11.2 Biological Resources Report and Jurisdictional Delineations

Biological Resources Technical Report

Westside Annexation and Specific Plan Project

Los Angeles County, California

May 15, 2025

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1.0 INTRODUCTION

1.1 Background and Purpose

Michael Baker International, Inc. (Michael Baker) is pleased to submit this technical report documenting the results of a biological resources assessment for the proposed Westside Annexation and Specific Plan Project (project, project site) located in the Antelope Valley of unincorporated Los Angeles County, California. The project applicant proposes annexation of the project site from Los Angeles County into the City of Lancaster and adoption of the proposed North Lancaster Industrial Specific Plan. This report is intended to satisfy the requirements of the California Environmental Quality Act (CEQA) and Environmental Impact Report prepared for the project.

1.2 Project Site Location

The project site (a general reference to the entire Annexation Area) encompasses approximately 7,153 acres in the Antelope Valley of unincorporated Los Angeles County (Figure 1, *Regional Vicinity*). The project site is generally bound by Avenue B to the north, Sierra Highway and Edwards Air Force Base to the east, Avenue G to the south, and 30th Street West to the west. State Route 14 (SR-14), Sierra Highway, 10th Street West, and 20th Street West transect the site in a north-south direction. The City of Lancaster is located south of the site.

The project site falls within Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, and 29, 32, 33, 34 of Township 8 North, Range 12 West, on the U.S. Geological Survey's (USGS) *Lancaster West and Rosamond, California* 7.5-minute quadrangle (refer to Figure 2, *Project Vicinity*). As shown on Figure 2 and Figure 3, *Project Site*, the project site consists of two distinct areas:

- **Annexation Area:** The annexation area encompasses the entirety of the approximately 7,153-acre project site.
- **Specific Plan Area:** The approximately 1,860-acre Specific Plan area is generally located in the center of the project site. The Specific Plan area is bounded by Avenue D to the north, Sierra Highway to the east, Avenue F-8 to the south, and 20th Street West to the west.

1.3 Project Description

The proposed project involves two components: 1) annexation from unincorporated Los Angeles County into the City of Lancaster jurisdiction and 2) adoption of the proposed North Lancaster Industrial Specific Plan, which would allow up to approximately 38.5 million square feet of industrial development.

1.3.1 Annexation

The proposed project includes the annexation of the approximately 7,153 acres project site currently in unincorporated Los Angeles County, into the City's jurisdiction.

1.3.2 General Plan Amendment

A General Plan Amendment would be required to amend the General Plan Land Use Map to reflect annexation of the project site and application of the proposed land use designations, including non-urban residential, mixed use, industrial, public uses, multiple family residential, and specific plan. Other General Plan elements would be amended as required to reflect the project.

1.3.3 Pre-Zoning

Within the project site, the proposed Specific Plan area would be pre-zoned Specific Plan to allow for implementation of the proposed North Lancaster Industrial Specific Plan while the remainder of the annexation area would be pre-zoned a mix of public uses, residential, commercial, and industrial zones.

1.3.4 Specific Plan

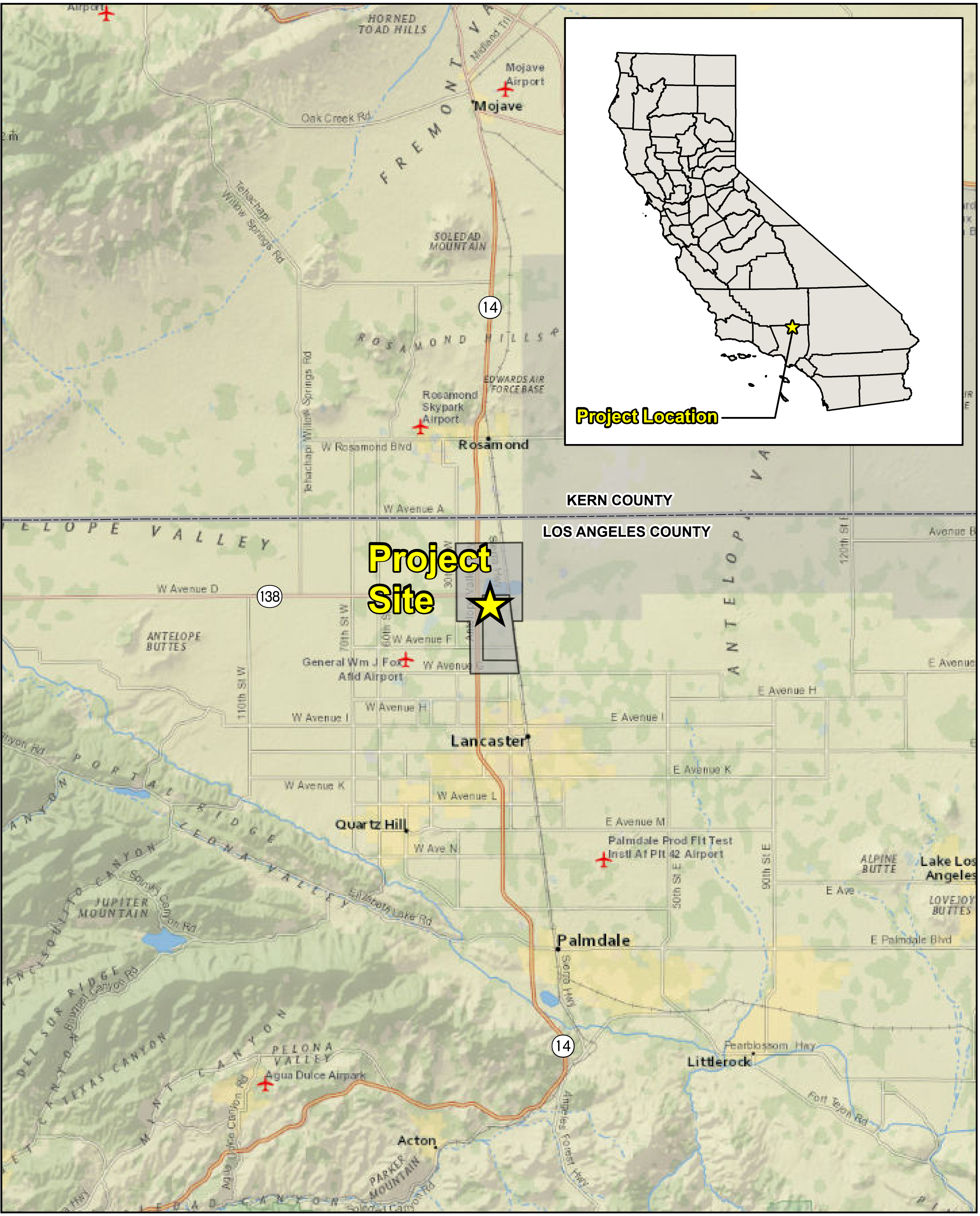
The North Lancaster Industrial Specific Plan would encompass approximately 1,860 acres in the central portion of the project site. The Specific Plan is proposed to allow for a site-specific land use plan, development standards, design guidelines, infrastructure systems, and implementation strategies on which subsequent development activities would be implemented. Figure 4, *Conceptual Land Use Plan*, illustrates the proposed land use plan for the Specific Plan area. As shown, within the project site, the Specific Plan area would be separated into eight Planning Areas with Light Industrial and Heavy Industrial land use designations.

Table 1, *Specific Plan Buildout Potential*, details maximum buildout potential in each of the eight planning areas based on a proposed 0.5 floor area ratio. In total, the Specific Plan would allow for approximately 38.5 million square feet of industrial uses.

TABLE 1. SPECIFIC PLAN BUILDOUT POTENTIAL

Planning Area	Land Use	Proposed Density	Acreage	Maximum Buildout
1	Light Industrial (LI)	0.5 FAR	313.6	6,830,208
2	Light Industrial (LI)		317.3	6,910,794
3	Light Industrial (LI)		123.4	2,687,652
4	Light Industrial (LI)		115.8	2,522,124
5	Light Industrial (LI)		512.4	11,160,072
6	Light Industrial (LI)		233.0	5,074,740
7	Heavy Industrial (HI)		75.9	1,653,102
8	Heavy Industrial (HI)		77.7	1,692,306
	Roadway	--	91.6	--
	TOTAL		**1,860.7 acres**	**38,530,998 SF**
Notes: FAR = floor area ratio; SF = square feet				

Within Planning Areas 2, 4, 6, 7, and 8, it is contemplated that there will be approximately 11.3 million square feet of industrial warehouse buildings and associated site improvements developed. The proposed development in these Planning Areas would be constructed over a 5-year duration.



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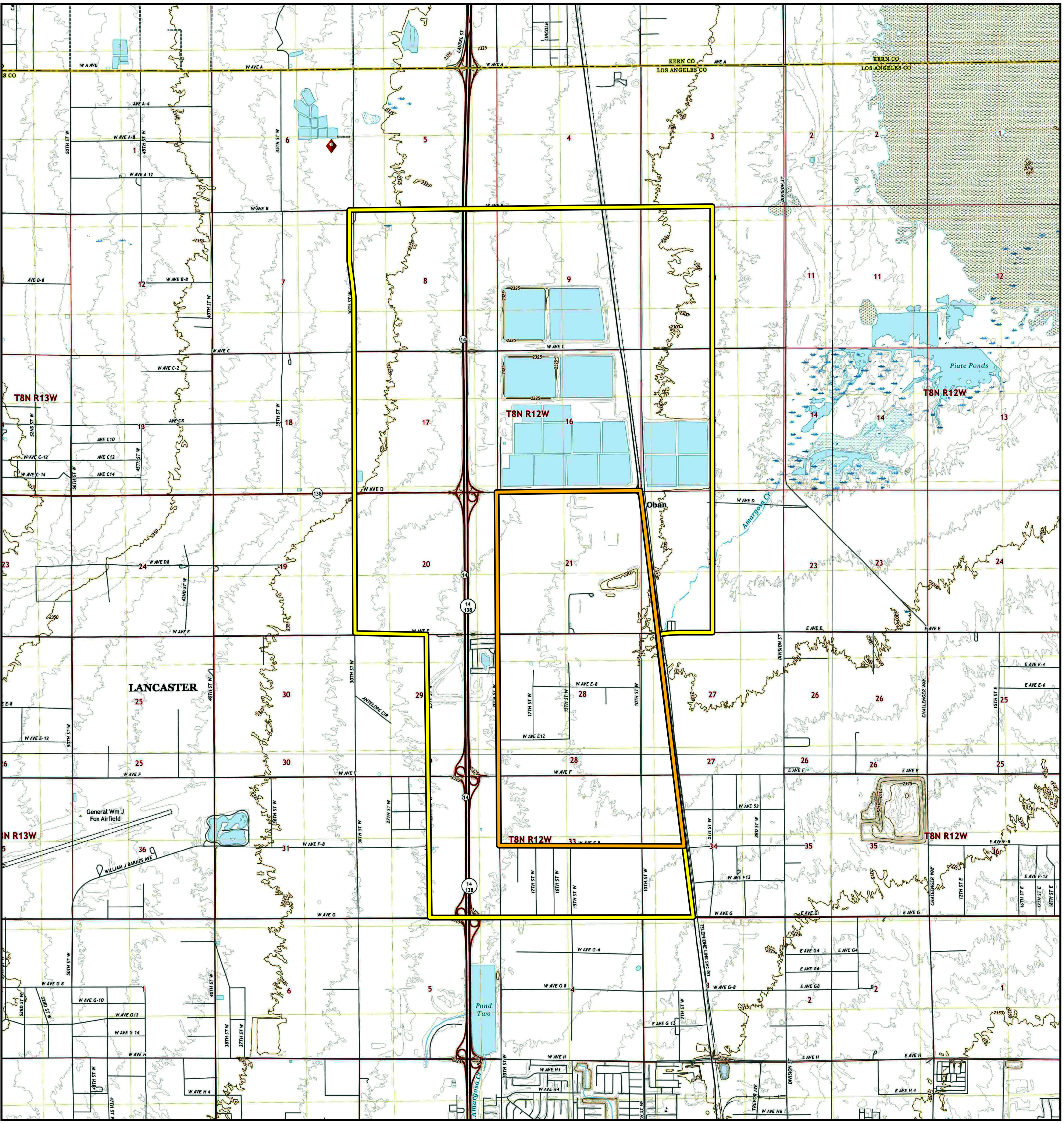
Source: ArcGIS Online, 2018

WESTSIDE ANNEXATION AND SPECIFIC PLAN PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Regional Vicinity

Figure 1



Legend

🟨 Annexation Area

🟧 Specific Plan Area

0 0.5 1 Miles

Source: USGS 7.5-Minute topographic quadrangle maps: *Lancaster East, Lancaster West, Rosamond (2022), and Rosamond Lake (2021)*

WESTSIDE ANNEXATION AND SPECIFIC PLAN PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Project Vicinity

Figure 2

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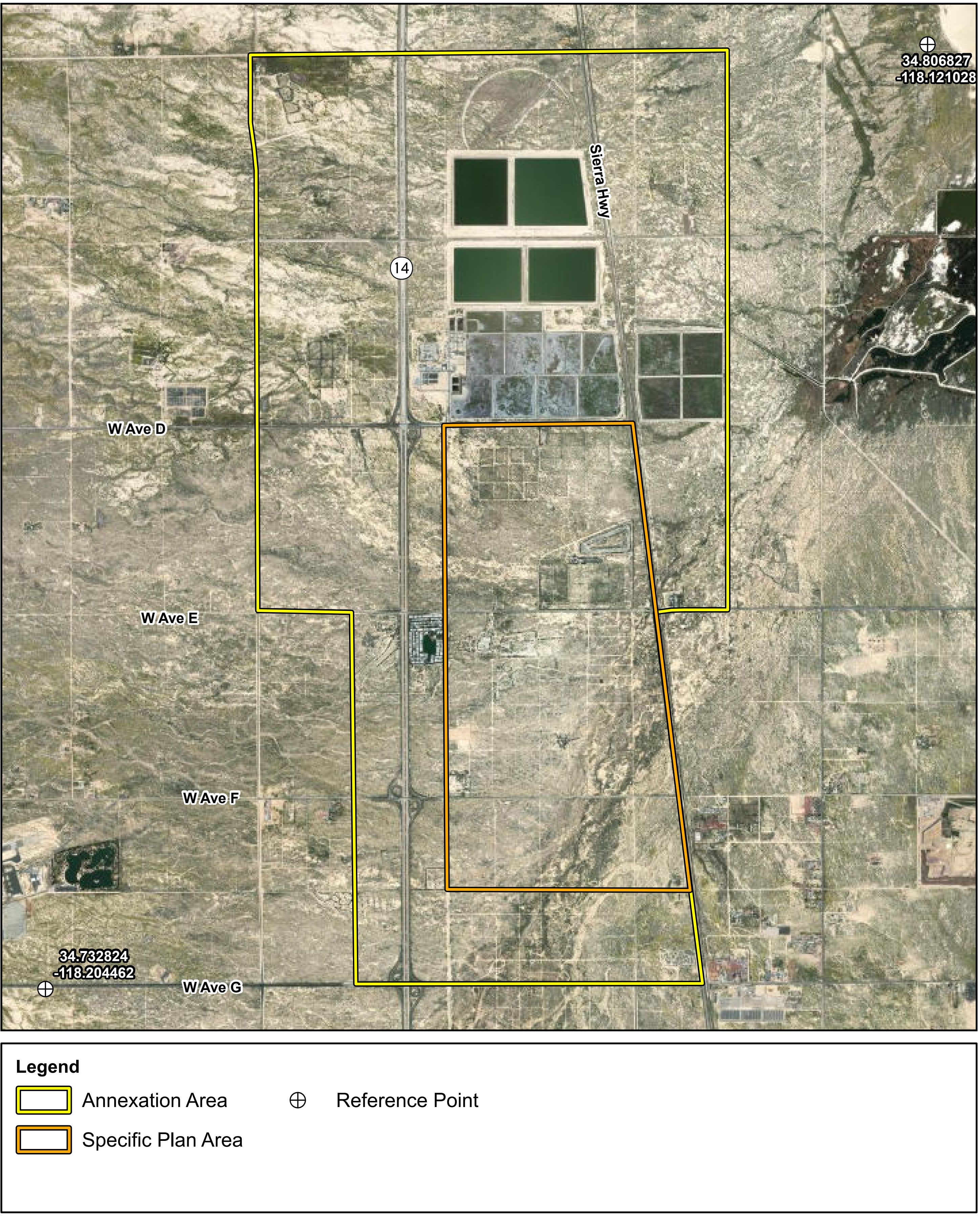

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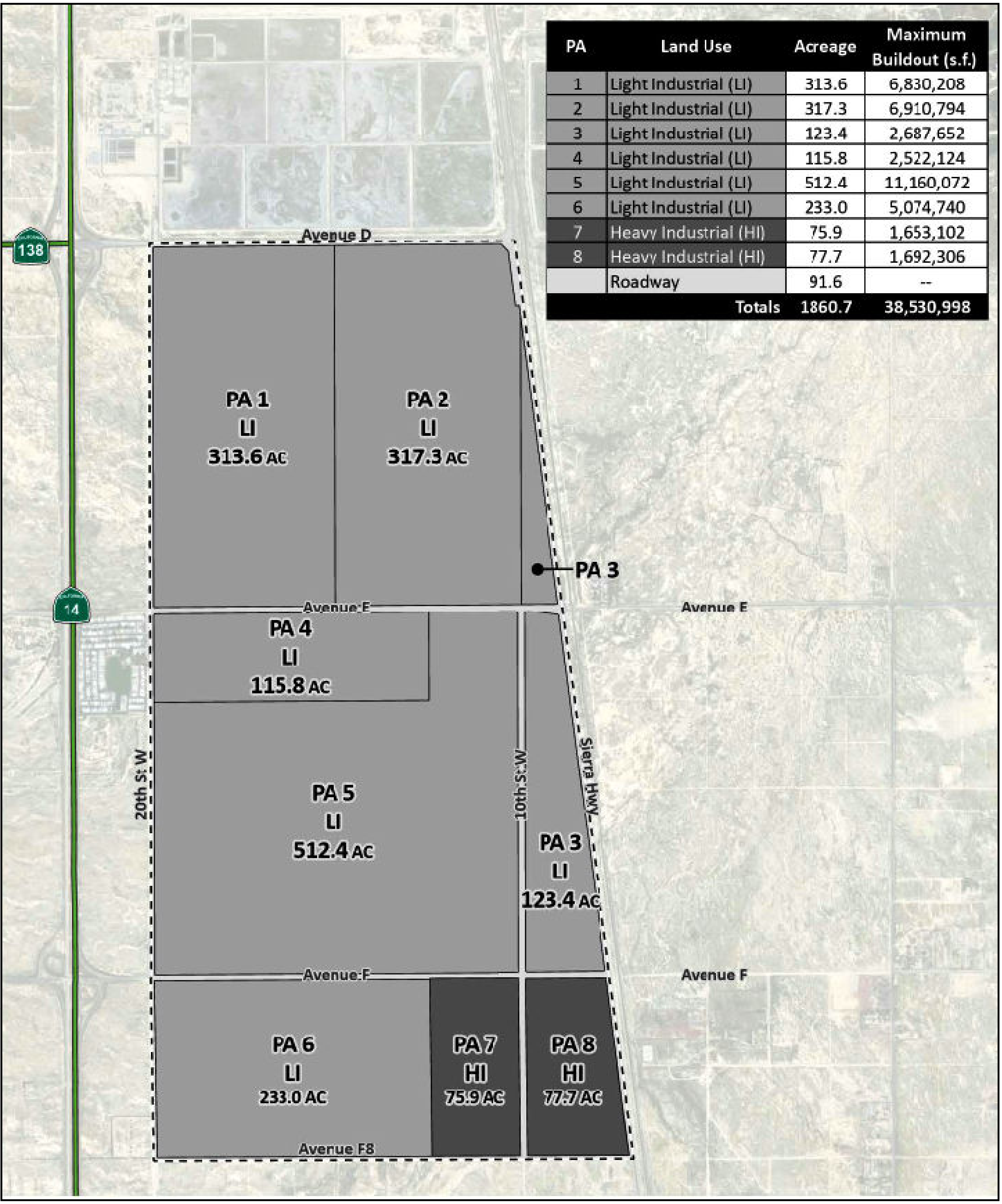
Source: Esri/Maxar (06/2023)

WESTSIDE ANNEXATION AND SPECIFIC PLAN PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Project Site

Figure 3



PA	Land Use	Acreage	Maximum Buildout (s.f.)
1	Light Industrial (LI)	313.6	6,830,208
2	Light Industrial (LI)	317.3	6,910,794
3	Light Industrial (LI)	123.4	2,687,652
4	Light Industrial (LI)	115.8	2,522,124
5	Light Industrial (LI)	512.4	11,160,072
6	Light Industrial (LI)	233.0	5,074,740
7	Heavy Industrial (HI)	75.9	1,653,102
8	Heavy Industrial (HI)	77.7	1,692,306
	Roadway	91.6	--
	Totals	1860.7	38,530,998

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NOT TO SCALE

Source: T&B Planning, August 2024

WESTSIDE ANNEXATION AND SPECIFIC PLAN PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Conceptual Land Use Plan

Figure 4

2.0 EXISTING SITE CONDITIONS

The project site is located within the Antelope Valley, in northern Los Angeles County. It is located within the ancient lakebed of Lake Thompson, which once covered the lower Antelope Valley, including present-day Rogers Lake, Rosamond Lake, and Buckskin Lake, during the Pleistocene epoch (Orme 2008). During this time, the region experienced a cooler, wetter climate, supporting pluvial lakes surrounded by lush marshes. However, around 10,000 years ago, during the Early Holocene, a major climate shift occurred, bringing warmer, drier conditions that caused these wetlands to recede and eventually disappear (Grayson 2011). As lake waters evaporated, soluble salts accumulated on the exposed lakebed, creating a highly alkaline substrate. The first colonizing plants were hydrophytic ("water-loving") and halophytic ("salt-tolerant") species, which adapted to the briny, drying landscape. Over time, wind-driven sediments (aeolian deposits) accumulated around small clumps of vegetation, forming elevated mounds that began to stabilize the landscape. As this desertification process continued, fossorial rodents (burrowing animals) took shelter in the vegetation clusters, further modifying the soil through their burrowing activities. Over millennia, this dynamic transition has reshaped the once-open lakebed into an upland desert shrubland ecosystem, with gradual increases in plant cover as vegetation expands into previously barren areas.

Key Takeaways:

- ✓ The project site transitioned from an ancient lakebed to a landscape now characterized predominately by upland desert ecosystems over thousands of years;
- ✓ Lake waters evaporated and the moisture-rich conditions disappeared from the project site as the climate became hotter and drier during the Early Holocene;
- ✓ The landscape is now largely dominated by upland desert shrub communities; and
- ✓ Vegetation continues to expand into formerly exposed lake sediments, reinforcing the project site's upland characteristics.

Today, the project site generally represents a fully transitioned upland desert landscape, shaped by thousands of years of aridification following the recession of Lake Thompson. While remnants of ancient lake sediments persist beneath the surface, the project site is now largely established as an upland desert system.

The project site is relatively flat, within a gently undulating upland landscape that slopes gradually eastward, with elevations ranging from 2,302 to 2,309 feet above mean sea level (AMSL). Pond-Oban complex (Px) soils underlie most of the project site (Figure 5, *USDA Soils*), with small areas of Pond loam (Po), Tray loam slightly saline (Tw), and Tray sand loam (Tu) soils, as well as Water (W) and Miscellaneous water (Mw). The project site has inclusions of subtle mound-intermound topography, that consists of small, elevated mounds (0.5–2 feet higher in elevation than surrounding areas), shaped over time by natural geologic and climatic processes. Despite its undulating surfaces, the project site remains predominately a well-drained upland system with limited water retention potential, as rainfall is intercepted by both mounds and intermounds, with mounds exhibiting higher porosity due to organic matter accumulation. In contrast, intermound areas, where finer textured materials are present, may experience shallow and short-lived ponding following precipitation events.

Amargosa Creek bisects the southeast area of the project site in a southwest to northeast direction but has been historically altered by human activity and channelized. Rows of excavated soil along the top of the banks of Amargosa Creek provide clear evidence of anthropogenic modification within the project site. The creek continues northeast but is diverted into a human-made basin before reaching Rosamond Lake. The project site falls within the Antelope-Fremont Valleys Watershed (HUC 18090206) and is an upland desert landscape with no sustained hydrology. Rainwater infiltration is rapid within the project site, and any ponding is limited, and temporary. As groundwater is too deep to influence surface conditions, reinforcing the site's well-drained nature.

According to the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service 2025 Web Soil Survey, the primary soil mapping unit within the project site is the Pond-Oban complex (457884), which is not classified as hydric (USDA 2025b). The Lancaster Area Soil Survey (1926), which provides the original data for the USDA 2025 Web Soil Survey, is nearly 100 years old and outdated[1]. But in a general sense, the project site is a well-drained upland system where water disperses, rather than accumulates. Within this landscape, water evaporates and drains away quickly. Development in the project site has been limited, and land uses have remained mostly consistent since at least 1995 (Google, Inc. 2024; Historicaerials.com 2024). A prominent feature in the northern portion of the project site, the Lancaster Water Reclamation Plant, appears operational in 1959. Other significant areas of development in the project site include Leisure Lake Mobile Estates and Mitchell's Avenue E RV Park. Within the project site, residential land uses are limited. A series of constructed ponds identified as "sewage disposal ponds" on USGS topographic mapping occur in the northern portion of the project site. Areas within 1-2 miles of the project site consist primarily of relatively undeveloped desert scrub. Further open undeveloped areas stretch 20 plus miles east-northeast of the project site. A patchwork of residential developments, solar farms, and agricultural land uses lie to the west-northwest, the outskirts of the City of Lancaster approximately 1 mile to the south, and the General William J Fox Airfield and associated development approximately 2 miles to the west.

Refer to Appendix A for representative photographs taken during surveys conducted in 2023.

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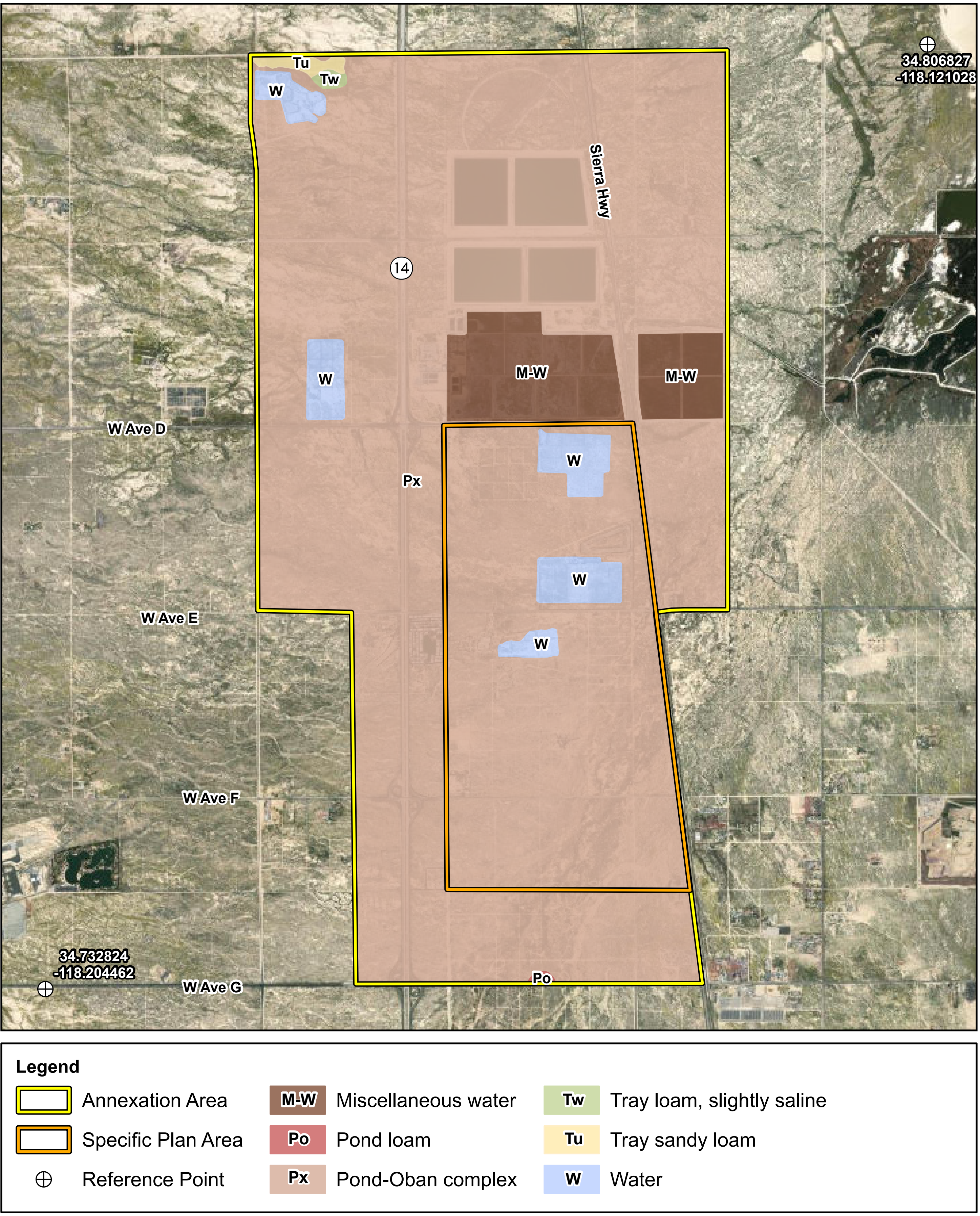
[1] The Lancaster Area Soil Survey (1926), is nearly 100 years old and is outdated, containing references to land values, a high-water table, and other attributes that no longer reflect current conditions within the project site.



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Source: Esri/Maxar (06/2023), USDA (9/2022)

WESTSIDE ANNEXATION AND SPECIFIC PLAN PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

USDA Soils

Figure 5

3.0 METHODS

3.1 Literature Review

Literature reviews and records searches were performed to determine which special-status biological resources have the potential to occur on - or within, the general vicinity of the project site. Known occurrences of special-status plant and wildlife species and sensitive vegetation communities[2] were identified by reviews of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB; CDFW 2024a), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (IREP; CNPS 2024), and the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation environmental project planning Tool (IPaC; USFWS 2024a), and other databases (as described in the Methods section below) as potentially occurring in the vicinity of the project site. CNDDB and IREP database reviews included queries for special-status species and sensitive vegetation community occurrence records within the USGS 7.5-minute quadrangles listed below and for the project region during the review of IPaC. Combined, these quadrangles capture an approximate 735 square-mile (470,400-acre) area centered around the project site.

- *Lancaster East*
- *Lancaster West*
- *Alpine Butte*
- *Rosamond*
- *Rosamond Lake*
- *Redman*
- *Littlerock*
- *Palmdale*
- *Ritter Ridge*
- *Little Buttes*
- *Del Sur*
- *Willow Springs*
- *Soledad Mountain*
- *Bissell*
- *Edwards*
- *Sleepy Valley*

The current regulatory/conservation status of special-status plant and wildlife species was verified through lists and resources provided by the CDFW, specifically the *Special Animals List* (CDFW 2024b), *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2024c), *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2024d), and *State and Federally Listed Endangered, Threatened, and Rare Plants of California* (CDFW 2024e). USFWS-designated Critical Habitat for species listed under the federal Endangered Species Act (FESA) was reviewed online via the Environmental Conservation Online System: Threatened and Endangered Species Active Critical Habitat Report (USFWS 2024b). In addition, previously prepared reports, survey results, and literature were reviewed, as available, detailing the biological resources previously observed on or within the vicinity of the project site to understand existing site conditions, confirm previous species observations, and note the extent of any disturbances, if present, that have occurred within the project site that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of

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[2] As used in this report, "special-status" refers to species that are either federally-/State-listed under their respective Endangered Species Acts, proposed, or candidates for listing; species that have been assigned a California Rare Plant Rank by the California Native Plant Society; species designated as Fully Protected, Species of Special Concern, or Watch List by the California Department of Fish and Wildlife; or State/locally rare natural vegetation communities.

special-status species., as well as the following resources for species information, previous data, and general context:

- *Custom Soil Resource Report for Antelope Valley Area, California* (U.S. Department of Agriculture, Natural Resources Conservation Service [USDA] 2024)
- USDA Web Soil Survey (2025a)
- National Wetlands Inventory (NWI) Mapper (USFWS 2024c), Appendix D
- Google Earth Pro historic aerial imagery from 1985 to 2024 (Google, Inc. 2024)
- *City of Lancaster General Plan 2030* (City of Lancaster 2009)
- *City of Lancaster General Plan 2030 Master Environmental Assessment* (RBF Consulting 2009)
- *Antelope Valley Logistics Center-West Project Initial Study/Mitigated Negative Declaration (City of Lancaster 2024)*
- Calflora Database (Calflora 2024)
- Species Accounts provided by Birds of the World (Billerman et. al 2022)
- Cornell Lab of Ornithology's eBird Database (eBird 2024)

3.2 Field Surveys

Focused field surveys for burrowing owl, rare plants, and Crotch's bumble bee were completed in 2023 across Planning Areas 2, 4, and 6-8. Results of these field surveys are presented in the reports listed below and appended to this report.

<u>Planning Areas 2 and 4:</u>

- Burrowing Owl Survey Report, North Lancaster Industrial Specific Plan – Planning Areas 2 and 4 Project (Michael Baker 2024a), Appendix E.
- Rare Plant Survey Report, North Lancaster Industrial Specific Plan – Planning Areas 2 and 4 Project (Michael Baker 2024b), Appendix F.
- Crotch's Bumble Bee Survey Report for the Antelope Valley Logistics Center (AVLC) North Project (Dudek 2023a), Appendix G.

<u>Planning Areas 6-8:</u>

- Burrowing Owl Survey Report, North Lancaster Industrial Specific Plan – Planning Areas 6-8 Project (Michael Baker 2023a), Appendix H.
- Rare Plant Survey Report, North Lancaster Industrial Specific Plan – Planning Areas 6-8 Project (Michael Baker 2023b), Appendix I.
- Crotch's Bumble Bee Survey for the Antelope Valley Logistics Center (AVLC) East Property (Dudek 2023b), Appendix J.

Protocol burrowing owl surveys were conducted in accordance with guidelines contained in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012); rare plant surveys following CDFW (2018), USFWS (2011), and CNPS (2001) guidelines, and Crotch's bumble bee following protocols prepared by Dudek and approved by CDFW. The results of these field surveys were integrated into this analysis and are presented and referenced where appropriate in this report. Recent reviews of aerial photography (Google, Inc 2025) were also conducted since the surveys were completed in 2023. This review indicated that no significant changes in land use or vegetative cover have occurred.

In addition to these biological surveys, a literature review and field surveys of Planning Areas 2, 4 and 6-8 were completed in February and March 2025 to determine the jurisdictional limits of waters of the US (WOTUS) and presented in *Westside Annexation and Specific Plan Project Delineation of Waters of the United States* (Noreas 2025). Field delineations were conducted based on methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (USACE 2008), and as further described in the Noreas delineation report, included as Appendix K.

4.0 RESULTS

4.1 Vegetation Communities and Land Cover Types

Vegetation mapping was completed in 2023 across Planning Areas 2, 4, and 6-8 during rare plant surveys (Michael Baker 2024b [Appendix F], 2023b [Appendix I]) and indicates that native desert scrub habitats are the dominant vegetation community/land cover type, composed primarily of shadscale/allscale (*Atriplex* spp.) scrub, with various other native desert scrub species present in smaller amounts. These desert scrub habitats have also experienced varying degrees of anthropogenic disturbances, as noted during 2023 field surveys, including impacts related to off-road vehicle use, illegal dumping, homeless encampments, and unrestrained domesticated and/or feral dogs. Such disturbances impact the plant diversity, health, distribution, composition and the overall quality of native habitats within the project site.

Based on a review of CDFW (2024f) on-line vegetation mapping, undeveloped areas of the project site outside the Planning Areas that were surveyed in 2023 contain similar *Atriplex*-dominated desert scrub habitats. Rubber rabbitbrush scrub (*Ericameria* spp.) and small areas of Mediterranean California naturalized annual and perennial grassland and stands of salt cedar (*Tamarix* spp.) are also mapped by CDFW within the project site. Incidental observations made by Michael Baker biologists of areas surrounding the Planning Areas surveyed in 2023, reflect a similar disturbed nature as those noted inside the surveyed Planning Areas. In general, the disturbance regimes across the project site limit the suitability of it to support native plant and wildlife species.

While Amargosa Creek transects southern portions of the project site, riparian habitats are not evident, as the stream channel has little topographic relief, and the stream corridor is composed of species that occur in the surrounding upland habitats. No natural riparian habitats were identified during vegetation surveys in 2023 across Planning Areas 2, 4, and 6-8. No significant native stands of trees, or other unique -or distinct vegetation communities, were identified during these field surveys, or during reviews of aerial photography and CNDDB records (CDFW 2024a) for the project site. Non-native trees which were planted primarily occur within the developed landscapes of Leisure Lake Mobile Estates and Mitchell's Avenue E RV Park. Stands of the non-native and invasive tamarisk tree in the project site were previously planted as wind breaks and are not naturally occurring.

Disturbed and developed land cover types were documented during 2023 surveys across Planning Areas 2, 4, and 6-8 and were identified during reviews of aerial photography across the remainder of the project site. Disturbed areas include those where native vegetation is no longer supported, and bare ground -or areas covered by weedy/ruderal plant species, have established. This includes locales that have been disturbed by human-influenced activities, and other areas where vegetation is simply sparse, or absent (e.g., road rights-of-way, lands impacted by utility infrastructure installation, etc.). Developed areas include paved roads and areas containing buildings and other structures as well, such as the water reclamation plant, and the mobile estates and RV park.

4.2 General Floral Inventory

Rare plant surveys were performed within specific portions of the project site, and plant species encountered were recorded to the lowest taxonomic level possible. A review of species lists from the project site indicates that the plant communities within it are typical of upland desert scrub habitats. A total of sixty-eight (68) plant species were identified during rare plant surveys conducted across Planning Areas 2 and 4 (Michael Baker 2024b) and Planning Areas 6-8 (Michael Baker 2023b). Of these, 48 species (71%) are native, and 20 species (29%) are non-native. All plant species identified during these surveys, any special-status designation, or indication of its status as a recognized invasive species are provided in Table B-1, Appendix B. No native tree species were observed during rare plant surveys, including western Joshua tree (*Yucca brevifolia*), further reinforcing the open, arid, and well-drained nature of the project site. The dominant vegetation consists of desert scrub species well-adapted to xeric (dry) upland environments, including saltbush/shadscale/allscale (*Atriplex* spp.), desert buckwheat (*Eriogonum* spp.), and common goldfields (*Lasthenia* spp.), all of which thrive in upland soils with rapid drainage and minimal moisture retention.

4.3 General Wildlife Inventory

This section provides a general discussion of common wildlife species that were detected during surveys conducted in 2023 across Planning Areas 2, 4, and 6-8, or that are expected to occur in the region. A total of forty-eight (48) wildlife species were identified during field surveys and are listed, along with any special-status designation, in Table B-2, Appendix B.

4.3.1 Fish

No fish or aquatic features suitable to sustain fish were observed during 2023 field surveys conducted across Planning Areas 2, 4, and 6-8. A review of aerial photography indicates that ponded water is present at the Lancaster Water Reclamation Plant, but these basins are artificially maintained as part of a wastewater treatment system and are not designed to support fish or natural aquatic ecosystems. Routine maintenance, water quality controls, and treatment processes further prevent conditions that would sustain fish populations within the project site. Similarly, Amargosa Creek, the prominent hydrological feature within the project site, is ephemeral, meaning it only carries water following precipitation events and remains dry for most of the year. Ephemeral streams do not provide the stable aquatic conditions necessary to support fish life cycles. There is no persistent flow, no perennial pools, and no hydrologic connectivity to fish-bearing waters from the project site. Given the lack of perennial water sources, sustained hydrology, or suitable aquatic habitat, fish are not present within the project site, nor would they be expected under natural conditions.

4.3.2 Amphibians

No amphibians or hydrogeomorphic features (e.g., perennial creeks, lakes, reservoirs) that would provide suitable breeding habitat for amphibians were detected during 2023 surveys conducted across Planning Areas 2, 4, and 6-8. Although historical mapping has sometimes referenced "pond" features in the region, these are naming conventions rather than indicators of hydrology within the project site. While individual amphibians may occur within the project site, significant populations of amphibians or breeding areas are not expected to occur.

4.3.3 Reptiles

Five (5) reptile species were identified during field surveys conducted in 2023 across Planning Areas 2, 4, and 6-8, including Great Basin whiptail (*Aspidoscelis tigris tigris*), red racer (*Coluber flagellum piceus*), long-nosed leopard lizard (*Gambelia wislizenii*), western fence lizard (*Scleroporus occidentalis*), and western side-blotched lizard (*Uta stansburiana elegans*) (Table B-2, Appendix B). These species are well-adapted to dry, well-drained upland conditions. The project site also provides suitable upland habitat for additional common reptile species known to occur in the region, including northern desert iguana (*Dipsosaurus dorsalis dorsalis*), desert spiny lizard (*Sceloporus magister*), Mohave rattlesnake (*Crotalus scutulatus scutulatus*), Mohave rattlesnake (*Crotalus scutulatus scutulatus*), and Mohave desert sidewinder (*Crotalus cerastes cerastes*). These species are strongly associated with arid, sandy, and rocky environments with rapid drainage and minimal moisture retention.

4.3.4 Birds

Thirty (30) bird species were detected during field surveys conducted in 2023 (see Table B-2, Appenidx B), the majority of which are characteristic of open desert scrub and upland environments. The most commonly observed species included common raven (*Corvus corax*), Say's phoebe (*Sayornis saya*), white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), and California horned lark (*Eremophila alpestris actia*). These species are all well-adapted to arid, upland habitats with open landscapes and sparse vegetation. As described in Section 4.1 of this report, the project site is dominated by desert scrub habitat, which provides suitable nesting habitat for upland songbirds. Additional nesting opportunities exist in structures, open ground surfaces, and other upland vegetation types present within the project site. Although Amargosa Creek crosses the project site, it is an ephemeral feature that does not sustain riparian vegetation or provide conditions suitable for riparian-dependent bird species. As a result, songbirds and raptors that rely on riparian corridors are not expected to nest within the project site. Overall, the project site provides marginal nesting habitat for various year-round and seasonal upland bird species.

Nesting birds are protected pursuant to the federal Migratory Bird Treaty Act (MBTA)[3] and the California Fish and Game Code (CFGC)[4]. To maintain compliance with the MBTA and CFGC, clearance surveys are typically required prior to any ground disturbance or vegetation removal activities to avoid direct or indirect impacts to active bird nests and/or nesting birds. Consequently, if an active bird nest (i.e., a nest with eggs or fledglings) is destroyed or if project activities result in indirect impacts (e.g., nest abandonment, loss of reproductive effort) to nesting birds, it is considered "take" and is potentially punishable by fines and/or imprisonment. The project site provides marginal nesting habitat for various year-round and seasonal bird species.

4.3.5 Mammals

Field surveys documented several common mammal species are characteristic of arid, upland environments within specific portions of the project site. Four (4) mammal species were observed, including desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), and coyote (*Canis latrans*), all of which are adapted to open desert scrub habitats with well-drained soils, and minimal water availability. The project site also provides suitable habitat for additional upland mammal species known to occur in the region, including Merriam's kangaroo rat (*Dipodomys merriami*), desert woodrat (*Neotoma lepida*), and southern grasshopper mouse (*Onychomys torridus*). These species thrive in dry, sandy, or rocky environments, relying on arid-adapted vegetation and natural burrowing conditions in well-drained upland soils.

Bats occur throughout most of California, including desert regions. However, opportunities for bat roosting and/or maternity roosting appears minimal or non-existent. Uninhabited structures that could provide suitable roosting habitat and trees suitable for cavity and foliar-roosting bat species are absent from the project site.

