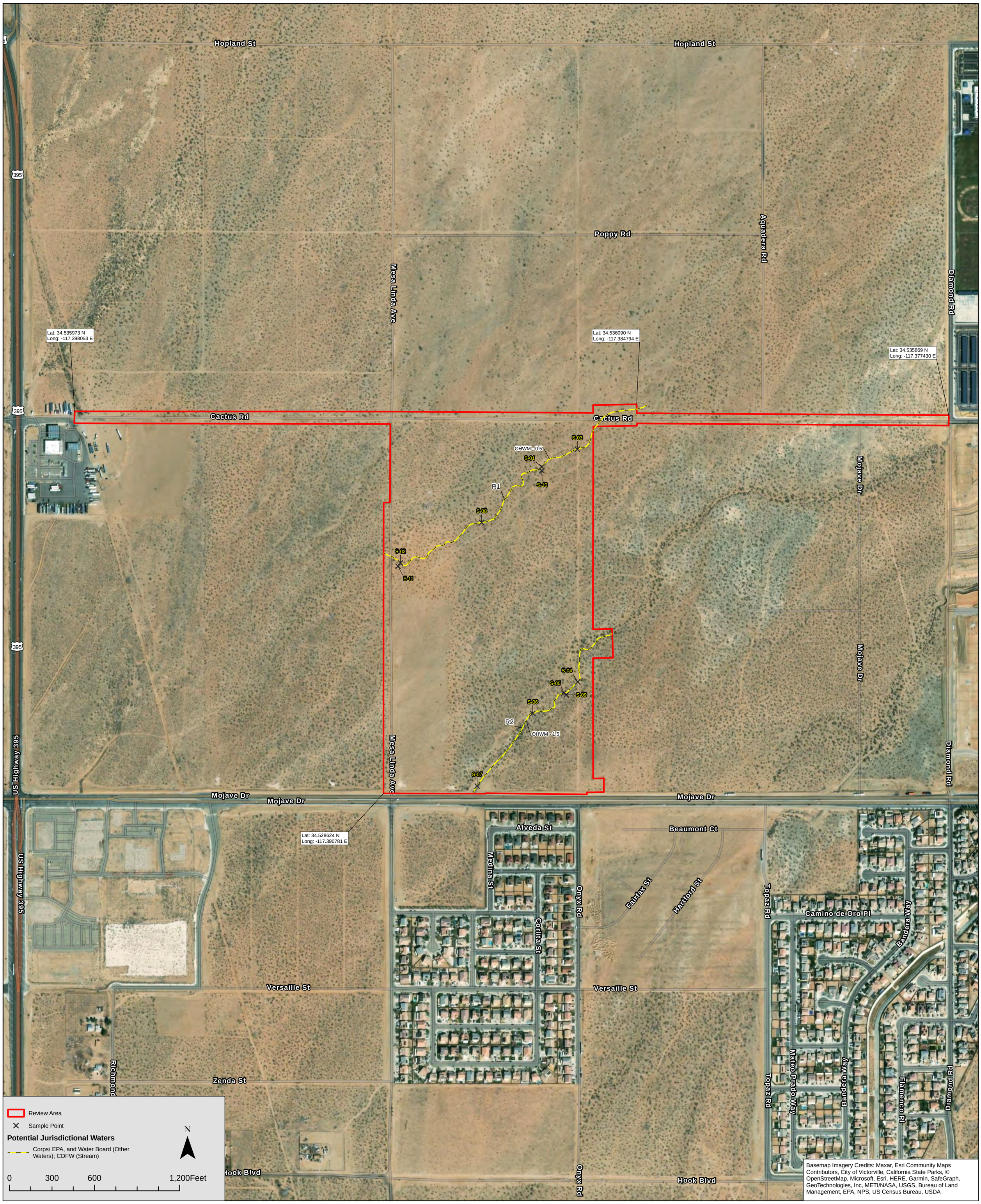

Figure 6. Aquatic Resource Delineation

Mojave 68 Project
San Bernardino County, California

Spatial Reference
Name: NAD 1983 2011 Contiguous USA Albers
PCS: NAD 1983 2011 Contiguous USA Albers
GCS: GCS NAD 1983 2011
Datum: NAD 1983 2011
Projection: Albers
Scale: 1:5,000
Map Units: Meter