4.4 Special-Status Biological Resources

During the literature review, a total of six (6) natural vegetation communities considered sensitive by CDFW, thirty-six (36) special-status plant species, and forty-two (42) special-status wildlife species were identified during reviews of the CNDDB, IREP, and IPaC, and are provided in Appendix C. The potential for these resources to occur in the project site was evaluated based on each species' known geographic distribution and elevation range; species-specific habitat requirements (e.g., vegetation communities/land covers, soils, hydrology, slope/aspect, and other requirements); life history traits (e.g., disturbance

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[3] The federal Migratory Bird Treaty Act (MBTA) prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the U.S. Fish and Wildlife Service. Refer to: https://www.fws.gov/law/migratory-bird-treaty-act-1918

[4] Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code or any regulation made pursuant thereto; Section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey); and Section 3513 makes it unlawful to take or possess any migratory non-game bird except as provided by the rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act, as amended (16 U.S.C. § 703 *et seq.*).

tolerance); and biologists' expertise, knowledge, and best professional judgement. Current and historic records of species identified during the literature review were also considered during the analysis; however, a species' potential to occur determination was not solely based on the age or location of these previously documented records. The potential to occur categories used in this analysis are defined as follows:

> **Present:** The species was observed or detected within the project site during general or focused/protocol surveys.
>
> **Expected:** The project site is within the known geographic distribution and elevation range of the species, suitable habitat (considering vegetation, soils, and other factors) is present, and there is viable landscape connectivity to a local, known extant population(s) or sighting(s).
>
> **Moderate**: The project site is within the known geographic distribution and elevation range of the species; however, habitat within the project site (considering vegetation, soils, and other factors) is marginal and landscape connectivity to a local, known, extant population or detection is compromised or non-existent.
>
> **Not Expected**: The species is not expected to occur within the project site as its distribution is restricted by substantive habitat requirements which do not occur – or are negligible within it, this location of is outside of the species' elevation range or known geographic distribution, or there is no connectivity to known, extant populations.

4.4.1 Sensitive Natural Communities

During the literature review, six (6) natural communities considered sensitive by the CDFW were identified in the CNDDB (refer to Table C-1, Appendix C). These include Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Scrub, Southern Willow Scrub, Valley Needlegrass Grassland, and Wildflower Fields.

The project site consists primarily of desert scrub habitats dominated by saltbush/shadscale/allscale (*Atriplex* spp.), areas disturbed by anthropogenic activities, and developed lands consisting of paved roadways and structures. No sensitive native vegetation communities were identified within the project site during surveys conducted in 2023 across Planning Areas 2, 4, and 6-8, and none were identified during reviews of aerial photography (Google, Inc 2024 and 2025). As a result, no sensitive vegetation communities, including those listed in *California Sensitive Natural Communities* by CDFW are expected to occur within the project site.

4.4.2 Special-Status Plant Species

During the literature review, a total of 36 special-status plant species were identified by the CNDDB, IREP, and IPaC (see Table C-1, Appendix C). Rare plant surveys across Planning Areas 2, 4, and 6-8 identified three special-status species, all of which are characteristic of dry, well-drained upland desert environments and/or alkaline areas. The total acreages of these species identified during the 2023 rare plant surveys is presented in Table 2 below. The results of these surveys, including where special-status species were mapped are presented in the rare plant survey reports appended as Appendix F and I.

TABLE 2. SPECIAL-STATUS PLANT SPECIES SURVEY RESULTS

Scientific Name	Common Name	Federal/State/CRPR	Acreage
Planning Area 2 and 4			
Calochortus striatus	alkali mariposa lily	None/None/1B.2	62.78
Chorizanthe spinosa	Mojave spineflower	None/None/4.2	1.31
Eriastrum rosamondense	Rosamond eriastrum	None/None/1B.1	0.81
Planning Areas 6-8			
Calochortus striatus	alkali mariposa lily	None/None/1B.2	129.45
Chorizanthe spinosa	Mojave spineflower	None/None/4.2	2.04

4.4.3 Special-Status Wildlife Species

During the literature review, a total of forty-two (42) special-status wildlife species were identified by CNDDB and IPaC (refer to Table C-2, Appendix C), including twenty-two (22) bird species. Three special-status wildlife species, northern harrier (*Circus hudsonius;* CDFW Species of Special Concern [SSC]), loggerhead shrike (*Lanius ludovicianus*; SSC), and California horned lark (CDFW Watch List species [WL]) were detected during field surveys within the project site. According to records within the CNDDB (CDFW 2024a) and a review of the eBird database (eBird 2024), several common raptor and songbird species known from the region have been recorded in the vicinity of the project site. Based on results of the field surveys conducted in 2023 across Planning Areas 2, 4, and 6-8, the actual habitat preferences of these species, occurrence records, and known current distributions, the only bird species determined to have moderate potential to occur, or is likely to occur within the project site, is the burrowing owl (*Athene cunicularia*).

While no individuals or sign of burrowing owl (i.e. whitewash, scat, prey remains) were detected during protocol surveys performed within selected areas across the project site, suitable desert scrub habitat and burrows potentially suitable for use by burrowing owl were observed. This species was designated in October 2024 by the FGC as a candidate species for listing under CESA. Burrowing owls are known to occupy desert scrub habitats in the Antelope Valley and could be a migrating transient, and/or forage within the project site. Remaining special-status bird species identified during the database reviews are not expected to occur within the project site due to a lack of suitable habitats preferred by these species, known distribution ranges, and/or lack of occurrence records in proximity of the project site.

Special-status reptile and fossorial mammal species comprise most of the non-bird special-status species identified during review of the CNDDB and IPaC. No individuals or sign of these special-status species were observed during 2023 field surveys conducted across Planning Areas 2, 4, and 6-8. Refer to Table C-2 in Appendix C for the potential for all 42 special-status wildlife species identified during the literature review to occur within the project site.

Due to their regional significance, burrowing owl, as well as the following specific federal and/or State-listed species are described and evaluated in further detail below: Crotch's bumble bee (*Bombus crotchii*; Candidate for State listing as endangered [CSE]), Swainson's hawk (*Buteo swainsonii*; State-listed threatened [ST]), desert tortoise (*Gopherus aggassizii*, federally-listed Threatened [FT] and ST), and Mohave ground squirrel (ST).

4.4.3.1 Burrowing Owl

As presented above, burrowing owl has recently been designated by the FGC as a Candidate for listing as endangered or threatened under CESA. This species is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant *et al.* 1999). Burrowing owls are dependent upon the presence of burrowing mammals (e.g., California ground squirrels, coyotes, American badger) whose burrows are used for roosting and nesting. The presence or absence of mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drainpipes, standpipes, and dry culverts. Burrowing owls may also burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. They also require open vegetation allowing open line-of-sight of the surrounding habitat to forage as well as watch for predators.

This species is known to occur in the Antelope Valley. Eighty-three (83) occurrence records of burrowing owl were identified during the review of the CNDDB (CDFW 2024a), nearly all of which are from within the past 20 years. No occurrence records coincide with the project site. Three records from within the past 20 years lie within 4 miles west of the project, west of SR-14, with a number of additional records out to 10 miles west of the project site. A concentration of records from the 2000's coincides with agricultural fields approximately 10 miles to the east.

A limited number of burrows potentially suitable for burrowing owl were identified during protocol surveys performed across Planning Areas 2 and 4 (Michael Baker 2024a [Appendix E] and Planning Areas 6-8 (Michael Baker 2023a [Appendix H]) in 2023; however, no individuals or sign of this species (i.e. whitewash, scat, or prey remains) were detected at burrows suitable for the species or elsewhere during protocol surveys. With the presence of potentially suitable desert scrub habitat and burrows in the project site and its known occurrence in the Antelope Valley, this species is likely to occur within the project site.

4.4.3.2 Crotch's Bumble Bee

Crotch's bumblebee (*Bombus crotchii*) was designated as a candidate for listing as endangered under CESA in September 2022, along with three other native bumblebee species. This species is found in a range of habitats across California, including open grasslands, shrublands, chaparral, desert margins, and semi-urban settings. While it has been documented in desert ecosystems, its presence is closely tied to the availability of high-quality floral resources and suitable nesting habitat, both of which are extremely limited within the project site. A review of the California Natural Diversity Database (CNDDB) identified three historical occurrence records for Crotch's bumble bee, the most recent of which dates back to 1971, approximately 3 miles southwest of the project. Additionally, two community science observations from iNaturalist within the broader Lancaster area have been reported within the last three years. However, these records do not establish a sustained presence of the species within the project site, or its immediate vicinity.

Despite the lack of suitable habitat, protocol-level surveys were conducted in 2023 across Planning Areas 2, 4, and 6-8, following CDFW-accepted methods (Dudek 2023a,b). These surveys yielded no detections of Crotch's bumble bee, nor were any nests found. Further habitat assessments confirmed that the majority of the project site lacks key biological features necessary to support this species, including sufficient floral resources and a high density of small rodent burrows for nesting and overwintering. Dudek also determined that the nearest area with sufficient foraging opportunities for *Bombus* species is the Piute Pond complex, located just east of the Annexation Area Therefore, based on historical records, current habitat conditions, and negative survey results, Crotch's bumble bee is not expected to occur within the project site.

4.4.3.3 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a highly migratory raptor that historically nests in grasslands, shrublands, and open woodlands but has adapted to utilizing agricultural landscapes where native habitat has been converted to farmland. This species typically nests in trees adjacent to foraging habitat, including irrigated pastures, row crops, grain fields, and hayfields (Bechard et al. 2020). A review of the California Natural Diversity Database (CNDDB) identified 37 occurrence records of Swainson's hawk, with the nearest documented nesting activity located approximately 1.0 mile southeast of the project site in 2016. Additionally, observations and nesting by this species in the region has been compiled from various sources and presented in *Conservation Analysis for the City of Lancaster's Alpine Butte Preserve* (Wildlands 2024). While observations of the species have been recorded in the vicinity of the project site, nesting has not been documented. Nesting by this species is strongly associated with agricultural land uses, which provide critical foraging opportunities. The project site lacks the mature trees necessary for nesting, and the project site and surrounding landscapes do not contain the irrigated farmland or prey-rich fields, that are needed to support Swainson's hawk foraging. While native desert vegetation exists within the project site, it does not provide the same high-value foraging conditions associated with agricultural areas, which offer greater concentrations of small mammals, birds, and insects. Due to the absence of key nesting and foraging requirements, Swainson's hawk is not expected to nest or regularly occur within the project site. While individuals may occasionally fly over the project site during migration, the lack of suitable nesting structures and agricultural food sources makes the project site unsuitable for sustaining a resident Swainson's hawk population.

4.4.3.4 Mohave Ground Squirrel

The Mojave ground squirrel (MGS) (*Xerospermophilus mohavensis*) is a small, diurnally active rodent endemic to the western Mojave Desert, with one of the smallest geographic ranges of any North American ground squirrel. This species is typically found in open desert scrub, alkali scrub, Joshua tree woodlands, and annual grasslands, where it relies on a mix of green vegetation, seeds, and fruits for foraging. MGS prefer sandy to gravelly soils but actively avoid rocky terrain. A review of the California Natural Diversity Database (CNDDB) identified 24 historical records of MGS, none of which overlap with the project site. The most recent records (from the 2000s) are located over 10 miles northeast, near Rodgers Dry Lake. Importantly, the project is at the extreme southwestern periphery of the species' known range and is not part of any core or peripheral MGS population area (CDFW 2019).

Additionally, no MGS were detected in any protocol surveys conducted within the broader Palmdale/Lancaster region between 2008 and 2012. Since 1991, no verifiable observations or trapping records of MGS have been documented anywhere in Los Angeles County outside of Edwards Air Force Base, and its immediate boundary (Leitner 2015, 2021). The most recent scientific assessments suggest that the species is essentially extirpated from Los Angeles County, with recent detections limited to the extreme northeastern portion of the county, well outside the project site. No MGS or sign of their presence (e.g., burrows, scat, tracks) were observed during any field surveys performed within specific portions of the project site. The suitability of habitat within the project site has been significantly reduced by past and ongoing human disturbances, further diminishing any potential for occupancy. Given the lack of recent records, the species' documented range contraction, multiple negative survey results, and the absence of suitable habitat features within the project site, MGS is not expected to occur within it.

4.4.3.5 Desert Tortoise

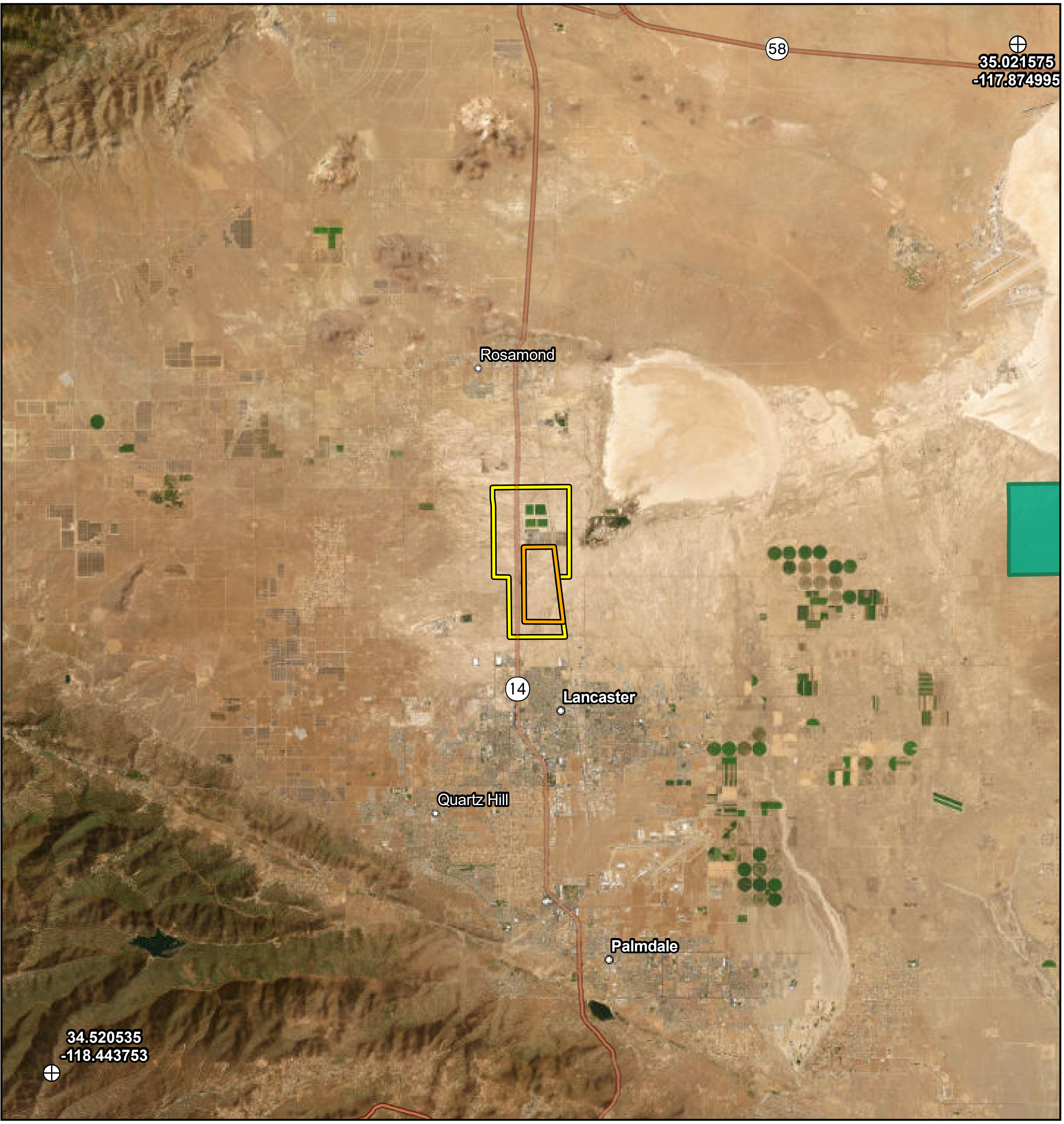
The desert tortoise (*Gopherus agassizii*) is currently designated as a State and federally threatened species and is native to the Mojave Desert of California, Nevada, Arizona, and southwestern Utah. This species is most commonly found in gentle-sloping desert terrain with a mix of sand and gravel, where low-growing desert scrub vegetation provides open inter-shrub spaces for movement and foraging. The preferred habitat for desert tortoise is creosote bush scrub below 5,500 feet in elevation, where they forage on wildflowers, grasses, and desert-adapted forbs. While desert tortoises require loose, moderately friable soils to support burrow construction, they also seek shelter in deep caves, rock crevices, or hardened soil overhangs. In a general sense, the project site, however, does not provide the necessary soil conditions, terrain, or vegetation structure to support this species. A review of the California Natural Diversity

Database (CNDDB) identified six desert tortoise occurrence records, none of which overlap with the project site. The closest records, which are dated within the past 20 years, are located more than 10 miles north and east of the project. Furthermore, no desert tortoises or signs of their presence (e.g., burrows, scat, tracks, or shell fragments) were detected during any field surveys conducted. The suitability of habitat within the project site has been significantly diminished by past and ongoing human disturbances, further reducing the potential for this species to occur. Given the lack of recent records, the absence of suitable soil and burrowing conditions, and the project site's location outside the range of viable populations, desert tortoise is not expected to occur within it.

4.5 Critical Habitat

Under the U.S. Endangered Species Act (ESA), Critical Habitat is designated at the time of listing of a species. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals of the species are present or not. In the event that a project may result in take or adverse modification to a listed species' designated Critical Habitat, a project may be required to obtain take authorization and engage in suitable mitigation. However, consultation with USFWS for impacts to Critical Habitat is only required when a project has a federal nexus. This may include projects that occur on federal lands, require federal permits (e.g., Clean Water Act [CWA] Section 404 permit), or receive any federal oversight or funding. If there is a federal nexus, then the federal agency that is responsible for providing funds or permits would be required to consult with the USFWS under the ESA.

The project site is not located within USFWS-designated Critical Habitat for any federally listed species (refer to Figure 6, *Critical Habitat*).



`9/19/2024 JN \\santca1hub\irvica1fs1\HROOT\pdata\202359\GIS\APRX\Westside Annexation NR\Westside Annexation NR.aprx`

Legend

- ▭ Annexation Area
- ▭ Specific Plan Area
- ⊕ Reference Point
- 🟩 Desert Tortoise (*Gopherus agassizii*)

Michael Baker INTERNATIONAL

0 12,500 25,000 Feet

Source: Esri/Maxar (06/2023), USFWS (09/2024)

WESTSIDE ANNEXATION AND SPECIFIC PLAN PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Critical Habitat

Figure 6

4.6 State and Federal Jurisdictional Aquatic Features

The project site is located within the ancient lakebed of Lake Thompson, which once covered the lower Antelope Valley, including present-day Rogers Lake, Rosamond Lake, and Buckskin Lake, during the Pleistocene epoch. During this time, the region experienced a cooler, wetter climate, supporting pluvial lakes surrounded by lush wetland marshes. However, approximately 10,000 years ago shifting climate conditions occurred during the Early Holocene, in which the climate became dryer and hotter causing the wetland resources to diminish.

As the lake waters receded from increased evaporation and transpiration, soluble salts precipitated out of solution and lined the retreading playa lake bottom. Hydrophytic (“water-loving”) halophytes (“salt-tolerant” plants) were among the first to colonize this briny substrate. The increase in air temperature created stronger winds and the exposed lake sediments were carried with the gusts. Small clumps of vegetation were able to hold these aeolian sediments and with additions of organic matter from decaying vegetation elevated mounds began to form. Fossorial rodents began to seek shelter amongst the shrubs and herbaceous growth from the soggy inter-mound areas and their “diggings” further expanded the height and width of these mounds. Although 10,000 years have passed, this landscape is still in transition from a perennial lake to an unvegetated pluvial lake bottom, to a desert shrub community with continual increases in plant cover as the inter-mounds are ever colonized by advancing vegetation.

The project site is relatively flat, gently undulating but sloped towards the east, with elevations ranging from 2,302 to 2,309 feet AMSL. The undulation consists of mound-intermound topography. The mounds are generally 0.5 -2 feet higher in elevation in comparison to the intermound areas. There are numerous theories on the origin of mounded topography ranging from Pleistocene gophers, fluvial action, vibrations caused by earthquakes, and wind deposited sediments. However, wind disposition of fine-grain mineral materials (silts and sands) coupled with organic deposition from decaying plant matter seem to be the more appropriate concept in this case.

The small amount of rainfall that falls on the project site’s undulating surface is intercepted by the mounds and inter-mounds. Due to the more porous soils of the mounds (mostly due to the addition of organic matter that is generally lacking in the intermounds), more of the rainwater is absorbed in comparison to the intermound areas. In areas where finer textured materials are present within the project site, very shallow ponding occurs in the inter-mound areas. However, the ponding is sporadic and short-lived. In addition to direct inception of rain, the inter-mounds receive some hydraulic inputs from the adjacent mounds as overland flows, or toe slope seepage. The groundwater is too deep (greater than 6.5 feet) within the project site to assist in supporting surface ponding (USDA 2025a).

Amargosa Creek generally bisects the southeast area of the project site in a southwest to the northeast direction. The creek is relatively shallow but has been altered by human activity and channelized throughout most of its length. Evidence of the channelization consists of the rows of excavated soil along each side of the top of bank. Amargosa Creek continues in a northeast direction but is diverted into a human-made basin prior to entering Rosmond Lake. Additionally, polygonal soil cracking was observed within the project site's inter-mound areas, occasionally displaying hexagonal patterns, while mound soils exhibited T-shaped or Y-shaped cracks.

Research suggests that:

- ✓ Polygonal (hexagonal) cracking in soils is a natural process influenced by drying and shrinking cycles, rather than sustained wet conditions.
    - Over time, annealing processes (gradual changes due to repeated drying and contraction) lead to increasingly complex hexagonal crack patterns.
    - Alkaline soil conditions contribute significantly to the formation of these cracks, meaning areas with higher soil pH are more prone to this type of cracking.
- ✓ In short, the formation of these cracks within the project site is due to natural desiccation cycles, a function of climate, soil chemistry, and drying cycles. These cracks develop as a result of natural drying and evaporation cycles rather than persistent water saturation within the project site, so their presence does not indicate sustained hydrology, nor is it an indicator of hydric soils.

The project site falls within the Antelope-Fremont Valleys Watershed. The geology within the project site is the same as that within the Central Valley, composed of Quaternary deposits (Pliocene to Holocene) consisting mostly of non-marine deposits of alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. According to USDA Web Soil Survey (2025a), and as depicted on Figure 5, *USDA Soils*, the most prevalent soil mapping unit that occurs within the project site is Px: Pond-Oban complex (457884). This soil mapping unit, along with all of its inclusions are not hydric, and are not included on the National Hydric Soil List (NHSL) (USDA 2025b). Unlike its name implies, the Pond soil series does not occur in ponds and was named after the Town of Pond, located in Kern County where the type locality for this series occurs. Staying in tradition, the Pond soil series was named after the nearest town or landmark where they were first recognized. Similarly, the Oban soil series was named from the landmark neighborhood of Oban, located less than 2 miles north of the project site.

The Soil Survey for the Landcaster Area, California (1926) where the Soilweb data is originally obtained, is nearly 100 years old, and much of the information is severely outdated. A total of nine soil pits were excavated within specific portions of the project site. In general, the soils were very similar, only varying slightly. Almost all the soils onsite had polygonal cracking caused by the shrink-swell conditions of the soils. In summary, the soils observed within the project site are moderately well drained, with greater than 6.5 feet of depth to a restrictive layer or ground water and are not considered hydric.

The vegetation within most of the project site would be classified as desert saltbush scrub according to Holland (1986). As the project site was generally dominated by non-hydrophytic woody saltbush species including shadscale (*Atriplex confertifolia*), fourwing saltbush (*A. casnescens*), and allscale saltbush (*A. polycarpha*), with and understory of weedy non hydrophytic annual grasses including cheatgrass (*Bromus* *tectorum*), Spanish brome (*Bromus madritensis*), common Mediterranean grass (*Schismus barbatus*), and smooth barely (*Hordeum murinum ssp. glaucum*). Other dominant species that were present included goosefoot (*Chenopodium album*) and needle goldfield (*Lasthenia gracilis*) (Noreas 2025).

As stated previously, hydrologically, the only significant drainage signature within the project site is Amargosa Creek, which flows southwest to northeast. Amargosa Creek is an ephemeral drainage, so it does not have a continuous flow throughout the year. Additionally, Amargosa Creek includes no notable concentrations of riparian habitat or hydrophytic vegetation within it. In a general sense, the project site is predominately a well-drained upland system where water disperses, rather than accumulates. Within this landscape, water drains away quickly. Nonetheless, a series of constructed ponds, identified as "sewage disposal ponds" on USGS topographic mapping occur in the northern portion of the project site.

Three federal and state agencies regulate activities within streams, wetlands, special aquatic sites, riverine and riparian areas in California. The U.S. Army Corps of Engineers (USACE) Regulatory Branch regulates discharge of dredged or fill material into "waters of the U.S." (WOTUS) pursuant to the CWA Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. Of the state agencies, the Regional Water Quality Control Board (RWQCB) regulates discharges to surface waters pursuant to Section 401 of the CWA. But as waters of the State (WOTS), the RWQCB pursuant to Section 13263 of the California Porter-Cologne Water Quality Control Act, and the CDFW, under Section 1600 et seq. of the CFGC, regulates alterations to streambed and associated riparian habitats. Reconnaissance surveys were performed across specific portions of the project site. Additionally, USGS 7.5-minute quadrangle mapping, aerial photography, and NWI mapping (USFWS 2024c) was reviewed for indications of regulated aquatic features occurring within the project site.

Results of the targeted field work across Planning Areas 2, 4, and 6-8 and desktop literature reviews provided in the Noreas (2025) delineation report (Appendix K), indicates that one primary drainage feature, Amargosa Creek, is the prominent water conveyance signature within the project site. Other unnamed and isolated features observed across these Planning Areas: did not exhibit a well-defined ordinary high watermark, obvious bed, bank or channel; lacked continuous or recurrent soil saturation at a frequency and duration sufficient to form or develop hydric soil indicators; and did not satisfy the hydrological or vegetative criteria required for state or federal protection as WOTS or WOTUS.

Amargosa Creek appears as a USGS blueline ephemeral stream on topographic mapping, transecting the southern portion of the project site. Additionally, lake and freshwater pond features depicted on the NWI map coincide with the treatment ponds at the water reclamation facility, and what appear to be other man-made ponds in the project site. Although the NWI (Appendix D) was reviewed and it is informative, it is not considered indicative of the resources within the project site[5]. As such, the precise acreage of

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[5] The NWI was reviewed and is informative, but it is not considered indicative of the resources observed within the project site for the following reasons:

WOTS and/or WOTUS within the project site, and impacts to any jurisdictional features, will be subsequently determined prior to ground disturbance. This is warranted, as Amargosa Creek, the sewage disposal ponds, etc., jurisdictional status under state (RWQCB and CDFW) and federal (USACE) regulations shall depend on several key factors that are yet to be formally vetted (e.g., presence of an uninterrupted – or continuous surface water connection to a Traditional Navigable Waters, Perennial or Intermittent waterway, adjacent wetlands, and so forth).

4.7 Wildlife Corridors and Habitat Linkages

Wildlife corridors are pathways that allow animals to move between suitable habitat areas, enabling genetic exchange and providing access to new territories as populations fluctuate. These corridors help mitigate habitat fragmentation caused by urbanization, infrastructure, and changes in vegetation by allowing species to move between isolated habitat patches. However, for a wildlife corridor to be functional, it must provide suitable cover, food, and water resources to support species movement while also being free from significant human disturbance or physical barriers. A review of the California Department of Fish and Wildlife's Terrestrial Habitat Connectivity Viewer (CDFW 2024g) confirms that the project site is not located within any mapped wildlife corridor, wildlife linkage area, or designated connectivity overlay. Instead, most of the project site is classified as having "Limited Connectivity Opportunity," meaning it does not serve as a key movement route for regional wildlife.

The far northern portion of the project site is mapped within a "Connections with Implementation Flexibility" zone (CDFW 2024g), which includes water reclamation ponds and artificial ponding features approximately 0.50 miles east of the project site. However, the project site itself does not provide the necessary conditions to function as a wildlife corridor. The project site is situated within the Antelope Valley region of the western Mojave Desert and is dominated by upland desert scrub habitat. While undeveloped open desert exists in the broader landscape, multiple barriers significantly reduce the suitability of the project site as a wildlife movement corridor, including:

- The presence of Fox Field Airport and commercial development (2 miles west);
- Major highways and paved roadways such as SR-14, SR-138, Sierra Highway, and local avenues; and

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- NWI users are advised that the features displayed therein show wetland type and extent using a biological definition. There is no attempt to define the limits of proprietary jurisdiction of any Federal, State, or local government - or to establish the geographical scope of the regulatory programs of government agencies. Therefore, the data should not be relied upon for jurisdictional identification.
- NWI maps have been prepared from limited analysis of high-altitude imagery in conjunction with collateral data sources focusing on wetlands. When imagery is conflicting, the Environmental Systems Research Institute (ESRI) Base imagery is used.
- Erosional features and other signatures within the project site are relatively small, and do not have obvious vegetation species variability, making them indistinguishable from other signatures (e.g., off highway vehicle tracks), at high altitude.

- Existing development, fence lines, and light and noise disturbances from vehicular traffic.

While Amargosa Creek transects the southern portion of the project site, this feature is ephemeral and does not contain a riparian corridor or vegetation structure that would facilitate significant wildlife movement. As a result, Amargosa Creek is not expected to function as a key movement corridor, nor does the project site provide a critical linkage between larger habitat areas. In summary, the project site does not function as a significant wildlife corridor or habitat linkage due to its upland nature, lack of riparian connectivity, and physical barriers such as roads, airports, and development. While some localized species may move through the project site, the broader Antelope Valley region contains more suitable open-space linkages, including the nearby Antelope Valley Significant Ecological Area (SEA), which provides a far greater role in supporting regional wildlife movement.

4.8 Significant Ecological Areas

Significant Ecological Areas (SEAs) are designated regions within Los Angeles County that contain irreplaceable biological resources and have been formally recognized in the Los Angeles County General Plan (County of Los Angeles 2015). The SEA Program aims to protect genetic and ecological diversity by identifying biologically significant areas capable of sustaining themselves over time. On December 17, 2019, the Los Angeles County Board of Supervisors adopted an SEA ordinance, which establishes permitting requirements, development standards, and review processes for new projects within designated SEAs. A review of SEA mapping confirms that the project site is not located within any designated SEA. The nearest SEA, the Antelope Valley SEA, is adjacent to the project site (Figure 7, *Significant Ecological Areas*). The Antelope Valley SEA extends from the Angeles National Forest to the playa lakes of Edwards Air Force Base. Additionally, the San Andreas SEA is located approximately 8 miles south-southwest of the project, following the San Andreas Fault line. This SEA serves as a connection between the San Gabriel and Tehachapi Mountain ranges and supports regional wildlife movement through protected desert drainages and native desert habitat. Regardless of the close proximity of these SEA, the requirements of the SEA program adopted by Los Angeles County do not apply to properties within the City limits.

4.9 Other Habitat Conservation Plan/Natural Community Conservation Plan Areas

The project site falls with the boundary of the Desert Renewable Energy Conservation Plan (DRECP). The DRECP is focused on 10.8 million acres of public lands in the desert regions of seven California counties – Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. It is a landscape-level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. It is a collaborative effort between the U.S. Bureau of Land Management (BLM), California Energy Commission, CDFW, and the USFWS (BLM 2024).

The project site also falls within the boundary of the West Mojave Plan. The West Mojave Plan is a habitat conservation plan and federal land use plan amendment that presents a comprehensive strategy to conserve and protect the desert tortoise, the Mohave ground squirrel, and nearly 100 other sensitive plants and animals and the natural communities they inhabit, while providing a streamlined program for complying with the requirements of CESA and FESA. The West Mojave Route Network Project is a key component of this plan. It includes amendments to the California Desert Conservation Area Plan and establishes a travel and transportation route network across approximately 3.1 million acres of public lands managed by BLM in Southern California. The project aims to balance conservation efforts with public access and recreation, ensuring sustainable use of the desert's resources.

Although the project site falls within the boundary of these habitat conservation plans, these plans are not applicable to the project as they apply to federally managed lands, which do not occur within it.

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Source: Esri/Maxar (06/2023), County of Los Angeles (12/2022)

WESTSIDE ANNEXATION AND SPECIFIC PLAN PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Critical Habitat

Figure 6

5.0 IMPACT ANALYSIS

The following discussion examines the impacts to biological resources that may occur as a result of the proposed project. The determination of impacts is based on both the features of the proposed project and the biological values of the habitat and sensitivity of plant and wildlife species potentially affected.

Impacts to biological resources are assessed using impact significance threshold criteria, which mirror the policy statement contained in the CEQA, Section 21001(c) of the California Public Resources Code. The questions below model those included in the checklist of questions listed in Appendix G of the CEQA guidelines and that are considered to determine if the project would have significant impacts to biological resources

5.1 Impacts to Special-Status Species

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

Less than Significant with Mitigation Incorporated. As presented in Section 4.4.2 and 4.4.3 of this report, several non-listed special-status plant and wildlife species are expected to occur or have moderate potential to occur within the project site. Species currently listed and protected under FESA and/or CESA are not expected to occur within the project site; however, burrowing owl, a Candidate for listing under CESA, is likely to occur on-site, while western Joshua tree, also a Candidate for state listing, has a moderate potential to occur within the project site. Therefore, development activities proposed in the project site could result in direct and indirect impacts to special-status species, including nesting birds protected under the MBTA and CFGC, resulting in significant impacts. Potential significant impacts and measures to reduce impacts to less than significant are presented below.

Individual special-status plant and wildlife species could be directly impacted by construction equipment crushing or running over them, trampling, or otherwise harming them. Indirect impacts could result from construction-related habitat loss and modification of adjacent habitats related to dust, noise, vibration, stormwater runoff, and through the potential spread of noxious and invasive plant species into these communities.

5.1.1 Special-Status Plants

Special-status plant species that were detected during field surveys - or were determined to have a moderate potential to occur within the project site and may be impacted by the Project include, alkali mariposa lily, Rosamond eriastrum, Mojave spineflower, golden goodmania, and white pygmy poppy. With implementation of Avoidance and Minimization Measure (AMM) BIO-1 presented in Section 6 below, impacts to these special-status plant species during implementation of projects proposed within the project site would be reduced to a level less than significant.

While not detected during surveys conducted in 2023 in Planning Areas 2, 4, and 6-8, Joshua trees have a moderate potential to occur within the project site and may be impacted by the Project. With the implementation of AMM BIO-1 presented in Section 6 below, impacts to western Joshua tree would also be reduced to a level less than significant.

5.1.2 Special-Status Wildlife

Special-status wildlife species previously identified in the project site during 2023 surveys, including northern harrier, loggerhead shrike and California horned lark, as well as burrowing owl, which is likely to occur, may be impacted by the proposed Project. With implementation of AMM BIO-2 and BIO-3 presented in Section 6 below, impacts to special-status wildlife species during implementation of projects proposed within the project site would be reduced to a level less than significant.

Nesting birds protected under the MBTA and CFGC could be directly impacted by construction equipment and indirectly because of noise, dust, and vibrations, which can result in increased nestling mortality due to nest abandonment or decreased feeding frequency. Although no active nests were observed during surveys in 2023, the project site includes habitats that are suitable to support nesting birds. With implementation of AMM BIO-3 presented in Section 6 below, impacts to nesting birds during implementation of projects proposed within the project site would be reduced to a level less than significant.

5.2 Impacts to Sensitive Natural Communities

b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No impact. Significant direct and indirect impacts to sensitive natural communities would be similar to those presented above for special-status plant species. As presented in Section 4.4.1 of this report, no sensitive native vegetation communities, including riparian habitats, were identified during surveys within specific portion of the project site, and none were identified during reviews of aerial photography (Google, Inc 2024 and 2025) and vegetation mapping (CDFW 2024f). As a result, sensitive natural communities are not expected to occur within the project site and therefore, the project would have no impact on riparian habitats or other sensitive natural communities.

5.3 Impacts to Jurisdictional Aquatic Resources

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

Less than significant with mitigation incorporated. As based on the Noreas (2025) delineation report and presented in Section 4.6 of this report, the reconnaissance level field work and literature reviews indicate that one primary drainage feature, Amargosa Creek, is the only notable water conveyance signature within the project site. Other unnamed and isolated features do not appear to exhibit a well-defined ordinary high watermark, obvious bed, bank or channel, continuous or recurrent soil saturation, and lack the hydrological or vegetative criteria required for state or federal protection as wetlands or waters. Nonetheless, a formal delineation of WOTUS and WOTS shall be completed prior to ground disturbance, so the final regulatory status of drainage signatures and the water reclamation facility can be determined.

While it is anticipated that these features do not fall under jurisdiction of the USACE, filling, dredging, or otherwise altering such features would result in impacts to signatures falling under State agency jurisdiction, and are expected to require a Waste Discharge Requirement from RWQCB, pursuant to the California Porter-Cologne Water Quality Control Act, and a Lake and Streambed Alteration Agreement from CDFW, pursuant to Section 1600 et seq. of the CFGC.

The presence and extent of regulatory agency jurisdiction shall be identified by completing a jurisdictional determination, and if potentially regulated jurisdictional features are determined present, a formal field delineation following the most recent agency-approved methods. This will be required to determine the extent of agency jurisdiction and potential impacts to regulated features. If these signatures are disturbed, permits or discretionary approval may need to be obtained from regulatory agencies: USACE, which regulates discharge of dredged or fill material into "WOTUS" pursuant to the CWA Section 404 of the CWA and Section 10 of the Rivers and Harbors Act; RWQCB, which regulates discharges to surface waters pursuant to Section 401 of the CWA and Section 13263 of the California Porter-Cologne Water Quality Control Act and CDFW, which regulates alterations to streambed and associated riparian habitat under Section 1600 et seq. of the CFGC. With implementation of BIO-4 presented in Section 7 below, unavoidable impacts to any jurisdictional features identified during a jurisdictional delineation of WOTS and WOTUS would be less than significant.

5.4 Impacts to Wildlife Movement or Wildlife Corridors

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

Less than significant with mitigation incorporated. As presented in Section 4.7 of this report, no recognized wildlife movement corridor or linkage coincides with the project site. The project site itself does not provide the necessary conditions to function as a wildlife corridor, nor does it support riparian dependent species. The project site is situated within the Antelope Valley region of the western Mojave Desert and is dominated by upland desert scrub habitat. While undeveloped open desert exists in the broader landscape, multiple barriers significantly reduce the suitability of the project site as a wildlife movement corridor, including:

- The presence of Fox Field Airport (2 miles west) and Palmdale Regional Airport (7 miles southeast);

- Major highways and paved roadways such as SR-14, SR-138, Sierra Highway, and local avenues; and
- Existing development, fence lines, vehicular traffic, lighting, and noise disturbances.

While Amargosa Creek transects the southern portion of the project site, this feature is ephemeral and does not contain a riparian corridor or vegetation structure that would facilitate significant wildlife movement. As a result, Amargosa Creek is not expected to function as a key movement corridor, nor does the project site provide a critical linkage between larger habitat areas. In summary, the project site does not function as a significant wildlife corridor or habitat linkage due to its upland nature, lack of riparian connectivity, and physical barriers such as roads, airports, and development. While some localized species may move through the project site, the broader Antelope Valley region contains more suitable open-space linkages, including the nearby Antelope Valley Significant Ecological Area (SEA), which provides a far greater role in supporting regional wildlife movement. As a result, the project site does not serve as a significant or recognized wildlife movement corridor. Although not focused on avoiding and minimization impacts to wildlife movement, with implementation of AMM BIO-1 through BIO-4, impacts to wildlife movement would be less than significant.

5.5 Conflicts with Local Policies or Ordinances

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

No impact. *Lancaster Municipal Code* (Municipal Code) Chapter 15.66, *Biological Impact Fee*, establishes a biological impact fee to mitigate long-term incremental impacts of new development on biological resources on a regional basis. The fee is based upon expected regional effects from new development and fees necessary to contribute to the City's "fair share" to mitigate impacts on a regional basis. The fee applies to all new development on vacant land which has not been previously developed. This includes land subdivisions, new development approvals, and requests for extension. The proceeds from received fees enables the city to acquire and preserve open space land which includes various biological resources, including resources found in the project site. Further, if unavoidable impacts to some non-listed special-status plant species would occur (those with a CRPR designation), the City charges a mitigation fee of $2,405 per acre for such unavoidable impacts. Coordination with the City would be required should non-listed species be impacted to determine the appropriate fee.

Additionally, Municipal Code Chapter 22.102, *Hillside Management and Significant Ecological Areas*, establishes development guidelines and required permits for development in or near City-designated SEAs. However, as the project site is not located in or near a city-designated SEA, Municipal Code Chapter 22.102 would not apply to the project. With adherence to these City ordinances, the proposed project is not expected to conflict with any local policies or ordinances protecting biological resources. Therefore, the project would have no impact on any local and regional policies or ordinances protecting biological resources.

5.6 Conflicts with Adopted Habitat Conservation Plan

f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No impact. The project site does not fall within the boundary of any adopted Natural Communities Conservation Plan/Habitat Conservation Plan area (refer to CDFW 2024h). Further, the project site does not fall within the boundary of any County of Los Angeles SEA. It does however, as described in Section 4.9 of this report, occur within the boundary of the DRECP and Western Mojave Plan. The DRECP is applicable to renewable energy projects on federal lands, which are not included in the project site. Similarly, the project would not conflict with provisions of the West Mojave Plan or West Mojave Route Network Project. As a result, no conflicts with such plans would occur.

6.0 AVOIDANCE AND MINIMIZATION MEASURES

6.1 Special-Status Plants

Special-status plants occur in the project site. To determine whether special-status plant species are present and the extent of their distribution within the project site, rare plant surveys shall be conducted prior to construction to determine proper compensatory mitigation for any impacts to special-status plant species that may occur. Although protocol rare plant surveys were completed in 2023 across Planning Areas 2, 4, and 6-8, additional rare plant surveys may be required to confirm resource avoidance, or proper compensatory mitigation for impacts to special-status plant species, should construction be initiated more than two blooming periods after the rare plant surveys were completed, or sooner at the discretion of the City. Protocol rare plant surveys shall be completed in accordance with the following measure.

BIO-1: Prior to construction, and during the appropriate blooming periods for special-status plant species with the potential to occur within the project site, qualified botanists shall conduct focused rare plant surveys following CDFW (2018), USFWS (2011) and/or CNPS (2001) survey guidelines to determine presence or absence of special-status plant species. The surveys shall be floristic in nature (i.e., identifying all plant species to the taxonomic level necessary to determine rarity) and include site visits covering the blooming period of special-status plant species with potential to occur within the project site. Should non-listed, CRPR-designated special-status plant species be identified, coordination with the City of Lancaster to mitigate for unavoidable impacts to such species via its existing biological resources fee mitigation program would occur.

Should western Joshua tree be identified and unavoidable impacts to the species anticipated, a census report providing count, size class, and photos of on-site western Joshua trees, and avoidance and minimization strategies will be prepared to initiate coordination with CDFW regarding the requirement for a Western Joshua Tree Incidental Take Permit (ITP). An ITP would be obtained pursuant to Section 2081 of the CFGC or the Western Joshua Tree Conservation Act.

Although not expected, if State- and/or federally listed plant species are identified within the project site and avoidance is not feasible, consultation with the CDFW and/or USFWS, as applicable, regarding an ITP would be required prior to initiating any ground disturbance within the project site.

6.2 Special-Status Wildlife

Although no individuals - or sign of burrowing owl, or any fossorial wildlife species were detected during protocol burrowing owl surveys conducted in 2023 (Michael Baker 2023a and 2024b) across the project site, nesting and foraging habitat for burrowing owl is known to occur in the Antelope Valley. Other fossorial special-status species, such as desert tortoise, Mohave ground squirrel, American badger, and desert kit fox are not expected within the project site. However, implementation of this AMM would provide opportunities for detecting not only of burrowing owl, but these other fossorial special-status species as well. This pre-construction survey would apply to the project site. To avoid and/or minimize potential impacts to burrowing owl, the following AMM shall be implemented:

BIO-2: A pre-construction burrowing owl clearance survey shall be conducted no more than 14 days prior to any vegetation removal or ground disturbing activities to avoid impacts to burrowing owls and/or occupied burrows. The pre-construction clearance survey shall be conducted by a qualified biologist and in accordance with the methods outlined in the Staff Report on Burrowing Owl Mitigation (CDFG 2012). Documentation of surveys and findings shall be submitted to the City of Lancaster for review and file. If no burrowing owls or occupied burrows are detected, project activities may begin, and no additional avoidance and minimization measures shall be required

If an active nest (i.e., occupied with eggs or fledglings) is found outside, but within 500 feet, of the development footprint, the qualified biologist shall establish a “no-disturbance” buffer around the burrow location(s). The size of the “no-disturbance” buffer shall be determined in consultation with the City and be based on the proposed level of disturbance. If an occupied burrow is found within the development footprint, the qualified biologist shall prepare an Impact Assessment and Burrowing Owl Mitigation Plan in accordance with CDFW’s Staff Report on Burrowing Owl Mitigation, if ground disturbance is contemplated to occur while the burrow is occupied. The project proponent shall contact CDFW to develop appropriate mitigation and management procedures and a final Burrowing Owl Mitigation Plan shall be submitted to the City and CDFW for review and approval prior to project activities.

If burrowing owl presence is confirmed, the Project proponent shall offset impacts by acquiring mitigation lands for the species. The potential mitigation land shall have the following: 1) have presence of burrowing owl; 2) replace the impacted burrowing owl habitat area at a minimum of 2:1 ratio to ensure no net loss of habitat; and 3) be of equivalent or greater habitat value than that of the project site. Prior to acquisition of potential mitigation land, the project proponent shall provide the City with the appropriate documentation for property eligibility. Requested documentation may include, but is not limited to, a biological report, preliminary title report, mineral risk assessment report, and Phase I Environmental Site Assessment report. Following the City’s written approval of potential mitigation land, the project proponent shall protect the land in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands pursuant to Assembly Bill 1094. Recordation or the conservation easement shall occur prior to commencement of the project activities. An appropriate endowment, to be determined by the City, shall also be provided for the long-term monitoring and management of mitigation lands.

Nesting Birds

The project site provides suitable habitats for nesting by bird species protected under the MBTA and CFGC, which cover special-status and common bird species. The following AMM shall be implemented to reduce potential impacts to nesting birds to less than significant. This pre-construction survey would apply to the project site.

BIO-3 Regardless of the time of year project-related activities are to be initiated, a pre-construction nesting bird clearance survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of any vegetation removal or ground disturbing activities. The qualified biologist shall survey all suitable nesting habitat within the project impact area, and areas within a biologically defensible buffer zone surrounding the project impact area. If no active bird nests are detected during the clearance survey, project activities may begin, and no additional avoidance and minimization measures shall be required.

If an active bird nest is found, the species shall be identified, and a "no-disturbance" buffer shall be established around the active nest. The size of the "no-disturbance" buffer shall be increased or decreased based on the judgement of the qualified biologist and level of activity and sensitivity of the species. The qualified biologist shall periodically monitor any active bird nests to determine if project-related activities occurring outside the "no-disturbance" buffer disturb the birds and if the buffer shall be increased. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, project activities within the "no-disturbance" buffer may occur following an additional survey by the qualified biologist to search for any new nests in the restricted area.

6.3 Jurisdictional Aquatic Resources

As described in Section 4.6 of this report, reconnaissance level analysis of soil and hydrology imply that no portion of the project site, aside from Amargosa Creek, meets the criteria for jurisdictional waters (WOTS or WOTUS). Hydric soil indicators - such as redoximorphic features, are absent, and no evidence of continuous or recurrent soil saturation at a frequency and duration sufficient to support hydrophytic vegetation, or to develop hydric soil development has been observed within the project site. Furthermore, the vegetation communities within the project site are dominated by upland species, with no significant presence of hydrophytes or wetland-associated plants.

To that end, the presence or absence of WOTS and/or WOTUS within the project site, and impacts to any jurisdictional features, will be subsequently determined prior to ground disturbance. This is warranted, as Amargosa Creek, the sewage disposal ponds, etc., jurisdictional status under state (RWQCB and CDFW) and federal (USACE) regulations shall depend on several key factors that are yet to be formally vetted.

Where unavoidable impacts to WOTS and/or WOTUS would occur within the project site, the following AMM shall be implemented to reduce impacts to any Federal or State jurisdictional resources to less than significant:

BIO-4 Temporary and/or permanent impacts to WOTS and/or WOTUS within the project site could require discretionary approvals from the USACE, CDFW, and/or RWQCB prior to impacts occurring within areas subject to the jurisdiction of USACE, CDFW and/or RWQCB (i.e., WOTS and / or WOTUS). Compensatory mitigation for impacts would be determined during the formal notification and/or application processes – if warranted and would be approved by the appropriate resource agency prior to work occurring within affected areas. Mitigation is anticipated to include one or more of the following to achieve no net loss of resource functions or values: restoration of impacted resources and/or preservation of unaffected resources within the project site; payment of an in-lieu fee to an agency approved mitigation bank; or acquisition of off-site lands that contain similar jurisdictional resources that would be held in a restrictive deed for perpetuity. The impact to mitigation ratio would be negotiated with appropriate resource agency during the discretionary approval process.

7.0 CONCLUSION

All findings of this report as described above and summarized in this section are based on a review of data from field surveys across Planning Areas 2, 4, and 6-8 conducted in 2023 and desk-top review of the resources identified in Section 4 of this report for the entire Annexation Area. This section summarizes the primary findings of this report and provides general recommendations and guidance for future proposed activities within the Annexation Area.

Several non-listed special-status plant species were documented in the project site in 2023 (Michael Baker 2023b and 2024b) and can be expected to occur in other areas within the project site, including alkali mariposa lily (CRPR 1B.2), Mojave spineflower (CRPR 4.2), and Rosamond eriastrum (CRPR 1B.1). Further, white pygmy poppy (CRPR 4.2), golden goodmania (CRPR 4.2), and western Joshua tree (protected under the WJTCA and a Candidate for listing under CESA), have moderate potential or are expected to occur within the Annexation Area. Pursuant to BIO-1 presented in Section 7 above, for any future proposed development on undisturbed lands, it is recommended that a focused rare plant survey be conducted if suitable habitat is present to support these species, or any other special-status plant species known to occur in the region. Additionally, updated protocol rare plant surveys to those conducted in 2023 may be required to confirm proper compensatory mitigation for impacts to special-status plant species, should construction be initiated more than two blooming periods after the rare plant surveys were completed, or sooner at the discretion of the City.

Special-status wildlife species that were documented on-site during the Michael Baker 2023 field surveys include northern harrier (CDFW SSC), loggerhead shrike (CDFW SSC), and California horned lark (CDFW WL). While no burrowing owl or sign of the species were detected during 2023 protocol surveys across Planning Areas 2, 4, and 6-8, suitable habitat and burrows were noted and this species is known from the region. With suitable desert scrub habitat across the Annexation Area, this species is likely to occur within the Annexation Area. Crotch's bumble bee (CSE), Swainson's hawk (ST), Mohave ground squirrel (ST), and desert tortoise (FT and ST) are known to occur in the region; however, these species are not expected to occur within the Annexation Area.

The project site is located within the Antelope Valley in northern Los Angeles County and represents a largely well-drained upland desert environment that has undergone thousands of years of natural transition. It was historically part of the ancient Lake Thompson basin, which once covered portions of the lower Antelope Valley during the Pleistocene epoch. However, as climate conditions shifted approximately 10,000 years ago, becoming increasingly arid, the lake system receded and ultimately disappeared. Today, the landscape consists predominately of upland desert scrub habitats, with considerable human disturbances, lacking physical evidence of sustained hydrology or indicators of hydric soils.

Key Findings

- ✓ Upland Characteristics:
    - The project site has fully transitioned into an upland desert environment dominated by desert scrub vegetation, primarily saltbush/shadscale (*Atriplex* spp.).
- ✓ Limited Water Retention:
    - The soil structure and drainage characteristics prevent the accumulation of water for extended periods, with any pooling being temporary.
- ✓ Absence of Hydric Soil Conditions:
    - Field investigations did not identify hydric soil indicators, and the predominate mapped soil series (Pond-Oban complex) is classified as well-drained upland soil series (USDA 2025a).
- ✓ No Riparian or Wetland Habitats:
    - Amargosa Creek, which crosses the project site, has been historically modified, is ephemeral and does not support riparian, or wetland vegetation.
- ✓ Limited Wildlife Connectivity:
    - The project site is not located within a mapped wildlife corridor, and surrounding development, roadways, and infrastructure limit its functionality as a movement corridor.

The project site features gently undulating topography with a subtle eastward slope, ranging in elevation from approximately 2,302 to 2,309 feet AMSL. The natural mound-intermound microtopography reflects long-term desertification processes, with intermounds occasionally experiencing minor, short-lived pooling following precipitation events. However, this does not indicate the presence of wetlands or sustained hydrology, as the soil's porosity and rapid evaporation and infiltration prevent prolonged saturation. Groundwater is too deep (>6.5 feet) to influence surface hydrology, reinforcing the well-drained upland nature of the project site (Soil Web 2025). The presence or absence of WOTS and/or WOTUS within the project site, and impacts to any jurisdictional features, will be determined prior to ground disturbance.

The project site is not located within a Significant Ecological Area (SEA) or any other designated conservation overlay. While the Antelope Valley SEA is adjacent to the project site, it is primarily associated with conservation of large-scale drainage features and wildlife movement corridors that do not extend into the project site. Further, the requirements of the SEA program adopted by Los Angeles County do not apply to properties within the City limits.

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APPENDIX A

SITE PHOTOGRAPHS

Photograph 1: South-facing view across Planning Area 6 (May 2023).

Photograph 2: North-facing view across Planning Area 6 (May 2023).

Photograph 3: Northeast-facing view across Planning Area 7 (May 2023).

Photograph 4: South-facing across Planning Area 8 (May 2023).

Photograph 5: Southwest-facing view of Amargosa Creek in Planning Area 7 (December 2022).

Photograph 6: Northeast-facing view of Amargosa Creek in Planning Area 6 (May 2023).

Photograph 7: West-facing view across the northern portion of Planning Area 2 (May 2023).

Photograph 8: Southeast-facing view across the central portion of Planning Area 2 (May 2023).

Photograph 9: Northwest-facing view across Planning Area 4 (May 2023).

Photograph 10: West-facing view across Planning Area 4 (May 2023).

APPENDIX B

PLANT AND WILDLIFE SPECIES OBSERVED LISTS

Table B-1: Plant Species Observed List[1]

Plants			
Scientific Name*	**Common Name**	**Cal-IPC Rating****	**CRPR*****
Allenrolfea occidentalis	Iodine bush		
Ambrosia dumosa	white-bur sage		
Amsinckia tessellata	Devil's lettuce		
*Arundo donax**	giant reed	High	
Asclepias fasicularis	narrow-leaf milkweed		
*Atriplex prostrata**	fat-hen		
Atriplex confertifolia	Shadscale		
Atriplex lentiformis	big saltbush		
Atriplex polycarpa	allscale saltbush		
*Bromus madritensis**	Spanish brome	High	
*Bromus tectorum**	Cheat grass		
Calochortus striatus	alkali mariposa lily		1B.2
Centromadia pungens ssp. *pungens*	common spikeweed		
*Centaurea solstitialis**	yellow star-thistle	High	
Chaenactis sp.	pincushion		
Chorizanthe spinosa	Mojave spineflower		4.2
Chorizanthe watsonnii	Watson's spineflower		
Chylismia claviformis	clavate fruited primrose		
Cleomella obtusifolia	Mojave stinkweed		
Cressa truxillensis	alkali weed		
Cryptantha sp.	cryptantha		
*Descurainia sophia**	flix weed	Limited	
Distichlis spicata	salt grass		
Elymus multisetus	big squirreltail grass		
Elymus cinereus	Great Basin wild-rye		
Ephedra nevadensis	Nevada ephedra		
Eremothera boothii	Booth's sun cup		
Eriastrum rosamondense	Rosamond eriastrum		1B.1
Ericameria nauseosa var. *mohavensiss*	Mojave rabbitbrush		
Eriogonum maculatum	spotted wild buckwheat		
*Erodium cicutarium**	coastal heron's bill	Limited	
Forestiera pubescens	desert olive		
Frankenia salina	alkali heath		
Grayia spinosa	hop sage		
*Halogeton glomeratus**	saltlover	Moderate	
Heliotropium curassavicum	alkali heliotrope		
Hordeum depressum	alkali barley		
*Hordeum murinum**	wall barley	Moderate	

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[1] Compiled from rare plant survey reports completed across Planning Areas 2, 4, and 6-8 in 2023 (Michael Baker 2024b and 2023b)

Isocoma acradenia	alkali goldenbush		
Juniperus californica	California juniper		
*Juniperus chinensis**	Chinese juniper		
*Kochia scoparia**	summer cypress	Limited	
*Lactuca serriola**	prickly lettuce		
Lasthenia gracilis	common goldfields		
Lepidium fremontii	desert pepperweed		
*Lepidium latifolium**	perennial pepperweed		
*Lepidium perfoliatum**	clasping pepperweed		
Lycium andersonii	Anderson thornbush		
Malacothrix coulteri	snake's-head		
Malvella leprosa	alkali-mallow		
Matricaria discoidea	pineapple weed		
Mentzelia albicaulis	whitestem blazingstar		
Neokochia californica	Mojave red sage		
Opuntia basilaris	beavertail cactus		
Pectocarya penicillata	northern pectocarya		
Pectocarya setosa	round-nut pectocarya		
Phacelia fremontii	Fremont's phacelia		
*Salsola tragus**	Russian thistle	Limited	
*Schismus barbatus**	common mediterranean grass	Limited	
*Sisymbrium altissimum**	tumble mustard		
Sporobolus airoides	alkali sacaton		
Stephanomeria sp.	wirelettuce		
Suaeda nigra	bush seepweed		
*Tamarix aphylla**	athel	Limited	
Tamarix sp.*	salt cedar	High	
Tetradymia axillaris	catclaw horsebrush		
Tetradymia glabrata	little leaf horsebrush		
Uropappus lindleyi	silver puffs		

* Non-native species

** **California Invasive Plant Council (Cal-IPC) Ratings**

High	These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
Moderate	These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
Limited	These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to

moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

*** **California Rare Plant Rank**

1B	Plants rare throughout their range with the majority endemic to California Threat Ranks .2 Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).
4	Plants of limited distribution – Watch List. Threat Ranks .2 Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).

Table C-2: Wildlife Species Observed List[2]

Wildlife		
Scientific Name	**Common Name**	**Status***
Birds		
Agelaius phoeniceus	red-winged blackbird	
Aphelocoma californica	California scrub-jay	
Artemisiospiza belli canescans	Bell's sparrow	-
Buteo jamaicensis	red-tailed hawk	-
Callipepla californica	California quail	-
Calypte anna	Anna's hummingbird	
Cathartes aura	turkey vulture	-
Chordeiles acutipennis	lesser nighthawk	
Circus hudsonius	northern harrier	SCC
Columba liva	rock pigeon	
Corvus brachyrhynchos	American crow	-
Corvus corax	common raven	-
Eremophila alpestris actia	California horned lark	WL
Euphagus cyanocephalus	Brewer's blackbird	
Haemorhous mexicanus	house finch	-
Lanius ludovicianus	loggerhead shrike	SSC
Melospiza melodia	song sparrow	-
Mimus polyglottos	northern mockingbird	-
Molothrus ater	brown-headed cowbird	
Myiarchus cinerascens	ash-throated flycatcher	
Numenius phaeopus	whimbrel	
Sayornis saya	Say's Phoebe	
Setophaga coronata	yellow-rumped warbler	
Spinus psaltria	lesser goldfinch	-
Streptophella decaocto	Eurasian collared-dove	
Sturnella neglecta	western meadowlark	-
Turdus migratorius	American robin	
Tyto alba	barn owl	
Zenaida macroura	mourning dove	-
Zonotrichia leucophrys	white-crowned sparrow	-
Mammals		
Canis latrans	coyote	-
Lepus californicus	black-tailed jackrabbit	-
Otospermophilus beecheyi	California ground squirrel	-
Sylvilagus audubonii	desert cottontail	-
Reptiles		
Aspidoscelis tigris tigris	Great Basin whiptail	-

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[2] Compiled from protocol burrowing owl survey reports completed across Planning Areas 2, 4, and 6-8 in 2023 (Michael Baker 2024a and 2023a)

Coluber flagellum	red racer	
Gambelia wislizenii	long-nosed leopard lizard	-
Scleroporus occidentalis	western fence lizard	-
Uta stansburiana elegans	western side-blotched lizard	-
Insects		
Apis sp.	European honey bee	
Pepsis thisbe	tarantuala hawk	
Veromessor pergandei	black harvester ant	

* **California Department of Fish and Wildlife (CDFW) Designations**

SSC Species of Special Concern – any species, subspecies, or distinct population of fish, amphibian, reptile, bird, or mammal native to California that currently satisfies one or more of the following criteria:

- is extirpated from California or, in the case of birds, in its primary seasonal or breeding role;
- is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed.
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; or
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

WL Watch List - taxa that were previously designated as “Species of Special Concern” but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

APPENDIX C

POTENTIAL FOR OCCURRENCE OF SPECIAL-STATUS SPECIES AND COMMUNITIES

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Androsace elongate spp. Acuta California androsace	4.2 G5?T3T4 S3S4	Annual herb. Found in chaparral, cismontane woodland, coastal scrub, meadows and seeps, Pinyon and juniper woodland, and valley and foothill grasslands. Found at elevations 490-1,305 feet amsl. Blooms March through June.	**Not Expected:** The habitats preferred by this species are generally not present within the project site. No records of this species occur within 10 miles of the project.
Astragalus hornii var. hornii Horn's milk-vetch	1B.1 GUT1 S1	Annual herb. Found on lake margins, alkaline soils within meadows and seeps and playas. Found at elevations ranging from 197 to 2,789 feet amsl. Blooming period is May to October.	**Not Expected:** The habitats preferred by this species are generally not present within the project site.
Astragalus preussii* var. *laxiflorus Lancaster milk-vetch	1B.1 G4T2 S1	Perennial herb. Occurs in chenopod scrub in California only near Lancaster and Edwards Air Force Base, were extremely rare. Found at approximate elevation of 2,295 feet amsl. Blooming period is March through May.	**Not Expected:** While chenopod scrub is preferred by this species and occurs within the project site, only one CNDDB occurrence record was identified during the literature review, recorded in 1902 approximately 2.5 miles southeast of the project. Additionally, this species was not detected during rare plant surveys conducted across specific portion of the project site.
Calochortus catalinae Catalina mariposa-lily	4.2 G3G4 S3S4	Perennial bulbiferous herb. Found in chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands. Found at elevations 50-2,295 feet amsl. Blooms (February) March through June.	**Not Expected:** The habitats preferred by this species are generally not present within the project site. No records of this species occur within 10 miles of the project.
Calochortus clavatus var. avius Pleasant Valley mariposa-lily	1B.2 G4T2 S2	Perennial bulbiferous herb. Found in lower montane coniferous forest (Josephine silt loam, volcanic). Found at elevations 305-1,800 feet amsl. Blooms Mary through July.	**Not Expected:** The habitats preferred by this species are generally not present within the project site. No records of this species occur within 10 miles of the project.
Calochortus clavatus var. gracilis slender mariposa-lily	1B.2 G4T2T3 S2S3	Perennial bulbiferous herb. Found in chaparral, coastal scrub, and valley and foothill grassland habitats. Found at elevations ranging from 1,050 to 3,280 feet amsl. Blooming period is March through June (November).	**Not Expected:** The habitats preferred by this species are generally not present within the project site.

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Calochortus palmeri var. palmeri Palmer's mariposa lily	1B.2 G3T2 S2	Perennial bulbiferous herb. Occurs in mesic soils within chaparral, lower montane coniferous forest, and meadows and seeps. Grows in elevations ranging from 2,329 to 7,841 feet amsl. Blooming period is April through July.	**Not Expected:** The habitats preferred by this species are generally not present within the project site.
Calochortus striatus alkali mariposa-lily	1B.2 G3 S2S3	Perennial bulbiferous herb. Occurs in alkaline and mesic microhabitat in chaparral, chenopod scrub, Mojavean desert scrub, and meadows and seeps. Found at elevations ranging from 230 to 5,235 feet amsl. Blooming period is April through June.	**Present:** This species was identified within a discrete portion of the project site during rare plant surveys. Suitable Mojavean desert scrub habitat occurs in the project site, making this species likely to occur.
Calystegia peirsonii Peirson's morning-glory	4.2 G4 S4	Perennial rhizomatous herb. Habitats include chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland. Found at elevations ranging from 98 to 4,921 feet. Blooming period is from April to June.	**Not Expected:** While chenopod scrub preferred by this species occurs within the project site, all six CNDDB occurrence records identified during the literature review are located 10 plus miles south-southwest of the project within the San Gabriel Mountains. Additionally, this species was not detected during rare plant surveys conducted throughout targeted sections of the project site.
Canbya candida white pygmy-poppy	4.2 G3G4 S3S4	Annual herb. Occurs on gravelly, sandy, granitic soils in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Found at elevations ranging from 2,297 to 5,249 feet amsl. Blooming period is March through June.	**Moderate:** Mojavean desert scrub habitat preferred by this species occurs within the project site. While no CNDDB occurrence records are within 5 miles of the project, a record of this species in the Calflora database coincides with the project site.
Castilleja plagiotoma Mojave paintbrush	4.3 G4 S4	Perennial herb (hemiparasitic). Grows in Great Basin scrub (alluvial), Joshua tree woodland, lower montane coniferous forest, and pinyon and juniper woodland habitats. Found at elevations ranging from 984 to 8,202 feet. Blooming period is from April to June.	**Not Expected:** The habitats preferred by this species are generally not present within the project site.

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Chorizanthe parryi* var. *parryi Parry's spineflower	1B.1 G3T2 S2	Annual herb. Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet amsl. Blooming period is April through June.	**Not Expected:** The habitats preferred by this species are generally not present within the project site. Additionally, the only occurrence record for this species within 5.0 miles of the project and was recorded in 1896.
Cryptantha clokeyi Clokey's cryptantha	1B.2 G3 S3	Annual herb. Occurs in Mojavean desert scrub. Found at elevations ranging from 2,379 to 4,478 feet amsl. Blooming month is April.	**Not Expected:** While Mojavean desert scrub preferred by this species occurs within the project site, only one CNDDB record was identified during the literature review, located 10 plus miles to the west in 2003. Additionally, this species was not detected during rare plant surveys conducted within designated areas of the project site.
Cymopterus deserticola desert cymopterus	1B.2 G2 S2	Perennial herb. Grows on sandy soils within Joshua tree woodland and Mojavean desert scrub habitats. Found at elevations ranging from 2,067 to 4,921 feet amsl. Blooming period is March to May.	**Not Expected:** While Mojavean desert scrub preferred by this species occurs within the project site, all nine CNDDB records identified during the literature review are located 10 plus miles to the east-northeast of the project in the vicinity of Rogers Lake. Additionally, this species was not detected during rare plant surveys performed within specific locations within the project site.
Chorizanthe spinosa Mojave spineflower	4.2 G4 S4	Annual herb. Found on sometimes alkaline soils within Joshua tree woodland, playas, Mojavean desert scrub, and chenopod scrub habitats. Found at elevations ranging from 20 to 4,265 feet. Blooming period is March through July.	**Present:** Mojavean desert scrub preferred by this species is present within the project site and this species was identified across specific portions of the project site. Suitable Mojavean desert scrub habitat occurs throughout the projects.
Delphinium recurvatum recurved larkspar	1B.2 G2? S2	Perennial herb. Occurs on alkaline soils, often in valley saltbush or valley chenopod scrub. Also found in valley and foothill grassland and cismontane woodland. Found at elevations ranging from 10 feet to 3,640 feet amsl. Blooms March-June.	**Not Expected:** While valley saltbush/chenopod scrub preferred by this species is present within the project site, only one CNDDB occurrence record was identified during the literature review, from approximately 10 miles north of the project back in 2011. Additionally, this species was not detected during rare plant surveys performed across specific portion of the project site.

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Diplacus johnstonii Johnston's monkeyflower	4.3 G4 S4	Annual herb. Found in lower montane coniferous forest in disturbed areas, gravelly, roadsides, rocky, scree. Found at elevations 975-2,920 feet amsl. Blooms May through August.	**Not Expected:** The habitats preferred by this species are generally not present within the project site and there are no occurrence records of this species within 10 miles of the project.
Eriastrum rosamondense Rosamond eriastrum	1B.1 G1? S1?	Annual herb. Occurs in Chenopod scrub and vernal pool habitats. Found at elevations ranging from 2,200 to 2,345 feet amsl. Blooming period is in May.	**Present:** Chenopod scrub preferred by this species is present within the project site and this species was identified during rare plant surveys that were conducted within designated areas of the project site. Suitable chenopod desert scrub habitat occurs across the project site.
Eriastrum sparsiflorum few-flowered eriastrum	4.3 G5 S4	Annual herb. Found in chaparral, cismontane woodland, Great Basin scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Found at elevations 1,075-1,710 feet amsl. Blooms Mary through September.	**Not Expected:** While Mojavean desert scrub habitat preferred by this species is present within the project site, two occurrence records of this species are located within 5 miles of the project, but are both > 100 years old.
Eriophyllum mohavense Barstow woolly sunflower	1B.2 G2 S2	Annual herb. Occurs in chenopod scrub, playas, and Mojavean desert scrub habitats. Found at elevations ranging from 1,640 to 3,150 feet amsl. Blooming period is March through May.	**Not Expected:** While Mojavean desert scrub habitat preferred by this species is present within the project site, only one CNDDB occurrence record was identified during the literature review, 8 miles east of the project and it is from 1995.
Eschscholzia minutiflora ssp. twisselmannii Red Rock poppy	1B.2 G5T2 S2	Occurs in Mojavean desert scrub (Volcanic tuff). Found at 2,230-4,035 feet amsl. Blooming period is March through May.	**Not Expected:** While Mojavean desert scrub habitat preferred by this species is present within the project site, only one CNDDB occurrence record was identified during the literature review, from 10 plus miles northeast of the project. Additionally, this species was not detected during rare plant surveys conducted within targeted portion of the project site.
Gilia interior inland gilia	4.3 G4 S4	Annual herb. Occurs in cismontane woodland, Joshua tree woodland, and lower montane coniferous forest. Found at elevations 700-1,700 feet amsl. Blooming period is March through May.	**Not Expected:** The habitats preferred by this species are generally not present within the project site and no occurrence records of this species occur within 5 miles of the project.

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Gilia latiflora spp. Cuyamensis Cuyama gilia	4.3 G5?T4 S4	Annual herb. Occurs in pinyon and juniper woodland on sandy substrates. Found at elevations 595-6,560 feet amsl. Blooms April through June.	**Not Expected:** The habitats preferred by this species are generally not present within the project site and no occurrence records of this species occur within 5 miles of the project.
Goodmania luteola golden goodmania	4.2 G3 S3	Annual herb. Occurs in Mojavean desert scrub, meadows and seeps, playas, and valley and foothill grasslands. Found at elevations ranging from 65 to 7,220 feet amsl. Blooming period is April through August.	**Expected:** Mojavean desert scrub habitat preferred by this species is present within the project site and there are several Calflora records from within 2 miles of the project and from the past 25 years.
Loeflingia squarrosa* var. *artemisiarum sagebrush loeflingia	2B.2 G5T3 S2	Annual herb. Occurs in sandy desert dunes, Great Basin scrub, and Sonoran desert scrub. Found at elevations ranging from 2,295 to 5,300 feet amsl. Blooming period is April through May.	**Not Expected:** The habitats preferred by this species are generally not present within the project site.
Lycium torreyi Torrey's box-thorn	4.2 G4G5 S3	Perennial shrub. Occurs in Mojavean desert scrub and Sonoran desert scrub, in rocky, sandy, streambank, and wash environments. Found at elevations -165-4,005 feet amsl. Blooming period is (Jan-Feb)March through June (Sept-Nov).	**Not Expected:** While Mojavean desert scrub habitat occurs within the project site, there are no occurrence records within 10 miles of the project. Additionally, this species was not detected during rare plant surveys conducted across targeted portions of the project site.
Monardella exilis Mojave monardella	4.2 G3? S3	Annual herb. Occurs in sandy soils within desert dunes, Mojavean desert scrub, Great Basin scrub, chenopod scrub, pinyon and juniper woodland, Joshua tree woodland, and lower montane habitats. Found at elevations ranging from 1970 feet to 7940 feet amsl. Blooms April-September.	**Not Expected:** While Mojavean desert scrub habitat preferred by this species is present within the project site, no CNDDB occurrence records for this species occur within 5.0 miles of the project. Additionally, this species was not detected during rare plant surveys conducted throughout specific areas within the project site.
Muilla coronata crowned muilla	4.2 G3 S3	Perennial bulbiferous herb. Occurs in Joshua tree woodland, pinyon and juniper woodland, Mojavean desert scrub, and chenopod scrub. Known elevations range from 2,200 to 6,430 feet amsl. Blooming period is March through April (May).	**Not Expected:** While Mojavean desert scrub habitat preferred by this species is present within the project site, no CNDDB occurrence records for this species occur within 5.0 miles of the project. Additionally, this species was not detected during rare plant surveys performed across targeted areas within the project site.

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Nemacladus secundiflorus var. robbinsii Robbins' nemacladus	1B.2 G3T2 S2	Annual herb. Occurs in openings in chaparral and valley and foothill grasslands. Found at elevations 1,150-5,580 feet amsl. Blooming period is April through June.	**Not Expected:** The habitats preferred by this species are generally not present within the project site and there are no occurrence records within 10 plus miles of the project.
Opuntia basilaris var. bachyclada short-joint beavertail	1B.2 G5T3 S3	Perennial stem succulent. Grows in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland habitats. Found at elevations ranging from 1,394 to 5,906 feet amsl. Blooming period is April through June.	**Not Expected:** While Mojavean desert scrub habitat preferred by this species is present in the project site, 20 CNDDB occurrence records identified during the literature review occur 12-20 miles southwest of the project. Additionally, this species was not detected during rare plant surveys conducted within specific portion of the project site.
Opuntia basilaris var. treleasei Bakersfield cactus	1B.1 G5T1 S1	Perennial stem. Occurs in chenopod scrub, cismontane woodland, and valley and foothill grasslands. Found at elevations 330-4,755 feet amsl. Blooming period is April through May.	**Not Expected:** While chenopod scrub habitat preferred by this species is present in the project site, the essential biological features required by this species are generally absent from the project site, and this species is not known from the Antelope Valley records.
Perideridia pringlei adobe yampah	4.3 G4 S4	Perennial herb. Occurs in chaparral, cismontane woodland, coastal scrub, and pinyon and juniper woodland. Found at elevations 985-5,905 feet amsl. Blooming period is April through June (July).	**Not Expected:** The habitats preferred by this species are generally absent from the project site and there are no occurrence records within 10 plus miles of the project. Records coincide with habitats in the San Gabriel mountains and foothills.
Puccinellia simplex California alkali grass	1B.2 G2 S2	Annual herb. Occurs in alkaline soils, flats, lake margins, or vernally mesic soils within chenopod scrub, meadows and seeps, valley and foothill grassland, and vernal pool habitats. Found at elevations ranging from 5 to 3,050 feet amsl. Blooming period is March through May.	**Not Expected:** While chenopod scrub habitat preferred by this species is present in the project site, 5 CNDDB occurrence records all from 1995 were identified during the literature review, located 7-10 miles east-northeast of the project, near Rosamond Lake. Additionally, this species was not detected during rare plant surveys conducted within specific portions of the project site.
Senna covesii Cove's cassia	1B.2 G5 S3	Perennial herb. Found on dry, sandy desert washes and slopes within Sonoran Desert scrub habitat. Found at elevations ranging from 738 to 4,249 feet amsl. Blooming period is from March to June (August).	**Not Expected:** The habitats preferred by this species are not present within the project site. Only one CNDDB occurrence record, from 2013, was identified during the literature review, it is located nearly 20 miles northeast of the project.

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Syntrichopappus lemmonii Lemmon's syntrichopappus	4.3 G4 S4	Annual herb. Occurs in chaparral, Joshua tree woodland, and pinyon and juniper woodland. Found at elevations 1,640-6,005 feet amsl. Blooming period is April through May (June).	**Not Expected:** The habitats preferred by this species are generally absent from the project site and there are no occurrence records within 10 plus miles of the project. Records coincide with habitats in the San Gabriel mountains and foothills.
Yucca brevifolia western Joshua tree	SC WJTCA	Evergreen. Occur in the Mojave Desert. Found in desert scrub, alkali scrub, and desert succulent shrub habitats.	**Moderate:** While this species was not observed during surveys conducted across portion of the project site, the project falls within the geographic range of this species.
CNDDB/Holland (1986) Southern Coast Live Oak Riparian Forest **MCV (1995)** Coast Live Oak Series **NVCS (2009)** *Quercus agrifolia* Woodland Alliance	G4 S4	Found at elevations ranging from sea level to 3,937 feet amsl in alluvial terraces, canyon bottoms, stream banks, slopes, and flats, Soils are deep, sandy or loamy with high organic matter. Coast live oak is a dominant or co-dominant in the tree canopy with bigleaf maple (*Acer macrophyllum*), box elder (*Acer negundo*), madrono (*Arbutus menziesii*), southern California black walnut, California sycamore, Fremont cottonwood, blue oak (*Quercus douglasii*), Engelmann oak, California black oak (*Quercus kelloggii*), valley oak (*Quercus lobata*), arroyo willow (*Salix lasiolepis*), and California bay (*Umbellularia californica*). Trees are less than 98 feet tall; canopy is open to continuous. Shrub layer is sparse to intermittent. Herbaceous layer is sparse or grassy.	**Not Expected:** Habitat type is not expected to occur within the project site.

TABLE C-1			
Scientific Name **Common Name**	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
CNDDB/Holland (1986) Southern Cottonwood Willow Riparian Forest **MCV (1995)** Fremont Cottonwood Series **NVCS (2009)** *Populus fremontii* Forest Alliance	G3 S3.2	Found at elevations ranging from sea level to 7,874 feet amsl on floodplains, along low-gradient rivers, perennial or seasonally intermittent streams, springs, in lower canyons in desert mountains, in alluvial fans, and in valleys with a dependable subsurface water supply that varies considerably during the year. Fremont cottonwood is a dominant or co-dominant in the tree canopy with box elder, desert baccharis (*Baccharis sergiloides*), Oregon ash (*Fraxinus latifolia*), northern California black walnut (*Juglans hindsii*), California sycamore, coast live oak, narrowleaf willow (*Salix exigua*), Goodding's willow (*Salix goodingii*), polished willow (*Salix laevigata*), arroyo willow, pacific willow (*Salix lasiandra* ssp. *lasiandra*), and yellow willow (*Salix lutea*). Trees and less than 25 meters tall; canopy is continuous to open. Shrub layer is intermittent to open. Herbaceous layer is variable.	**Not Expected:** Habitat type is not expected to occur within the project site.
CNDDB/Holland (1986) Southern Riparian Scrub **MCV (1995)** N/A **NVCS (2009)** N/A	G3 S3.2	Riparian zones dominated by small trees or shrubs, lacking taller riparian trees.	**Not Expected:** Habitat type is not expected to occur within the project site.
CNDDB/Holland (1986) Southern Willow Scrub **MCV (1995)** N/A **NVCS (2009)** N/A	G3 S2.1	Dense, broadleaved, winter-deciduous riparian thickets dominated by several willow species, with scattered emergent Fremont's cottonwood and California sycamore. Most stands are too dense to allow much understory development. Loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. This early seral type required repeated flooding to prevent succession to Southern Cottonwood-Sycamore Riparian Forest.	**Not Expected:** Habitat type is not expected to occur within the project site.

CNDDB/Holland (1986) Valley Needlegrass Grassland **MCV (1995)** Foothill Needlegrass Series, Nodding Needlegrass Series, Purple Needlegrass Series **NVCS (2009)** *Nassella cernua* Herbaceous Alliance, *Nassella lepida* Herbaceous Alliance, *Nassella pulchra* Herbaceous Alliance	G3 S3.1	Occurs at elevations ranging from 0 to 5,577 feet amsl on all topographic locations. Soils may be deep with high clay content, loamy, sandy, or silty derived from mudstone, sandstone, or serpentine substrates. California melicgrass (*Melica californica*), Torrey melic (*Melica torreyana*), nodding needle grass (*Stipa cernua*), foothill needle grass (*Stipa lepida*) and/or purple needle grass (*Stipa pulchra*) is dominant or characteristically present in the herbaceous layer with other perennial grasses and herbs including spidergrass (*Aristida ternipes*), milkvetch (*Astragalus* spp.), wild oat (*Avena* spp.), bromes (*Bromus* spp.), fire reedgrass (*Calamagrostis koelerioides*), mariposa (*Calochortus* spp.), morning glory (*Calystegia* spp.), amole (*Chlorogalum pomeridianum*), clarkia (*Clarkia* spp.), common sandaster (*Corethrogyne filaginifolia*), turkey-mullein (*Croton setiger*), cryptantha (*Cryptantha* spp.), American wild carrot, (*Daucus pusillus*), blue dicks (*Dichelostemma capitatum*), blue wildrye (*Elymus glaucus*), buckwheat (*Eriogonum* spp.), erodium (*Erodium* spp.), California poppy (*Eschscholzia californica*), California fescue (*Festuca californica*), shortpod mustard (*Hirschfeldia incana*), narrow tarplant (*Holocarpha virgata*), meadow barley (*Hordeum brachyantherum*), June grass (*Koeleria macrantha*), goldfields (*Lasthenia* spp.), plantain (*Plantago* spp.), one sided blue grass (*Poa secunda*), sanicle (*Sanicula* spp.), western blue eyed grass (*Sisyrinchium bellum*), clover (*Trifolium* spp.) and/or fescue (*Vulpia* spp.). Emergent trees and shrubs may be present at low cover. Herbs are less than 3 feet; cover is open to continuous.	**Not Expected:** Habitat type is not expected to occur within the project site.
CNDDB/Holland (1986) Wildflower Field **MCV (1995)** N/A	G2 S2.2	Generally found in valley and foothill grasslands.	**Not Expected:** Habitat type is not expected to occur within the project site.

TABLE C-1

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
NVCS (2009) N/A			

California Department of Fish and Wildlife (CDFW)

SC	Candidate - the classification provided to a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of endangered species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of threatened species.

California Native Plant Society (CNPS) California Rare Plant Rank

1B	Plants rare, threatened, or endangered in California and elsewhere.
2B	Plants rare, threatened, or endangered in California but more common elsewhere.
4	Plants of limited distribution – Watch List.

Threat Ranks

.1	Seriously threatened in California (over 80% of occurrences threatened/high degree any immediacy of threat).
.2	Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).
.3	Not very threatened in California (less than 20% of occurrences threated / low degree and immediacy of threat or no current threats known).

NatureServe Conservation Status Rank

The Global Rank (G#) reflects the overall condition and imperilment of a species throughout its global range. The Infraspecific Taxon Rank (T#) reflects the global situation of just the subspecies or variety. The State Rank (S#) reflects the condition and imperilment of an element throughout its range within California. (G#Q) reflects that the element is very rare but there are taxonomic questions associated with it; the calculated G rank is qualified by adding a Q after the G#). Adding a ? to a rank expresses uncertainty about the rank.

G1/T1	Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2/T2	Imperiled— At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3/T3	Vulnerable— At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4/T4	Apparently Secure— Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5	Secure – Common; widespread and abundant.
GNR	Unranked – Global rank not yet assessed.
S1	Critically Imperiled – Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
S2	Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or State.
S3	Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4	Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
SNR	Unranked – State conservation status not yet assessed.

Western Joshua Tree Conservation Act (WJTCA)

This Act provides for the conservation of western Joshua tree at a landscape scale, while also making available a permitting and mitigation process that would rely on simpler template permits and allow payment of in-lieu fees.

Table C-2

Scientific Name Common Name	Special-Status Rank*	Habitat Preferences and Distribution Affinities	Potential to Occur
Accipiter cooperii Cooper's hawk	WL G5 S4	Yearlong resident of California. Generally, found in forested areas up to 3,000 feet above mean sea level (amsl) in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests, but can be found in urban and suburban areas where there are tall trees (25 to 50 feet high) for nesting. Prefers pines, oaks, Douglas-firs, beeches, spruces for nesting. Common in open areas during nesting season.	**Not Expected:** Project site habitat is unsuitable for nesting by this species and marginally suitable for foraging. No CNDDB occurrence records are located within 10 miles of the project, and the nearest record is from 80 years ago.
Actinemys pallida southwestern pond turtle	SSC G2G3 SNR	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater.	**Not Expected:** Suitable habitats preferred by this species are not present within the project site. While aquatic features are generally present in the vicinity of the water reclamation plant in the northern portion of the project, these features are regularly maintained and not expected to support this species.
Agelaius tricolor tricolored blackbird	ST SSC G1G2 S1S2	Range is limited to the coastal areas of the Pacific coast of North America, from Northern California to upper Baja California. Can be found in a wide variety of habitat including annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields, cattle feedlots, and dairies. Occasionally forage in riparian scrub habitats along marsh borders. Basic habitat requirements for breeding include open accessible water, protected nesting substrate freshwater marsh dominated by cattails (*Typha* spp.), willows (*Salix* spp.), and bulrushes (*Schoenoplectus* spp.), and either flooded or thorny/spiny vegetation and suitable foraging space providing adequate insect prey.	**Not Expected:** This species is not expected to occur within the project site due to limited access to open water and suitable nesting substrate.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Aimophila ruficeps canescens Southern California rufous-crowned sparrow		Yearlong resident that is typically found between 3,000 and 6,000 feet amsl. Breed in sparsely vegetated scrubland on hillsides and canyons. Prefers coastal sage scrub dominated by California sagebrush (*Artemisia californica*), but they can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats.	**Not Expected:** Habitats preferred by this species are generally not present within the project site.
Anniella pulchra northern California legless lizard	SSC G3 S3	Typical habitat consists of sandy or loose loamy soils under sparse vegetation in chaparral, coastal dunes, and coastal scrub. Prefers soils with high moisture content.	**Not Expected.** While sparse desert scrub habitat is present within the project site, Pond-Oban complex soils, cover most of the project and are generally unsuitable for this species. Approximately a dozen CNDDB occurrences are within 10 miles of the project, primarily to the west and south, with one record coinciding with the northern portion of the project but dated from 70 years ago.
Anniella spp. California legless lizard	SSC G3G4 S3S4	Resemble small snakes. Rarely found crawling in the open, except at night. Typically found under objects or leaves, often in gardens in southern California. Not commonly seen.	**Not Expected:** Habitats preferred by this species are generally not present within the project site. No CNDDB occurrence records are from within 20 miles of the project. The nearest records are from the San Gabriel Mountains to the south of the project.
Aquila chrysaetos golden eagle	FP G5 S3	Yearlong resident of California. Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	**Not Expected:** Habitat is marginal for foraging; however, this species may pass through the project site searching for prey. Nesting habitat is generally absent from the project.
Arizona elegans occidentalis California glossy snake	SSC G5T2 S2	Inhabits arid scrub, rocky washes, grasslands, and chaparral habitats. Appears to prefer microhabitats of open areas and areas with soil loose enough for easy burrowing.	**Not Expected:** Habitats preferred by this species are generally absent from the project site.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Artemisiospiza belli belli Bell's sparrow	WL G5T2T3 S3	This species has a wide, but sparse distribution in western Riverside County, specifically within the "Riverside lowlands, San Jacinto Foothills, Santa Ana Mountains, and Desert Transition Bioregions. Yearlong resident on the coastal side of southern California mountains. Breeds in coastal sage scrub and chaparral habitats from February to August. They require semi-open habitats with evenly spaced shrubs one to two meters high. Occurs in chaparral dominated by fairly dense stands of chamise (*Adenostoma fasciculatum*).	**Not Expected:** This species is typically associated with dense, intact stands of coastal sage scrub habitats, particularly those with a high cover. The project site generally consists of upland, well-drained soils without extensive sagebrush-dominated vegetation. While not a wetland-dependent species, Bell's Sparrow does favor moisture-retaining soils in certain parts of its range. Since project site lacks marshes, wetlands, or riparian vegetation, it further reduces suitability for this species. While some populations extend into the western Mojave Desert, they are patchy and tied to specific vegetation communities. To that end, this species was not observed within the project site, but has been detected during surveys two miles west of the project.
Asio flammeus short-eared owl	SSC G5 S3	Found in swamp lands, both fresh and salt, lowland meadows, and irrigated alfalfa fields. They nest on dry ground in depression concealed in vegetation. The species needs tule patches or tall grasses for nesting/daytime seclusion.	**Not Expected (Foraging):** Habitat within the project site is marginal for foraging and this species may pass through the project searching for prey, although this species is more likely to occur around agricultural fields, wetland and riparian areas. However, there are no CNDDB occurrence records for this species within 5.0 miles of the project. In addition, there is no suitable nesting habitat within the project site.
Asio otus long-eared owl	SSC G5 S3?	Nests in conifer, oak, riparian, pinyon-juniper, and desert woodlands that are either open or are adjacent to grasslands, meadows, or shrublands. Key habitat components are some dense cover for nesting and roosting, suitable nest platforms, and open foraging areas.	**Not Expected:** Nesting habitat and dense cover preferred by this species is not present within the project site.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Athene cunicularia burrowing owl	SC G4 S3	Yearlong resident of California. Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	**Moderate:** Suitable desert habitats preferred by this species and potentially suitable burrows for this species are present within the project site. Suitable habitats occur across the project site and this species is known from the Antelope Valley.
Bombus crotchii Crotch's bumble bee	SC G2 S1S2	Found from coastal California east to the Sierra-Cascade crest and south into Mexico. Primarily occurs in California, including the Mediterranean region, Pacific coast, western desert, great valley, and adjacent foothills through most of southwestern California. Has also been recorded in Baja California, Baja California Sur, and in southwest Nevada. Inhabits open grassland and scrub habitats. Primarily nests underground. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	**Not Expected:** Although marginal habitat that includes this species' food plant genera are present within the project site and this species has been documented in iNaturalist in the vicinity within the past few years, a survey across targeted portions of the project site found no individuals of this species. The nearest documented extant occurrence for this species in the CNDDB was documented in 1971 approximately 3 miles to the southwest of the project.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Endemic to California and only found in vernal pools. Vernal pool habitats form in depressions above an impervious substrate layer, or claypan/duripan. This species does not occur in riverine, marine, or other permanent bodies of water. When the temporary pools dry, offspring persist in suspended development as desiccation-resistant embryos (commonly called cysts) in the pool substrate until the return of winter rains and appropriate temperatures allow some of the cysts to hatch.	**Not Expected:** The project site consists of well-drained upland soils and does not contain seasonal depressions that hold water long enough to support fairy shrimp life cycles. Vernal pool fairy shrimp require seasonal pools that retain water for several weeks to months. The project site lacks low-permeability soils necessary to sustain these conditions. The site's soils are too well-drained, alkaline, or saline, which would prevent the formation of the ephemeral freshwater pools that fairy shrimp rely on. Since the project site has no record of vernal pool formations in historical aerials or soil surveys, it further supports the conclusion that the habitat is unsuitable. Additionally, there are no CNDDB records of this species from the Antelope Valley. The nearest records are from 12 plus miles south-southwest in the San Gabriel Mountains.