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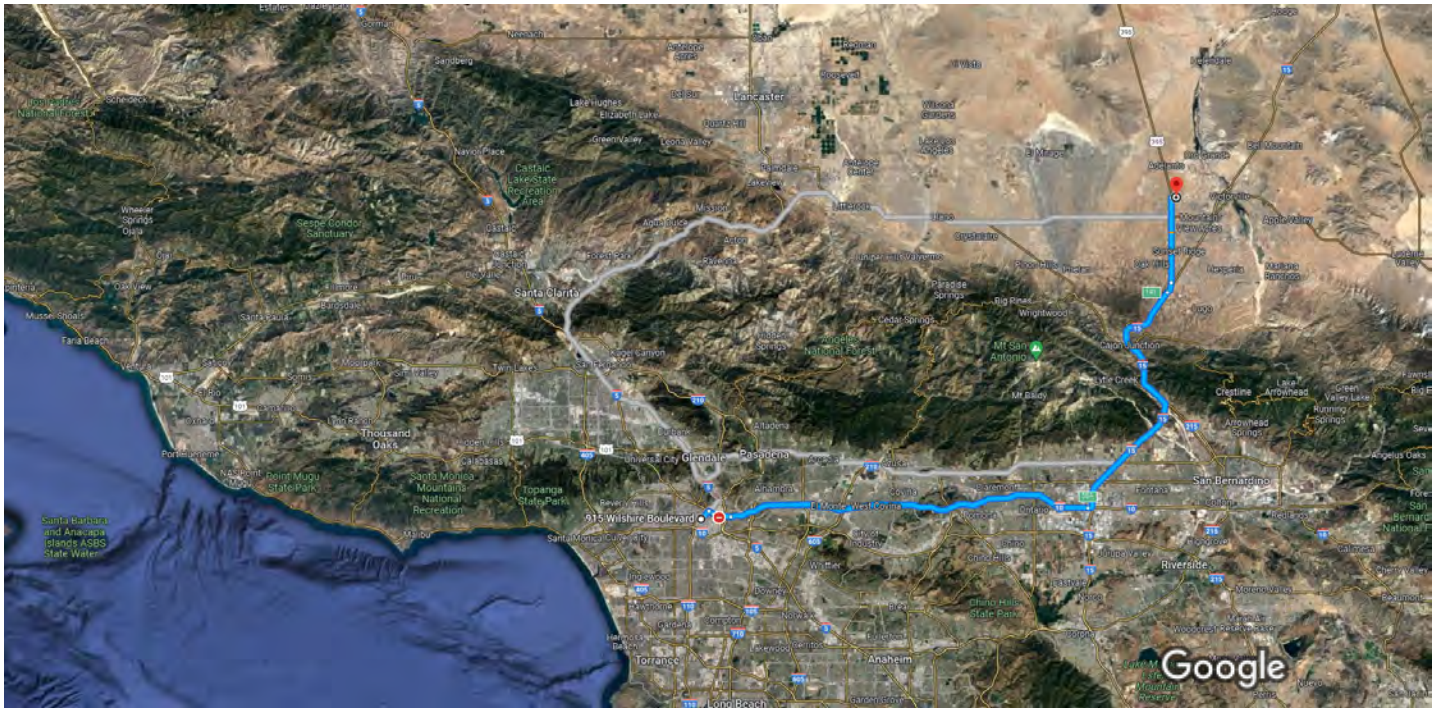
Appendix B

Driving Directions

Google Maps

915 Wilshire Blvd, Los Angeles, CA 90017 to Victorville, California

Drive 83.4 miles, 1 hr 32 min



Imagery ©2023 TerraMetrics, Map data ©2023 Google 5 mi

915 Wilshire Blvd
Los Angeles, CA 90017

Get on San Bernardino Fwy from S Figueroa St, W Cesar Estrada Chavez Ave and E Cesar E Chavez Ave

11 min (3.0 mi)

1. Head southeast on Wilshire Blvd toward S Figueroa St

394 ft

2. Turn left at the 1st cross street onto S Figueroa St

1.2 mi

3. Turn right onto W Cesar Estrada Chavez Ave

0.6 mi

4. Continue onto E Cesar E Chavez Ave

0.7 mi

5. Turn right onto N Mission Rd

0.1 mi

6. Turn left onto the ramp to I-10 E
⚠ Parts of this road may be closed at certain times or days

0.3 mi

Follow I-10 E and I-15 N to US-395 N in Hesperia. Take exit 141 from I-15 N

1 hr 8 min (71.0 mi)

7. Merge onto San Bernardino Fwy

1.0 mi

8. Continue onto I-10 E/San Bernardino Fwy

⚠ Parts of this road may be closed at certain times or days

38.8 mi

9. Use the right 2 lanes to take exit 58A to merge onto I-15 N/Ontario Fwy toward Barstow/Las Vegas

ⓘ Continue to follow I-15 N

30.0 mi

10. Take exit 141 for U.S-395 toward Bishop/Adelanto

1.2 mi

Follow US-395 N to Cactus Rd in Victorville

17 min (9.4 mi)

11. Continue onto US-395 N

8.9 mi

12. Turn right onto Cactus Rd

0.5 mi

Victorville
California

Appendix C

NRCS Custom Soil Resource Report

United States Department of Agriculture

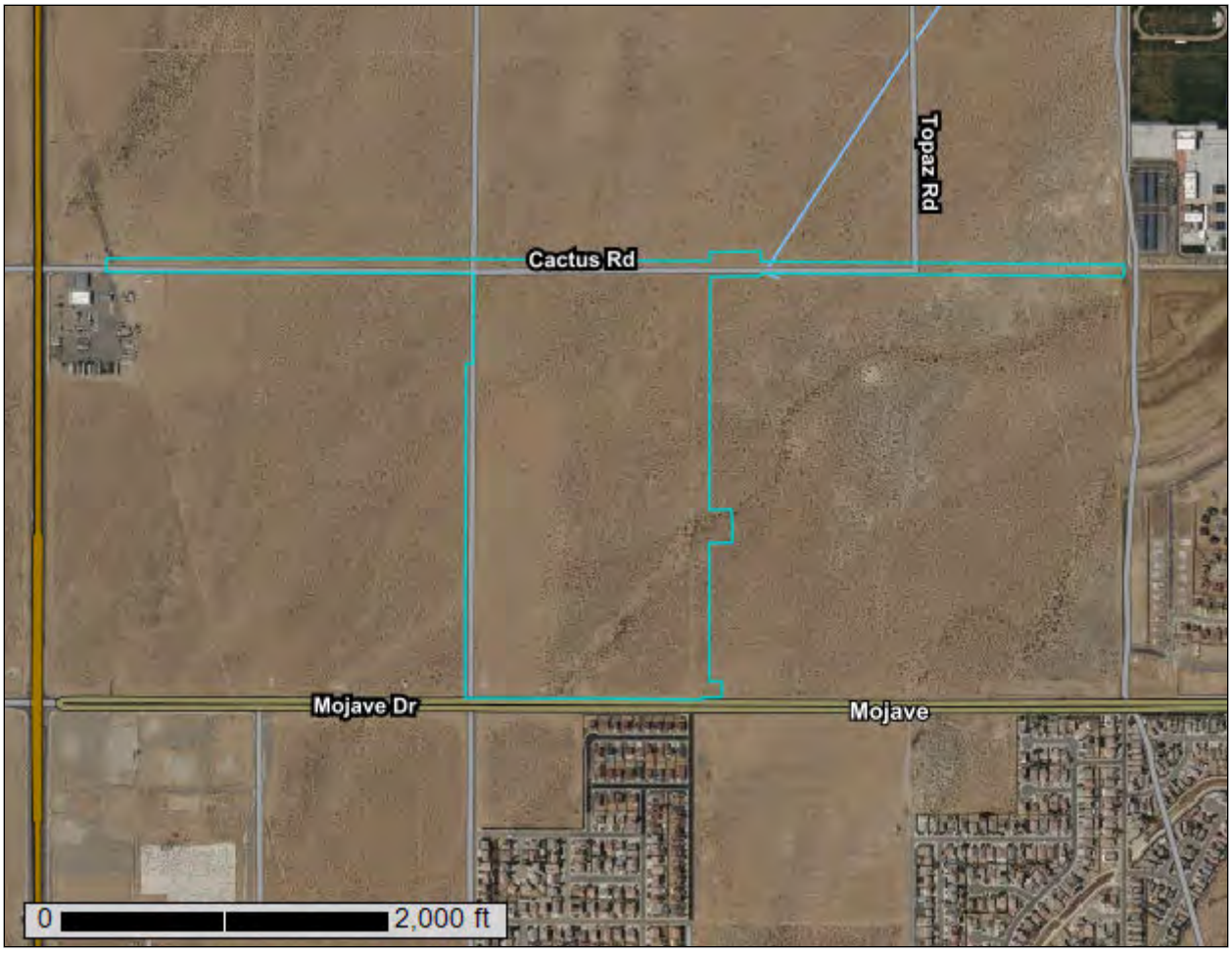
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Bernardino County, California, Mojave River Area