Table C-2			
Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Buteo regalis ferruginous hawk	WL G4 S3S4	Occurs in open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Preys on mostly lagomorphs, ground squirrels, and mice.	**Not Expected:** Ferruginous Hawks prefer open grasslands, prairies, or habitats with low vegetation for hunting. Since the project site consists of upland, well-drained soils with dense or unsuitable vegetation, it does not provide the open foraging habitat this species require. Additionally, this species primarily hunts small mammals such as ground squirrels, prairie dogs, and rabbits. The project site generally lacks a large, stable prey populations, so it is unlikely to support Ferruginous Hawk activity. Additionally, Ferruginous Hawks nest on cliffs, trees, or isolated ground features in open landscapes. The project site lacks these nesting features, so it is not suitable for breeding. Also, Ferruginous Hawks are winter migrants rather than year-round residents in California. Since the project site lacks suitable winter foraging grounds, it is unlikely to attract them. Due to the absence of open foraging habitat, low prey availability, and lack of nesting structures, Ferruginous Hawk is not expected to occur at the project site.
Buteo swainsoni Swainson's hawk	ST G5 S3	Summer migrant in southern California. Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grassland or suitable grain or alfalfa fields or livestock pastures.	**Not Expected:** Project site habitat is only marginally suitable for foraging and this species is not expected to nest in the project.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Charadrius montanus mountain plover	SSC G3 S2S3	Found in short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Prefers grazed areas and areas with burrowing rodents with short vegetation, bare ground, and flat topography.	**Not Expected: I**n California, Mountain Plovers primarily winter in agricultural fields, grazed grasslands, or in the Central Valley and coastal plains. As a result, the project site lacks these specific wintering habitats, and plovers are unlikely to occur. Suitable foraging habitats preferred by this species are not present within the project site. This species does not nest in California.
Charadrius nivosus nivosus western snowy plover	FT SSC G3T3 S3	Occurs on sandy beaches, salt pond levees and along the shores of large alkali lakes. Breeding generally occurs above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Nests typically occur in flat, open areas with sandy or saline substrates; vegetation and driftwood are usually sparse or absent.	**Not Expected:** Suitable foraging and nesting habitats preferred by this species are not present within the project site. Additionally, there are no occurrence records for this species within 5.0 miles of the project.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Circus hudsonius northern harrier	SSC G5 S3	Yearlong resident of California. Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded area. In general, it prefers saltwater marshes, wet meadows, sloughs, and bogs for nesting and foraging. Nests on the ground in shrubby vegetation or patches of dense vegetation, usually at the marsh edge.	**Not Expected:** Northern Harriers prefer marshes, wet meadows, and open grasslands for hunting and nesting. The project site consists of upland, well-drained desert soils without the moist, open habitats that harriers typically require. This species nests on the ground in dense, low vegetation, usually in wetland areas or undisturbed grasslands which are not present within the project site. Also, Northern Harriers primarily hunt small mammals and birds, often relying on wetland or grassland rodent populations. Since the project site lacks sufficient prey populations, it would not support regular foraging activity either. While Northern Harriers can occur in parts of the Mojave Desert during migration or winter, they tend to concentrate around agricultural fields, marshes, or other open habitats. If your site lacks historical records or suitable habitat features, it is unlikely to attract them. To that end, there are no CNDDB occurrence records for this species within 5 miles of the project.
Corynorhinus townsendii Townsend's big-eared bat	SSC G4 S2	An uncommon species throughout California, it is known to be found in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. The species is extremely sensitive to human disturbance.	**Not Expected:** Suitable foraging and roosting habitats preferred by this species are not present within the project site. Additionally, there are no CNDDB occurrence records for this species within 5 miles of the project.
Euphydryas editha quino quino checkerspot butterfly	FE G4G5T1T2 S1S2	Occupies a variety of habitat types that support California plantain (*Plantago erecta*), the species primary larval host plant, including grasslands, coastal sage scrub, chamise chaparral, red shank chaparral, juniper woodland, and semi-desert scrub. Can also be found in desert canyons and washes at the lower edge of chaparral habitats.	**Not Expected:** Habitats preferred by this species are not present within the project site. There are no CNDDB records of this species from the Antelope Valley and the nearest are from 15 plus miles south of the project in the San Gabriel Mountains.

Table C-2			
Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
***Danaus plexippus plexippus* pop. 1** monarch – California overwintering population	FE G4T1T2Q S2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts are located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**Not Expected:** Suitable foraging and roosting habitats preferred by this species are not present within the project site. Additionally, there are no CNDDB occurrence records for this species within 5 miles of the project.
Falco columbarius merlin	WL G5 S3S4	Winter resident of southern California. Nest in forested openings, edges, and along rivers across northern North America. Found in open forests, grasslands, and especially coastal areas with flocks of small songbirds or shorebirds. This species does not breed in California.	**Not Expected:** Merlin typically inhabits open woodlands, coastal areas, grasslands, and forest edges which do not occur within the project site. Additionally, Merlins breed primarily in boreal forests, prairies, and wooded edges in northern North America. The Lancaster area is outside their breeding range, so nesting is not expected. While Merlins migrate through parts of California and winter in open habitats with abundant prey, they tend to favor agricultural fields, coastal dunes, and riparian corridors which are not present within the project site. Merlins primarily hunt small birds and large insects, often near wetlands or open woodlands. Due to the lack of woodland edges, agricultural fields, reliable prey sources, and suitable wintering or stopover habitat, Merlin is not expected to occur at the project site.
Falco mexicanus prairie falcon	WL G5 S4	The prairie falcon is associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields during the winter season, and desert scrub areas, all typically dry environments of western North American where there are cliffs or bluffs for nest sites. The species requires sheltered cliff ledges for cover and nesting which may range in height from low rock outcrops of 30 feet to vertical, 400 feet high (or more) cliffs and typically overlook some treeless country for hunting. Open terrain is used for foraging.	**Not Expected (Foraging):** The project site provides only marginal foraging habitat for this species. Additionally, the project site does not provide cliff ledges for cover and nesting.

Table C-2			
Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Gopherus agassizii desert tortoise	FT ST G3 S2S3	Can be found in a wide variety of habitats, such as alluvial fans, desert washes, canyons, and saltbush plains; most tortoises in the Mojave Desert are usually associated with creosote bush scrub on alluvial fans and bajadas. Wildflowers, grasses, and in some cases, cacti make up the bulk of their diet. Some of the more common forbs consumed by the tortoise include desert dandelion (*Malacothrix glabrata*), primrose (*Camissonia* spp. and *Oenothera* spp.) desert plantain (*Plantago ovata*), milkvetches (*Astragalus* spp.), gilia (*Gilia* spp.), desert marigold (*Baileya multiradiata*), Mojave lupine (*Lupinus odoratus*), phacelia (*Phacelia* spp.), desert wishbone-bush (*Mirabilis laevis*), lotus (*Lotus* spp.), forget-me-knots (*Cryptantha* spp.), goldfields (*Lasthenia californica*), California coreopsis (*Leptosyne californica*), white-margin sandmat (*Euphorbia albomarginata*), and the introduced red stemmed filaree (*Erodium cicutarium*).	**Not Expected:** There is marginally suitable habitat on-site. However, the closest known extant population is over 10 miles west and northwest of the project, near Edwards Air Force Base. Additionally, the project is at the southwestern edge of the species geographic range.
Helminthoglypta fontiphila Soledad shoulderband	G1 S1	Can be found in Soledad Canyon and Little Rock Creek Canyon on the north flank of the San Gabriel Mountains.	**Not Expected:** Suitable habitats preferred by this species are not present within the project site. This species does not occur outside of its small range.
Helminthoglypta greggi Mohave shoulderband	G2 S2	Can be found in moist, rocky habitat. Found on three mountain peaks southeast of Bakersfield.	**Not Expected:** Suitable habitats preferred by this species are not present within the project area, which also does not fall within the known range of this species.
Gymnogyps californianus California condor	FP FE SE G1 S2	Current distribution of California condor is considered to be all of the Los Padres National Forest and western half of the Angeles National Forest (USDA Forest Service 2000), with some occasionally found in the Sequoia National Forest. Nest sites are typically located in chaparral, conifer forest, or oak woodland habitats. Nest sites are in cliff caves in the mountains. Some have nested in large cavities within sequoias *(Sequoiadendron giganteum*).	**Not Expected:** Suitable foraging and roosting habitats preferred by this species are not present within the project site and this species is not known to occur in the Antelope Valley.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Haliaeetus leucocephalis bald eagle	SE FP G5 S3	Locally common yearlong resident of southern California. Typically prefer areas near large water bodies such as sea coasts, coastal estuaries and inland lakes and rivers, in many areas, these birds are found within two miles of a water source. Most populations, specifically those in northern regions, migrate to southern, milder climates annually. Generally, these birds nest in the canopy of tall, coniferous trees, surrounded by smaller trees. They have been reported nesting on the ground, on cliffs, on cellular phone towers, on electrical poles and in artificial nesting towers.	**Not Expected:** Suitable foraging and roosting habitats preferred by this species are generally absent from the project site. There are no CNDDB occurrence records of this species from the Antelope Valley.
Lanius ludovicianus loggerhead shrike	SSC G4 S4	Yearlong resident of California. Prefers open habitats with bare ground, scattered shrubs, and areas with low or sparse herbaceous cover including open-canopied valley foothill hardwood, riparian, pinyon-juniper desert riparian, creosote bush scrub, and Joshua tree woodland. Requires suitable perches including trees, posts, fences, utility lines, or other perches. Nests in branches up to 14 feet above the ground frequently in a shrub with thorns or with tangled branching habitats.	**Present:** One individual of this species was observed foraging within the project site.
Onychomys torridus ramona southern grasshopper mouse	SSC G5T3 S3	Common in arid desert habitats of the Mojave and southern Central Valley of California. Known elevation range is generally below 3,000 feet amsl. Little is known about habitat requirements; however, it is commonly found in scrub habitats with friable soils for digging in desert areas. It is believed that alkali desert scrub and desert scrub habitats are preferred, with somewhat lower densities expected in other desert habitats, including succulent shrub, wash, and riparian areas. Also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats.	**Not Expected:** While habitats potentially suitable – albeit low quality, habitat for this species can be found within the project site, only one CNDDB record occurs within the Antelope Valley, 20 plus miles southeast of the project.

Table C-2

Scientific Name Common Name	Special-Status Rank*	Habitat Preferences and Distribution Affinities	Potential to Occur
Perognathus alticola inexpectatus Tehachapi pocket mouse	SSC G2T1T2 S1S2	Found in arid annual grassland and desert shrub communities, but also in fallow grain fields and within Russian thistle. This small mammal burrows for cover and nesting, and aestivates and hibernates during extreme weather. Forages on open ground and under shrubs.	**Not Expected:** While potentially suitable desert scrub habitat occurs within the project area, CNDDB records of this species are from 25 plus miles west of the project in mountainous areas; no records are from the Antelope Valley.
Perognathus inornatus San Joaquin pocket mouse	G2G3 S2S3	Found in grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, south to the Mojave Desert. Associated with fine-textured, sandy, friable soils.	**Not Expected:** Suitable habitats preferred by this species are generally absent from the project site, including loose, fine, sandy soils. The nearest CNDDB record is from nearly 100 years ago and 10 miles south of the project.
Phrynosoma blainvillii coast horned lizard	SSC G3G4 S4	Occurs in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. Its elevational range extends up to 4,000 feet in the Sierra Nevada foothills and up to 6,000 feet in the mountains of southern California. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (e.g., fire, floods, unimproved roads, grazing lands, and fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	**Not Expected:** Loose, fine sandy soils preferred by this species are generally absent within the project site. As it primarily consists of compacted surface soils which likely precludes this species from occurring. Further, the only known CNDDB occurrence record within 5 miles of the project was recorded in 1964.
Plegadis chihi white-faced ibis	WL G5 S3S4	Locally rare resident/migrant in southern California. Prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland.	**Not Expected:** Suitable foraging and nesting habitats preferred by this species are not present within the project site. A CNDDB record of this species from 1998 includes observation of an individual at the Piute Ponds, east of the project. While this species may occur at the Piute Pond complex, habitats suitable for this species are not present in the project site and this species is not expected to occur within the project.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Polioptila californica californica coastal California gnatcatcher	FT SSC G4G5T3Q S2	Yearlong resident of sage scrub habitats that are dominated by California sagebrush. This species generally occurs below 750 feet amsl in coastal regions and below 1,500 feet amsl inland. Ranges from the Ventura County, south to San Diego County and northern Baja California and it is less common in sage scrub with a high percentage of tall shrubs. Prefers habitat with more low-growing vegetation.	**Not Expected:** Suitable sage scrub habitats preferred by this species are not present within the project site and this species is not known from the Antelope Valley.
Rana draytonii California red-legged frog	FT SSC G2G3 S2S3	The species historically occurred in the San Gabriel Wilderness Area of the Angeles National Forest; there were no post-1970 observations in this area or nearby parts of the Angeles National Forest. In 1999, a population (estimated between 15 and 25 adults) was located on the Angeles National Forest in the San Francisquito drainage. Breeding sites are in a variety of aquatic habitats including streams, deep pools, backwaters within streams and creeks, ponds, marshes, sag ponds, dune ponds, lagoons, and artificial impoundments (i.e., stock ponds). Breeding adults are often associated with deep (greater than 2 feet) still or slow-moving water and dense shrubby riparian or emergent vegetation.	**Not Expected:** Suitable aquatic habitats required by this species are not present within the project site.
Taxidea taxus American badger	SSC G5 S3	Occupies a wide variety of habitats including dry, open grassland, sagebrush, and woodland habitats. Require dry, friable, often sandy soil to dig burrows for cover, food storage, and giving birth. Occasionally found in riparian zones and open chaparral with less than 50% plant cover.	**Not Expected:** Suitable grassland, sagebrush, and woodland habitats preferred by this species are generally absent from the project site and soils are generally unsuitable. The nearest CNDDB records are from 10 plus miles from the project and from more than 90 years ago.
Thamnophis hammondii two-striped garter snake	SSC G4 S3S4	Occurs in or near permanent fresh water, often along streams with rocky beds and riparian growth up to 7,000 feet amsl.	**Not Expected:** Suitable aquatic habitats required by this species are not present within the project site.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Toxostoma lecontei Le Conte's thrasher	SSC G4 S3	Common yearlong resident in southern California. Typically occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs. Habitats with a high proportion of one or more species of saltbush (*Atriplex* spp.) and/or cylindrical cholla cactus (*Cylindropuntia* spp.) is preferred. The ground is generally bare or with sparse patches of grasses and annuals forming low ground cover. Prefers thick, dense, and thorny shrubs or cholla cactus for nesting.	**Not Expected:** While saltbush scrub preferred by this species is present in the project area, suitable vegetation to support nesting is absent. Of approximately 10 CNDDB records identified during review, the nearest CNDDB record is from 1986 and 6 miles north of the project. Remaining records are from 10 plus miles away, with the most recent from 2005.
Vireo bellii pusillus least Bell's vireo	FE SE G5T2 S2	Summer resident in southern California. Breeding habitat generally consists of dense, low, shrubby vegetation in riparian areas, and mesquite brushlands, often near water in arid regions. Early successional cottonwood-willow riparian groves are preferred for nesting. The most critical structural component of nesting habitat in California is a dense shrub layer that is 2 to 10 feet (0.6 to 3.0 meters) above ground. The presence of water, including ponded surface water or moist soil conditions, may also be a key component for nesting habitat.	**Not Expected:** Suitable riparian foraging and nesting habitats preferred by this species are not present within the project site. Additionally, there are no CNDDB occurrence records for this species within 5 miles of the project.

Table C-2

Scientific Name Common Name	**Special-Status Rank***	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Xerospermophilus mohavensis Mohave ground squirrel	ST G2G3 S2S3	Restricted to the Mojave Desert in creosote bush scrub (most common), desert saltbush scrub, desert sink scrub, desert greasewood scrub, shadscale scrub, Joshua tree woodland, and annual grasslands. Prefers deep, sandy to gravelly soils on flat to moderately sloping terrain; species tends to avoid rocky areas and is not known to occupy areas of desert pavement. May consume leaves, forbs, shrubs, and grasses of several species and genera, including creosote (*Larrea tridentata*), winter fat (*Krascheninnikovia lanata*), spiny hop sage (*Grayia spinosa*), freckled milk vetch (*Astragalus lentiginosus*), white mallow (*Eremalche exilis*), wooly marigold (*Baileya pleniradiata*), lilac sunbonnet (*Langloisia setosissima*), Mojave monardella (*Monardella exilis*), saltbush, gilia, golden linanthus (*Linanthus aureus*), and Mediterranean grass (*Schismus arabicus*), as well as seeds of box thorn (*Lycium* spp.).	**Not Expected:** There is marginally suitable habitat within the project site for this species. Although one CNDDB occurrence record is within 5 miles of the project, this species has not been detected in Los Angeles County outside of Edwards Air Force Base in over 30 years (Leitner 2015).

* **U.S. Fish and Wildlife Service (USFWS)**

FE	Endangered – any species which is in danger of extinction throughout all or a significant portion of its range.
FT	Threatened – any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
FC	Candidate – any species which has been designated as a candidate eligible for considering to be listed under the Federal Endangered Species Act.

California Department of Fish and Wildlife (CDFW)

SE	Endangered – any native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
ST	Threatened – any native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required under the California Endangered Species Act.
SC	Candidate - the classification provided to a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of endangered species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of threatened species.
FP	Fully Protected – any native species or subspecies of bird, mammal, fish, amphibian, or reptile that were determined by the State of California to be rare or face possible extinction.

SSC	Species of Special Concern – any species, subspecies, or distinct population of fish, amphibian, reptile, bird, or mammal native to California that currently satisfies one or more of the following criteria: - is extirpated from California or, in the case of birds, in its primary seasonal or breeding role; - is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed. - is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; or - has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.
WL	Watch List - taxa that were previously designated as “Species of Special Concern” but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

NatureServe Conservation Status Rank

The Global Rank (G#) reflects the overall condition and imperilment of a species throughout its global range. The Infraspecific Taxon Rank (T#) reflects the global situation of just the subspecies or variety. The State Rank (S#) reflects the condition and imperilment of an element throughout its range within California. (G#Q) reflects that the element is very rare but there are taxonomic questions associated with it; the calculated G rank is qualified by adding a Q after the G#). Adding a ? to a rank expresses uncertainty about the rank.

G1/T1	Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2/T2	Imperiled— At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3/T3	Vulnerable— At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4/T4	Apparently Secure— Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5	Secure – Common; widespread and abundant.
GNR	Unranked – Global rank not yet assessed.
S1	Critically Imperiled – Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
S2	Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or State.
S3	Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4	Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
SNR	Unranked – State conservation status not yet assessed.

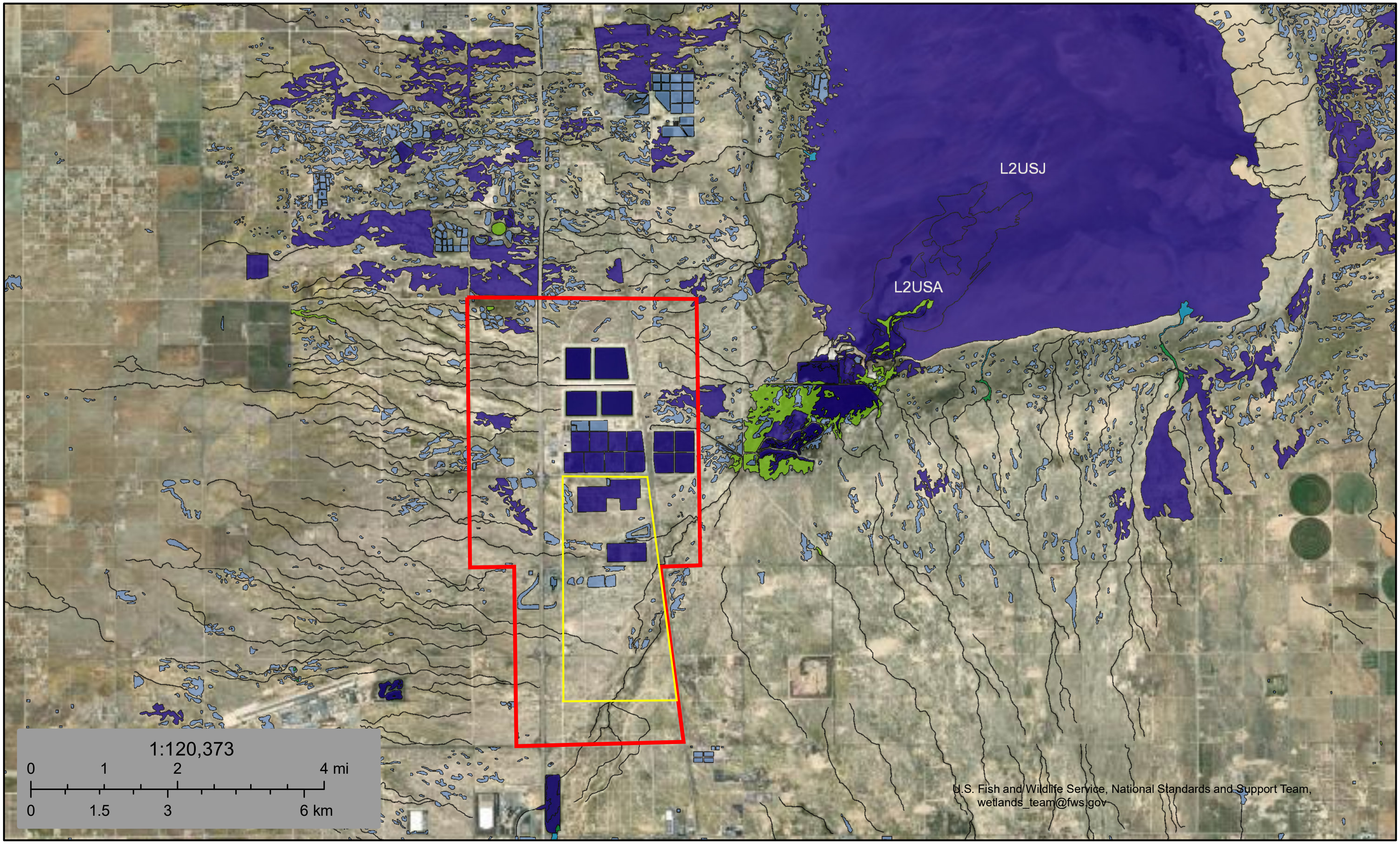
APPENDIX D

NATIONAL WETLANDS INVENTORY MAP

U.S. Fish and Wildlife Service

National Wetlands Inventory

Westside Annexation and Specific Plan Project



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

August 18, 2024

Wetlands

■ Estuarine and Marine Deepwater

■ Estuarine and Marine Wetland

— Westside Annexation Area

■ Freshwater Emergent Wetland

■ Freshwater Forested/Shrub Wetland

■ Freshwater Pond

— Specific Plan Area

■ Lake

■ Other

■ Riverine

APPENDIX E

BURROWING OWL SURVEY REPORT
PLANNING AREAS 2 AND 4

Michael Baker
INTERNATIONAL

We Make a Difference

January 31, 2024 JN 195378

Northpointe Development
Attn: *Alex Jarzembowski*
3315 North Oak Trafficway
Kansas City, MO 64116

SUBJECT: Results of Focused Burrowing Owl (*Athene cunicularia*) Surveys for the Proposed North Lancaster Industrial Specific Plan – Planning Areas 2 and 4 Project, Unincorporated Los Angeles County, California

Dear Mr. Jarzembowski:

This report contains the findings of Michael Baker International's (Michael Baker) focused burrowing owl (*Athene cunicularia*; [BUOW]) survey conducted during the 2023 breeding season for the North Lancaster Industrial Specific Plan – Planning Areas 2 and 4 Project (project or project site) located in the City of Lancaster, Los Angeles County, California. Based on the results of Michael Baker's initial review of California Natural Diversity Database (CNDDB; CDFW 2023) occurrence records, the project site is located within the vicinity of known occurrences of burrowing owls and the area that provides suitable nesting and foraging habitat. As such, focused BUOW surveys were conducted during the 2023 breeding season to document the presence/absence of BUOW within the project site and suitable habitat within 500 feet (survey area) in accordance with the *Staff Report on Burrowing Owl Mitigation* (*Staff* Report) (California Department of Fish and Game [CDFG] 2012). The focused BUOW habitat assessment/burrow survey was conducted on April 20 and 26, 2023, during the species breeding season to document any suitable habitat within the project site.

Project Location

The project site is generally located east of 20th Street West, north of West Avenue E4, south of West Avenue D, and east of Sierra Highway in an unincorporated area of Los Angeles County, California (refer to Figures 1 and 2, *Regional and Project Vicinity*). West Avenue E transects the project site, dividing the overall site into a northern and southern portion. The project site is depicted in Section 21 and Section 28 of Township 8 North, Range 12 West, on the U.S. Geological Survey's (USGS) *Lancaster West, California* 7.5-minute quadrangle. Specifically, the project site totals approximately 437 acres, including the project site itself (432.96 acres) and proposed utility extensions (4.25 acres), and encompasses Assessor's Parcel Numbers (APN) 3116-014-038, 33116-014-039, 3116-022-002, 3116-022-001, and 3116-008-032.

Project Description

The project site is located north of the City of Lancaster in an unincorporated portion of Los Angeles County, California. The project site is generally bordered by 20th Street West to the west, West Avenue East 4 to the south, Sierra Highway to the east, and West Avenue D to the north. Amargosa Creek occurs east of the project site. The specific study area is depicted within Section 21, Township 8 North, Range 12 West, San Bernardino Principal Meridian in the US Geological Survey (USGS) Lancaster West Quadrangle.

The proposed project is component of the larger Westside Annexation and Specific Plan Project which involves two components: 1) annexation of the project site from unincorporated Los Angeles County into the City of Lancaster jurisdiction and 2) adoption of the proposed North Lancaster Industrial Specific Plan (Specific Plan), which would allow up to approximately 38.5 million square feet of industrial development.

Species Background

The BUOW is a grassland specialist distributed throughout western North America, where it is known to occupy a wide variety of arid and semi-arid open areas within shrub, desert, and grassland environments. The California Department of Fish and Wildlife (CDFW) currently lists the BUOW as a California Species of Special Concern. BUOWs require large open, sparsely vegetated areas, on rolling or level terrain with an abundance of fossorial mammal burrows (> 4 inches in diameter). In addition, BUOWs require open vegetation allowing open line-of-sight of the surrounding habitat to forage as well as watch for predators. BUOWs are dependent upon the presence of burrowing mammals (e.g., California ground squirrel [*Otospermophilus beecheyi*], coyote [*Canis latrans*], American badger [*Taxidea taxus*]) whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of fossorial mammal burrows is often a major factor that limits the presence or absence of BUOW. Where mammal burrows are scarce, BUOWs have been observed digging their own burrows in soft, friable soil and have been observed utilizing man-made cavities such as buried and non-functioning drainpipes, standpipes, and dry culverts. Additionally, BUOWs may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators.

Adult BUOWs are small owls (approximately 7.5 to 9.8 inches) with long legs and short tails that are speckled brown and white, with yellow eyes and yellow bill. A bold white throat and eyebrows are also typical distinguishing features for BUOWs. Juvenile BUOWs are usually less mottled than adults, with buffy-yellow underparts. BUOWs have crepuscular (dawn and dusk) hunting habits but are often observed perched in or near the burrow entrance during the day. One burrow is typically selected for use as the main nest burrow, however, BUOWs also utilize satellite burrows that are often located within the immediate vicinity of the main nest burrow. BUOWs prey upon invertebrates and small vertebrates through the low growing vegetation which allows for foraging visibility (Thomsen 1971). They typically forage in short grass, mowed, or overgrazed pasture, golf courses and airports (Thomsen 1971). Based on the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), the BUOW breeding season in California extends from

February 1 through August 31. BUOWs in California may migrate southerly but often remain in their breeding area during the non-breeding months. The BUOW was once abundant and widely distributed within southern California, but it has declined precipitously in counties such as Los Angeles, Orange, San Diego, Riverside, and San Bernardino.

Regulatory Framework

Migratory Bird Treaty Act

The BUOW is a resident and migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918. The MBTA reflects agreements made between the U.S., England, Mexico, the former Soviet Union, and Japan to protect all of North America's migratory bird populations. The MBTA protects migratory bird nests from possession, sale, purchase, barter, transport, import and export, and collection. The other prohibitions (i.e., capture, pursue, hunt, and kill) of the MBTA are inapplicable to nests. The regulatory definition of take, as defined in Title 50 Code of Federal Regulations (C.F.R.) Part 10.12, means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to hunt, shoot, wound, kill, trap, capture, or collect. Only the verb "collect" applies to nests. It is illegal to collect, possess, and by any means transfer possession of any migratory bird nest. The MBTA prohibits the destruction of a nest when it contains birds or eggs, and no possession shall occur during the destruction (U.S. Fish and Wildlife Service 2017). Certain exceptions to this prohibition are included in Title 50 C.F.R. Section 21. Pursuant to Section 3513 of the California Fish and Game Code (CFGC), CDFW enforces the MBTA consistent with rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

California Fish and Game Code

Pursuant to Section 3513 of the California Fish and Game Code (CFGC), the California Department of Fish and Wildlife (CDFW) enforces the MBTA consistent with rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA. Additionally, BUOW is protected under Sections 3503, 3503.3, 3511, and 3513 of the CFGC which prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (March 1 through August 15, annually). Section 3503.5 of the CFGC protects birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks and owls, including BUOWs) which makes it unlawful to take, posses, or destroy their nest or eggs. Further, the *Staff Report* offers long-term assurances for conservation of this species in exchange for biologically appropriate levels of incidental take and/or habitat loss as defined in the approved plan.

Methodology

Based on a review of aerial photography, CNDDB records, and reports of the species' occurrence in the Antelope Valley, the project site (depicted in Figure 3, *Project Site and Vegetation Communities*) was identified as providing suitable habitat and nesting and foraging opportunities for BUOW. As such, a focused habitat assessment/burrow survey and focused BUOW surveys were conducted by Michael Baker biologists on four (4) separate occasions during the 2023 breeding season in accordance with the *Staff Report* (CDFG 2012). The focused habitat assessment/burrow survey was conducted concurrently with the first focused BUOW survey on April 20, 2023, though survey efforts were stopped due do the deterioration of weather conditions and were resumed on April 26 during favorable weather conditions. Subsequent rounds of BUOW surveys were completed May 16-18 (Round 2 of surveys), June 20 and 21 (Round 3), and on July 11 and 12 (Round 4). Surveys generally were not conducted during rain, high winds, dense fog, or high temperatures. Please refer to Table 1 below for a summary of the survey dates, times, surveyors, and weather conditions for each of the surveys.

Table 1: Survey Dates, Surveyors, Timing, and Weather Conditions

Date	Surveyors*	Time (start / finish)	Temperature (°F) (start / finish)	Wind Speed (mph) (start / finish)
April 20, 2023	AJ, JP, AN, TJM	0645 / 01000	58 / 71	2 - 3
April 26, 2023	AJ, JP, AN	0645 / 1100	41 / 77	0 - 3
May 16, 2023	AJ, JP	0730 / 1000	64 / 93	0 - 3
May 17, 2023	AJ, JP	0715 / 1000	61 / 91	0 - 3
May 18, 2023	AP, JP	0630 / 0740	75 / 89	1 - 4
June 20, 2023	AJ, JP, AN	0600 / 0945	55 / 68	8 – 10
June 21, 2023	AJ, JP	0600 / 0900	59 / 75	1 - 5
July 11, 2023	AJ, JP	0600 / 1000	60/89	0-10
July 12, 2023	AJ, JP, MY	0600 / 1000	73 / 90	0-12
*JP = John Parent, AJ = Anna Jullie, AN= April Nakagawa, Trina Ming = TJM, Marcel Young = MY				

The project site was surveyed for suitable, occupied, and remnant burrows consisting of natural and man-made structures capable of providing suitable roosting/nesting opportunities. During the focused habitat assessment/burrow survey conducted on April 20 and 26, 2023, a systematic search for suitable burrows (> 4 inches in diameter) within all portions of the project site was conducted. Survey transects were spaced out at approximately 3- to 6-meter (10 to 20 feet) intervals to ensure 100% visual coverage of the entire project site, excluding a small area where a residence is present within the southwest corner of the norther portion of the project site.

Areas within the 500-foot buffer around the project site were surveyed indirectly, as access to directly survey these areas was not provided. Additionally, surveys of native desert scrub habitat adjacent to the alignment of proposed utility extensions were also indirectly surveyed from the paved roadway of 20th Street West, between the southern boundary of the project site, south to West Ave F. Surveyors walked along the roadway scrutinizing disturbed roadside habitat along the east side of the roadway, where utility extension activities are proposed to occur.

In accordance with the *Staff Report*, surveys were not conducted during rain, high winds (> 12 miles per hour), dense fog, or temperatures over 90 degrees Fahrenheit, and were conducted between the hours of 0600-1000. Adverse weather conditions delayed completion of the initial habitat assessment/burrow survey, which was conducted on April 20 and 26, a few days after the April 15 target date recommended for completion of the first survey by the *Staff Report*. High wind conditions in the Antelope Valley limited suitable survey days prior to completion of the first survey and during subsequent survey rounds. Binoculars were used to scan areas that were inaccessible due to the lack of right-of-entry to observe and identify distant birds; identify any suitable, occupied, and remnant burrows consisting of natural and man-made substrates; and identify any activity around suitable habitat for BUOW. Methods to detect the presence of BUOWs included direct observation, aural detection, and signs of presence (i.e., pellets, whitewash, feathers, tracks, and prey remains). If detected, the location of any suitable habitat, potential burrows, sign (i.e., pellets, whitewash, feathers, or prey remains), and BUOWs observed within the survey area are recorded and mapped using a hand-held Global Positioning System (GPS) unit.

Results and Discussion

Existing Conditions

The survey area primarily consists of disturbed vegetation communities and includes two residential structures, one within the southwest corner of the portion of the project site located north of West Ave E and one just east of 20th Street West within the portion of the project site located south of West Ave E. The remainder of the site is devoid of structures. A series of constructed and abandoned ponds are present within the northern section of the project site, north of West Ave E. The site is generally flat and lies at an elevation of approximately 2,300 to 2,306 feet above mean sea level. Based on a review of Google Earth Pro aerial imagery from 1994 to 2023 (Google, Inc. 2023) and results from the field surveys, it was determined that the survey area is surrounded by undeveloped open land and a mobile home complex to the west and east, Lancaster Water Reclamation Plant to the north, and open land to the south. Refer to Attachment B for representative photographs taken throughout the survey area.

Six (6) vegetation communities and two other land cover types were mapped within the survey area (refer to Figure 3):

- Fiddleneck – Phacelia Fields (*Amsinckia* [*menziesii*, *tessellata*] - *Phacelia* spp. Herbaceous Alliance, *Amsinckia tessellata* - *Erodium cicutarium* Association)
- Disturbed Fiddleneck – Phacelia Fields (Disturbed *Amsinckia* [*menziesii*, *tessellata*] - *Phacelia* spp. Herbaceous Alliance, *Amsinckia tessellata* - *Erodium cicutarium* Association)
- Disturbed Shadscale Scrub (Disturbed *Atriplex confertifolia* Shrubland Alliance, *Atriplex confertifolia – Atriplex polycarpa* Association)
- Disturbed Allscale Scrub (Disturbed *Atriplex polycarpa* Shrubland Alliance, *Atriplex polycarpa* Association)
- Disturbed Rubber Rabbitbrush Scrub (Disturbed *Ericameria nauseosa* Shrubland Alliance, *Ericamerica nauseosa* Association)
- Tamarisk Thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance, *Tamarix* spp. Association). Other land cover types consisted of Disturbed and Disturbed/Developed
- Disturbed land cover
- Developed land cover

While generally composed of native plant species, vegetative communities occurring on-site have been disturbed by anthropogenic impacts and include a significant amount of vegetative cover by non-native, weedy herbaceous species, resulting in the overall disturbed nature of the project site.

Literature Review

Based on a review of the CNDDB, twenty-nine (29) occurrence records for burrowing owl were identified from within the USGS *Lancaster West, Lancaster East, Roasamond Lake,* and *Rosamond California* 7.5-minute quadrangle. Of these occurrences, six (6) occur within a 5-mile radius of the project site, with five of these records from within the past 20 years (CDFW 2023). The closest extant occurrence in the CNDDB (Occurrence Number 1062) was recorded in 2004, approximately 1.30 miles east of the project site (CDFW 2023). There are also several records of this species in the eBird database from the last 20 years, within and just outside of a 5-mile radius of the project site (eBird 2023).

Survey Results

No individual BUOW or sign of BUOW were observed during focused surveys conducted across the project site in 2023. A total of seventeen (17) suitable burrows were recorded during the focused burrow survey conducted on April 20 and 26, 2023, located primarily in the northern portion of the project site (refer to Figure 4, *Survey Results*).

A total of twenty-nine (29) wildlife species were detected over the course of the focused survey efforts, including 23 bird, 3 mammal, and 3 reptile species. The most commonly occurring wildlife species on-site included horned lark (*Eremophila alpestris*), northern mockingbird (*Mimus polyglottos*), Eurasian collared dove (*Streptopella decaocto*), house finch (*Haemorhous mexicanus*), and common raven (*Corvus corax*). Two special-status bird species were incidentally observed during BUOW surveys, including northern harrier (*Circus hudsonius*; CDFW Species of Special Concern [SSC]) and loggerhead shrike (*Lanius ludovicianus*; SSC). Refer to Attachment C for a complete list of wildlife species observed during focused surveys.

Conclusions and Recommendations

While burrows potentially suitable for BUOW were found on-site, based on results of the 2023 focused surveys, no BUOW are currently nesting on-site. No individual BUOW or recent sign of the species were detected. Although BUOW is currently considered absent from the project site, with known records of BUOW in the project region, potential exists for BUOW to occur on-site prior to implementation of the proposed project. Therefore, a pre-construction clearance survey would be required to reconfirm the absence of BUOWs and maintain compliance with the MBTA and CFGC. In accordance with the *Staff Report*, a "take avoidance survey" would need to be conducted by a qualified biologist following methods described in Appendix D of the *Staff Report* no more than 14 days prior to initiating any ground disturbing activities to avoid direct take of BUOWs, including those that may occupy burrows just prior to construction. Once the survey is completed, the qualified biologist should prepare and submit a final report documenting the results of the clearance survey to CDFW for review and file. A BUOW avoidance and minimization plan should also be prepared and submitted to CDFW for approval prior to the initiation of any project activities, regardless of pre-construction survey results, to account for the presence of owls if a burrow becomes occupied after construction has commenced.

Please do not hesitate to contact me at (714) 394-5646 or john.parent@mbakerintl.com should you have any questions or require further information.

Sincerely,

Anna Jullie

John Parent

Wildlife Biologist
BUOW Survey Lead

Anna Jullie

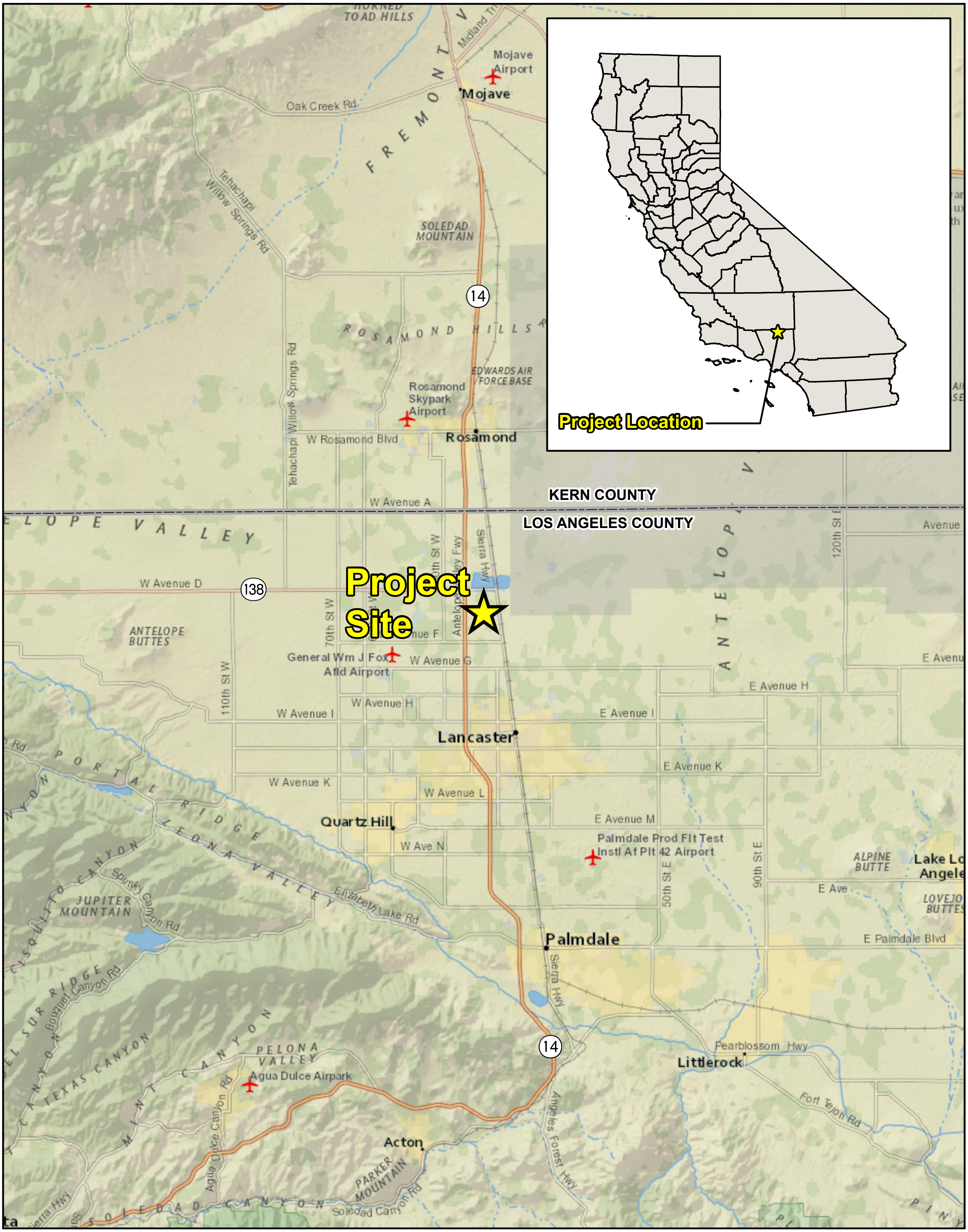
Wildlife Biologist

Attachments:

A. *Project Figures*
B. *Site Photographs*
C. *Wildlife Species Observed List*
D. *References*

Attachment A

Project Figures



10/30/2023 JN \IRVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx

Michael Baker
INTERNATIONAL

0 2.5 5
Miles

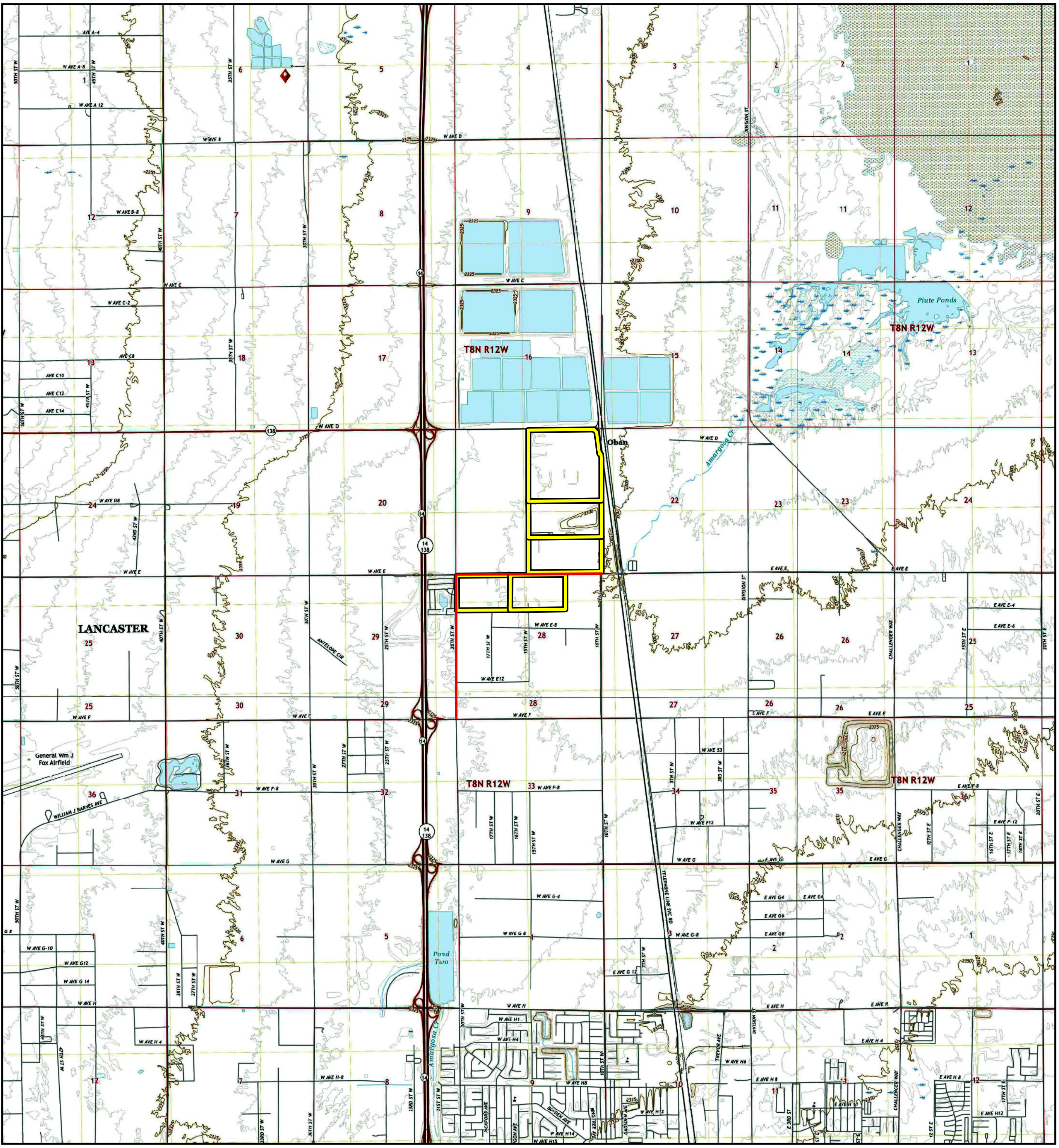
Source: ArcGIS Online, 2018

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
FOCUSED BURROWING OWL SURVEY

Regional Vicinity

Figure 1

1/3/2024 JN \\RVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx



Legend

☐ Project Site (432.96 acres)

☐ Utility Extensions

0 0.5 1 Miles

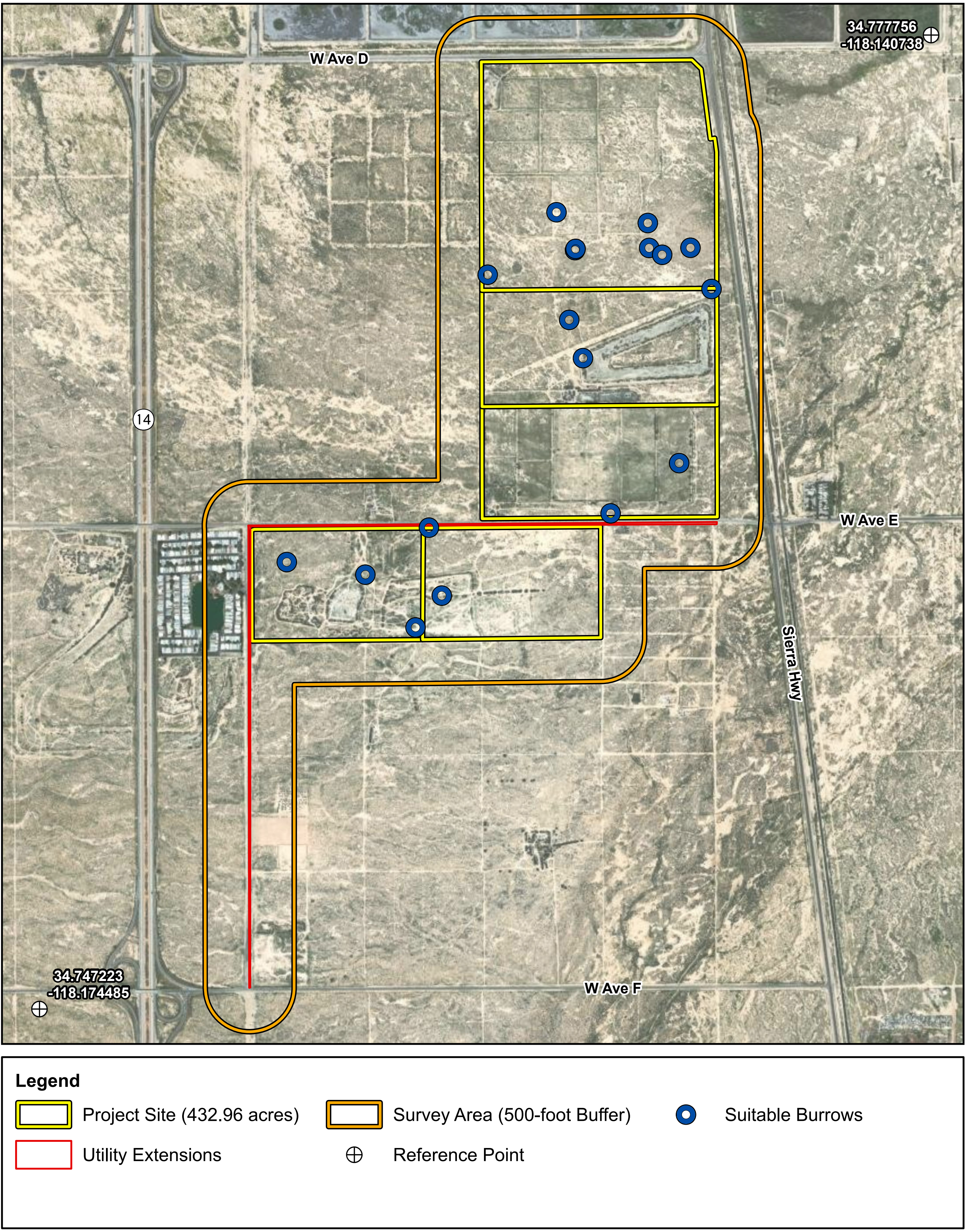
NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
FOCUSED BURROWING OWL SURVEY

Site Vicinity

Michael Baker INTERNATIONAL

Source: USGS 7.5-Minute topographic quadrangle maps: *Lancaster East, Lancaster West, Rosamond (2022), and Rosamond Lake (2021)*

Figure 1



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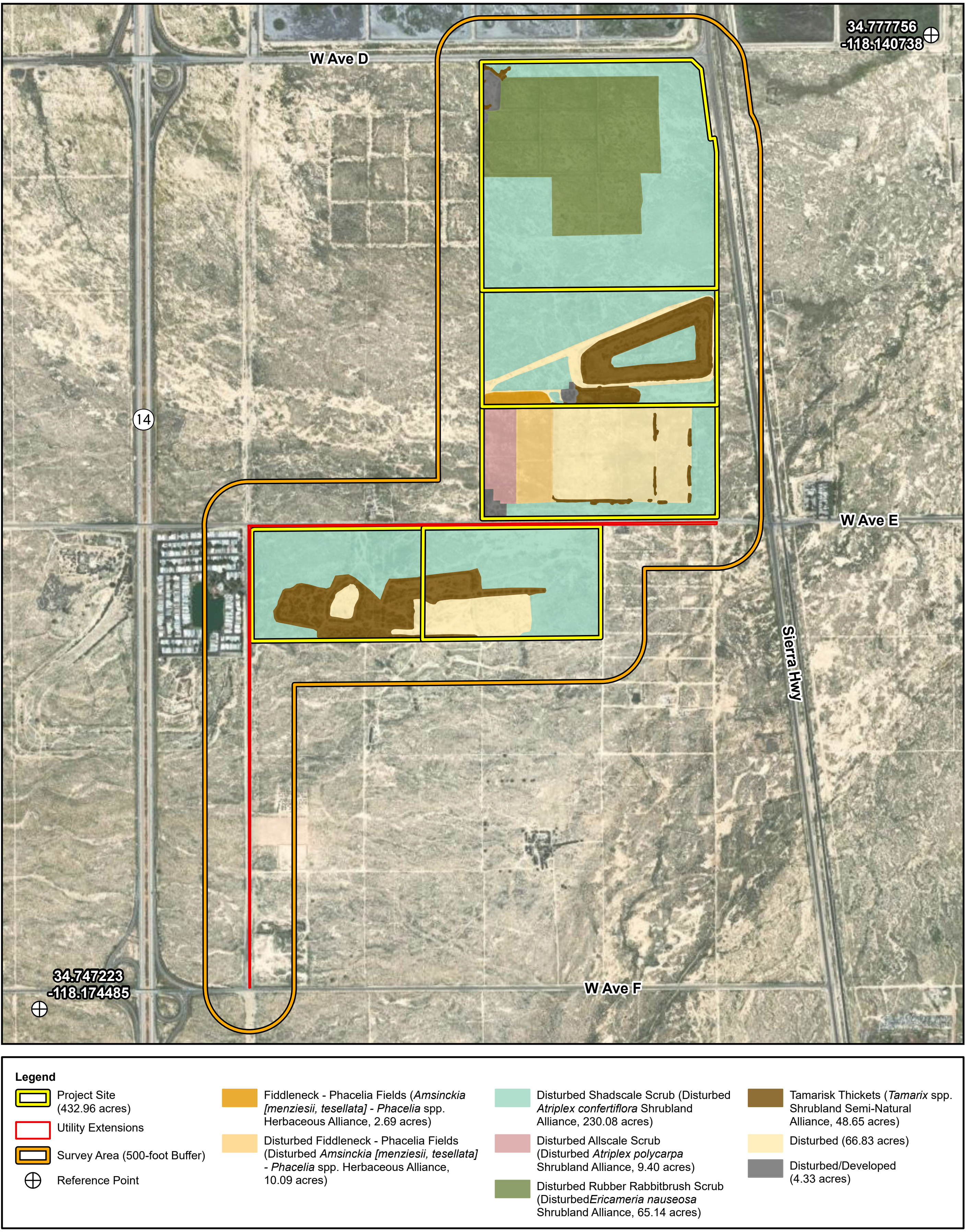
NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
FOCUSED BURROWING OWL SURVEY

Survey Results

0 750 1,500
Feet

Source: Esri/Maxar (10/2021)

Figure 4



NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
FOCUSED BURROWING OWL SURVEY
Project Site, Survey Area, and Vegetation
Communities and Land Cover Types

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0 750 1,500
Feet

Source: Esri/Maxar (10/2021)

Figure 3

1/3/2024 JN \\IRVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx

Attachment B

Site Photographs

Photograph 1: North-facing view from near the middle of the northern portion of the project site.

Photograph 2: West-facing view from near the middle of the northern portion of the project site.

Photograph 3: Potentially suitable burrow recorded in the northern portion of the project site.

Photograph 4: North-facing view from the eastern boundary of the northern portion of the project site.

Photograph 5: Northeast-facing view from near the center of the southern portion of the project site.

Photograph 6: North-facing view from the southern boundary of the southern portion of the project site.

Attachment C

Wildlife Species Observed List

Wildlife Species Observed

	Common Name	**Special Status Rank**
BIRDS		
Agelaius phoeniceus	red-winged blackbird	
Aphelocoma californica	California scrub-jay	
Calypte anna	Anna’s hummingbird	
Callipepla californica	California quail	
Chordeiles acutipennis	lesser nighthawk	
Circus hudsonius	northern harrier	SCC
Columba liva	rock pigeon	
Corcus corax	common raven	
Corvus brachyrhynchos	American crow	
Eremophila alpestris ammophila	California horned lark	
Euphagus cyanocephalus	Brewer’s blackbird	
Haemorhous mexicanus	house finch	
Lanius ludovicianus	loggerhead shrike	SSC
Melospiza melodia	song sparrow	
Mimus polyglottos	northern mockingbird	
Molothrus ater	brown-headed cowbird	
Myiarchus cinerascens	ash-throated flycatcher	
Numenius phaeopus	whimbrel	
Streptopella decaocto	Eurasian collared-dove	
Sturnella neglecta	western meadowlark	
Turdus migratorius	American robin	
Tyto alba	barn owl	
Zonotrichia leucophrys	white-crowned sparrow	
MAMMALS		
Canis latrans	coyote	
Lepus californicus	black-tailed jackrabbit	
Sylvilagus audubonii	desert cottontail	
REPTILES		
Coluber flagellum	red racer	
Sceloporus occidentalis	western fence lizard	
Uta stansburiana	side-blotched lizard	

Attachment D

References

California Department of Fish and Game [CDFG]. 2012. *Staff Report on Burrowing Owl Mitigation*. March 7. State of California Natural Resource Agency, Department of Fish and Game. 36 pp.

CDFW. 2023. Rarefind 5, California Natural Diversity Database, California. Database report on threatened, endangered, rare or otherwise sensitive species and communities for the USGS *Lancaster West, Little Buttes, Rosamond, and Del Sur, California* 7.5-minute quadrangle.

Haug, E. A., B.A. Millsap, and M.S. Martell. 1993. Burrowing Owl (*Speotyto cunicularia*). In the Birds of North America, No. 61 (A.Poole and F. Gill, Eds.) Philadelphia: The Academy of Natural Science; Washington

Thomsen, L. 1971. *Behavior and ecology of Burrowing Owls in the Oakland Municipal Airport*. Condor 73: 177-192.

U.S. Fish and Wildlife Service. 2017. *Migratory Bird Treaty Act of 1918*. Access online at: https://www.fws.gov/law/migratory-bird-treaty-act-1918.

APPENDIX F

RARE PLANT SURVEY REPORT
PLANNING AREAS 2 AND 4

Michael Baker
INTERNATIONAL

We Make a Difference

August 8, 2023 JN 192704

NORTHPOINT DEVELOPMENT
Attn: *Jack Lac*
3315 N. Oak Trafficway
Kansas City, MO 64116

SUBJECT: Results of Rare Plant Surveys for the North Lancaster Industrial Specific Plan – Planning Areas 6 through 8 Project, Los Angeles County, California

Dear Mr. Lac:

Michael Baker International (Michael Baker) is pleased to submit this report to Northpoint Development documenting the results of rare plant surveys conducted for the Antelope Valley Logistics Center - East Project (project) located in unincorporated Los Angeles County, California. Michael Baker biologists conducted rare plant surveys during the 2023 blooming season to document the presence or absence of special-status[1] plant species that were determined to have a potential to occur within the project site, also referred to as the survey area.

Project Location

The project site is generally located north of West Avenue G, east of 17th Street West, south of West Avenue F, and west of Sierra Highway in unincorporated Los Angeles County, California (refer to Figure 1, *Regional Vicinity*, Attachment A). The project site is depicted in Section 36 of Township 8 North, Range 13 West, on the U.S. Geological Survey's (USGS) *Lancaster West, California* 7.5-minute quadrangle. Specifically, the project site totals approximately 278.13 acres (refer to Figure 2, *Project Vicinity*, Attachment A).

Project Description

The project site consists of 266.86 acres of undeveloped land split between eight parcels: Assessor's Parcel Number (APN) 3118-015-012, APN 3118-015-00, APN 3118-001-006, APN 3118-001-007, APN 3118-001-010, APN 3118-001-011, and APN 3118-001-012. This project specifically, refers to Parcels 6, 7, and 8 of the eight. Elevations within the project site are generally uniform and range from approximately 2,307 feet above mean sea level (msl) to 2,313 feet above msl.

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[1] As used in this report, "special-status" refers to plant species that are federal or State-listed, proposed, or candidates; plant species that have been designated a California Rare Plant Rank by the California Native Plant Society; and State/locally rare plant species.

Methodology

Literature Review

Prior to field surveys, Michael Baker conducted a literature review and records search for special-status plant species documented within 5 miles of the survey area. Previously recorded occurrences of special-status plant species within a 5-mile radius in the USGS *Lancaster East, Lancaster West, Rosamond Lake, and Rosamond, California* 7.5-minute quadrangles were identified through a query of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB; CDFW 2023a) and the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CIRP; CNPS 2023a). In addition, a Species List was generated utilizing the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation project planning tool (IPaC) (USFWS 2023).

The current conservation status of plant species was verified through lists and resources provided by the CDFW, specifically the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2023b) and the *State and Federally Listed Endangered, Threatened, and Rare Plants of California* (CDFW 2023c). In addition, Michael Baker reviewed previously prepared reports, survey results, and literature, as available, detailing the biological resources previously observed on or within the vicinity of the survey area to gain an understanding of existing site conditions, confirm previous species observations, and note the extent of any disturbances that have occurred within the survey area that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status species, as well as the following resources:

- *A Manual of California Vegetation, Online Edition* (CNPS, 2023b)
- *California Sensitive Natural Communities* (CDFW 2023d)
- *Custom Soil Resource Report for Antelope Valley Area, California* (United States Department of Agriculture [USDA] 2023)
- Google Earth Pro Historical Aerial Imagery from 2003 to 2023 (Google, Inc. 2023)

In total, 13 special-status plant species have been recorded in the USGS *Lancaster East, Lancaster West, Rosamond Lake, and Rosamond California* 7.5-minute quadrangles (CDFW 2023a; CNPS 2023a; USFWS 2023). The potentials for special-status species to occur within the survey area were determined based on known occurrence records and the following:

- **Present**: Species was observed or detected within the survey area during the field survey.
- **High**: Occurrence records (within 20 years) indicate that the species has been known to occur on or within 1 mile of the survey area and the site is within the normal expected range of this species. Intact, suitable habitat preferred by this species occurs within the survey area and/or there is viable landscape connectivity to a local known extant population(s) or sighting(s).
- **Moderate**: Occurrence records (within 20 years) indicate that the species has been known to occur within 1 mile of the survey area and the site is within the normal expected range of this species. There is suitable habitat within the survey area, but the site is ecologically isolated from any local known extant populations or sightings.

- **Low**: Occurrence records (within 20 years) indicate that the species has been known to occur within 5 miles of the survey area, but the site is outside of the normal expected range of the species and/or there is poor quality or marginal habitat within the survey area.
- **Not Expected**: There are no occurrence records of the species within 5 miles of the survey area, there is no suitable habitat within the survey area, and/or the survey area is outside of the normal expected range for the species.

Alkali mariposa lily (*Calochortus striatus*) and Mojave spineflower (*Chorizanthe spinosa*) were both detected in the project site during the 2023 surveys performed by Michael Baker. Rosamond eriastrum (*Eriastrum rosamondense*) was determined to have a high potential to occur. All other special-status plant species were either determined to have a low potential or are not expected to occur within the survey area due to a lack of suitable habitat and/or review of occurrence records, known habit preferences and distribution, elevation ranges, and subsequent determination of potential for occurrence.

Table 1: Potentially Occurring Special-Status Plant Species

Scientific Name Common Name	**Special-Status Rank**	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Calochortus striatus alkali mariposa lily	1B.2	Perennial herb (bulb). Habitats include chaparral, chenopod scrub, meadows and seeps, and Mojavean desert scrub. Found at elevations ranging from 230 to 5,235 feet amsl. Blooming period is April through June.	**Present:** This species was detected in the survey area during the 2023 rare plant surveys.
Chorizanthe spinosa Mojave spineflower	4.2	Annual herb. Habitats include chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, and playas. Found at elevations ranging from 20 to 4,265 feet amsl. Blooming period is March through July.	**Present:** This species was detected in the survey area during the 2023 rare plant surveys.
Eriastrum rosamondense Rosamond eriastrum	1B.1	Annual herb. Habitats include chenopod scrub (openings) and vernal pools (edges). Found at elevations ranging from 2,295 to 3,855. Blooming period is April through May.	**High:** The project site provides suitable habitat for this species and this species was detected within 1 mile on an adjacent property during surveys conducted by Michael Baker during the 2023 year.
Source: Michael Baker 2023			

Field Surveys

Michael Baker biologists conducted the 2023 rare plant surveys during the peak blooming periods for plant species occurring in the Antelope Valley region. All surveys were conducted in accordance with accepted survey protocols and guidelines (CDFW 2018; CNPS 2001) using systematic field techniques across all habitats within the survey area to ensure thorough coverage of the entire project site. Special-status species, as detected, were mapped using GPS devices. Small populations with negligible acreage were quantified using clicker counters and GPS point data was recorded. Polygons were mapped for larger populations. One or multiple survey plots were taken within each polygon. Special-status species were quantified within each survey plot and counts were extrapolated for the overall polygon. Refer to Table 2 below for a summary of the survey dates, timing, surveyors, and weather conditions.

Table 2: Survey Dates, Timing, Surveyors, and Weather Conditions

Date	Time (start / finish)	Surveyors*	Weather Conditions	
			Temperature (°F) (start / finish)	Wind Speed (mph) (start / finish)
May 1, 2023	0830 / 1230	TM, OE, MS	56 sunny / 64 sunny	16 - 23
May 24, 2023	0613 / 1250	TM, SM, MS	54 sunny / 75 sunny	7 - 19
June 7, 2023	0626 / 0900	TM, AN, MS	52 cloudy / 60 cloudy	11 - 12
* TM=Trina Ming, OE=Oscar Escobar, MS=Marisol Sanchez, SM=Sammy Martinez, AN=April Nakagawa				

The surveys were floristic in nature, indicating that all plants observed were identified to the lowest taxonomic level necessary to determine rarity or listing status. Plant nomenclature used in this report follows the *Jepson eFlora* (Jepson Flora Project 2023) and scientific names are provided immediately following common names of plant species (first reference only). Vegetation communities were mapped and classified to the alliance level in accordance with *A Manual of California Vegetation, Online Edition* (CNPS 2023b). Geographic Information Systems (GIS) ArcGIS Pro software was then used to digitize the mapped vegetation communities and display these data onto an aerial photograph.

Existing Conditions

The project site is vacant and void of any structures. The site is generally flat and lies at an elevation of approximately 2,307 to 2,313 feet above mean sea level. Refer to Attachment B for representative photographs of the survey area taken during the field surveys.

According to the *Custom Soil Resource Report for Antelope Valley Area, California* (USDA 2023), the survey area is underlain by one soil unit: Pond-oban complex (Px). Based on a review of Google Earth Pro aerial imagery from 2003 to 2023 (Google, Inc. 2023) and results from the field surveys, it was determined that the survey area historically consisted of and was surrounded by undeveloped open land. Currently the survey area and the surrounding areas remain undeveloped.

Higher than average amounts of rainfall were recorded in the region during the 2022/2023 wet season. The average seasonal rainfall at William J. Fox Airfield, approximately two miles west of the project site, is 6.68 inches; the 2022-2023 season total was 7.47 inches (Los Angels Almanac 2023). Such conditions lead to exceptional plant growth during the 2023 spring months and likely lead an above-average number of rare plants to germinate than would be expected during a typical blooming season.

Survey Results

One (1) vegetation community, disturbed *Atriplex confertifolia* Shrubland Alliance (*Atriplex confertifolia – Atriplex polycarpa* Association) was mapped within the survey area. The vegetation community and land cover types are identified in Table 2 below and depicted on Figure 3, *Vegetation Communities and Other Land Uses*, in Attachment A.

Table 3: Vegetation Communities and Land Cover within the Survey Area

Vegetation Communities and Land Cover	Acreage[2]
Disturbed Shadcale Scrub (*Atriplex confertifolia* Shrubland Alliance)	278.13
TOTAL	**278.13**

Special-Status Vegetation Communities

No special-status vegetation communities, as designated by CDFW (2023d), are present within the survey area. The on-site community consisted of disturbed shadscale scrub habitat.

Special-Status Plant Species

A total of 35 plant species were observed within the survey area during the 2023 rare plant surveys, each identified to the lowest taxonomic level necessary to determine rarity or listing status. Of those, 71 percent (25 species) are native species. Refer to Attachment C for a complete list of plant species observed during the 2023 rare plant surveys.

Two special-status plant species were detected during the 2023 rare plant surveys, including alkali mariposa lily (*Calochortus striatus*) (California Rare Plant Rank [CRPR] 1B.2) and Mojave spineflower (*Chorizanthe spinosa*) (CRPR 4.2). No plant species listed as threatened, endangered, or as a candidate species under the federal Endangered Species Act or the California Endangered Species Act were observed within the survey area. Table 3 below provides the results of the count and acreage quantities for the survey performed for each special-status species.

Table 4: Special-Status Plant Survey Results

Scientific Name	Common Name	Federal/State/CRPR	Count	Acreage[3]
Calochortus striatus	alkali mariposa lily	None/None/1B.2	260,933	129.45
Chorizanthe spinosa	Mojave spineflower	None/None/4.2	717,286	2.04

Potential Impacts

Based on the presence of special-status plant species across a significant portion of the project site, implementation of the project has potential to directly impact alkali mariposa lily and Mojave spineflower (refer to Figure 4, *Survey Results* in Attachment A).

Conclusions and Recommendations

The project has the potential to impact up to 260,933 individual alkali mariposa lily covering 129.45 acres and up to 717,286 individual Mojave spineflower covering 2.04 acres. Impacts to alkali mariposa lily, a

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[2] Total area surveyed is larger than project site.

[3] As noted in the *Field Surveys* portion of this report, areas containing small numbers of rare plant individuals (areas of negligible acreage) were mapped using points rather than polygons and therefore are accounted for in the count section of the table.

species with a CRPR of 1B.2, would be considered significant under CEQA and as such would require mitigation to reduce impacts to below a level of significance.

Mojave spineflower is a special-status species with a CRPR of 4.2; species with a CRPR of 3 or 4 generally do not require evaluation under CEQA when small numbers or areas of such species are impacted. However, given the quantity of Mojave spineflower present on-site, an evaluation of this CRPR 4 species under CEQA may be warranted and mitigation for impacts to the species ultimately required.

On or off-site preservation of habitat occupied by the special-status plant species detected on-site, via an in-lieu fee program administered by an agency-approved mitigation bank is anticipated and would provide appropriate compensatory mitigation for impacts to alkali mariposa lily and Mojave spineflower.

Please feel free to contact me at (949) 472-3495 or at trina.ming@mbakerintl.com with any questions you may have regarding the results and/or recommendations provided in this report.

Sincerely,

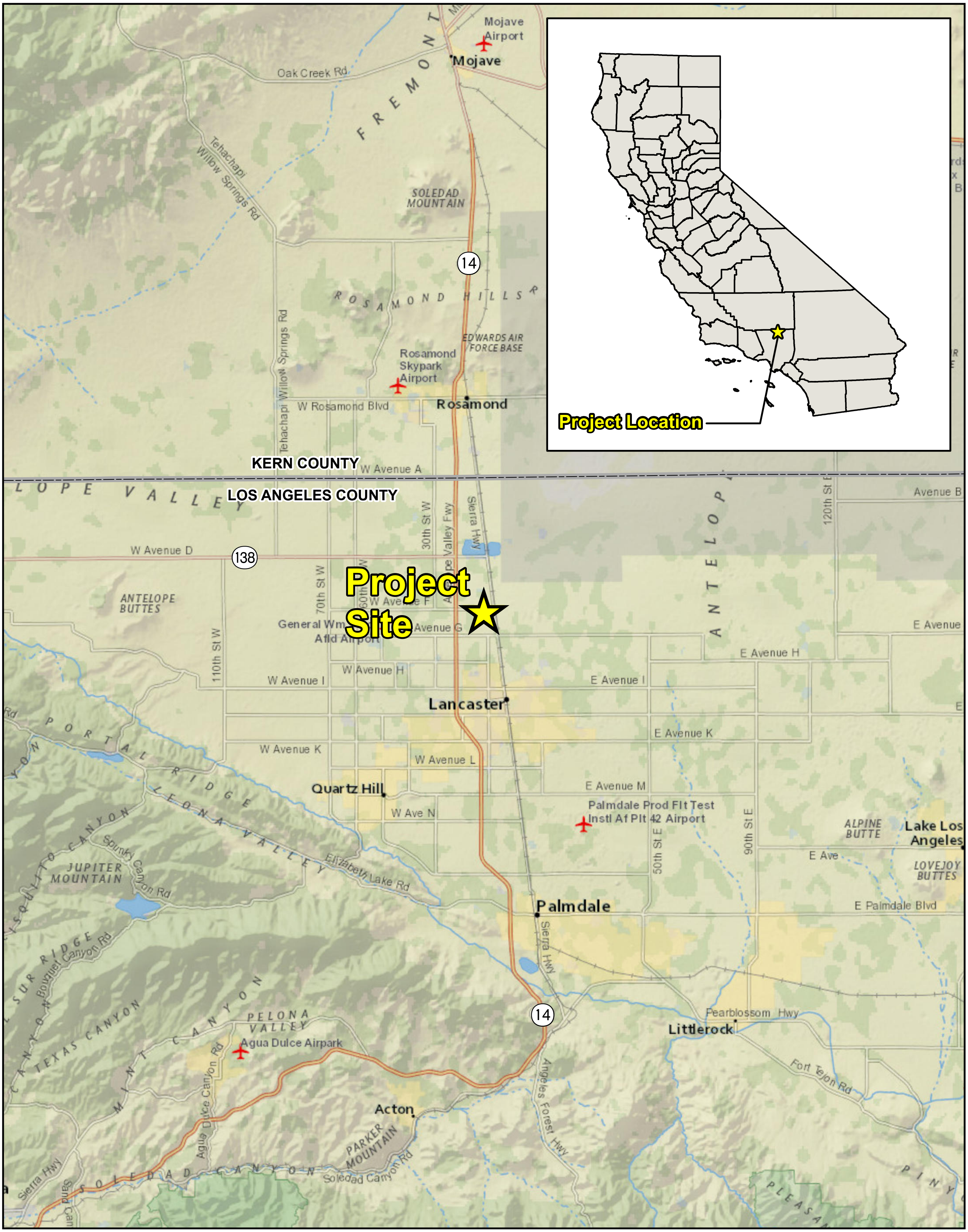
Trina Ming

Trina Ming
Biologist
Natural Resources

Attachments:
- A. *Project Figures*
- B. *Site Photographs*
- C. *Plant Species Observed List*
- D. *References*

Attachment A

Project Figures



0 2.5 5
Miles

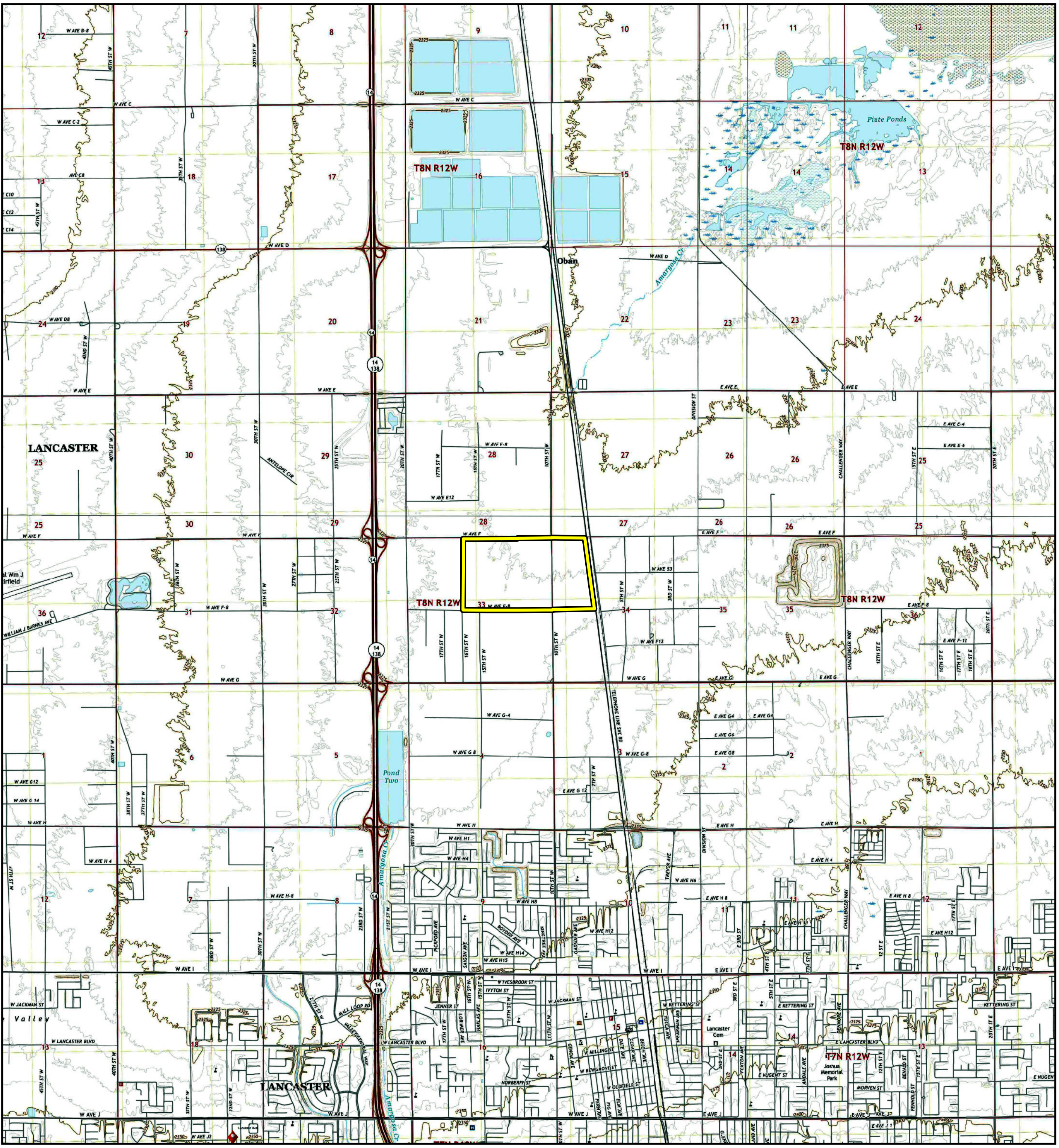
Source: ArcGIS Online, 2018

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN - PLANNING AREAS 6 THROUGH 8 PROJECT
RARE PLANT SURVEY REPORT

Regional Vicinity

Figure 1

9/5/2023 JN \\RVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx



9/5/2023 JN \\RVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx

Legend

🟨 Project Site (278.13 acres)

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN - PLANNING AREAS 6 THROUGH 8 PROJECT
RARE PLANT SURVEY REPORT

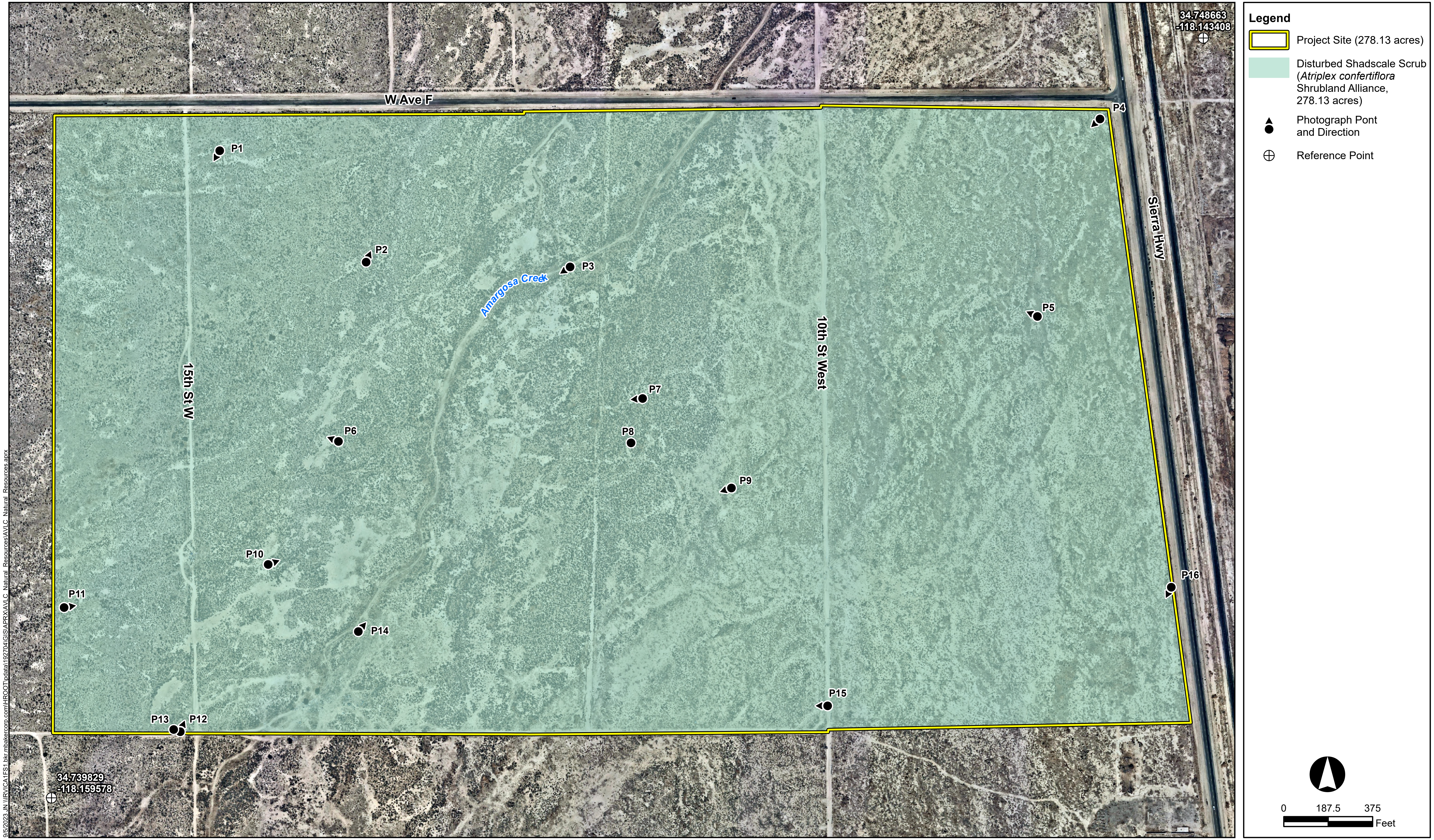
Project Vicinity

0 0.5 1 Miles

Source: USGS 7.5-Minute topographic quadrangle maps: *Lancaster East, Lancaster West, Rosamond (2022), and Rosamond Lake (2021)*

Michael Baker INTERNATIONAL

Figure 2



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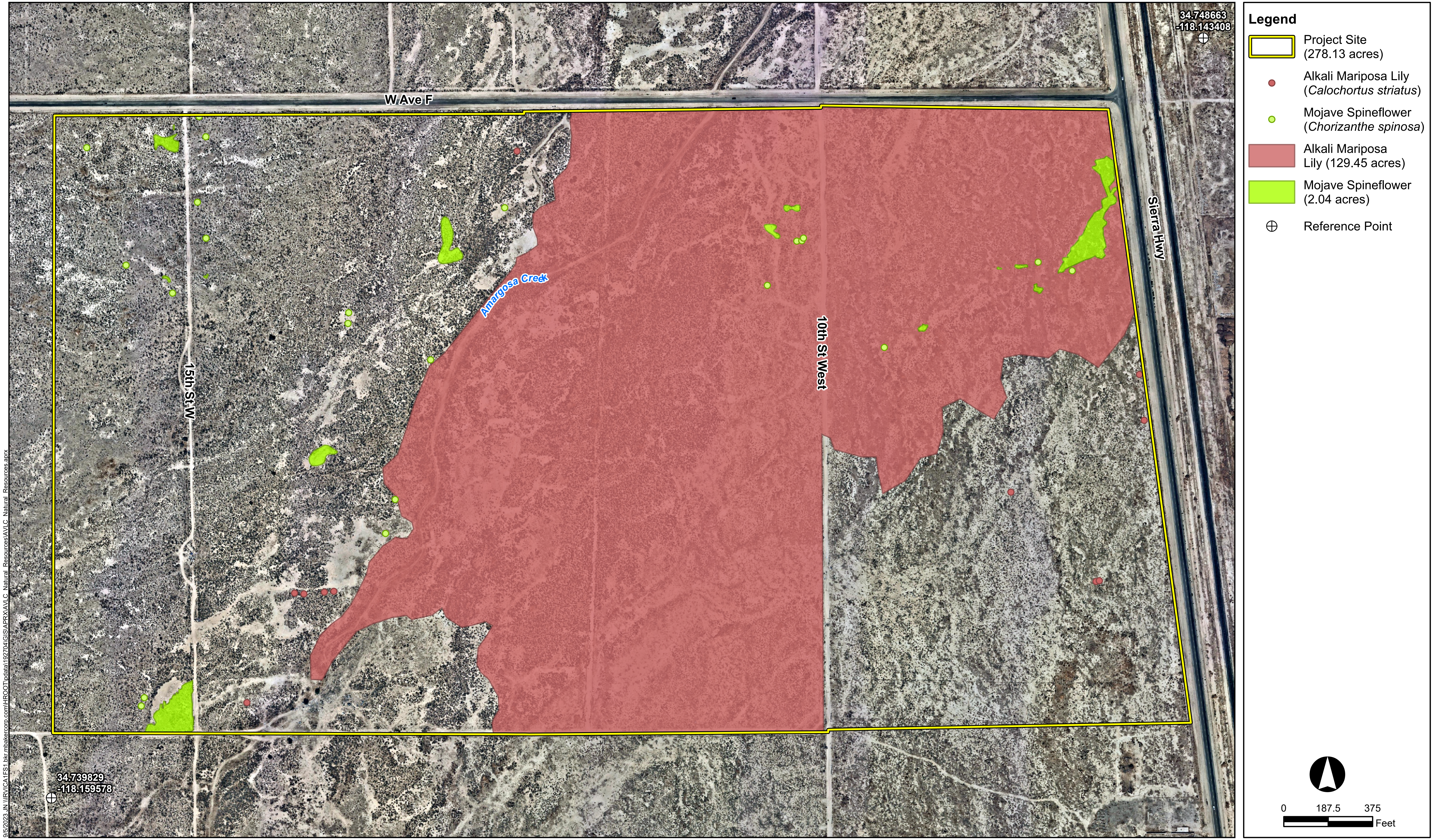
Michael Baker
INTERNATIONAL

Source: Nearmap (09/2021)

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN - PLANNING AREAS 6 THROUGH 8 PROJECT
RARE PLANT SURVEY REPORT

Vegetation Communities and Other Land Uses

Figure 3



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Michael Baker
INTERNATIONAL

Source: Nearmap (09/2021)

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN - PLANNING AREAS 6 THROUGH 8 PROJECT
RARE PLANT SURVEY REPORT

Survey Results

Figure 4

Attachment B

Site Photographs

Photo 1: Standing at the northwestern portion of the survey area facing southwest.