Mojave 68 Project



May 11, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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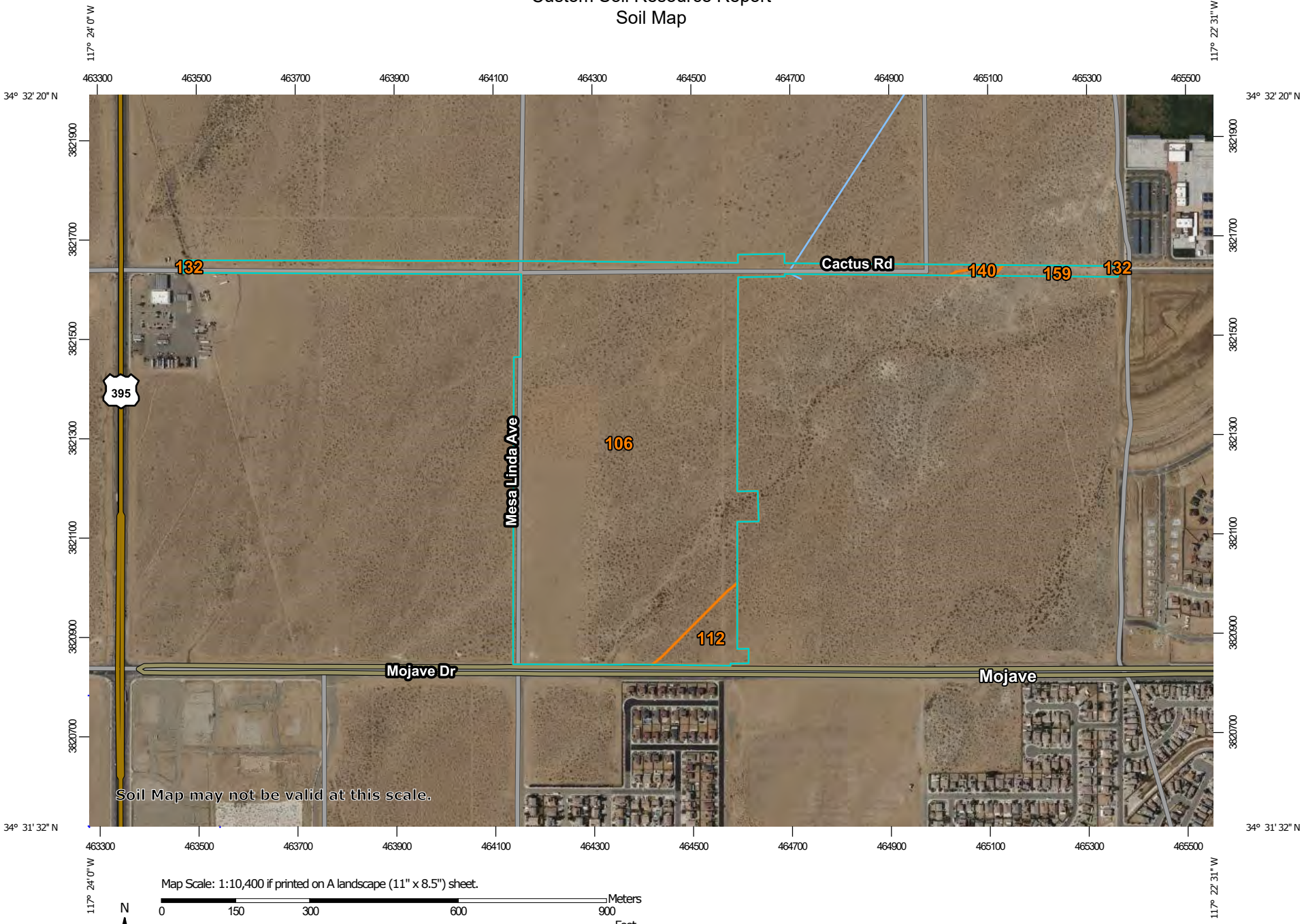
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:10,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 14, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 17, 2022—Jun 12, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
106	BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	94.9	94.5%
112	CAJON SAND, 0 TO 2 PERCENT SLOPES	3.7	3.7%
132	HELENDALE LOAMY SAND, 2 TO 5 PERCENT SLOPES	0.1	0.1%
140	LAVIC LOAMY FINE SAND	0.4	0.4%
159	ROSAMOND LOAM, SALINE-ALKALI	1.3	1.3%
Totals for Area of Interest		**100.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Bernardino County, California, Mojave River Area