Photo 2: Standing at the northwestern portion of the survey area facing northeast.

Photo 3: Standing at the central northern portion of the survey area facing southwest.

Photo 4: Standing at the northeastern portion of the site facing southwest.

Photo 5: Standing within the central eastern portion of the survey area facing northwest.

Photo 6: Standing within the central western portion of the survey area facing northwest.

Photo 7: Standing within the central portion of the survey area facing southwest.

Photo 8: Close up view of alkali mariposa lily.

Photo 9: Standing within the central portion of the survey area facing southwest.

Photo 10: Standing within the southwestern section of the survey area northeast.

Photo 11: Standing on the southwestern portion of the survey area facing east.

Photo 12: Standing on the southwestern portion of the survey area facing northeast.

Photo 13: Close up view of Mojave spineflower.

Photo 14: Standing on the southwestern portion of the survey area facing northeast.

Photo 15: Standing in the southeastern portion of the survey area facing west.

Photo 16: Standing on the southeastern portion of the survey area facing southwest.

Attachment C

Plant Species Observed List

Table C-1: Plant Species Observed List

*Scientific Name**	Common Name	Cal-IPC Rating**	CRPR***
Amsinckia sp.	fiddleneck		
Atriplex confertifolia	shadscale		
*Atriplex prostrata**	fat-hen		
Atriplex lentiformis	big saltbush		
Atriplex polycarpa	allscale saltbush		
*Bromus madritensis**	Spanish brome	High	
Bromus sp.*	brome		
Calochortus striatus	alkali mariposa lily		1B.2
*Centaurea solstitialis**	yellow star-thistle	High	
Chaenactis sp.	pincushion		
Chorizanthe spinosa	Mojave spineflower		4.2
Cressa truxillensis	alkali weed		
Cryptantha sp.	cryptantha		
*Descurainia sophia**	flix weed	Limited	
Elymus sp.	wild-rye		
Eriogonum maculatum	spotted wild buckwheat		
*Erodium cicutarium**	coastal heron's bill	Limited	
Forestiera pubescens	desert olive		
Frankenia salina	alkali heath		
Heliotropium curassavicum	alkali heliotrope		
*Hordeum murinum**	wall barley	Moderate	
Juniperus californica	California juniper		
*Lactuca serriola**	prickly lettuce		
Lepidium fremontii	desert pepperweed		
Malacothrix coulteri	snake's-head		
Malvella leprosa	alkali-mallow		
Matricaria discoidea	pineapple weed		
Mentzelia albicaulis	whitestem blazingstar		
Neokochia californica	Mojave red sage		
Pectocarya penicillata	northern pectocarya		
Phacelia fremontii	Fremont's phacelia		
*Schismus barbatus**	common Mediterranean grass	Limited	
Suaeda nigra	bush seepweed		
Tamarix sp.*	salt cedar	High	
Tetradymia axillaris	catclaw horsebrush		

* Non-native species

** **California Invasive Plant Council (Cal-IPC) Ratings**

High	These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
Moderate	These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
Limited	These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

*** **California Rare Plant Rank**

1B Plants rare throughout their range with the majority endemic to California

Threat Ranks

.1 Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2 Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).

4 Plants of limited distribution – Watch List.

Threat Ranks

.2 Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).

Attachment D

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END OF DOCUMENT

APPENDIX G

CROTCH’S BUMBLE BEE SURVEY REPORT PLANNING AREAS 2 AND 4

DUDEK
MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 800.450.1818 F 760.632.0164

December 1, 2023

Arthur Popp
Michael Baker International (MBI)
5 Hutton Centre Drive
Santa Ana, CA 92707

Subject: Crotch Bumble Bee Survey For the AVLC North Property, Lancaster, San Bernardino County, California.

Dear Mr. Popp:

This report documents the results of protocol-level presence/absence surveys for Crotch bumble bee (*Bombus crotchii*; abbreviated herein as CBB) that were conducted for the Antelope Valley Logistics Center (AVLC) North Project (project), located near Highways 138 and 14 outside of the City of Lancaster in unincorporated Los Angeles County, California (Figure 1). This memorandum detail the survey methods and survey results.

1 Project Description and Location

The proposed project would include construction and operation of an industrial warehouse facility. Specific details of the project are currently unknown, including the exact configuration and location of facilities on site, the precise size and area of proposed facilities, the design of project buildings or structures, and the construction schedule. Absent specific project details, this memo is therefore based on the assumption of full development of the survey area, the approximately 437-acre AVLC North.

2 Vegetation Communities

The vegetation community across AVLC West is disturbed Shrubland Alliance of Shadescale Scrub (*Atriplex confertifolia*) and Desert Saltbush Scrub (*Atriplex polycarpa*) as defined by Holland (1986) and refined for San Diego County by Oberbauer (2008). Pockets of Tamarisk sp. were observed throughout, primarily near areas of disturbance.

3 Methods

CBB is a candidate for listing as “Endangered” under CESA and is afforded the protection of CESA while the California Fish and Game Commission decides if listing the species is warranted. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California (The Xerces Society 2018). The size of CBB colonies has not been well documented, but like most other species of bumble bees, the species primarily nests underground (The Xerces Society 2018). The plant families most associated with observations or collections of the species from California include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (The Xerces Society 2018). Nectar plants known to be visited by CBB include the genera Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia (Williams et al. 2014, Xerces Society et al. 2018), but it is assumed flowering plants in other genera could also support foraging by this species.

While no standardized survey methodology is currently available from CDFW for Crotch bumble bee, the following survey methods were reviewed to develop one: (1) *U.S. National Protocol Framework for the Inventory and Monitoring of Bees* for North American bumble bees, prepared by S. Droege, J.D. Engler, E. Sellers and L.E. O'Brien (2017); and (2) Survey Protocols for the Rusty Patched Bumble Bee (*Bombus affinis*), a federally listed bumble bee located in the Midwestern United States, prepared by the U.S. Fish and Wildlife Service (2019). In June 2023, CDFW released the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species". Following survey protocols and considerations from these documents, Dudek conducted one (1) of the recommended three (3) survey passes of the review area, which coincided with the Colony Active Period (April through August) for Crotch bumble bee (CDFW 2023a) (see Table 1). The surveys focused on surveying patches of blooming plants and looking at nest resources suitable for bumble bee use (i.e., small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, rock walls, and brush piles).

Table 1. Schedule of Surveys

Survey Area	Hours	Personnel	Hours	Conditions
AVLC North	7/12/2023	Pedro Garcia	0750-1059	78°–85°F; 0% cloud cover; 5–15 mph winds
AVLC North	7/13/2023	Michael Cady	0723-1352	76°–96°F; 0% cloud cover; 1–8 mph winds

Suitable floral resource habitat was identified and mapped within the project site. For each 50-acre patch of suitable habitat (i.e., for the purposes of these surveys all non-developed areas were considered potentially suitable) 1 person-hour per three acres of the highest quality habitat within each 50-acre plot, as determined by the qualified biologist, was visually surveyed. The three-acre plots (study areas) were determined based on burrow mapping and vegetation data provided by MBI. AVLC North contained nine study areas (Figure 2).

4 Results

Dudek conducted the first pass of focused surveys for CBB at the survey area on July 11th and 12th,2023. The site contained few to no small mammal burrows and limited flowering resources (Table 2).

Table 2. Survey Area Primary Pollinator Species

Survey Area	Species in Bloom	% of Study Area in Bloom
AVLC North 1	*Tamarisk sp.* *Centromedia pungens*	8% 2%
AVLC North 2	*Tamarisk sp.*	2%
AVLC North 3	*Tamarisk sp.*	2%
AVLC North 4	*Tamarisk sp.*	2%
AVLC North 5	*Tamarisk sp.*	10%
AVLC North 6	*Tamarisk sp.*	10%
AVLC North 7	*Centromedia pungens*	2%
AVLC North 8	*Tamarisk sp.*	10%
AVLC North 9	-	-

No bumblebees were observed and no nests were found. Other invertebrates observed include European honey bee (*Apis mellifera*), tarantula hawk (*Pepsis sp*), blue dasher (*Pachydiplax longipennis*), and grasshopper (*Trimerotropis sp*).

Due to the lack of potential floral resources and limited small rodent burrows on site, and with concurrence from MBI, no further surveys were conducted after the first survey. It was determined that it was unlikely to find bumble bees and that additional surveys would not be acceptable.

The nearest area with sufficient foraging opportunities for *Bombus* was the Piaute Pond complex, located approximately 1.8-kilometers to the northeast of AVLC North.

The nearest known occurrences of CBB within the last five years are from May 30, 2020, 5.97-kilometers south of AVLC North (iNaturalist observation 47942633) and June 30, 2022, 10.8-kilometers southwest (iNaturalist observation 124337473).

If you have any questions or require additional information, please feel free to contact me at 760.815.3838 or pgarcia@dudek.com. I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Pedro Garcia
Biologist

Att.: *Figure 1, Project Location*
Figure 2, Bumble Bee Study Areas
Attachment A, Study Area Site Photos

cc: *Brock Ortega, Dudek*

References

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Attachment A

Study Area Site Photos

AVLC North 1

AVLC North 2

AVLC North 3

AVLC North 4 (east)

AVLC North 4 (west)

AVLC North 5

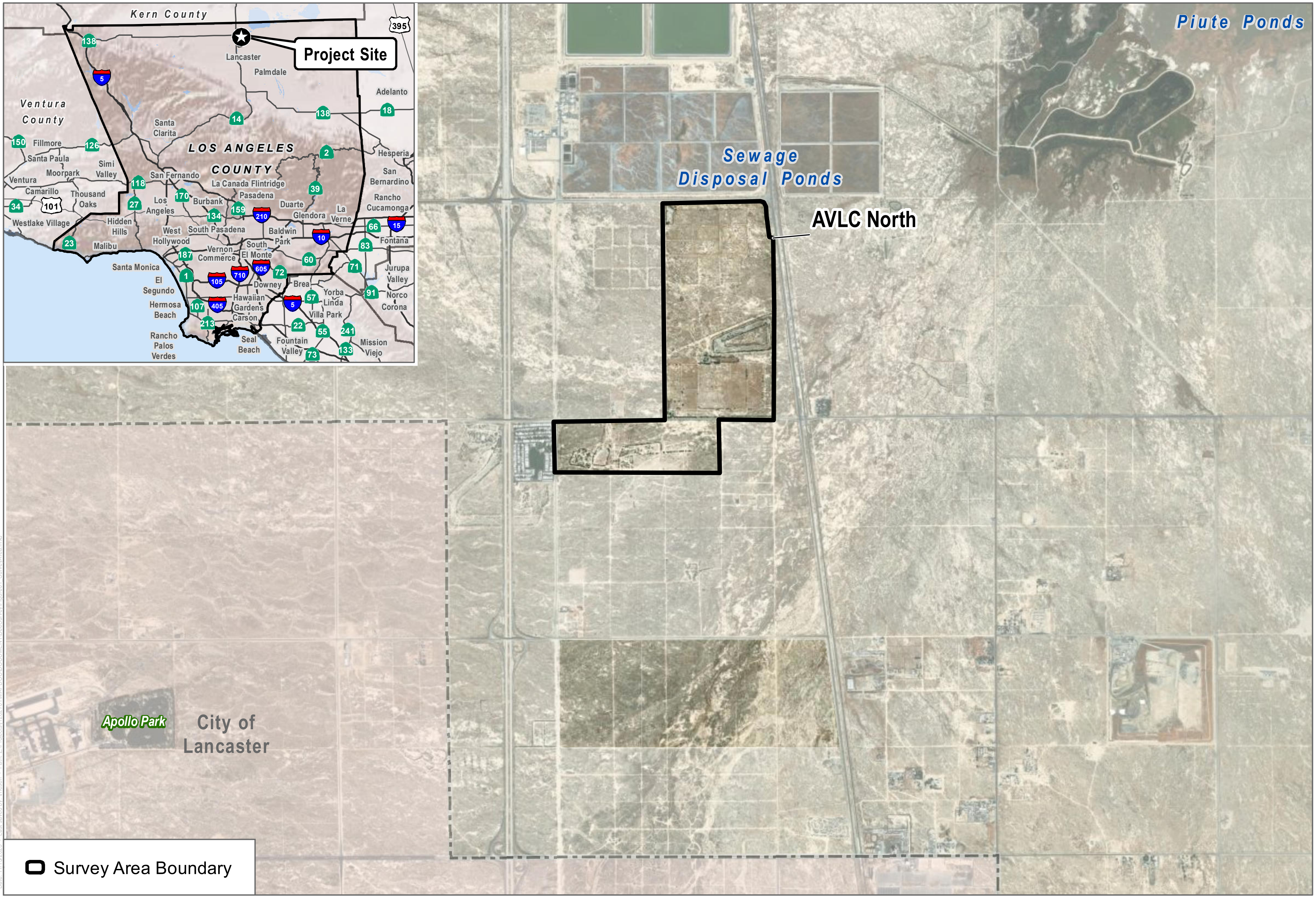
AVLC North 6

AVLC North 7

AVLC North 8 (east)

AVLC North 8 (west)

AVLC North 9



SOURCE: ESRI Imagery 2023; Open Street Map 2019

DUDEK

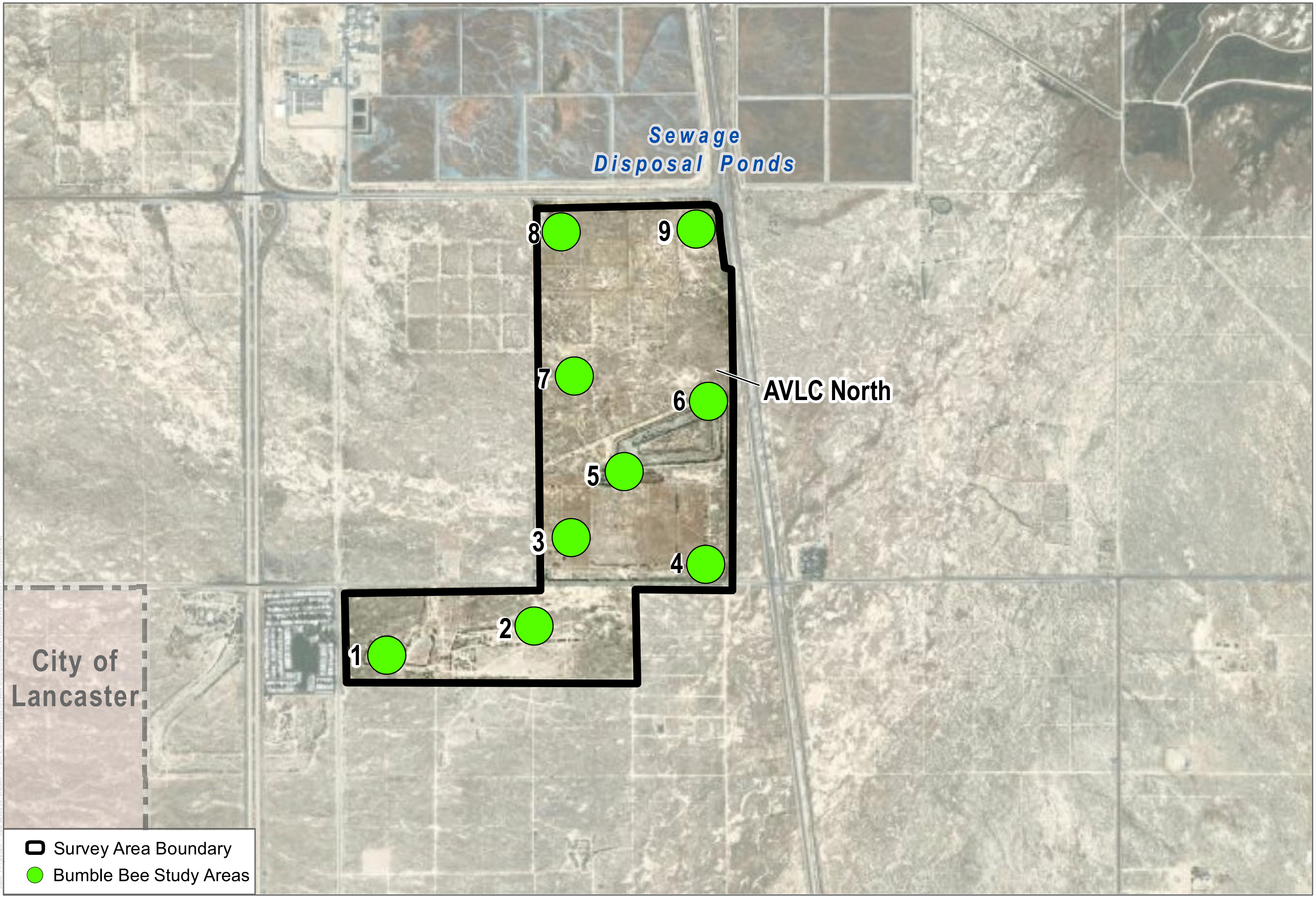
0 2,250 4,250
Feet

FIGURE 1

Bumble Bee Survey Area

Antelope Valley Logistics Center Project

Date: 11/13/2023 - Last saved by: tfriesen - Path: Z:\Projects\j1282701\MAPDOC\DOCUMENT\BeeSurvey\Figure01_SurveyArea.mxd



SOURCE: ESRI Imagery 2023; Open Street Map 2019

DUDEK

0 1,500 2,500 Feet

FIGURE 2

Bumble Bee Study Areas

Antelope Valley Logistics Center Project

APPENDIX H

BURROWING OWL SURVEY REPORT
PLANNING AREAS 6-8

Michael Baker
INTERNATIONAL

We Make a Difference

September 5, 2023 JN 195378

Northpointe Development
Attn: *Jack Lac*
3315 North Oak Trafficway
Kansas City, MO 64116

SUBJECT: Results of Focused Burrowing Owl (Athene cunicularia) Surveys for the proposed North Lancaster Industrial Specific Plan – Planning Areas 6 through 8 Project - Unincorporated Los Angeles County, California

Dear Mr. Lac:

This report contains the findings of Michael Baker International's (Michael Baker) focused burrowing owl (*Athene cunicularia*; [BUOW]) survey conducted during the 2023 breeding season for proposed North Lancaster Industrial Specific Plan – Planning Areas 6 through 8 Project (project or project site) located in the City of Lancaster, Los Angeles County, California. Based on the results of Michael Baker's initial review of California Natural Diversity Database RareFind 5 (CNDDB; CDFW 2022) occurrence records, the project site is located within the vicinity of known burrowing owls and the area that provides suitable nesting and foraging habitat. As such, focused BUOW surveys were conducted during the 2023 breeding season to document the presence/absence of BUOW within the project site and suitable habitat within 500 feet (survey area) in accordance with the *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game [CDFG] 2012). The focused BUOW surveys were conducted pursuant to Measure BIO-1 of the Mitigation Monitoring and Reporting Program (MMRP), and General Condition 45 of the City of Palmdale Conditions of Approval.

Project Location

The project site is generally located east of 20th Street West, north of West Avenue G, south of West Avenue F, and east of Sierra Highway in the City of Lancaster, County of Los Angeles, California (refer to Figure 1, *Regional and Project Vicinity*). The project site is depicted in Section 33 and Section 34 of Township 8 North, Range 12 West, on the U.S. Geological Survey's (USGS) *Lancaster West, California* 7.5-minute quadrangle.

Project Description

The project site consists of 266.86 acres of undeveloped land split between eight parcels: Assessor's Parcel Number (APN) 3118-015-012, APN 3118-015-00, APN 3118-001-006, APN 3118-001-007, APN 3118-

001-010, APN 3118-001-011, and APN 3118-001-012. This project specifically, refers to Parcels 6, 7, and 8 of the eight. Elevations within the project site are generally uniform and range from approximately 2,307 feet above mean sea level (msl) to 2,313 feet above msl.

Background

Burrowing Owl

The BUOW is a grassland specialist distributed throughout western North America, where it is known to occupy a wide variety of arid and semi-arid open areas within shrub, desert, and grassland environments. The California Department of Fish and Wildlife (CDFW) currently lists the BUOW as a California Species of Special Concern. BUOWs require large open, sparsely vegetated areas, on rolling or level terrain with an abundance of fossorial mammal burrows (> 4 inches in diameter). In addition, BUOWs require open vegetation allowing open line-of-sight of the surrounding habitat to forage as well as watch for predators. BUOWs are dependent upon the presence of burrowing mammals (e.g., California ground squirrel [*Otospermophilus beecheyi*], coyote [*Canis latrans*], American badger [*Taxidea taxus*]) whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of fossorial mammal burrows is often a major factor that limits the presence or absence of BUOW. Where mammal burrows are scarce, BUOWs have been observed digging their own burrows in soft, friable soil and have been observed utilizing man-made cavities such as buried and non-functioning drainpipes, standpipes, and dry culverts. Additionally, BUOWs may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators.

BUOWs have crepuscular (dawn and dusk) hunting habits but are often observed perched in or near the burrow entrance during the day. One burrow is typically selected for use as the main nest burrow, however, BUOWs also utilize satellite burrows that are often located within the immediate vicinity of the main nest burrow. BUOWs prey upon invertebrates and small vertebrates through the low growing vegetation which allows for foraging visibility (Thomsen 1971). They typically forage in short grass, mowed, or overgrazed pasture, golf courses and airports (Thomsen 1971). Based on the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), the BUOW breeding season in California extends from February 1 through August 31. BUOWs in California may migrate southerly, but often remain in their breeding area during the non-breeding months. The BUOW was once abundant and widely distributed within southern California, but it has declined precipitously in counties such as Los Angeles, Orange, San Diego, Riverside, and San Bernardino.

Regulatory Framework

The BUOW is a resident and migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918. The MBTA reflects agreements made between the U.S., England, Mexico, the former Soviet Union, and Japan to protect all of North America's migratory bird populations. The MBTA protects migratory bird nests from possession, sale, purchase, barter, transport, import and export, and collection. The other prohibitions (i.e., capture, pursue, hunt, and kill) of the MBTA are inapplicable to nests. The regulatory definition of take, as defined in Title 50 Code of Federal Regulations

(C.F.R.) Part 10.12, means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to hunt, shoot, wound, kill, trap, capture, or collect. Only the verb "collect" applies to nests. It is illegal to collect, possess, and by any means transfer possession of any migratory bird nest. The MBTA prohibits the destruction of a nest when it contains birds or eggs, and no possession shall occur during the destruction (U.S. Fish and Wildlife Service 2017). Certain exceptions to this prohibition are included in Title 50 C.F.R. Section 21. Pursuant to Section 3513 of the California Fish and Game Code (CFGC), CDFW enforces the MBTA consistent with rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Additionally, BUOW is protected under Sections 3503, 3503.3, 3511, and 3513 of the CFGC which prohibit the take, possession, or destruction of birds, their nests, or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (March 1 - August 15, annually). Section 3503.5 of the CFGC protects birds in the orders Falconiformes or Strigiformes (birds of prey, such as hawks and owls, including BUOWs) which makes it unlawful to take, posses, or destroy their nest or eggs.

Methodology

The project site has been identified as providing suitable habitat and foraging opportunities for BUOW. As such, a focused burrow survey and focused BUOW surveys were conducted by Michael Baker biologists Anna Jullie, John Parent, and Trina Ming on four (4) separate days during the 2023 breeding season. The focused burrow survey was conducted concurrently with the first focused BUOW survey on April 6, 2023. Surveys were not conducted during rain, high winds, dense fog, or high temperatures. Please refer to Table 1 below for a summary of the survey dates, times, surveyors, and weather conditions for each of the surveys.

Table 1: Survey Dates, Surveyors, Timing, and Weather Conditions

Date	Surveyors*	Time (start / finish)	Temperature (°F) (start / finish)	Wind Speed (mph) (start / finish)
April 6, 2023	AJ, JP	0600 / 01000	30 / 61	0 - 4
April 7, 2023	AJ, JP	0600 / 1000	40 / 64	2 - 4
April 15, 2023	AJ, JP	0600 / 1000	54 /	1 - 3
May 11, 2023	AJ, JP, AP	0600 / 1000	50 / 81	0 - 3
May 15, 2023	AJ, JP	600 / 1000	57 / 82	1 - 2
May 17, 2023	AP, JP, TJM	0600 / 0700	56 / 88	1 - 4
June 5, 2023	AJ, JP	0600 / 1000	53 / 80	2 - 5
June 26, 2023	AJ, JP	0600 / 1000	63 / 79	0 - 12
July 10, 2023	AJ, JP	0600 / 1000	59 / 88	2 - 6
* AJ = Anna Jullie, John Parent = JP, Trina Ming = TJM, AP = Arthur Popp				

The BUOW focused surveys were conducted during the 2023 breeding season (February 1 through August 31) in accordance with the survey guidelines and protocols provided in the *Staff Report on Burrowing Owl*

Mitigation (CDFG 2012). Areas providing suitable habitat for BUOWs were surveyed for suitable, occupied, and remnant burrows consisting of natural and non-natural substrates. Survey transects were conducted at approximately 3- to 6-meter (10 to 20 feet) intervals to ensure 100% visual coverage of all areas within suitable habitat, as applicable based on topography and site access. Binoculars were used to scan areas that were inaccessible due to lack of right-of-entry to observe and identify distant birds; identify any suitable, occupied, and remnant burrows consisting of natural and non-natural substrates; and identify any activity around potential suitable habitat for BUOW. Methods to detect the presence of BUOWs included direct observation, aural detection, and signs of presence (i.e., pellets, whitewash, feathers, or prey remains, particularly around burrows). The location of all suitable habitat, potential burrows, sign, and BUOWs observed within the survey area were recorded and mapped with a hand-held Global Positioning System (GPS) unit.

Results and Discussion

Existing Conditions

The survey area is primarily characterized as saltbush scrub. The project site is surrounded by similar habitat, with some disturbed habitat including dirt roads and homeless encampments. Please refer to Attachment B for representative photographs taken throughout the survey area.

Regional Context

According to the CNDDB, there are four (4) occurrence records for BUOW within the USGS *Lancaster West, California* 7.5-minute quadrangle (CDFW 2023). Of these occurrences two (2) are within a 5-mile radius of the project site. The closest extant occurrence in the CNDDB (Occurrence Number 1888) was recorded in 2013, approximately 3.70 miles southwest of the project site where two adults and one juvenile were detected in habitat consisting of ruderal agricultural fields surrounded by commercial and residential development (CDFW 2023). There are several records of this species in the eBird database from within the last 20 years, within and just outside of a 5-mile radius from the project site (eBird 2023).

Focused Survey Results

No individuals of burrowing owl were observed during the surveys. A total of thirty-five (35) suitable burrows were observed within the survey area during the focused burrow survey conducted on April 6, 2023 (refer to Figure 4, Survey Result). The burrows were observed primarily in the northeast portion of the survey area. Sign of burrow owl, in the form of old pellets, whitewash, and small remnants of animal bones that may have been prey for the owl, were observed at one burrow along the west project boundary (See Figure 4 and Site Photos 7-10); however, no indications that the species was present at this burrow were observed during protocol surveys.

A total of twenty-one (21) wildlife species were detected over the course of the focused survey effort, including 3 reptiles, 14 birds, and 4 mammals. The most commonly occurring wildlife species on-site included California quail (*Callipepla californica*), common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), horned lark (*Eremophila alpestris*), and northern mockingbird (*Mimus polyglottos*). One special-status wildlife species, Bell's sparrow (Artemisiospiza billi belli), a CDFW Watch List species, was observed foraging within the project site during surveys. Please refer to Attachment C for a complete list of wildlife species observed during the focused surveys.

Conclusions and Recommendations

Based on the results of the 2023 focused surveys, no BUOWs were observed within the survey area. However, there were observed BUOW sign, including suitable or remnant burrows and sign including pellets, whitewash, and remnants of animal bones. According to the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), BUOW occupancy is confirmed at a site when a burrowing owl, or its sign, is observed at or near a burrow entrance. Therefore, BUOW may be presumed to be present in the survey area and project-related activities may be expected to result in direct or indirect impacts to BUOWs or potentially occupied burrows. To confirm the presence or absence of this species prior to construction, a burrowing owl clearance survey within 14 days prior to initiating project activities is recommended. If BUOW are observed during construction activities, further review could be required to maintain compliance with the MBTA and CFGC.

Please do not hesitate to contact me at (616) 502-1186 or anna.jullie@mbakerintl.com should you have any questions or require further information.

Sincerely,

Anna Jullie

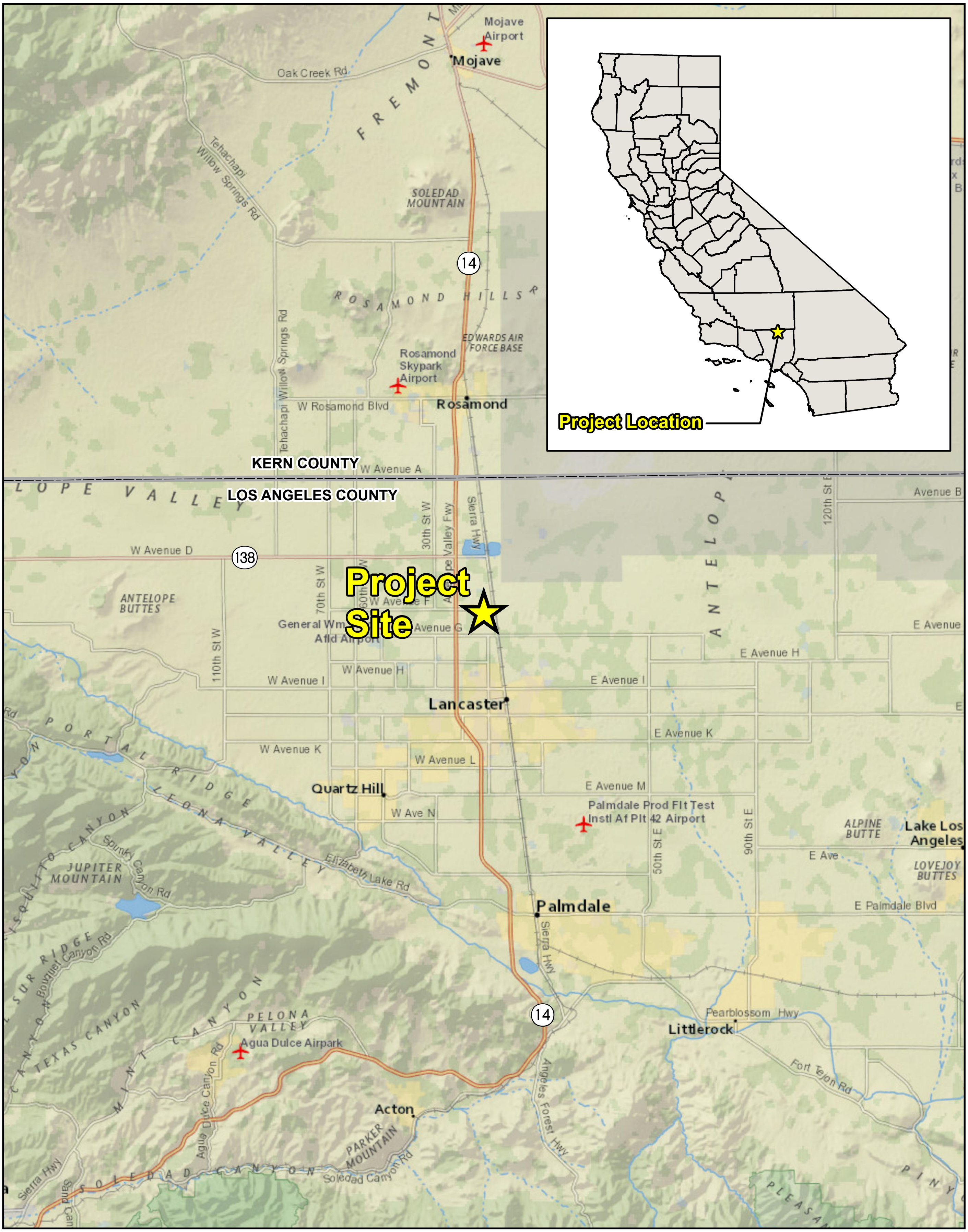
Anna Jullie
Biologist

Attachments:

A. Project Figures
B. Site Photographs
C. Wildlife Species Observed List
D. References

Attachment A

Project Figures



9/5/2023 JN \\IRVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx

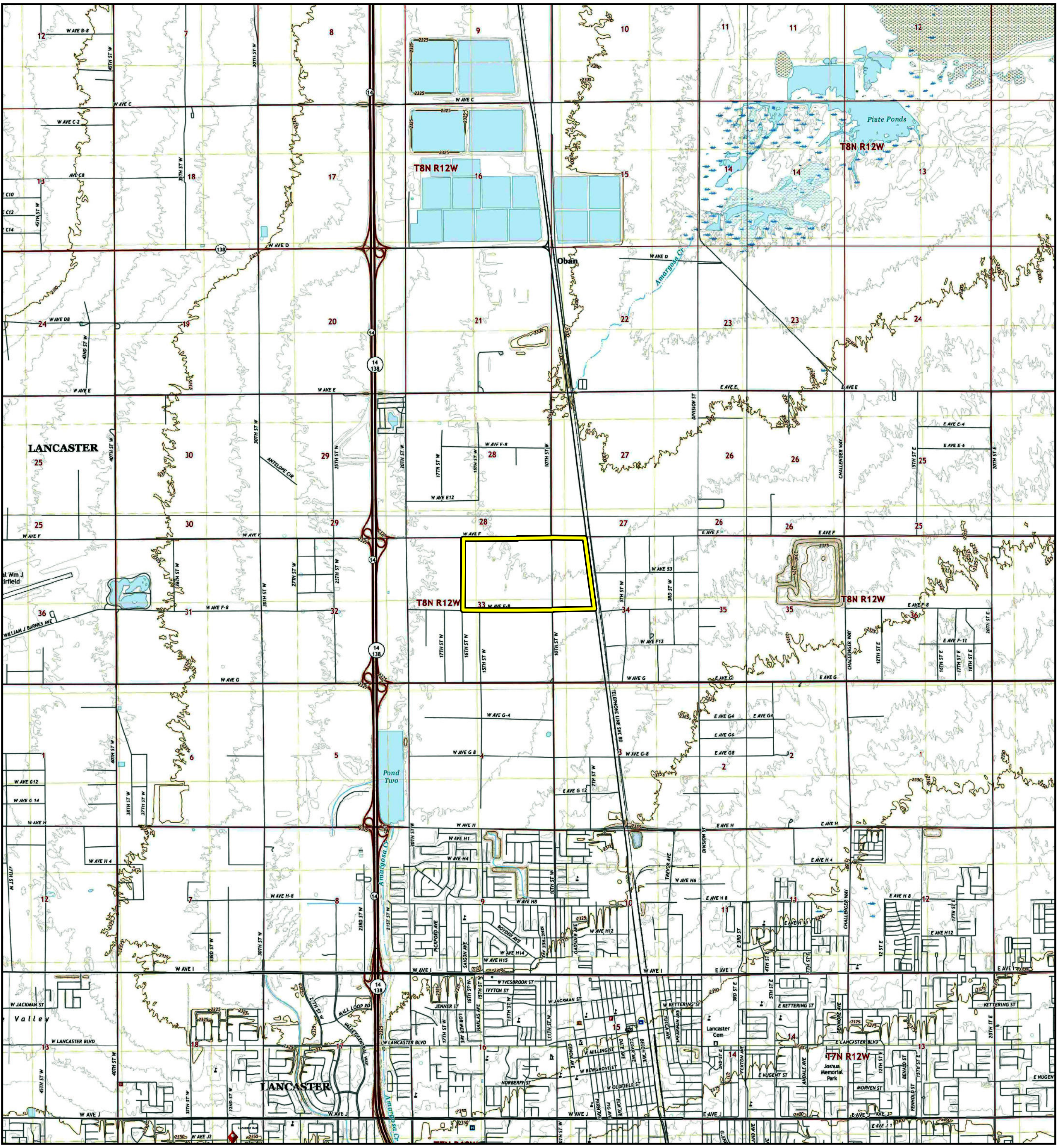
Michael Baker INTERNATIONAL

Source: ArcGIS Online, 2018

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN - PLANNING AREAS 6 THROUGH 8 PROJECT
FOCUSED BURROWING OWL SURVEY

Regional Vicinity

Figure 1



9/5/2023 JN \\RVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx

Legend

▭ Project Site (278.13 acres)

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN - PLANNING AREAS 6 THROUGH 8 PROJECT
FOCUSED BURROWING OWL SURVEY

Site Vicinity

0 0.5 1
Miles

Michael Baker
INTERNATIONAL

Source: USGS 7.5-Minute topographic quadrangle maps: *Lancaster East, Lancaster West, Rosamond (2022), and Rosamond Lake (2021)*

Figure 2

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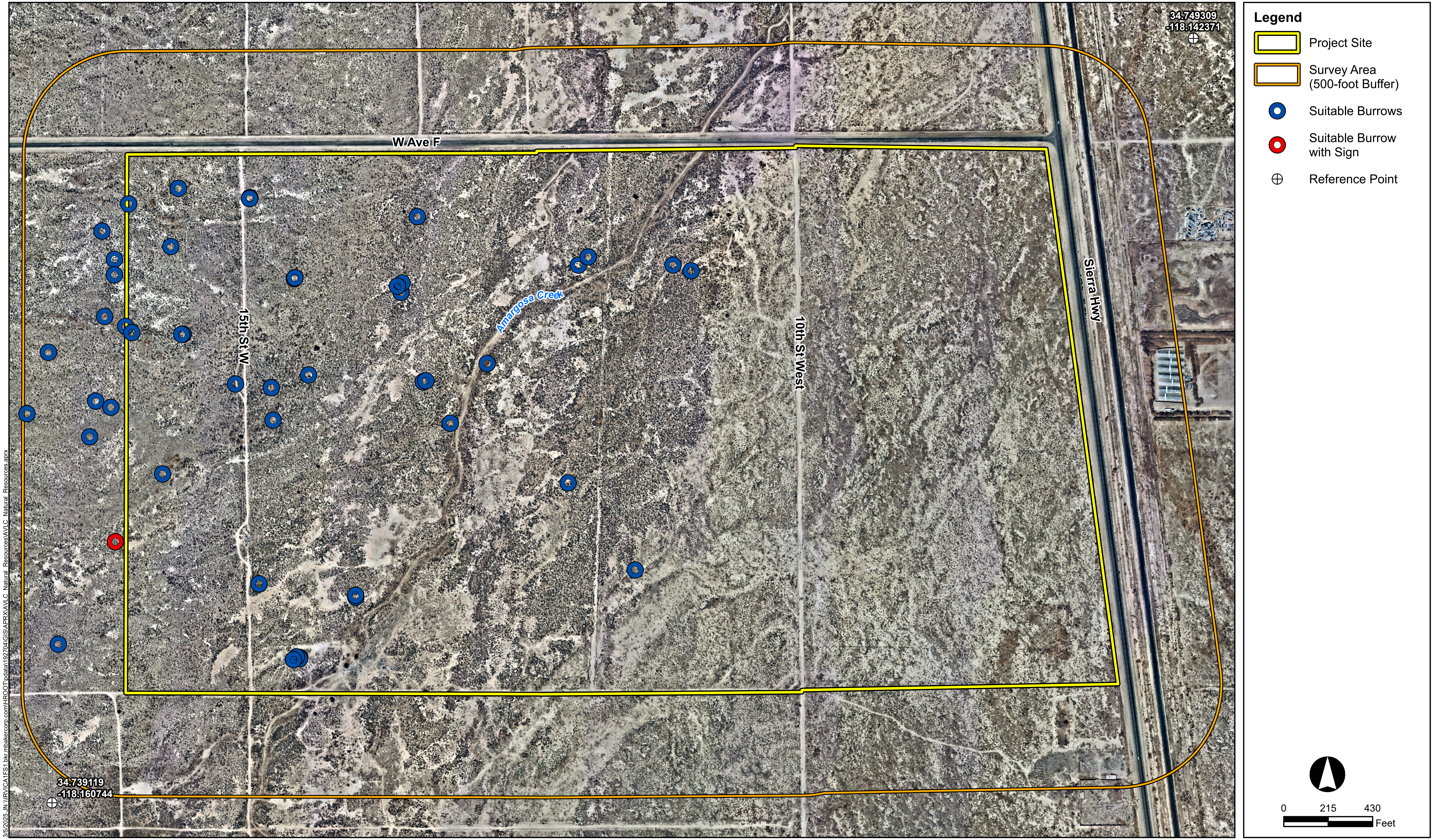
Michael Baker
INTERNATIONAL

Source: Nearmap (09/2021)

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN - PLANNING AREAS 6 THROUGH 8 PROJECT
FOCUSED BURROWING OWL SURVEY

Project Site and Survey Area

Figure 3



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Michael Baker
INTERNATIONAL

Source: Nearmap (09/2021)

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 6 THROUGH 8 PROJECT
FOCUSED BURROWING OWL SURVEY

Survey Results

Figure 4

Attachment B

Site Photographs

Photograph 1: Southwest-facing view from the east project boundary.

Photograph 2: Southwest-facing view from the northeast corner of project site.

Photograph 3: North-facing view, from the southwest corner of project site.

Photograph 4: Northwest-facing view from the middle portion of the project site

Photograph 5: East-facing view from the north boundary of the project site.

Photograph 6: Northeast-facing view from the southern boundary of the project site.

Photograph 7: Burrow with potential sign including whitewash and pellets.

Photograph 8: Whitewash sign near burrow.

Photograph 9: Whitewash sign near burrow.

Photograph 10: Pellet found near burrow.

Attachment C

Wildlife Species Observed List

Wildlife Species Observed List

Scientific Name	Common Name	Status*
Birds		
Artemisiospiza belli	Bell's sparrow	
Buteo jamaicensis	red-tailed hawk	
Callipepla californica	California quail	-
Cathartes aura	turkey vulture	
Corvus brachyrhynchos	American crow	-
Corvus corax	common raven	-
Eremophila alpestris	horned lark	-
Haemorhous mexicanus	house finch	
Melospiza melodia	song sparrow	-
Mimus polyglottos	northern mockingbird	
Spinus psaltria	lesser goldfinch	
Sturnella neglecta	western meadowlark	
Zenaida macroura	mourning dove	-
Zonotrichia leucophrys	white-crowned sparrow	
Mammals		
Canis latrans	coyote	-
Lepus californicus	black-tailed jackrabbit	
Otospermophilus beecheyi	California ground squirrel	
Sylvilagus audubonii	desert cottontail	-
Reptiles		
Aspidoscelis tigris tigris	great basin whiptail	-
Scleroporus occidentalis	western fence lizard	-
Uta stansburiana elegans	western side-blotched lizard	-

Attachment D

References

California Department of Fish and Game [CDFG]. 2012. *Staff Report on Burrowing Owl Mitigation*. March 7. State of California Natural Resource Agency, Department of Fish and Game. 36 pp.

CDFW. 2023. Rarefind 5, California Natural Diversity Database, California. Database report on threatened, endangered, rare or otherwise sensitive species and communities for the USGS *Lancaster West, Little Buttes, Rosamond, and Del Sur, California* 7.5-minute quadrangle.

Haug, E. A., B.A. Millsap, and M.S. Martell. 1993. Burrowing Owl (*Speotyto cunicularia*). In the Birds of North America, No. 61 (A.Poole and F. Gill, Eds.) Philadelphia: The Academy of Natural Science; Washington

Thomsen, L. 1971. *Behavior and ecology of Burrowing Owls in the Oakland Municipal Airport*. Condor 73: 177-192.

U.S. Fish and Wildlife Service. 2017. *Migratory Bird Treaty Act of 1918*. Access online at: https://www.fws.gov/law/migratory-bird-treaty-act-1918.

[END OF DOCUMENT]

APPENDIX I

RARE PLANT SURVEY REPORT PLANNING AREAS 6-8

Michael Baker
INTERNATIONAL

We Make a Difference

February 2, 2024 JN 195378

NORTHPOINT DEVELOPMENT
Attn: *Alex Jarzembowski*
3315 N. Oak Trafficway
Kansas City, MO 64116

SUBJECT: Results of Rare Plant Surveys for the Proposed North Lancaster Industrial Specific Plan – Planning Areas 2 and 4 Project, Unincorporated Los Angeles County, California

Dear Mr. Jarzembowski:

Michael Baker International (Michael Baker) is pleased to submit this report to Northpoint Development documenting the results of rare plant surveys conducted for the North Lancaster Industrial Specific Plan – Planning Areas 2 and 4 Project (project) located in unincorporated Los Angeles County, California. Michael Baker biologists conducted rare plant surveys during the 2023 blooming season to document the presence or absence of special-status[1] plant species that were determined to have a potential to occur within the project site and utility extensions areas which combined are referred to as the survey area.

Project Location

The project site is generally located north of West Avenue F, east of 20th Street West, south of West Avenue D, and west of Sierra Highway in an unincorporated area of Los Angeles County, California (refer to Figure 1, *Regional Vicinity*, Attachment A). The project site is depicted in Section 21 and 28 of Township 8 North, Range 12 West, on the U.S. Geological Survey's (USGS) *Rosamond, California* 7.5-minute quadrangle with a small portion depicted on Section 28 of Township 8 North, Ranch 12 West, on the USGS) *Lancaster West, California* 7.5-minute quadrangle. The project site totals approximately 432.96 acres. Additionally, the utility extensions areas totals approximately 4.25 acres for a total of approximately 437.21 acres comprising the survey area (refer to Figure 2, *Project Vicinity*, Attachment A).

Project Description

The project site is located north of the City of Lancaster in an unincorporated portion of Los Angeles County, California. The project site is generally bordered by 20th Street West to the west, West Avenue East 4 to the south, Sierra Highway to the east, and West Avenue D to the north. Amargosa Creek occurs east of the project site. The specific study area is depicted within Section 21, Township 8 North, Range 12

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[1] As used in this report, "special-status" refers to plant species that are federal or State-listed, proposed, or candidates; plant species that have been designated a California Rare Plant Rank by the California Native Plant Society; and State/locally rare plant species.

West, San Bernardino Principal Meridian in the US Geological Survey (USGS) Lancaster West Quadrangle.

The proposed project is component of the larger Westside Annexation and Specific Plan Project which involves two components: 1) annexation of the project site from unincorporated Los Angeles County into the City of Lancaster jurisdiction and 2) adoption of the proposed North Lancaster Industrial Specific Plan (Specific Plan), which would allow up to approximately 38.5 million square feet of industrial development.

Methodology

Literature Review

Prior to field surveys, Michael Baker conducted a literature review and records search for special-status plant species documented within 5 miles of the survey area. Previously recorded occurrences of special-status plant species within a 5-mile radius in the USGS *Lancaster East, Lancaster West, Rosamond Lake, and Rosamond, California* 7.5-minute quadrangles were identified through a query of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB; CDFW 2023a) and the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CIRP; CNPS 2023a). In addition, a Species List was generated utilizing the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation project planning tool (IPaC) (USFWS 2023).

The current conservation status of plant species was verified through lists and resources provided by the CDFW, specifically the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2023b) and the *State and Federally Listed Endangered, Threatened, and Rare Plants of California* (CDFW 2023c). In addition, Michael Baker reviewed previously prepared reports, survey results, and literature, as available, detailing the biological resources previously observed on or within the vicinity of the survey area to gain an understanding of existing site conditions, confirm previous species observations, and note the extent of any disturbances that have occurred within the survey area that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status species, as well as the following resources:

- *A Manual of California Vegetation, Online Edition* (CNPS, 2023b)
- *California Sensitive Natural Communities* (CDFW 2023d)
- *Custom Soil Resource Report for Antelope Valley Area, California* (United States Department of Agriculture [USDA] 2023)
- Google Earth Pro Historical Aerial Imagery from 1994 to 2023 (Google, Inc. 2023)
- Calflora: Information on California plants for education, research and conservation (Calflora 2023)

In total, 15 special-status plant species have been recorded in the USGS *Lancaster East, Lancaster West, Rosamond Lake, and Rosamond California* 7.5-minute quadrangles (CDFW 2023a; CNPS 2023a; USFWS 2023). The potential for the special-status species identified during the database review to occur within the survey area were determined based on known occurrence records and the following:

- **Present**: Species was observed or detected within the survey area during the field survey.
- **High**: Occurrence records (within 20 years) indicate that the species has been known to occur on or within 1 mile of the survey area and the site is within the normal expected range of this species.

Intact, suitable habitat preferred by this species occurs within the survey area and/or there is viable landscape connectivity to a local known extant population(s) or sighting(s).

- **Moderate**: Occurrence records (within 20 years) indicate that the species has been known to occur within 1 mile of the survey area and the site is within the normal expected range of this species. There is suitable habitat within the survey area, but the site is ecologically isolated from any local known extant populations or sightings.
- **Low**: Occurrence records (within 20 years) indicate that the species has been known to occur within 5 miles of the survey area, but the site is outside of the normal expected range of the species and/or there is poor quality or marginal habitat within the survey area.
- **Not Expected**: There are no occurrence records of the species within 5 miles of the survey area, there is no suitable habitat within the survey area, and/or the survey area is outside of the normal expected range for the species.

Alkali mariposa lily (*Calochortus striatus*), Mojave spineflower (*Chorizanthe spinosa*) and Rosamond eriastrum (*Eriastrum rosamondense*) were detected in the project site during the 2023 surveys performed by Michael Baker. Golden goodmania (*Goodmania luteola*) was determined to have a high potential to occur. All other special-status plant species were either determined to have a low potential or are not expected to occur within the survey area due to a lack of suitable habitat and/or review of occurrence records, known habit preferences and distribution, elevation ranges, and subsequent determination of potential for occurrence.

Table 1: Potentially Occurring Special-Status Plant Species

Scientific Name Common Name	**Federal/ State/CRPR**	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Astragalus preussii* var. *laxiflorus Lancaster milk-vetch	None/None/1B.1	Perennial herb. Habitats include chenopod scrub. Found at 2295 feet amsl. Blooming period is March through May.	**Not expected:** One occurrence record was documented 2.88 miles away from the project site in 1902 (121 years ago).
Calochortus striatus Alkali-mariposa lily	None/None/1B.2	Perennial bulbiferous herb. Habitats include chaparral, chenopod scrub, meadows and seeps, and Mojavean desert scrub. Found at elevations ranging from 230 to 5,235 feet amsl. Blooming period is April through June.	**Present:** This species was detected in the project site during 2023 rare plant surveys.
Calystegia peirsonii Peirson's morning-glory	None/None/4.2	Perennial rhizomatic herb. Habitats include chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland. Found at elevations ranging from 100 to 4,920 feet amsl. Blooming period is April through June.	**Not expected:** There are no known records of this species within five miles of the project site.

Scientific Name Common Name	**Federal/ State/CRPR**	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Canbya candida white pygmy-poppy	None/None/4.2	Annual herb. Habitats include Joshua tree "woodland", Mojavean desert scrub, and pinyon and juniper woodland. Found at elevations ranging from 1,970 to 4,790 feet amsl. Blooming period is March through June.	**Not expected:** One occurrence record was documented 2.8 miles away from the project site with no survey date. The occurrence was last updated in 1995 (28 years ago).
Castilleja plagiotoma Mojave paintbrush	None/None/4.3	Perennial herb (hemiparasitic). Habitats include Great Basin scrub (alluvial), Joshua tree "woodland", lower montane coniferous forest, and pinyon and juniper woodland. Found at elevations from 985 to 8,205 feet amsl. Blooming period is from April through June.	**Not expected:** There are no known records of this species within five miles of the project site.
Chorizanthe parryi* var. *parryi Parry's spineflower	None/None/1B.1	Annual herb. Habitats include chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. Found at elevations ranging from 900 to 4,005 feet amsl. Blooming period is April through June.	**Not expected:** One occurrence record was documented 2.8 miles away from the project site in 1896 (127 years ago).
Chorizanthe spinosa Mojave spineflower	None/None/4.2	Annual herb. Habitats include chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, and playas. Found at elevations ranging from 20 to 4,265 feet amsl. Blooming period is March through July.	**Present:** This species was detected in the survey area during the 2023 rare plant surveys.
Eriastrum rosamondense Rosamond eriastrum	None/None/1B.1	Annual herb. Habitats include chenopod scrub (openings) and vernal pools (edges). Found at elevations ranging from 2,295 to 3,855. Blooming period is April through May.	**Present:** This species was detected in the survey area during the 2023 rare plant surveys.
Eriophyllum mohavense Barstow woolly sunflower	None/None/1B.2	Annual herb. Habitats include chenopod scrub, Mojavean desert scrub, and playas. Found at elevations ranging from 1,640 to 3,150 feet amsl. Blooming period is March through May.	**Not expected:** There are no known records of this species within five miles of the project site.
Goodmania luteola Golden goodmania	None/None/4.2	Annual herb. Habitats include meadows and seeps, Mojavean desert scrub, playas, and valley and foothill grassland. Found at elevations ranging from 65 to 7,220 feet amsl. Blooming period is April through August.	**High:** Calflora observations for this species were made in 2016 (7 years ago) 0.78 miles away from the project site and the site contains desert scrub habitat preferred by this species.

Scientific Name Common Name	**Federal/ State/CRPR**	**Habitat Preferences and Distribution Affinities**	**Potential to Occur**
Loeflingia squarrosa* var. *artemisiarum Sagebrush loeflingia	None/None/2B.2	Annual herb. Habitats include desert dunes, Great Basin scrub, and Sonoran Desert scrub. Found at elevations ranging from 2,295 to 5,300 feet amsl. Blooming period is April through May.	**Not expected:** One occurrence record was documented within the project site in 1932 (91 years ago).
Monardella exilis Mojave monardella	None/None/4.2	Annual herb. Habitats include chenopod scrub, desert dunes, Great Basin scrub, Joshua tree "woodland", lower montane coniferous forest, Mojavean desert scrub, and pinyon and juniper woodland. Found at elevations ranging from 1,970 to 6,725 feet amsl. Blooming period is April through September.	**Not expected:** There are no known records of this species within five miles of the project site.
Muilla coronata Crowned muilla	None/None/4.2	Perennial bulbiferous herb. Habitats include chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, and pinyon and juniper woodland. Found at elevations ranging from 2,200 to 6,430 feet amsl. Blooming period is March through April.	**Not expected:** There are no known records of this species within five miles of the project site.
Puccinellia simplex California alkali grass	None/None/1B.2	Annual herb. Habitats include chenopod scrub, meadows and seeps, valley and foothill grassland, and vernal pools. Found at elevations ranging from 5 to 3,050 feet amsl. Blooming period is March through May.	**Not expected:** There are no known records of this species within five miles of the project site.
Yucca brevifolia Western Joshua tree	None/CC/None	Tree. Habitats include Joshua tree woodland. Found at elevations ranging from 1,312 to 7,545 feet amsl. Blooming period is March through May.	**Low:** One calflora observation for this species was made in 2020 (3 years ago) 4.17 miles away from the project site.

Scientific Name Common Name	Federal/ State/CRPR	Habitat Preferences and Distribution Affinities	Potential to Occur

Source: CDFW 2023a; CNPS 2023b; USFWS 2023a; Calflora 2023.
Status Legend
State
CC: Candidate for state listing.
CRPR (California Rare Plant Rank)
List 1B: Plants rare, threatened, or endangered in California and elsewhere.
List 2B: Plants rare, threatened, or endangered in California but common elsewhere.
List 4: Plants of limited distribution – Watch List.
Threat Rank:
.1 Seriously threatened in California — Over 80% of occurrences threatened / high degree and immediacy of threat.
.2 Moderately threatened in California — 20-80% of occurrences threatened / moderate degree and immediacy of threat.
.3 Not very threatened in California — Less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known.

Field Surveys

Michael Baker biologists conducted the 2023 rare plant surveys during the peak blooming periods for plant species occurring in the Antelope Valley region. All surveys were conducted in accordance with accepted survey protocols and guidelines (CDFW 2018; CNPS 2001) using systematic field techniques across all habitats within the survey area to ensure thorough coverage of the entire project site. Special-status species, as detected, were mapped using GPS devices. Small populations with negligible acreage were quantified using clicker counters and GPS point data was recorded. Polygons were mapped for larger populations. One or multiple survey plots were taken within each polygon. Special-status species were quantified within each survey plot and counts were extrapolated for the overall polygon. Refer to Table 2 below for a summary of the survey dates, timing, surveyors, and weather conditions.

Table 2: Survey Dates, Timing, Surveyors, and Weather Conditions

Date	Time (start / finish)	Surveyors*	Weather Conditions	
			Temperature (°F) (start / finish)	Wind Speed (mph) (start / finish)
May 16, 2023	0625 / 1250	TM, OE, AN	61 cloudy / 90 sunny	3 - 6
May 17, 2023	0730 / 1145	TM, OE, MS	63 sunny / 95 sunny	2 - 19
May 18, 2023	0633 / 1202	TM, OE, AN	70 sunny / 91 sunny	7 - 9
June 13, 2023	0630 / 0858	TM, AN, MS	59 sunny / 68 sunny	8 - 8
June 21, 2023	0630 / 0838	TM, OE, MS	57 sunny / 64 sunny	12 -13

* TM=Trina Ming, OE=Oscar Escobar, AN=April Nakagawa, MS=Marisol Sanchez

The surveys were floristic in nature, indicating that all plants observed were identified to the lowest taxonomic level necessary to determine rarity or listing status. Plant nomenclature used in this report follows the *Jepson eFlora* (Jepson Flora Project 2023) and scientific names are provided immediately following common names of plant species (first reference only). Vegetation communities were mapped and classified to the alliance level in accordance with *A Manual of California Vegetation, Online Edition* (CNPS 2023b). Geographic Information Systems (GIS) ArcGIS Pro software was then used to digitize the mapped vegetation communities and display these data onto an aerial photograph.

Higher than average amounts of rainfall were recorded in the region during the 2022/2023 wet season. The average seasonal rainfall at William J. Fox Airfield, approximately two miles west of the project site, is 6.68 inches; the 2022-2023 season total was 7.47 inches (Los Angeles Almanac 2023a). Rainfall occurring during the months of the survey (May and June 2023) totaled 0.12 and 0.00 inches, respectively (Los Angeles Almanac 2023b). Such conditions lead to exceptional plant growth during the 2023 spring months and likely contributing to an above-average number of rare plants germinating than would be expected during a typical blooming season.

Existing Conditions

Two residential structures exist within the central portion of the site with one just north of West Avenue East and one just east of 20th Street West. The remainder of the site is devoid of structures. Surveying in these and the immediate surrounding areas were limited due to the presence of homeowners and dogs. A series of constructed and abandoned ponds are present within the northern sections of the project site. The site is generally flat and lies at an elevation of approximately 2,300 to 2,306 feet above mean sea level. Refer to Attachment B for representative photographs of the survey area taken during the field surveys.

According to the *Custom Soil Resource Report for Antelope Valley Area, California* (USDA 2023), the survey area is underlain by two soil units: Pond-oban complex (Px) and Water (W). Based on a review of Google Earth Pro aerial imagery from 1994 to 2023 (Google, Inc. 2023) and results from the field surveys, it was determined that the survey area historically and currently consists of two housing structures and undeveloped open land surrounded by open land and a mobile home complex to the west and east, Lancaster Water Reclamation Plant to the north, and open land to the south.

Survey Results

Six (6) vegetation communities were mapped within the survey area including, 1) Fiddleneck – Phacelia Fields (*Amsinckia* [*menziesii*, *tessellata*] - *Phacelia* spp. Herbaceous Alliance, *Amsinckia tessellata* - *Erodium cicutarium* Association), 2) Disturbed Fiddleneck – Phacelia Fields (Disturbed *Amsinckia* [*menziesii*, *tessellata*] - *Phacelia* spp. Herbaceous Alliance, *Amsinckia tessellata* - *Erodium cicutarium* Association), 3) Disturbed Shadscale Scrub (Disturbed *Atriplex confertifolia* Shrubland Alliance, *Atriplex confertifolia – Atriplex polycarpa* Association), 4) Disturbed Allscale Scrub (Disturbed *Atriplex polycarpa* Shrubland Alliance, *Atriplex polycarpa* Association), 5) Disturbed Rubber Rabbitbrush Scrub (Disturbed *Ericameria nauseosa* Shrubland Alliance, *Ericamerica nauseosa* Association), and 6) Tamarisk Thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance, *Tamarix* spp. Association). Other land cover types consisted of Disturbed and Disturbed/Developed. The vegetation community and land cover types are identified in Table 2 below and depicted on Figure 3, *Vegetation Communities and Other Land Uses*, in Attachment A.

Table 3: Vegetation Communities and Land Cover within the Survey Area

Vegetation Communities and Land Cover	**Acreage[2]**
Fiddleneck – Phacelia Fields (*Amsinckia* [*menziesii, tessellata*] - *Phacelia* spp. Herbaceous Alliance)	2.69
Disturbed Fiddleneck – Phacelia Fields (Disturbed *Amsinckia* [*menziesii, tessellata*] - *Phacelia* spp. Herbaceous Alliance)	10.09
Disturbed Shadcale Scrub (Disturbed *Atriplex confertifolia* Shrubland Alliance)	230.08
Disturbed Allscale Scrub (Disturbed *Atriplex polycarpa* Shrubland Alliance)	9.40
Disturbed Rubber Rabbitbrush Scrub (Disturbed *Ericameria nauseosa* Shrubland Alliance)	65.14
Tamarisk Thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance)	48.65
Disturbed	66.83
Disturbed/Developed	4.33
TOTAL	**437.21**

Special-Status Vegetation Communities

No special-status vegetation communities, as designated by CDFW (2023d), are present within the survey area.

Special-Status Plant Species

A total of 58 plant species were observed within the survey area during the 2023 rare plant surveys, each identified to the lowest taxonomic level necessary to determine rarity or listing status. Of those, 71 percent (41 species) are native species. Refer to Attachment C for a complete list of plant species observed during the 2023 rare plant surveys.

Three special-status plant species were detected during the 2023 rare plant surveys, including alkali mariposa lily (California Rare Plant Rank [CRPR] 1B.2), Mojave spineflower (CRPR 4.2), and Rosamond eriastrum (CRPR 1B.1). No plant species listed as threatened, endangered, or as a candidate species under the federal Endangered Species Act or the California Endangered Species Act were observed within the survey area. Table 3 below provides the results of the count and acreage quantities for the survey performed for each special-status species.

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[2] Total may not equal sum due to rounding.

Table 4: Special-Status Plant Survey Results

Scientific Name	Common Name	Federal/State/CRPR	Count	Acreage
Calochortus striatus	alkali mariposa lily	None/None/1B.2	41,733	62.78
Chorizanthe spinosa	Mojave spineflower	None/None/4.2	815,930	1.31
Eriastrum rosamondense	Rosamond eriastrum	None/None/1B.1	815,135	0.81

Potential Impacts

Based on the survey results and project description, implementation of the project would result in direct impacts to alkali mariposa lily, Mojave spineflower, and Rosamond eriastrum (refer to Figure 4, *Survey Results* in Attachment A). At this time, it is anticipated that implementation of the project would result in the entire project site being disturbed, resulting in the removal of all individual special-status plant species.

Conclusions and Recommendations

The project has the potential to impact up to 41,733 individual alkali mariposa lily covering 62.78 acres, up to 815,930 individual Mojave spineflower covering 1.31 acres, and up to 815,135 Rosamond eriastrum covering 0.81 acre. Mojave spineflower is a special-status species with a CRPR of 4.2; species with a CRPR of 3 or 4 generally do not require evaluation under CEQA when small numbers or areas of such species are impacted. However, given the quantity of Mojave spineflower present on-site, an evaluation of this CRPR 4 species under CEQA may be warranted and mitigation for impacts to the species ultimately required. On or off-site preservation of habitat occupied by the special-status plant species detected on-site, via an in-lieu fee program administered by an agency-approved mitigation bank is anticipated and would provide appropriate compensatory mitigation for impacts to Mojave spineflower, alkali mariposa lily, and Rosamond eriastrum.

Please feel free to contact me at (949) 472-3495 or at trina.ming@mbakerintl.com with any questions you may have regarding the results and/or recommendations provided in this report.

Sincerely,

Trina Ming

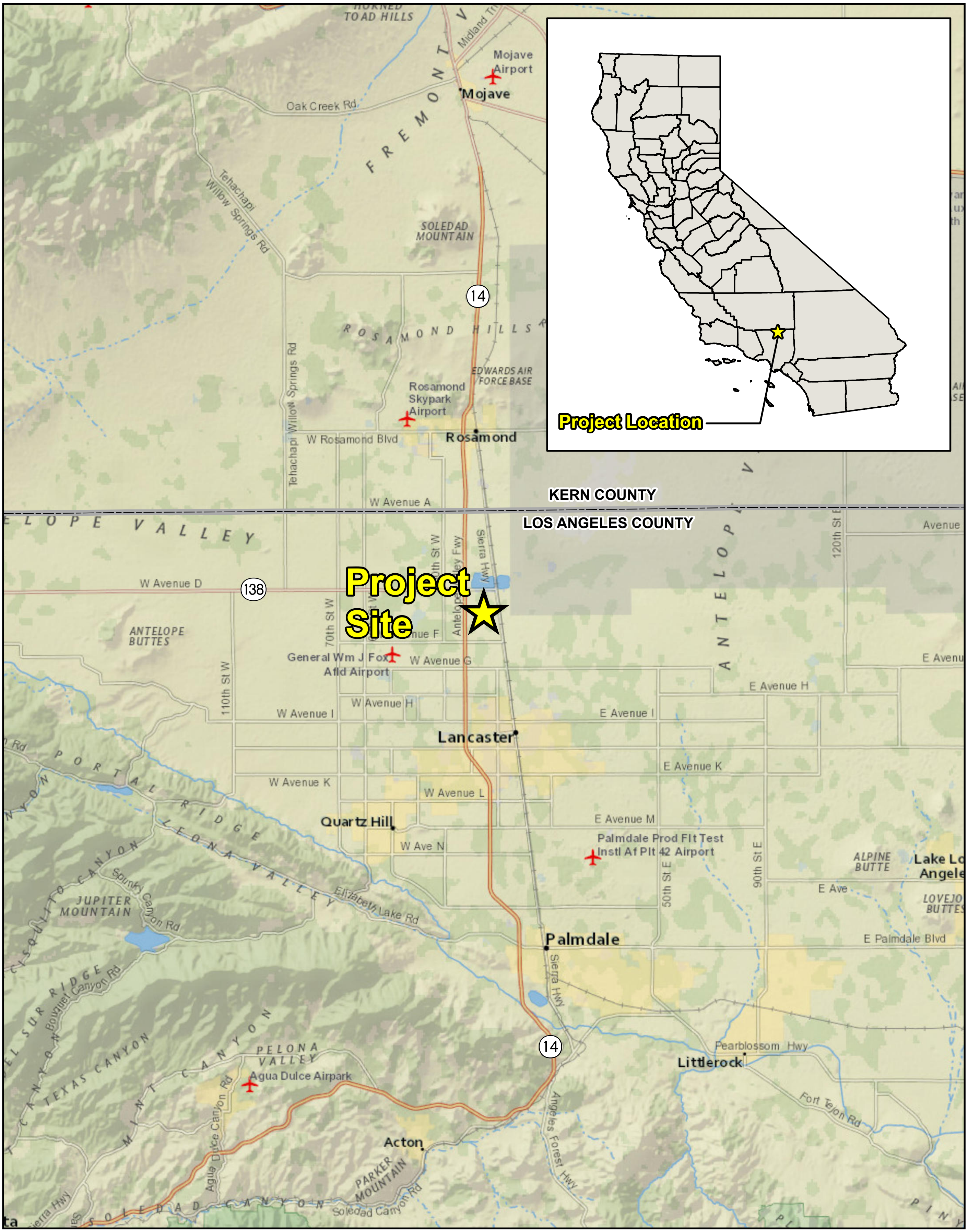
Trina Ming
Biologist
Natural Resources

Attachments:

A. *Project Figures*
B. *Site Photographs*
C. *Plant Species Observed List*
D. *References*

Attachment A

Project Figures



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Michael Baker
INTERNATIONAL

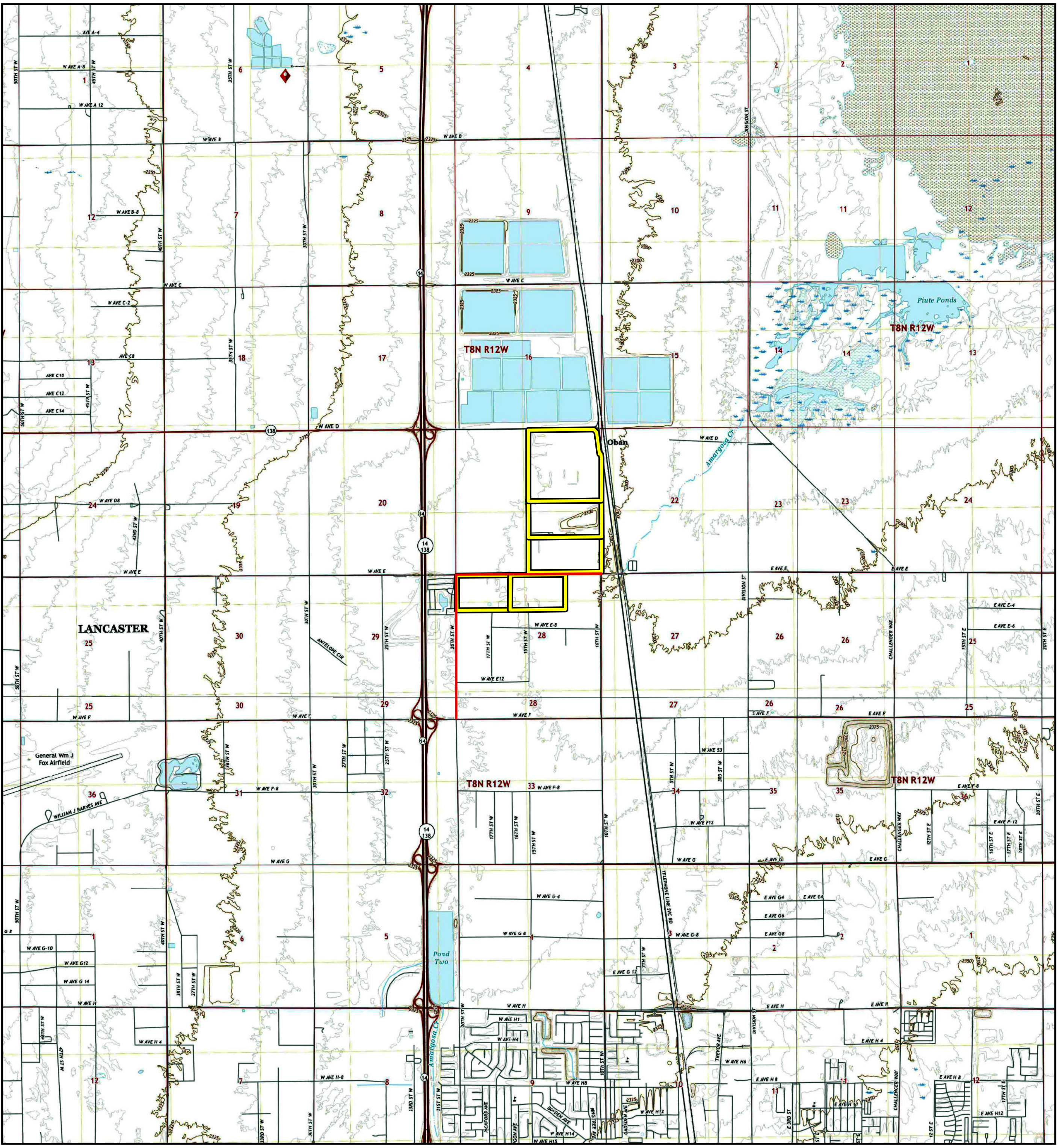
Source: ArcGIS Online, 2018

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
RARE PLANT SURVEY REPORT

Regional Vicinity

Figure 1

1/3/2024 JN \\IRVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx



Legend

🟨 Project Site (432.96 acres)

🟥 Utility Extensions

0 0.5 1
Miles

Michael Baker
INTERNATIONAL

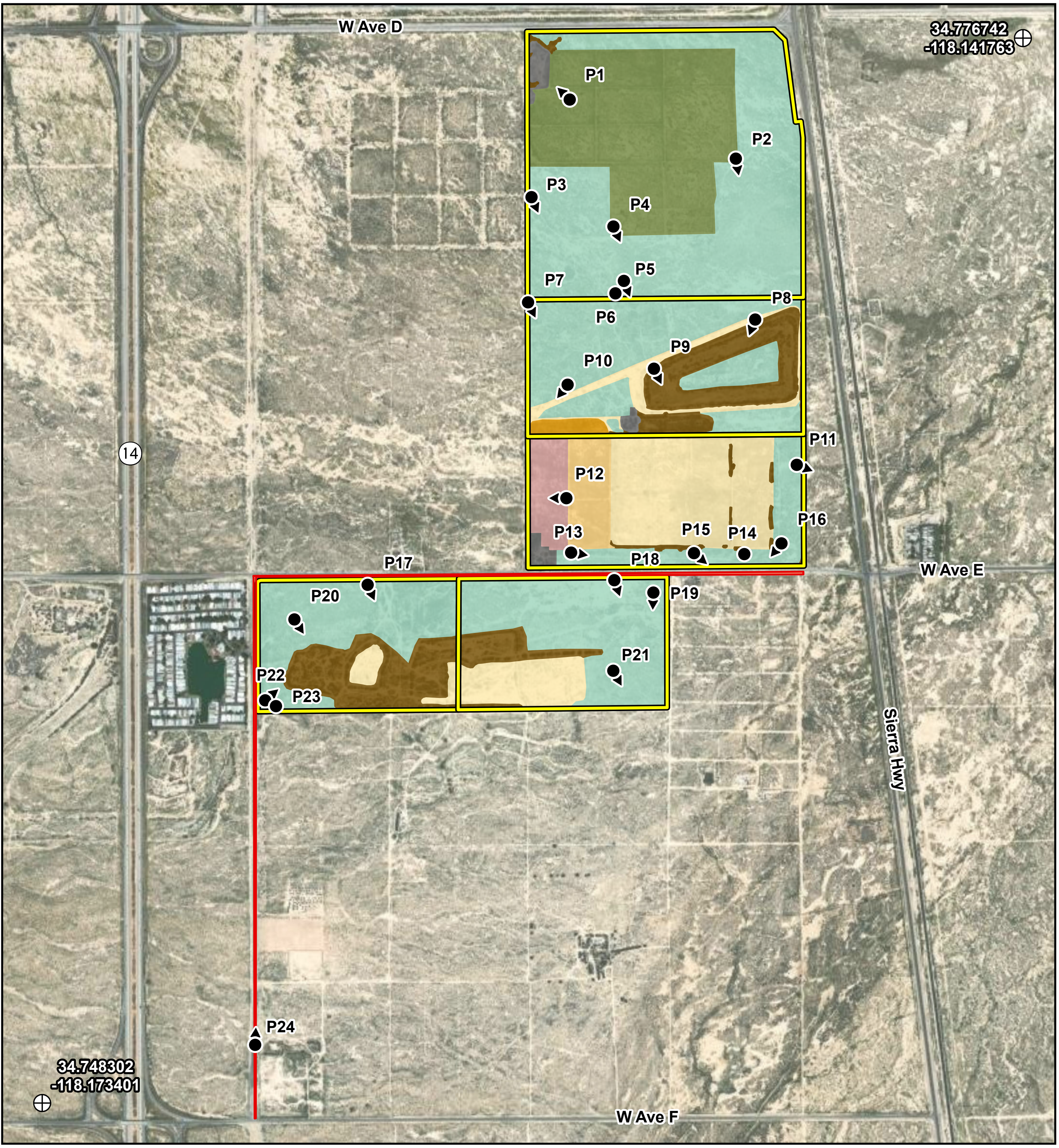
NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
RARE PLANT SURVEY REPORT

Project Vicinity

Source: USGS 7.5-Minute topographic quadrangle maps: *Lancaster East, Lancaster West, Rosamond (2022), and Rosamond Lake (2021)*

Figure 2

1/3/2024 JN \\IRVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx



Legend

- ▭ Project Site (432.96 acres)
- ▭ Utility Extensions
- ● Photograph Point and Direction
- ⊕ Reference Point
- 🟧 Fiddleneck - Phacelia Fields (*Amsinckia [menziesii, tesellata] - Phacelia* spp. Herbaceous Alliance, 2.69 acres)
- 🟨 Disturbed Fiddleneck - Phacelia Fields (Disturbed *Amsinckia [menziesii, tesellata] - Phacelia* spp. Herbaceous Alliance, 10.09 acres)
- 🟦 Disturbed Shadscale Scrub (Disturbed *Atriplex confertiflora* Shrubland Alliance, 230.08 acres)
- 🟥 Disturbed Allscale Scrub (Disturbed *Atriplex polycarpa* Shrubland Alliance, 9.40 acres)
- 🟩 Disturbed Rubber Rabbitbrush Scrub (Disturbed*Ericameria nauseosa* Shrubland Alliance, 65.14 acres)
- 🟫 Tamarisk Thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance, 48.65 acres)
- 🟨 Disturbed (66.83 acres)
- ⬛ Disturbed/Developed (4.33 acres)

Michael Baker
INTERNATIONAL

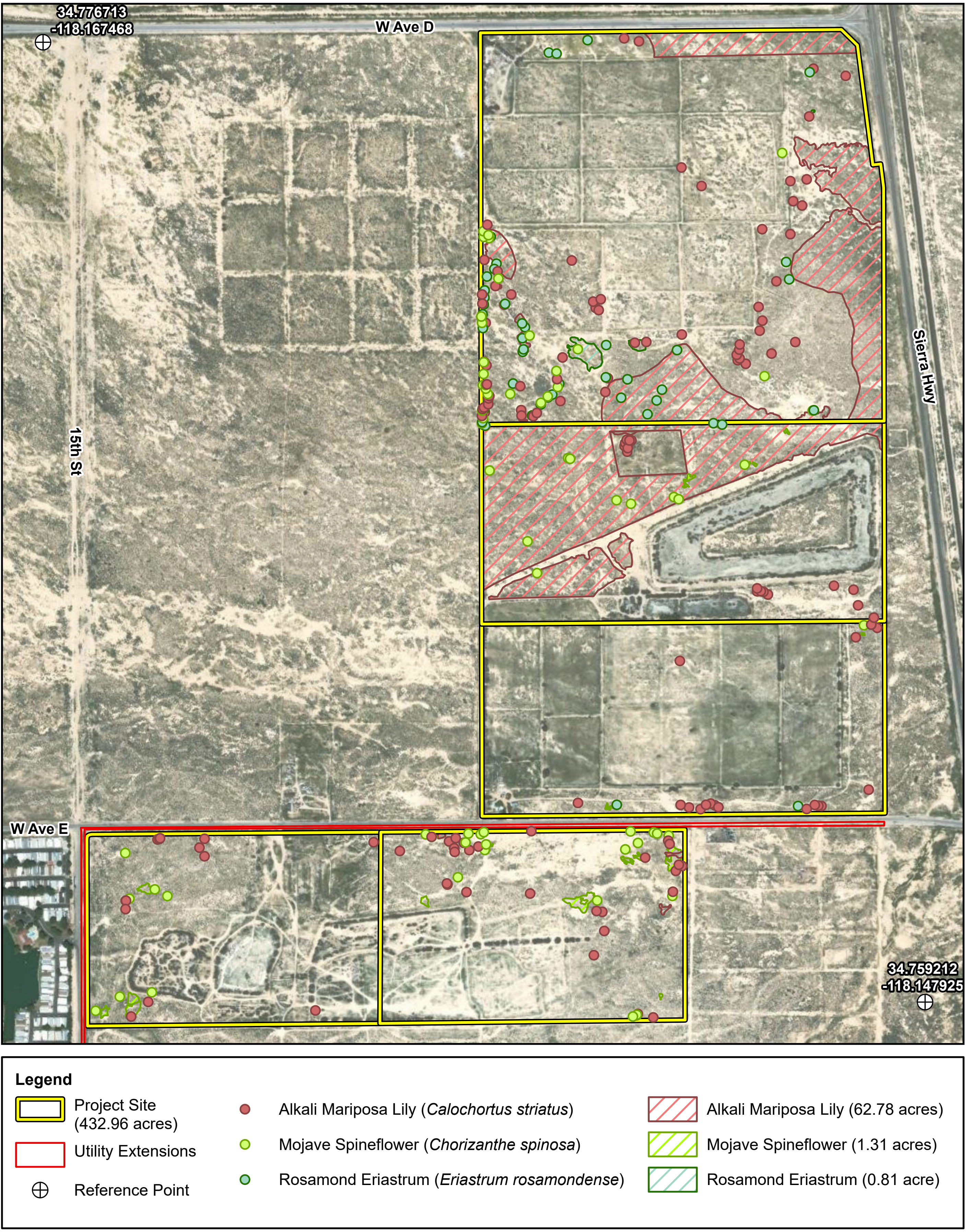
0 700 1,400
Feet

Source: Esri/Maxar (10/2021)

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
RARE PLANT SURVEY REPORT

Vegetation Communities and Other Land Uses

Figure 3



2/1/2024 JN \\IRVICA1FS1.bkr.mbakercorp.com\HROOT\pdata\192704\GIS\APRX\AVLC_Natural_Resources\AVLC_Natural_Resources.aprx

NORTH LANCASTER INDUSTRIAL SPECIFIC PLAN – PLANNING AREAS 2 AND 4 PROJECT
RARE PLANT SURVEY REPORT

Survey Results

Source: Esri/Maxar (10/2021)

Figure 4

Attachment B

Site Photographs

Photo 1: Standing at the northwestern portion of the survey area facing northwest.

Photo 2: Standing at the northeastern portion of the survey area facing south.

Photo 3: Standing at the northwestern portion of the survey area facing southeast.

Photo 4: Standing at the northern portion of the site facing southeast.

Photo 5: Standing within the central northern portion of the survey area facing southeast.

Photo 6: Close up view of an alkali mariposa lily.

Photo 7: Standing within the western portion of the survey area facing southeast.

Photo 8: Standing within the central eastern portion of the survey area facing southwest.

Photo 9: Standing within the central portion of the survey area facing southeast.

Photo 10: Standing within the central western section of the survey area southwest.

Photo 11: Standing on the eastern portion of the survey area facing southeast.

Photo 12: Standing on the western portion of the survey area facing west.

Photo 13: Standing on the central eastern portion of the survey area facing east.

Photo 14: Close up view of a Rosamond eriastrum.

Photo 15: Standing in the central eastern portion of the survey area facing southeast.

Photo 16: Standing on the central eastern portion of the survey area facing southwest.

Photo 17: Standing on the central western portion of the survey area facing southeast.

Photo 18: Standing on the central portion of the survey area facing southeast.

Photo 19: Standing on the central portion of the survey area facing south.

Photo 20: Standing on the central portion of the survey area facing southeast.

Photo 21: Standing in the central eastern portion of the survey area facing southeast.

Photo 22: Standing on the central western portion of the survey area facing northeast.

Photo 23: Close up view of a Mojave spineflower.

Photo 24: Standing on the southernmost portion of the survey area facing north.

Attachment C

Plant Species Observed List

Table C-1: Plant Species Observed List

Scientific Name*	**Common Name**	**Cal-IPC Rating****	**CRPR*****
Allenrolfea occidentalis	iodine bush		
Amsinckia tessellata	devil's lettuce		
*Arundo donax**	giant reed	High	
Asclepias fasicularis	narrow-leaf milkweed		
*Atriplex prostrata**	fat-hen		
Atriplex confertifolia	shadscale		
Atriplex lentiformis	big saltbush		
Atriplex polycarpa	allscale saltbush		
*Bromus madritensis**	Spanish brome	High	
*Bromus tectorum**	cheat grass		
Calochortus striatus	alkali mariposa lily		1B.2
Centromadia pungens ssp. *pungens*	common spikeweed		
Chaenactis sp.	pincushion		
Chorizanthe spinosa	Mojave spineflower		4.2
Chorizanthe watsonnii	Watson's spineflower		
Cressa truxillensis	alkali weed		
*Descurainia sophia**	flix weed	Limited	
Distichlis spicata	salt grass		
Elymus cinereus	Great Basin wild rye		
Ephedra sp.	ephedra		
Eremothera boothii	Booth's evening-primrose		
Eriastrum rosamondense	Rosamond eriastrum		1B.1
Ericameria nauseosa var. *mohavensis*	Mojave rabbitbrush		
Eriogonum maculatum	spotted wild buckwheat		
*Erodium cicutarium**	coastal heron's bill	Limited	
Forestiera pubescens	desert olive		
Frankenia salina	alkali heath		
Grayia spinosa	hop sage		
*Halogeton glomeratus**	saltlover	Moderate	
Heliotropium curassavicum	alkali heliotrope		
Hordeum depressum	alkali barley		
*Hordeum murinum**	wall barley	Moderate	
Isocoma acradenia	alkali goldenbush		
*Juniperus chinensis**	Chinese juniper		
*Kochia scoparia**	summer cypress	Limited	
*Lactuca serriola**	prickly lettuce		
Lasthenia gracilis	common goldfields		
Lepidium fremontii	desert pepperweed		
*Lepidium latifolium**	perennial pepperweed	High	
*Lepidium perfoliatum**	clasping pepperweed		
Lycium andersonii	Anderson thornbush		

Table C-1: Plant Species Observed List

Scientific Name*	**Common Name**	**Cal-IPC Rating****	**CRPR*****
Malacothrix coulteri	snake's-head		
Malvella leprosa	alkali-mallow		
Matricaria discoidea	pineapple weed		
Mentzelia albicaulis	whitestem blazingstar		
Neokochia californica	Mojave red sage		
Opuntia basilaris	beavertail cactus		
Pectocarya penicillata	northern pectocarya		
Pectocarya setosa	round-nut pectocarya		
*Salsola tragus**	Russian thistle	Limited	
*Schismus barbatus**	common mediterranean grass	Limited	
Sporobolus airoides	alkali sacaton		
Stephanomeria sp.	wirelettuce		
Suaeda nigra	bush seepweed		
*Tamarix aphylla**	athel	Limited	
Tamarix sp.*	salt cedar	High	
Tetradymia glabrata	little leaf horsebrush		
Uropappus linleyi	silver puffs		

* Non-native species

** **California Invasive Plant Council (Cal-IPC) Ratings**

High	These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
Moderate	These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
Limited	These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

*** **California Rare Plant Rank**

1B Plants rare throughout their range with the majority endemic to California

Threat Ranks

.1 Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2 Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).

4 Plants of limited distribution – Watch List.

Threat Ranks

.2 Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).

Attachment D

References

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END OF DOCUMENT

APPENDIX J

CROTCH'S BUMBLE BEE SURVEY REPORT PLANNING AREAS 6-8

DUDEK
MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 800.450.1818 F 760.632.0164

December 1, 2023

Arthur Popp
Michael Baker International (MBI)
5 Hutton Centre Drive
Santa Ana, CA 92707

Subject: Crotch Bumble Bee Survey For the AVLC East Property, Lancaster, San Bernardino County, California.

Dear Mr. Popp:

This report documents the results of protocol-level presence/absence surveys for Crotch bumble bee (*Bombus crotchii*; abbreviated herein as CBB) that were conducted for the Antelope Valley Logistics Center (AVLC) East Project (project), located near Highways 138 and 14 outside of the City of Lancaster in unincorporated Los Angeles County, California (Figure 1). This memorandum detail the survey methods and survey results.

1 Project Description and Location

The proposed project would include construction and operation of an industrial warehouse facility. Specific details of the project are currently unknown, including the exact configuration and location of facilities on site, the precise size and area of proposed facilities, the design of project buildings or structures, and the construction schedule. Absent specific project details, this memo is therefore based on the assumption of full development of the survey area, the approximately 276-acre AVLC East.

2 Vegetation Communities

The vegetation community across AVLC West is disturbed Shrubland Alliance of Shadescale Scrub (*Atriplex confertifolia*) and Desert Saltbush Scrub (*Atriplex polycarpa*) as defined by Holland (1986) and refined for San Diego County by Oberbauer (2008). Pockets of Tamarisk sp. were observed throughout, primarily near areas of disturbance.

3 Methods

CBB is a candidate for listing as “Endangered” under CESA and is afforded the protection of CESA while the California Fish and Game Commission decides if listing the species is warranted. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California (The Xerces Society 2018). The size of CBB colonies has not been well documented, but like most other species of bumble bees, the species primarily nests underground (The Xerces Society 2018). The plant families most associated with observations or collections of the species from California include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (The Xerces Society 2018). Nectar plants known to be visited by CBB include the genera Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia (Williams et al. 2014, Xerces Society et al. 2018), but it is assumed flowering plants in other genera could also support foraging by this species.