106—BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES

Map Unit Setting

National map unit symbol: hkrb
Elevation: 3,000 to 3,400 feet
Mean annual precipitation: 3 to 6 inches
Mean annual air temperature: 59 to 63 degrees F
Frost-free period: 180 to 280 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Bryman and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bryman

Setting

Landform: Fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 43 inches: sandy clay loam
H3 - 43 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R030XF012CA - Sandy
Hydric soil rating: No

Minor Components

Cajon, loamy surface

Percent of map unit: 5 percent

Hydric soil rating: No

Mohave variant

Percent of map unit: 5 percent
Hydric soil rating: No

Helendale

Percent of map unit: 5 percent
Hydric soil rating: No

Bryman, gravelly surface

Percent of map unit: 5 percent

112—CAJON SAND, 0 TO 2 PERCENT SLOPES

Map Unit Setting

National map unit symbol: hkrj
Elevation: 1,800 to 3,200 feet
Mean annual precipitation: 3 to 6 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 290 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Cajon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cajon

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 7 inches: sand
H2 - 7 to 25 inches: sand
H3 - 25 to 45 inches: gravelly sand
H4 - 45 to 60 inches: stratified sand to loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R030XF012CA - Sandy
Hydric soil rating: No

Minor Components

Manet

Percent of map unit: 5 percent
Landform: Playas
Hydric soil rating: Yes

Kimberlina

Percent of map unit: 5 percent

Helendale

Percent of map unit: 5 percent

132—HELENDALE LOAMY SAND, 2 TO 5 PERCENT SLOPES

Map Unit Setting

National map unit symbol: hks5
Elevation: 2,500 to 3,800 feet
Mean annual precipitation: 3 to 6 inches
Mean annual air temperature: 59 to 63 degrees F
Frost-free period: 180 to 280 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Helendale and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Helendale

Setting

Landform: Fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 4 inches: loamy sand
H2 - 4 to 30 inches: sandy loam

H3 - 30 to 66 inches: sandy loam
H4 - 66 to 99 inches: loamy sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R030XF012CA - Sandy
Hydric soil rating: No

Minor Components

Lavic

Percent of map unit: 5 percent
Hydric soil rating: No

Cajon

Percent of map unit: 5 percent
Hydric soil rating: No

Cave

Percent of map unit: 5 percent
Hydric soil rating: No

140—LAVIC LOAMY FINE SAND

Map Unit Setting

National map unit symbol: hksf
Elevation: 2,800 to 3,100 feet
Mean annual precipitation: 3 to 6 inches
Mean annual air temperature: 59 to 63 degrees F
Frost-free period: 180 to 280 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lavic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lavic

Setting

Landform: Fan aprons, fan skirts
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 10 inches: loamy fine sand
H2 - 10 to 20 inches: loamy sand
H3 - 20 to 49 inches: loam
H4 - 49 to 60 inches: stratified sand to loamy sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 26 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R030XF012CA - Sandy
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 14 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Landform: Playas
Hydric soil rating: Yes

159—ROSAMOND LOAM, SALINE-ALKALI

Map Unit Setting

National map unit symbol: hkt1

Elevation: 1,700 to 2,900 feet
Mean annual precipitation: 3 to 6 inches
Mean annual air temperature: 59 to 63 degrees F
Frost-free period: 180 to 280 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Rosamond and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rosamond

Setting

Landform: Fan skirts
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 44 inches: stratified loam to silty clay loam
H3 - 44 to 60 inches: stratified loamy coarse sand to loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: R030XF032CA - SALINE ALKALI FLATS
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 14 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Landform: Playas
Hydric soil rating: Yes

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Appendix D

Precipitation Analysis

WETS Table

WETS Station: VICTORVILLE, CA								
Requested years: 1971 - 2023								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	59.3	31.9	45.6	0.98	0.34	1.06	3	0.4
Feb	62.6	34.8	48.7	1.10	0.32	1.13	2	0.0
Mar	67.3	38.5	52.9	0.89	0.24	0.92	2	0.0
Apr	74.0	43.0	58.5	0.32	0.08	0.28	1	0.0
May	82.2	49.5	65.8	0.14	0.00	0.10	0	0.0
Jun	92.5	56.5	74.5	0.04	0.00	0.00	0	0.0
Jul	98.3	62.8	80.6	0.18	0.00	0.16	1	0.0
Aug	97.4	62.0	79.7	0.20	0.00	0.14	0	0.0
Sep	91.6	56.3	74.0	0.23	0.00	0.15	0	0.0
Oct	80.1	46.1	63.1	0.34	0.00	0.27	1	0.0
Nov	67.6	36.5	52.1	0.38	0.11	0.37	1	0.0
Dec	59.0	31.1	45.1	0.89	0.28	0.93	2	0.1
Annual:					3.76	6.72		
Average	77.7	45.8	61.7	-	-	-	-	-
Total	-	-	-	5.70			13	0.5

GROWING SEASON DATES			
Years with missing data:	24 deg = 8	28 deg = 9	32 deg = 8
Years with no occurrence:	24 deg = 2	28 deg = 0	32 deg = 0
Data years used:	24 deg = 45	28 deg = 44	32 deg = 45
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	2/5 to 12/5: 303 days	3/6 to 11/19: 258 days	3/29 to 11/5: 221 days
70 percent *	1/28 to 12/14: 320 days	2/26 to 11/28: 275 days	3/23 to 11/12: 234 days
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1917	2.25	0.06	0.18	0.11	0.18	0.00	0.06	0.20	0.00	0.00	T	0.00	3.04
1918	0.05	1.22	0.75	0.00	0.00	T			0.20	1.16	0.60	M0.70	4.68
1919													
1920													
1921													
1922													
1923													
1924													
1925													
1926													
1927													
1928													
1929													

1930													
1931													
1932													
1933													
1934													
1935													
1936													
1937													
1938											0.00	2.20	2.20
1939	1.35		0.98	0.12	T	0.00	0.00	T		0.00	0.37	0.40	3.22
1940	M2.05	1.59	0.49	0.07	0.00	0.00	0.00	0.00	T	0.51	0.19	2.45	7.35
1941	0.79	1.84	M3.94	2.55	0.16	0.00	0.00	0.39	0.00	1.24	0.30	1.17	12.38
1942	0.00	0.11	0.46	0.50	0.00	0.00	0.00	1.09	0.00	0.43	T	0.11	2.70
1943	3.88	1.81	1.85	0.61	0.00	0.00	0.00	0.00	0.60	0.15	0.29	3.62	12.81
1944	0.21	5.45	0.52	0.48	0.00	0.00	0.00	0.00	0.00	0.00	2.29	0.31	9.26
1945	0.03	1.29	1.58	0.23	0.00	0.00	T	0.97	0.01	0.30	0.00	1.07	5.48
1946	0.00	0.76	0.95	0.40	0.02	0.00	0.13	0.00	0.00	0.07	2.06	0.84	5.23
1947	0.10	0.09	0.83	0.24	0.00	0.01	0.00	0.00	0.00	0.04	0.06	1.79	3.16
1948	0.00	1.04	0.42	0.10	0.00	0.00	0.00	0.00	0.00	1.56	0.00	1.13	4.25
1949	2.56	0.30	0.58	M0.15	M0.00	0.00	0.00	0.00	0.00	0.03	0.35	0.18	4.15
1950	0.30	0.47	0.87	0.03	0.06	0.00	0.49	0.00	0.01	T	0.13	0.00	2.36
1951	1.18	0.20	0.10	0.92	0.51	0.00	0.02	M0.00	0.02	0.45	0.10	1.81	5.31
1952	3.37	T	2.02	0.30	T	0.00	0.06	0.03	0.88	0.00	1.76	1.49	9.91
1953	0.09	0.21	0.35	0.03	0.07	0.00	0.04	0.17	0.00	0.00	0.21	0.10	1.27
1954	2.79	0.15	0.99	0.02	0.04	0.02	0.07	0.00	0.11	0.00	2.13	0.27	6.59
1955	1.76	0.10	0.00	0.00	0.00	0.00	0.05	0.06	0.00	0.00	0.22	0.37	2.56
1956	1.91	0.02	0.00	0.79	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	3.05
1957	2.12	0.16	0.62	0.14	0.01	0.00	0.00	0.00	0.00	1.37	0.24	0.65	5.31
1958	0.11	1.68	1.24	1.29	0.26	0.00	0.00	0.04	0.04	0.13	0.25	0.00	5.04
1959	0.41	0.84	0.00	0.01	0.00	0.00	0.02	T	0.08	0.04	0.21	1.22	2.83
1960	0.68	0.38	0.01	0.14	0.02	0.00	0.03	0.00	0.20	0.08	0.66	0.08	2.28
1961	0.10	T	0.11	T	0.00	0.00	0.00	0.72	0.00	0.05	0.48	0.69	2.15
1962	0.31	1.58	0.06	0.00	0.04	0.00	0.00	0.00	0.00	0.19	0.00	0.08	2.26
1963	0.06	0.51	0.44	0.41	0.00	0.07	0.00	0.81	3.94	1.92	0.29	T	8.45
1964	0.45	0.11	0.31	0.07	0.13	0.00	0.03	T	0.00	0.12	1.25	0.00	2.47
1965	0.05	0.15	0.30	2.14	0.17	0.08	M0.03	0.52	0.08	0.00	1.93	2.00	7.45
1966	0.27	0.52	0.44	0.00	0.00	0.00	0.03	0.16	0.15	0.16	0.52	0.66	2.91
1967	0.26	0.00	0.04	1.00	0.00	0.00	0.29	0.32	0.	0.	1.	0.77	4.55

									36	00	51		
1968	0.06	0.09	0.48	0.26	0.00	0.12	0.74	0.00	0.04	0.05	0.27	0.25	2.36
1969	1.87	3.93	0.18	0.23	0.48	0.61	0.59	0.00	0.08	0.00	0.66	0.01	8.64
1970	0.15	0.49	1.05	0.10	0.00	0.00	T	0.01	0.00	0.00	1.91	1.64	5.35
1971	0.04	0.34	0.12	0.18	0.15	0.00	0.28	0.00	0.00	0.29	0.02	1.10	2.52
1972	0.00	0.00	0.00	0.05	0.00	0.54	0.00	0.14	0.14	1.03	0.75	0.16	2.81
1973	0.60	2.03	1.67	0.04	0.00	0.00	0.00	0.05	0.00	0.00	0.33	0.01	4.73
1974	2.00	0.00	0.29	0.07	0.58	0.00	0.46	0.78	0.00	0.16	0.00	0.93	5.27
1975	0.17	0.21	1.04	0.75	0.00	0.00	0.22	0.00	0.24	0.08	0.00	0.21	2.92
1976	0.00	1.84	0.44	0.05	0.09	0.00	0.00	0.00	3.62	1.13	0.46	0.00	7.63
1977	1.15	0.04	0.52	0.00	1.35	0.04	0.00	1.43	0.00	0.00	0.08	1.77	6.38
1978	1.93	3.35	3.63	0.61	0.09	0.00	0.00	0.11	0.80	0.16	0.36	0.79	11.83
1979	3.44	1.39	1.76	0.00	0.15	0.00	0.00	0.18	0.00	0.13	0.00	0.00	7.05
1980	1.89	4.45	2.06	0.39	0.42	0.04	0.00	0.00	0.05	0.00	0.00	0.02	9.32
1981	0.76	0.52	1.48	0.01	0.06	0.00	0.00	0.13	0.00	0.13	0.30	0.00	3.39
1982	M1.41	0.52	2.25	1.12	0.16	0.00	0.03	0.13	0.04	0.36	1.48	1.12	8.62
1983	2.39	1.61	4.80	0.93	0.00	0.00	0.00	0.83	0.49	1.20	0.57	0.60	13.42
1984	0.00	0.01	0.00	0.00	0.00	0.00	1.45	0.39	0.13	0.00	0.11	4.36	6.45
1985	0.14	0.15	0.23	0.00	0.03	0.02	0.00	0.00	0.33	0.32	2.34	0.68	4.24
1986	0.30	M1.30	1.19	0.85	0.00	0.00	0.15	0.18	0.08	0.35	0.77	1.08	6.25
1987	1.58	0.17	0.39	0.61	0.22	0.06	0.00	0.00	0.26	1.05	0.87	1.40	6.61
1988	1.14	0.31	0.22	0.89	0.01	0.00	0.00	0.88	0.00	0.00	0.06	0.21	3.72
1989	0.93	0.26	0.00	0.00	0.54	0.00	0.00	0.03	0.51	0.02	0.01	0.04	2.34
1990	1.05	0.51	0.06	0.06	0.86	0.03	0.02	1.39	0.12	0.00	0.18	0.00	4.28
1991	1.04	1.35	3.25	0.00	0.04	0.00	0.20	0.00	0.32	0.42	0.27	1.43	8.32
1992	1.46	2.51	2.59	0.17	0.02	0.00	0.31	0.00	0.00	0.36	0.00	3.68	11.10
1993	4.72	2.87		0.00	0.00	0.85	0.00		0.00	0.01	0.19	0.41	9.05
1994	0.29	0.49	1.28	0.36	0.50	0.00	0.00	0.12	0.00	0.04	0.19	0.68	3.95
1995	2.91	0.62	2.63	0.12	0.07	0.03	0.03	0.03	0.17	0.00	0.00	0.62	7.23
1996	0.47	1.48	0.15	0.01	0.05	0.00	0.44	0.02	0.00	0.24	0.55	0.35	3.76
1997	M0.40	0.00	0.01	0.00	0.34	0.06	0.00	0.00	1.36	0.01	0.43	2.65	5.26
1998	0.51	5.39	1.01	0.33	0.73	0.00	0.00	0.64	1.08	0.00	0.34	0.10	10.13
1999	0.42	0.49	0.06	0.70	0.31	0.20	1.28	0.00	0.00	0.00	0.00	0.00	3.46
2000	0.03	1.23	0.17	0.84	0.00	0.00	0.00	M0.03	0.00	0.18	0.00	0.00	2.48
2001	1.54	M1.91	0.70	0.30	0.01	0.00	0.27	0.00	0.	0.	0.	0.52	6.03

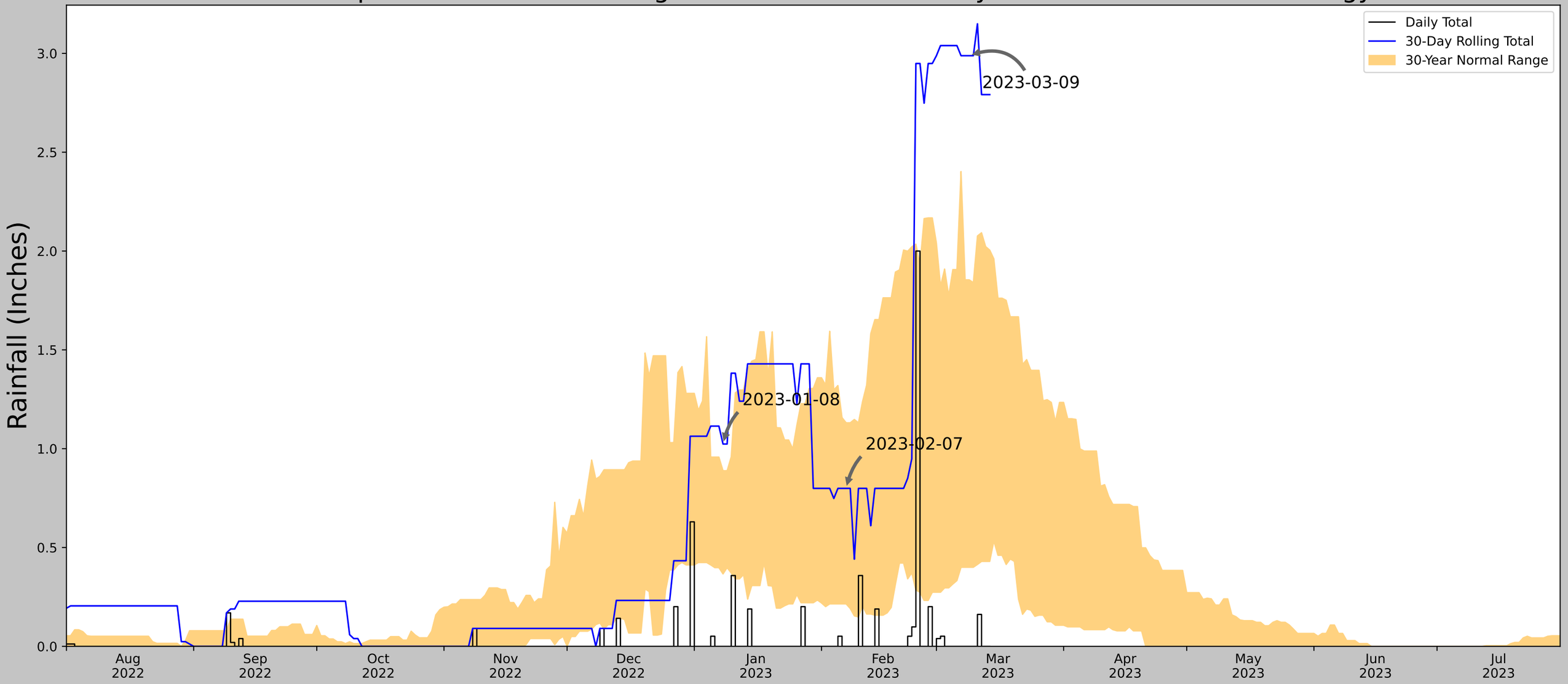
									00	15	63		
2002	0.12	0.00	0.27	0.18	0.00	0.00	0.00	0.00	0.00	0.05	0.13	0.53	1.28
2003	0.00	3.64	1.30	1.18	0.14	0.00	0.55	0.00	0.00	0.00	1.24	0.45	8.50
2004	0.05	1.95	0.11	0.23	0.00	0.00	0.00	0.13	0.00	3.32	1.39	2.16	9.34
2005	2.20	4.17	0.43	0.05	0.00		0.74	0.88	0.43	1.48	0.00	0.13	10.51
2006	0.37	0.45	0.83	0.68	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.14	2.49
2007	0.07	0.18		0.12	0.00	0.00	0.00	0.00	0.02			0.92	1.31
2008	1.30	0.10	0.00	0.00	0.02	0.00	0.00	0.00	0.03				1.45
2009	0.04	1.30	0.02	0.00	0.00	0.18	0.00	0.03	0.00	0.00	0.20	0.53	2.30
2010	4.34	2.02	0.26	0.70	M0.00	0.00	M0.00	0.00	0.00	M1.65	0.02	M5.35	14.34
2011	0.45	1.19	1.56	0.00	0.00	0.00	0.53	0.00	0.06	0.00	0.64	0.37	4.80
2012	0.07	0.21	0.63	0.84	0.00	0.00	0.67	1.17	0.04	0.00	0.06	0.74	4.43
2013	0.46	0.28	M0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.91	0.21	2.03
2014	0.00	0.01	0.54	0.10	0.00	0.00	0.00	0.04	0.03	0.00	0.13	0.95	1.80
2015	1.00	0.26	0.00	0.00	0.00	0.00	1.34	0.00	1.17	0.36	0.20	0.29	4.62
2016	1.04	0.00	0.56	0.62	0.00	0.00	0.00	0.00	0.00	0.44	0.11	2.23	5.00
2017	1.71	1.91	0.00	0.00	0.05	0.00	0.00	0.09	0.05	0.00	0.00	0.00	3.81
2018	0.69	0.14	0.78	0.00	0.03	0.00	0.00	0.00	0.00	1.02	0.19	1.60	4.45
2019	0.88	1.47	0.72	0.11	0.37	0.00	0.00	0.00	0.00	0.00	1.71	2.84	8.10
2020	0.00	0.00	2.05	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.25	4.55
2021	1.42	0.00	0.02	0.01	0.00	0.00	0.28	0.00	0.23	0.44	0.00	0.64	3.04
2022	0.00	0.50	0.12	0.07	0.00	0.00	0.00	0.45	0.38	0.43	0.85	0.23	3.03
2023	1.21	M0.00	M0.58										1.79

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2023-03-22

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.531834, -117.388154
Observation Date	2023-03-09
Elevation (ft)	3008.67
Drought Index (PDSI)	Mild drought (2023-02)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-03-09	0.4	1.854331	2.988189	Wet	3	3	9
2023-02-07	0.214567	1.131102	0.799213	Normal	2	2	4
2023-01-08	0.366142	0.888583	1.023622	Wet	3	1	3
Result							Wetter than Normal - 16

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PEARBLOSSOM	34.5025, -117.8969	3101.05	29.034	92.38	15.747	10650	81
EL MIRAGE	34.5892, -117.6303	2950.131	16.312	150.919	9.802	294	0
PINON HILLS 3.5 N	34.4849, -117.6442	3495.079	14.442	394.029	12.189	385	9
HESPERIA 2E	34.4206, -117.2661	3055.118	36.378	45.932	18.041	23	0
VICTORVILLE	34.5292, -117.2928	2879.921	34.441	221.129	23.114	1	0

Appendix E

Wetland Determination Data

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-01

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR): D 30 Lat: 34.53489063 Long: -117.38703401 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-02

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D 30 Lat: 34.53305247 Long: -117.39037484 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Erodium cicutarium	40	✔	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	40% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	40 (A)		200 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-03

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D 30 Lat: 34.53522891 Long: -117.38619555 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Erodium cicutarium	40	✔	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	40% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	40 (A)		200 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

none

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-04

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D 30 Lat: 34.53076062 Long: -117.38619478 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-05

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D 30 Lat: 34.53054644 Long: -117.38652471 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-06

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D 30 Lat: 34.53015519 Long: -117.3872584 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-07

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D 30 Lat: 34.52876233 Long: -117.38857309 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ✔ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-08

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): D 30 Lat: 34.53382465 Long: -117.38845459 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✔ Water Marks (B1) (**Riverine**)
- ✔ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

See Appendix F for OHWM widths. Indicators of aquatic landscape features within channel area included: sand & gravel bars; drift: organic; sediment sheets; and water level marks.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S-09

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Undulating Slope (%): 1

Subregion (LRR): D 30 Lat: 34.530535 Long: -117.386497 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5 yr)			
1. Larrea tridentata	30	✔	UPL
2. Ephedra viridis	5		UPL
3. Ericameria paniculata	5		UPL
4.			
5.			
	40%	= Total Cover	
Herb Stratum (Plot size: 5 yr)			
1. Erodium cicutarium	30	✔	UPL
2. Festuca rubra	15	✔	FAC
3. Bromus diandrus	5		UPL
4.			
5.			
6.			
7.			
8.			
	50%	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	75	x 5 =	375
Column Totals:	90 (A)		420 (B)

Prevalence Index = B/A = 4.67

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S-09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Francisco--Oakland/Marin County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S10

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Undulating Slope (%): 1

Subregion (LRR): C 14 Lat: 34.534872 Long: -117.387035 Datum: WGS 84

Soil Map Unit Name: 204 - Xerorthents-Urban land complex, 0 to 9 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5 yr)			
1. Larrea tridentata	30	✔	UPL
2. Ericameria paniculata	5		UPL
3.			
4.			
5.			
	35%	= Total Cover	
Herb Stratum (Plot size: 5 yr)			
1. Erodium cicutarium	40	✔	UPL
2. Festuca rubra	10	✔	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	50%	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	75	x 5 =	375
Column Totals:	85 (A)		405 (B)

Prevalence Index = B/A = 4.76

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mojave 68 City/County: San Bernardino County Sampling Date: 2023-03-02

Applicant/Owner: Industrial Property Group, Inc. State: California Sampling Point: S11

Investigator(s): Greg Huffman/Terry Huffman Section, Township, Range: S10 T5N R5W

Landform (hillslope, terrace, etc.): Fan Remnant Local relief (concave, convex, none): Undulating Slope (%): 1

Subregion (LRR): D 30 Lat: 34.533031 Long: -117.390391 Datum: WGS 84

Soil Map Unit Name: 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

This data sheet is being used for the purposes of determining the presence or absence of an Ordinary High Water Mark (OHWM) within fan remnant channel landforms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5 yr)			
1. Larrea tridentata	30	✔	UPL
2.			
3.			
4.			
5.			
	30%	= Total Cover	
Herb Stratum (Plot size: 5 yr)			
1. Erodium cicutarium	45	✔	UPL
2. Festuca rubra	5		FAC
3.			
4.			
5.			
6.			
7.			
8.			
	50%	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	75	x 5 =	375
Column Totals:	80 (A)		390 (B)

Prevalence Index = B/A = 4.88

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: S11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix F

Other Water OHW Data (Stream OHW Widths)

Appendix F. Other Water OHW Data (Stream OHW Widths)						
Name	**Begin Lat**	**Begin Long**	**End Lat**	**End Long**	**OHWM Present Y/N?**	**OHWM Width (FT)**
R1	34.528638	-117.388673	34.531688	-117.385379	Y	1.75
R2	34.533119	-117.390778	34.535439	-117.385825	Y	1.00

Appendix G

Surface Flow Mapping: Review Area Tributaries to Navigable Waters

Appendix G. Surface Flow Mapping: Review Area Tributaries to Navigable Waters
Mojave 68 Project
San Bernardino County, California

0 3.75 7.5 15 Miles

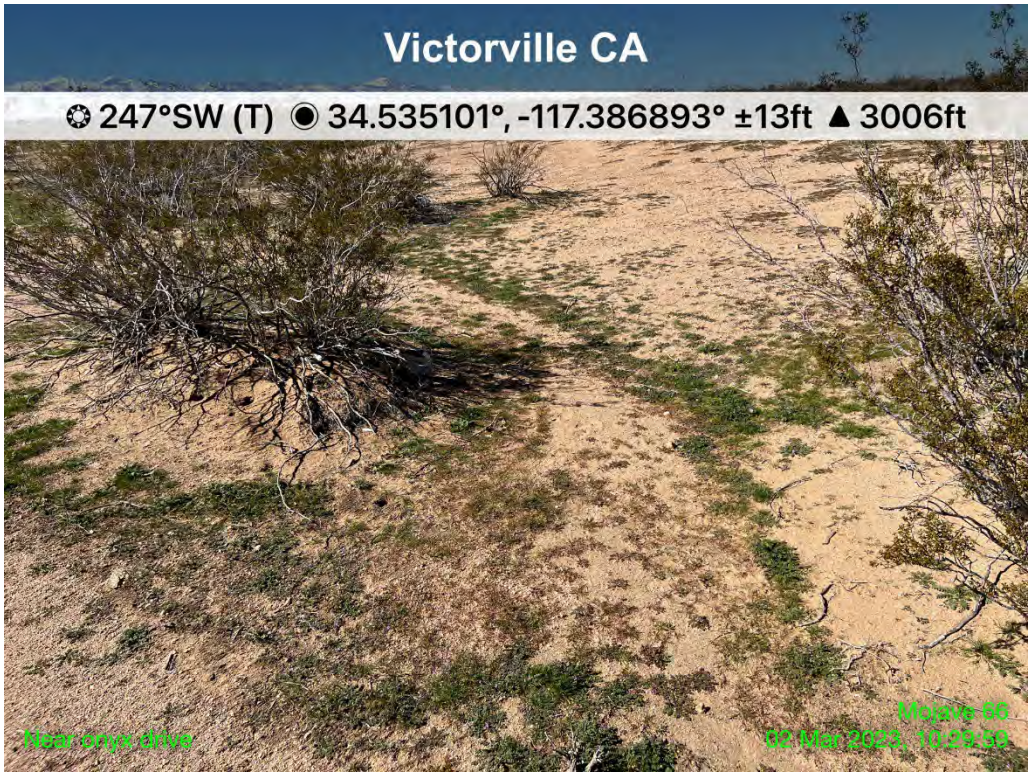
N

Spatial Reference
Name: WGS 1984 Web Mercator Auxiliary Sphere
PCS: WGS 1984 Web Mercator Auxiliary Sphere
GCS: GCS WGS 1984
Datum: WGS 1984
Projection: Mercator Auxiliary Sphere
Map Units: Meter

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS
523 4[TH] ST. STE 224, SAN RAFAEL, CA 94901 · 415.925.2000 · www.h-bgroup.com

Appendix H

Representative Review Area Photographs



Ephemperal Drainage Channel (R1) and Vegetation

Ephemperal Drainage Channel (R2) and Vegetation

Ephemperal Drainage Channel (R2) and Vegetation