While no standardized survey methodology is currently available from CDFW for Crotch bumble bee, the following survey methods were reviewed to develop one: (1) *U.S. National Protocol Framework for the Inventory and Monitoring of Bees* for North American bumble bees, prepared by S. Droege, J.D. Engler, E. Sellers and L.E. O'Brien (2017); and (2) Survey Protocols for the Rusty Patched Bumble Bee (*Bombus affinis*), a federally listed bumble bee located in the Midwestern United States, prepared by the U.S. Fish and Wildlife Service (2019). In June 2023, CDFW released the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species". Following survey protocols and considerations from these documents, Dudek conducted one (1) of the recommended three (3) survey passes of the review area, which coincided with the Colony Active Period (April through August) for Crotch bumble bee (CDFW 2023a) (see Table 1). The surveys focused on surveying patches of blooming plants and looking at nest resources suitable for bumble bee use (i.e., small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, rock walls, and brush piles).

Table 1. Schedule of Surveys

Survey Area	Hours	Personnel	Hours	Conditions
AVLC East	7/11/2023	Pedro Garcia	1055-1531	89°–96°F; 0% Cloud Cover; 2–11 mph winds

Suitable floral resource habitat was identified and mapped within the project site. For each 50-acre patch of suitable habitat (i.e., for the purposes of these surveys all non-developed areas were considered potentially suitable) 1 person-hour per three acres of the highest quality habitat within each 50-acre plot, as determined by the qualified biologist, was visually surveyed. The three-acre plots (study areas) were determined based on burrow mapping and vegetation data provided by MBI. AVLC East contained five study areas (Figure 2).

4 Results

Dudek conducted the first pass of focused surveys for CBB at the survey area on July 11th, 2023. The site contained few to no small mammal burrows and limited flowering resources (Table 2).

Table 2. Survey Area Primary Pollinator Species

Survey Area	Species in Bloom	% of Study Area in Bloom
AVLC East 1	*Eriogonum maculatum* *Chorizanthe spinosa*	7% 3%
AVLC East 2	*Chorizanthe spinosa* *Centromedia pungens* *Tamarisk sp.* *Ericameria nauseosa*	<3% 3% 3% <1%
AVLC East 3	*Stephanomeria pauciflora* *Ericameria nauseosa*	<1% 10%
AVLC East 4	-	-
AVLC East 5	-	-

No bumblebees were observed and no nests were found. Other invertebrates observed include European honey bee (*Apis mellifera*), tarantula hawk (*Pepsis sp*), blue dasher (*Pachydiplax longipennis*), and grasshopper (*Trimerotropis sp*).

Due to the lack of potential floral resources and limited small rodent burrows on site, and with concurrence from MBI, no further surveys were conducted after the first survey. It was determined that it was unlikely to find bumble bees and that additional surveys would not be acceptable.

The nearest area with sufficient foraging opportunities for *Bombus* was the Piaute Pond complex, located approximately 1.9-kilometers to the northeast of AVLC East.

The nearest known occurrences of CBB within the last five years are from May 30, 2020, 5.97-kilometers south of AVLC East (iNaturalist observation 47942633) and June 30, 2022, 10.6-kilometers southwest (iNaturalist observation 124337473).

If you have any questions or require additional information, please feel free to contact me at 760.815.3838 or pgarcia@dudek.com. I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Pedro Garcia
Biologist

Att.: *Figure 1, Project Location*
Figure 2, Bumble Bee Study Areas
Attachment A, Study Area Site Photos

cc: *Brock Ortega, Dudek*

References

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Attachment A

Study Area Site Photos

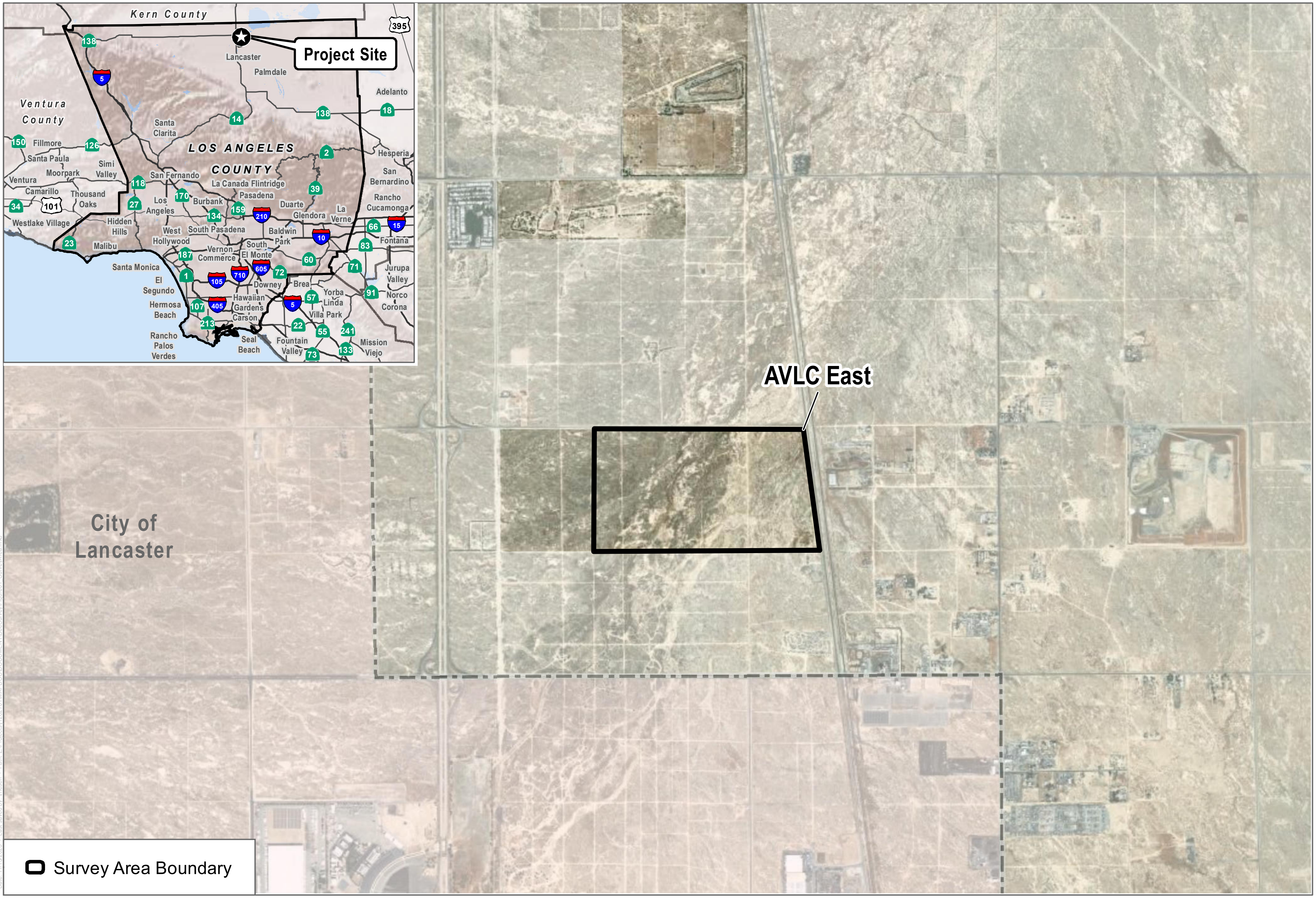
AVLC East 1

AVLC East 2

AVLC East 3

AVLC East 4

AVLC East 5



SOURCE: ESRI Imagery 2023; Open Street Map 2019

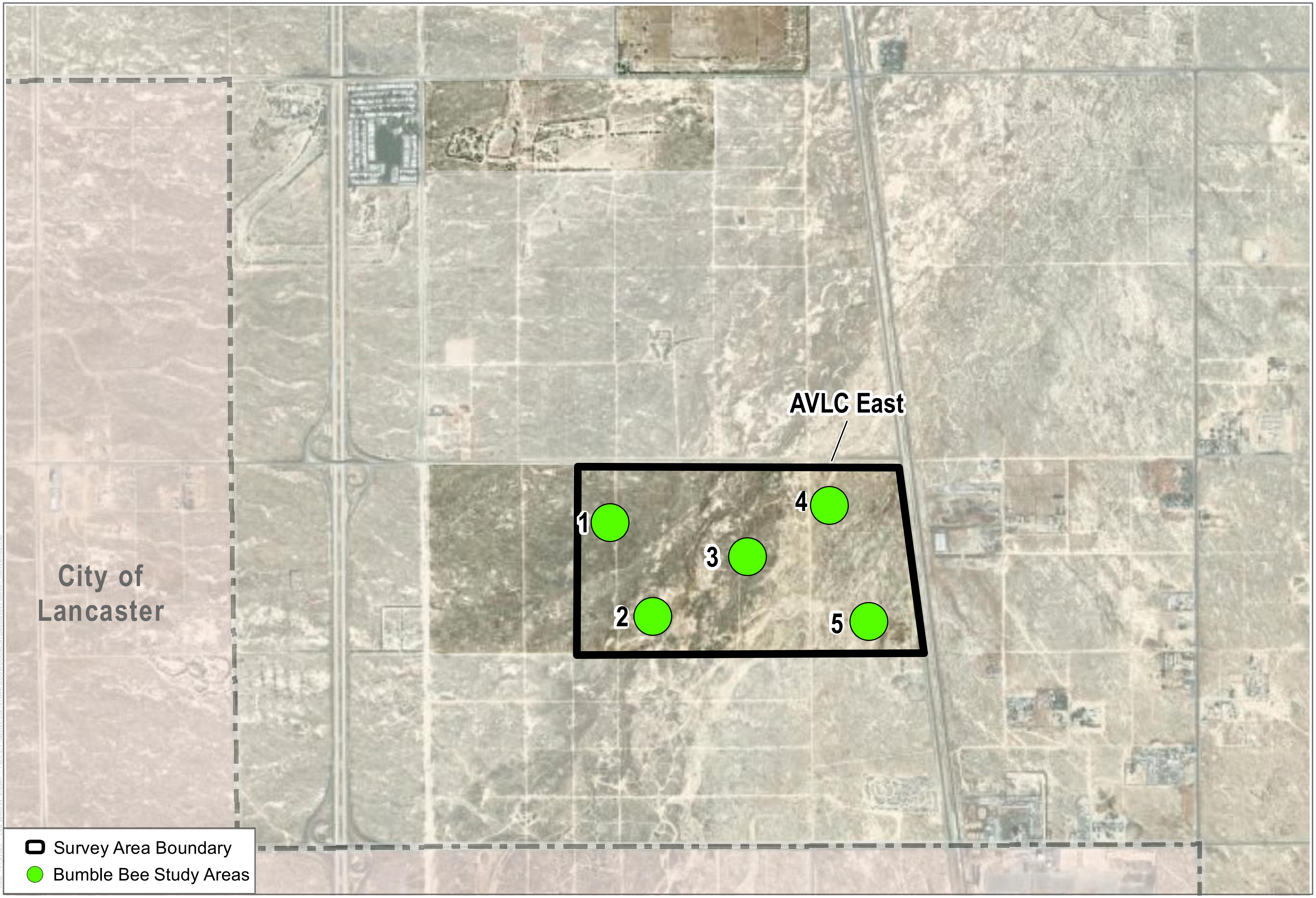
DUDEK

0 2,250 4,250 Feet

FIGURE 1

Bumble Bee Survey Area

Antelope Valley Logistics Center Project



SOURCE: ESRI Imagery 2023; Open Street Map 2019

DUDEK

FIGURE 2

Bumble Bee Study Areas

Antelope Valley Logistics Center Project

APPENDIX K

DELINEATION OF WATERS OF THE U.S. PLANNING AREAS 2, 4, AND 6-8

Westside Annexation and Specific Plan Project
Delineation of Waters of the United States

April 2025

Prepared By

NOREAS
Environmental Engineering and Science
16361 Scientific Way
Irvine, CA 92618
(949) 467-9116

Certification

The undersigned certify - under penalty of law, that they have personally examined and are familiar with the information submitted in this document and all attachments and that, based on an inquiry of those individuals immediately responsible for obtaining the information, believe that the information is true, accurate, and complete. The undersigned are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Prepared By: *Lenny Malo MS* Date: 4/7/25
Lenny Malo
Senior Project Manager & Regulatory Specialist
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TABLES

APPENDICES

COMMON ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
APT	Antecedent Precipitation Tool
CFR	Code of Federal Regulations
CWA	Clean Water Act
°F	degrees Fahrenheit
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
USEPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning Systems
HUC	Hydrologic Unit Code
KMZ	Keyhole Markup Language Zipped
NI	No Indicator
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
NOREAS	NOREAS Inc.
NTCHS	National Technical Committee for Hydric Soils
OBL	Obligate Wetland
OHWM	Ordinary High-Water Mark
PS	Project Site
RPW	Relatively Permanent Waters
SSURGO	Soil Survey Geographic Database
TNW	Traditional Navigable Waters
UPL	Upland
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1.0 INTRODUCTION AND SUMMARY OF FINDINGS

This Waters of the United States (WOTUS) delineation evaluates potential jurisdictional features within Planning Areas 2, 4, 6, 7, and 8 of the Westside Annexation and Specific Plan Project (Project), located in unincorporated Los Angeles County, California. The Project falls within Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, and 29, 32, 33, 34, Township 8 North, Range 12 West, and San Bernadino Meridian on the U.S. Geological Survey's (USGS) Lancaster West and Rosamond, California 7.5-minute topographic quadrangle maps. This delineation was conducted to determine the extent of features within the approximately 714.83-acres Project Site (PS) that may be subject to regulation by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA).

The PS is part of a larger 7,153-acre proposal for annexation into the City of Lancaster and is within the boundaries of the proposed North Lancaster Industrial Specific Plan (Specific Plan). The Specific Plan envisions the development of 38.5 million square feet of industrial uses, with a five-year buildout planned for Planning Areas 2, 4, 6, 7, and 8 (hereafter, these Planning Areas shall be referred to as the PS Appendix A, Figures 1 and 2). As shown within Appendix A, Figures 1 and 2, the PS, consists of a distinct northern and southern section.

This delineation has been conducted in accordance with the evolving definition of "WOTUS" under the CWA. The initial rule, published in the Federal Register on January 18, 2023, became effective on March 20, 2023. Subsequently, in response to the U.S. Supreme Court's decision in Sackett v. Environmental Protection Agency (USEPA) on May 25, 2023, the rule was amended to align with the Court's findings, with the conforming rule published on August 29, 2023, and effective as of September 8, 2023. Notably, on March 12, 2025, the U.S. Department of the Army, the U.S. Army Corps of Engineers, and the Environmental Protection Agency issued a memorandum providing further clarification on the implementation of the "continuous surface water connection" standard established by the Supreme Court in Sackett. This memorandum emphasizes that only wetlands and permanent bodies of water with a continuous surface connection to traditional interstate navigable waters fall under the jurisdiction of the CWA. In light of this memorandum, this delineation specifically assessed the presence of continuous surface connections between wetlands and traditionally navigable waters within the Lancaster area. This approach safeguards compliance with the latest regulatory guidance and accurately reflects the current scope of waters protected under the CWA.

This delineation utilized current and historical imagery, hydrologic databases, analytical tools, on-the-ground analyses and measurements, and a thorough review of pertinent regulations, manuals, and guidance documents to accurately identify the geographic limits of WOTUS. Subject matter experts conducted field assessments of the PS and its watershed in February and March 2025 (i.e., on February 22nd and 23rd, and March 5th, 8th, 9th, 10th and 11th) to evaluate the presence of jurisdictional aquatic features—such as wetlands, stream channels, and riparian habitats—based on hydrophytic vegetation, hydric soils, and hydrologic indicators. Historic and current aerial photography of the PS were also reviewed - prior to, and during the field assessments. Aerial photography was informative with deference to the state and function of land resources in both the present, and historic context. The USEPA WATERS GeoViewer tool also provided access to spatial data sets - such as interactive upstream and downstream search capabilities, to assist in determining the jurisdictional status of resources detected within the region. Additionally, the Federal Emergency Management Agency (FEMA) flood zone was reviewed, and the National Wetland Inventory (NWI) which is maintained by the U.S. Fish and Wildlife Service (USFWS). This was all done to support the identification of potential WOTUS within the PS.

This delineation of potential WOTUS was conducted following guidance in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (USACE 2008c). The Ordinary High-Water Mark (OHWM) of potential other WOTUS was delineated, following the guidance in A Field Guide to the Identification of the Ordinary High-Water Mark in the Arid West Region in the Western United States (Lichvar and McColley 2008). This delineation also uses the current USACE Arid West Wetland Determination Data Sheet and OHWM Data Form – as appropriate, which have not yet been updated to reflect the recent U.S. Supreme Court decision in Sackett v. USEPA. With that said, the new WOTUS rule introduces additional requirements beyond the traditional OHWM and three-parameter test to define WOTUS, and wetlands. The new rule mandates a relatively permanent, continuous - or uninterrupted, surface water connection to an (a)(1) through (a)(5) Waters (See Section 2.1.1 under Regulatory Setting below for additional information). Therefore, although the physical, chemical, and biological criteria for a WOTUS may be superficially satisfied, an individual feature may not meet the legal definition of a WOTUS - under the CWA, and related legal jurisdiction.

This delineation confirms that no WOTUS are present within the PS. Extensive analysis, conducted in accordance with the most current federal regulations, field methods, and guidance—including the March 12, 2025, Memorandum on Continuous Surface Connection—demonstrates that the hydrologic features within the PS lack the necessary criteria to qualify as jurisdictional WOTUS under the CWA.

Key Findings

1. Absence of an OHWM.
    a. With the exception of Amargosa Creek, none of the signatures observed within the PS exhibit physical indicators of an OHWM, which is a primary criterion for establishing jurisdiction under 33 Code of Federal Regulations (CFR) Part 328(a).
    b. Without a well-defined OHWM, there is no evidence of sustained flow, bed-and-bank development, or long-term hydrologic connectivity to downstream navigable waters.

2. Lack of a Continuous Surface Water Connection
    a. All detected features, including Amargosa Creek, are isolated and do not maintain a continuous, uninterrupted surface water connection to any jurisdictional (a)(1) through (a)(5) Waters under WOTUS.
    b. Ephemeral surface flows within the PS ultimately terminate in to a human-made detention basin prior reaching to Rosamond Dry Lake, a non-navigable, closed basin that does not function as a downstream water body under federal jurisdiction.
    c. The March 12, 2025 Memorandum further clarifies that hydrologic connections must be direct, observable, and sustained to meet the WOTUS definition. Seasonal, ephemeral, or event-driven flow does not establish jurisdiction.

3. Regulatory Compliance and Scientific Rigor
    a. This delineation was conducted using current and historic aerial imagery, hydrologic modeling, site-specific field assessments, and the latest regulatory framework from the USACE.
    b. All applicable indicators were analyzed, ensuring compliance with the revised WOTUS rule and the latest USACE and USEPA guidance on continuous surface connection.

Based on the best available science, site-specific data, and the latest federal regulatory definitions, no features or signatures within the PS satisfy the criteria required to be classified as WOTUS or a USACE jurisdictional wetland. While this analysis represents a thorough, technically sound, and regulatory-compliant delineation, only the USACE has the authority to make a final jurisdictional determination regarding aquatic resources at the PS. However, given the lack of hydrologic connectivity and absence of jurisdictional features, it is highly unlikely that USACE would assert jurisdiction over any portion of the PS under current law.

2.0 REGULATORY SETTING

2.1 Regulatory Review

2.1.1 Army Corps of Engineers

Pursuant to Section 404 of the CWA, the Corps regulates the discharge of dredged and/or fill material into WOTUS. The term "WOTUS" is defined in USACE regulations at 33 CFR Part 328.3(a) as:

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

(2) Impoundments of waters otherwise defined as WOTUS under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

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

(4) Wetlands adjacent to the following waters:
  (i) Waters identified in paragraph (a)(1) of this section; or
  (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

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

USACE regulations in 33 CFR Part 328.3(b) exclude the following from being "WOTUS" even where they otherwise meet the terms of paragraphs (a)(2) through (5) above:

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

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

(3) Ditches (including roadside ditches) excavated wholly in and draining

only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of WOTUS; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(c)(4) as:

> ...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

“Adjacent” wetlands are defined by 33 CFR 328.3(c)(2) as having a “continuous surface connection” to other WOTUS.

Wetland Definition Pursuant to Section 404 of the CWA

The term “wetlands” (a subset of WoUS) is defined at 33 CFR 328.3(b) as:

> "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions."

Wetlands under USACE jurisdiction must have the following field indicators:

1. Hydrophytic vegetation (A prevalence of vegetation typically adapted for life in saturated soil conditions in which more than 50 percent of the dominant plants are obligate wetland plants [OBL], facultative wetland plants [FACW] and facultative plants [FAC] (Environmental Laboratory 1987).

   Plant wetland indicator status from The National Wetland Plant List: 2016 Update of Wetland Ratings (NWPL) (Lichvar et al. 2016) is abbreviated as follows:

    a. OBL = Obligate wetland plants. Almost always occur in wetlands.
    b. FACW = Facultative wetland plants. Usually occur in wetlands but may occur in non-wetlands.
    c. FAC = Facultative plants. Occur in wetlands and non-wetlands.
    d. FACU = Facultative upland plants. Usually occur in non-wetlands but may occur in wetlands.
    e. UPL = Obligate upland plants. Almost never occur in wetlands.
    f. For species not listed in the NWPL, "Not Listed" (NL) is used to indicate their absence in the list. These species can be assumed to be upland species.

2. Hydric soils (soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part) (Natural Resources Conservation Services [NRCS] 2018); and

3. Wetland hydrology (areas that are periodically inundated or have soils saturated to the surface at some time during the growing season; where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively [Environmental Laboratory 1987]).

Growing season dates are determined through onsite observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperatures. Growing season dates may be approximated by using Climate Analysis for Wetlands (WETS) (tables available from the NRCS National Water and Climate Center (NWCC) to determine the median dates of 28 degrees Fahrenheit (°F) (-2.2 degree Celsius) air temperatures in spring and fall based on long-term records gathered at the nearest appropriate National Weather Service meteorological station (USACE 2008a).

The USACE defines "water body" as any area that in a normal year has water flowing or standing above ground to the extent that evidence of an OHWM is established (FR Volume 67, Number 10, Tuesday January 15, 2002). Water bodies are not required to be dominated by hydrophytic vegetation or to have positive hydric soil indicators to be considered USACE-jurisdictional.

March 12, 2025, Memorandum on "Continuous Surface Connection" in WOTUS Delineation

On March 12, 2025, the U.S. Department of the Army, USACE, and the USEPA issued a Memorandum to the Field clarifying the proper implementation of the "continuous surface connection" standard under the WOTUS definition within the CWA. This memorandum provides further regulatory guidance following the Supreme Court's decision in Sackett v. USEPA (2023), reinforcing a narrower interpretation of jurisdictional waters by emphasizing that only wetlands and water features with an unbroken, physical surface water connection to a traditionally navigable water body qualify as WOTUS.

Key Considerations from the Memorandum

1. Strict Interpretation of "Continuous Surface Connection"
    a. A surface water connection must be direct, persistent, and unbroken to a jurisdictional water (i.e., navigable-in-fact waters, interstate waters, or tributaries with relatively permanent flow).
    b. Ephemeral, intermittent, or indirect hydrologic connections, including subsurface or groundwater links, do not establish jurisdiction.
    c. Water features that only connect during extreme weather events, seasonal rainfall, or infrequent flooding are not considered WOTUS under this memorandum.

2. Implications for Adjacent Wetlands
    a. Wetlands must have an active, observable, and sustained surface water connection to WOTUS.
    b. If a wetland is separated from jurisdictional waters by upland areas, natural barriers, or constructed levees, it does not meet the definition of WOTUS, even if hydrologically influenced by proximity.

3. Delineation and Assessment Method
    a. The burden of proof now requires clear documentation of a continuous, uninterrupted surface water connection in field delineations.
    b. Hydrologic indicators such as an OHWM, direct overland flow, or sustained surface connectivity must be present year-round or consistently during normal hydrologic conditions.
    c. Remote sensing data, historical imagery, or occasional ponding alone cannot establish jurisdiction unless there is physical evidence of continuous connectivity to WOTUS.

3.0 METHODS

Documentation relevant to the PS and surrounding area was reviewed using the methods below.

3.1 Literature Reviews

Prior to conducting fieldwork, the following information was reviewed to determine watershed characteristics, locations and types of aquatic resources that may be present within the PS:

- Natural Resource Conservation Service, Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2025a) (Appendix A, Figure 4);
- Natural Resource Conservation Service, Watershed Boundary Dataset (USDA-NRCS 2025b) (Appendix A, Figure 5);
- Federal Emergency Management Agency (FEMA 2025) (Appendix A, Figure 6);
- NWI maintained by the US Fish and Wildlife Service (USFWS 2025) (Appendix A, Figure 7);
- USGS 7.5-minute Topographic Map Lancaster West and Rosamond, California, (USGS 1987);
- 2025 color aerial photographs (Bing Maps 2025);
- Google Earth version 5.2.1.1588 (March 2025);
- Agricultural Applied Climate Information System's precipitation data and seasonal temperature information (AgACIS 2024);
- USACE Navigable Waterways in the Los Angeles District (USACE 2025b);
- FrameFinder (University of California 2025);
- Environmental Protection Agency Enviromapper for Water (USEPA 2025a);
- U.S. Environmental Protection Agency (USEPA) (2025b) WATERS GeoViewer Tool (epa.maps.arcgis.com/apps/webappviewer) (Appendix A, Figures 8 and 9);
- USEPA Antecedent Precipitation Tool (APT) (2025c) (epa.gov/wotus/antecedent-precipitation-tool-apt); and
- Western Regional Climate Center Data California Weather Station (WRCC 2025).

The above documents were reviewed. The PS was assessed for the presence of indicators of jurisdictional aquatic resources, including an OHWM, hydrophytic vegetation, hydric soils, and evidence of surface hydrology. The intent of this assessment was to determine where water may flow, or may not flow - or terminate, and was used to determine efficient locations for visual inspections to occur in the field.

3.1.1 Aerial Photography

Historic and current aerial photography of the PS were reviewed, prior to and during the field assessments. Aerial photography was used to view land resources in both the present, and historic context. Inundation and vegetative signatures on aerial images can imply the presence - or absence, of lakes, rivers, or streambed systems within a discrete location.

3.1.2 U.S. Fish and Wildlife Service National Wetland Inventory Data and Environmental Protection Agency WATERS GeoViewer

The USEPA WATERS GeoViewer tool provided access to spatial data sets (Appendix A, Figures 8 and 9) - such as interactive Upstream/Downstream search capabilities, and interactive watersheds, to assist in determining the jurisdictional status of resources detected within the PS (epa.maps.arcgis.com/apps/webappviewer). Additionally, the FEMA flood zone is depicted in Appendix A, Figure 6. Furthermore, the NWI – which is maintained by the USFWS, was reviewed to support the identification of potential jurisdictional resources within the PS. However, this database (i.e., the NWI) is not used for regulatory jurisdictional review.

3.1.3 Antecedent Precipitation Tool

The Antecedent Precipitation Tool (APT) was also utilized to determine whether field observations are representative of typical climatic conditions (i.e., those that have been experienced over the past thirty years). This tool is informative when assessing whether certain field conditions are observed during typical, as opposed to atypical rainfall cycles. The APT queries data from weather stations that are located within a 30-mile radius from the Project.

3.1.4 Topography

USGS topographic maps were reviewed as well (Appendix A, Figure 1). These maps tend to illustrate elevation contours, drainage patterns, and hydrography within the PS. USGS 7.5-Minute Topographic Quadrangles "*Lancaster West and Rosamond*" was evaluated to facilitate identification of potential drainage features within the PS - as indicated from topographic changes, blue-line features, or visible drainage patterns in order to characterized features.

3.2 Procedures and Field Data Collection Techniques

Potential USACE-defined wetlands, and other WOTUS, and additional riverine resources were evaluated in the field with a handheld Global Positioning System (GPS) receiver. The surface area of each feature was then calculated within a Geographic Information System (GIS) to determine total jurisdiction area within the PS. KMZ (Keyhole Markup Language Zipped) files and GIS/ESRI shapefiles are available for all mapped resources, upon request, as aquatic resource boundaries were not permanently flagged, or demarked within the PS at the time of the delineation.

3.2.1 Waters of the United States Delineation Techniques

The specific delineation of signatures tied to WOTUS was conducted within the PS using a combination of on the ground quantification, remote sensing and ground verification via pedestrian surveys on February 22nd and 23rd, and March 5th, 8th, 9th, 10th and 11th of 2025. Assessment of the presence - or absence, of an OHWM was based on observations - evidence of flow, and unique characteristics indicating the presence of active water flow, shelving, drift lines, disturbed vegetation, etc. Or other indicators identified in the "Field Guide to Identification of the OHWM in the Arid West Region of the Western United States" (Lichvar and McColley 2008). OHWM characteristics in this region would primarily consist of sediment sorting, destruction of terrestrial vegetation, and a change in substrate in the feature as compared to the surrounding upland area. However, features were excluded from this assessment if they are human-made ditches, exhibited swales or erosional characteristics, etc., in accordance with USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United States[1].

Data collected included digital format GPS locations, and photos (Appendix B). Both a routine off-site and on-site field determination was conducted for USACE-defined wetlands, and non-wetland WOTUS. This delineation also uses the current USACE Arid West Wetland Determination Data Sheet and OHWM Data Form (Appendix D), which have not yet been updated to reflect the recent U.S. Supreme Court decision in Sackett v. USEPA, or the recent 2025 Memorandum on "Continuous Surface Connection." With that

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[1] USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United States – In summary, ditches, swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow, are not WOTUS.

said, the new WOTUS rule introduces additional requirements beyond the traditional OHWM and three-parameter test to define WOTUS and wetlands. The new rule now mandates a relatively permanent, continuous - or uninterrupted, surface water connection to an (a)(1) through (a)(5) Waters. Therefore, although the physical, chemical, and biological criteria for a WOTUS may be superficially satisfied, an individual feature may not meet the legal definition of a WOTUS under the CWA, and related legal jurisdiction. The term continuous surface water connection to a Traditional Navigable Water (TNW) or Relatively Permanent Water (RPW)is used only for wetlands. Connected to - or tributary to, are terms used for non-wetland aquatic resources and the relative permanence of a hydrological connection to TNW.

Features that did not meet the hydrophytic vegetation wetland criteria are also reviewed to determine if they met the definition of other WOTUS (i.e., had evidence of an OHWM). Data collected from georeferenced aerial photographs, topographic maps, and soils data are viewed on handheld mobile devices, and used to target areas with potential to be WOTUS. During fieldwork, all accessible areas within the PS were visually surveyed for hydrophytic vegetation, standing water, scoured areas, etc. Inaccessible areas were viewed from the elevated locales with the aid of binoculars, aerial photographs, and so forth. Areas that were determined to have an OHWM, defined bed/bank or suspected of being WOTUS, wetlands or other sensitive riparian/riverine communities were further analyzed for a dominance of hydrophytic vegetation, hydric soils, and hydrology as described below. The evaluation process for USACE-defined wetlands considered vegetation, soils, and hydrological parameters of suspected features. The location of the OHWM, is defined based on clear lines visible on banks; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; and differences in vegetation species, composition or structure.

3.2.2 Vegetation

The dominance and/or prevalence of hydrophytic vegetation was determined using USACE methods. Plant species not readily identifiable in the field were determined based on diagnostic keys from the Jepson Manual: Vascular Plants of California (Second Edition) (Baldwin et al. 2012). The wetland indicator status of plant species was based on the National Wetland Plant List (NWPL): 2018 Update of Wetland Ratings (Lichvar et al. 2018) - Table 1.

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Plants that occur almost always (estimated probability > 99%) in wetlands under natural conditions
Facultative Wetland (FACW)	Plants that occur usually (estimated probability >67% to 99%) in wetlands, but also occur (estimated probability 1% to 33%) in non-wetlands
Facultative (FAC)	Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands
Facultative Upland (FACU)	Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands
Obligate Upland (UPL)	Plants that occur rarely (estimated probability < 1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions
No Indicator (NI)	Wetland indicator status not assigned. Species is assumed to be upland.

The wetland vegetation criterion was considered met when more than 50 percent of the dominant plant species across all strata were rated OBL, FACW, or FAC, or if the aerial cover of hydrophytic plant species resulted in a prevalence rating of 3.0 or less. The USACE defines “dominant” plant species as those with at least 20 percent coverage of the total canopy.

The "50/20 rule" method was utilized to determine plant dominance (USACE 2024a). The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50% of the total dominance measure for the stratum, plus any additional species that individually comprise 20% or more of the total dominance measure for the stratum. The list of dominant species is then combined across strata (McIntosh 2011).

The USACE defines an area to be vegetated if it has 5 percent or more total plant cover at the peak of the growing season. Those sites supporting either a dominance or prevalence of hydrophytes under USACE definition or a dominance or absence of hydrophytes under Water Boards definition were further examined for indicators of hydric soils and wetland hydrology discussed below.

3.2.3 Soils

Soil texture, matrix, redoximorphic features (i.e., mottles), and any presence of subsoil layers impervious to water infiltration were documented from hand-excavated soil pits to the greatest extent practical. Soils were examined for positive hydric soil indicators such as low chroma, mottles (e.g., iron or manganese concretions), histic epipedons, organic layers, gleization, sulfidic odor or other primary hydric soil indicators listed on an Arid West Wetland Determination Data Form – as appropriate. Soil color and characteristics were determined from moist soil peds using Munsell Soil Color Book (Munsell Color 2000). When possible, soils were evaluated in the field to a depth of approximately 8–20 inches, where possible. GPS position data are collected at each soil pit and detailed within Project figures – when this type of sampling is appropriate. If warranted, upland and wetland soil pits are evaluated as well to delineate the wetland/upland boundary – when necessary. Hydric soil assessments were predominately based upon the guidance provided in the Arid West Regional Supplement (USACE 2008c). General soil information for the PS was obtained from the online GIS that provides the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) with soil data (USDA-NRCS 2025a).

3.2.4 Hydrology & Impounded Features

Hydrology was evaluated in areas suspected of seasonal inundation and/or saturation to the surface during the growing season. Recent precipitation data was analyzed to evaluate the frequency and amount of rainfall events within the PS, and on surrounding lands. Hydrological information was also determined for features by signatures on aerial photographs over time, as well as field analysis of the presence/absence of primary - or secondary hydrological indicators (i.e., surface water, saturation, sediment or drift deposits, watermarks, soil cracks, oxidized root channels, and/or biotic or salt crusts). Personnel also examined if there was any physical evidence of a continuous surface water connection, or uninterrupted surface water connection to any (a)(1) through (a)(5) Waters, as described in Title 33 CFR Part 328(a). Additionally, impounded features – if observed, were assessed to determine if they possessed natural characteristics with indicators of all three (3) wetland parameters: 1) dominance of hydrophytic vegetation (or Facultative Neutral), 2) possess hydric soils in the upper part, and 3) wetland hydrology.

4.0 RESULTS

The Antelope Valley, located in northern Los Angeles County, California, has undergone significant ecological transformations over millennia. During the Pleistocene epoch, this region was submerged under Lake Thompson, a vast body of water covering approximately 950 square kilometers. This lake extended over present-day areas, including Rogers Dry Lake, Rosamond Dry Lake, and Buckhorn Dry Lake. The cooler, wetter climate of that era supported extensive pluvial lakes surrounded by lush marshlands.

Around 10,000 years ago, during the Early Holocene, a significant climatic shift brought warmer and drier conditions, leading to the desiccation of these wetlands. As Lake Thompson evaporated, soluble salts accumulated on the exposed lakebed, creating a highly alkaline substrate. This environment was initially colonized by hydrophytic (water-loving) and halophytic (salt-tolerant) plant species. Over time, wind-driven sediments accumulated around these vegetation clusters, forming elevated mounds that stabilized the landscape. Gradually transforming the once-open lakebed into an upland desert shrubland ecosystem. This transition reflects the dynamic interplay between climatic factors and biological processes in shaping the region's current arid landscape.

Presently, the PS is characterized by a predominantly upland desert ecosystem, a result of thousands of years of aridification following the recession of Lake Thompson. While remnants of ancient lake sediments persist beneath the surface, the PS is largely established as an upland desert system. The PS includes Amargosa Creek in the southwestern area. Amargosa Creek is an ephemeral drainage that historically conveyed flows into the Rosamond Dry Lake bed. The human-made ponds that were pumped full with ground water attracted water fowl as well as the seasonal water in Rosamond Lake in the early 20th century.

Several duck hunting clubs, such as the Oasis Duck Club, the Crystal Wells Gun Club, and the Piute Gun Club, were established in the Lancaster area during the 1930s. These clubs actively modified the landscape within and around the PS to create hunting opportunities by constructing dikes, holding ponds, hunting blinds, and filled by pumping groundwater. They effectively transformed notable portions of the PS into a recreational hub for hunters, and vacationers alike. According to the USGS 1933 topographic map, the duck ponds in the northern terminus of the PS were labeled Hoffman Club, and the southern ponds - north of Avenue E were labeled Clarke Club. Both clubs were added onto the USGS 1947 topographic map, including the ponds south of Avenue E (unlabeled). The last additions occurred prior to 1973, with the deep boat pond and small section between both clubs (USGS 1973). The number of ponds inundated seem to decrease through time, after the 1980s' until the 2000s' where they are all completely fallowed.

Several factors contributed to the decline of these duck hunting ponds over the past half-century:

- Land Acquisition by the Government. The U.S. government acquired large tracts of land in the Antelope Valley for military purposes, including areas occupied by duck clubs. This acquisition led to the dissolution of clubs like the Piute Gun Club in 1961.
- Changes in Water Management. As Lancaster's population grew, water management priorities shifted. Artificial ponds in the area were historically maintained by pumping groundwater. However, continued pumping caused groundwater levels to drop, making it more expensive and energy-intensive to access. Rising electricity costs further compounded the issue, and ultimately, water resources were redirected to meet growing urban demands. As a result, maintaining these ponds became less feasible and was no longer prioritized.
- Shifts in Recreational Trends. Over time, recreational preferences changed, leading to a decline in the popularity of local duck hunting.

Today, remnants of these once-thriving duck hunting ponds can still be observed in the PS. Visible infrastructure such as dikes, docks, and water control systems serve as historical markers of the area’s past recreational use. The PS remains a relatively flat, well-drained upland landscape with limited water retention potential. Subtle mound-intermound topography, shaped over time by natural geologic and climatic processes, characterizes the area. Despite its undulating surfaces, the PS exhibits rapid rainwater infiltration—meaning precipitation is quickly absorbed into the well-drained soils. Any ponding that does occur is shallow, short-lived, and generally dissipates fast. These conditions are not sustained long enough to create anaerobic soil environments or develop hydric soil indicators. Groundwater is too deep to influence surface conditions, reinforcing the site’s well-drained nature. This historical and ecological context is crucial for understanding the current state of the PS.

4.1 PS Geology and Soils

The PS is underlain by Quaternary deposits from the Pliocene to Holocene epochs, primarily comprising non-marine alluvium, lake, playa, and terrace deposits (Jennings et al. 1977). According to the NRCS SoilWeb database (Soil Survey, NRCS, USDA, accessed February 2025), the predominant soil mapping unit within the PS is the Pond-Oban complex (457884). Despite its name, the Pond soil series does not occur in ponded areas but was named after the town of Pond in Kern County, California, where this soil type was first identified. Similarly, the Oban soil series was named after the nearby landmark neighborhood of Oban, located adjacent to the northeast corner of the PS.

It’s important to note that the Soil Survey for the Lancaster Area, California, from which SoilWeb data is derived, is nearly a century old and contains outdated information. For instance, it mentions a “high-water table,” which is inconsistent with current conditions. Additionally, there are no soil map units for the Pond Soil Series within Kern County, and the type locality for this series is now mapped by the NRCS as Calfax clay loam, saline, 0 to 2 percent slopes, MLRA 17. Furthermore, the Pond-Oban complex map unit lacks components -or inclusions of geographically associated soils listed in the official series descriptions, such as Chino, Fresno, Lewis, Traver, Waukena, and Hacienda.

During this investigation, a total of seven (7) chemical analysis soil sample points were collected and twenty-three (23) soil pits were hand excavated within the PS (Appendix A, Figure 3, Appendix B, and Appendix D). Chemical analysis of the seven samples indicated - as expected, that the soils onsite are alkaline (Appendix C, Table 1). With the exception of soil sample G – obtained outside the PS (which would be considered strongly alkaline [pH of 8.5 – 19.0]), all of the soils sampled for pH are considered very strongly alkaline (pH > 9.0).

The excavated soil pits exhibited remarkable consistency (Appendix B and D), with minor variations in the depth and texture of the A horizon, generally aligning with NRCS soil component descriptions (e.g., fine sandy loam within the A Horizon’s 0 to 4 inches). The topsoil predominantly consisted of fine sandy loam and silty clay loam, underlain by a mineral layer. Most notably, almost all soils within the PS displayed polygonal soil cracking in intermound areas, occasionally forming hexagonal patterns, while mound soils exhibited T-shaped or Y-shaped cracks.

Research indicates that such polygonal (hexagonal) cracking results from natural desiccation processes influenced by drying and shrinking cycles, rather than sustained wet conditions (Goehring and Morris 2014). Over time, annealing processes-gradual changes due to repeated drying and contraction lead to increasingly complex hexagonal crack patterns. Alkaline soil conditions significantly contribute to the formation of these cracks, meaning areas with higher soil pH are more prone to this type of cracking (Zhang et al., 2023). Therefore, the presence of these cracks within the PS is attributed to natural desiccation cycles, a function of climate, soil chemistry, and drying cycles, rather than persistent water saturation (Appendix B). Consequently, their presence alone does not indicate sustained hydrology, nor serve as an indicator of hydric soils.

While the polygonal cracks were more defined and deeper (up to 2 inches) in the intermound areas compared to the mound areas, redox features were notably absent in most intermound areas, except for soil pits 18 and 22 (Appendix A, Figure 3). This absence suggests that the dominant soils within the PS only experience short-duration seasonal ponding in low-lying depressions following precipitation events. The isolated presence of redoximorphic features (soil pits 18) and olive-colored soils (soil pit 22) in the aforementioned samples, indicates that periodic anaerobic conditions occur only in these specific locations - serving as potential hydric soil indicators. Both of these soil pits occurred in human-made duck ponds that historically were artificially inundated continuously for several months out of the year. In summary, the vast majority of soils within the PS are moderately well-drained, with depths greater than 6.5 feet to a restrictive layer or groundwater. To that end, potential hydric soils were only identified in the two specific soil pits mentioned above.

The key take aways are as follows:

- Deeper, more prominent soil cracks were observed in the low-lying intermound areas of the PS, indicating drying and shrinkage. However, clear indicators of prolonged soil saturation—such as redoximorphic features, including rust-colored mottling or gray soils—were only present around the artificially flooded duck ponds. These signatures were absent in the more natural intermound areas, suggesting they do not retain water long enough to develop hydric soil characteristics.
- Only two specific soil pits within the PS showed signs of occasional wetness that could qualify as hydric soils, and these were located in historic duck ponds that were inundated with pumped ground water.
- Overall, the majority of the PS is well-drained and doesn't pond water for long enough - or often enough, to satisfy the official criteria for hydric soils.

According to the 2012 National Technical Committee for Hydric Soils (NTCHS[2]) - a committee established by the USDA to provide technical guidance on identifying and classifying hydric soils (i.e., soils formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil), mandatory hydric soil criterion number 3 asserts the following:

- "soils frequently ponded for more than 7 consecutive days during the growing season may qualify as hydric, but only if they also show key field indicators."
  - These indicators, which are essential for confirming the hydric nature of the soil, include:
    - Redox Features. These are color patterns in the soil profile that indicate the presence of reduced iron compounds, a sign of anaerobic conditions.
    - Reduced Soil Colors: These are colors that are indicative of the lack of oxygen in the soil, such as greys, blues, or greens.
- "Frequently" means ponding must occur in more than 50% of years, or at least 50 out of 100 years.

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[2] The NTCHS is responsible for: Developing the official definition of hydric soils; Publishing the "Hydric Soils of the United States" list; Providing and updating the "Field Indicators of Hydric Soils;" and supporting the scientific framework used in wetland delineations and regulatory decisions under the Clean Water Act.

- Based on 41 years of site-specific rainfall data and field observations, the growing season (March–November) at the PS receives limited rainfall, and lacks the sustained inundation required to meet this standard (Appendix C, Table 2).
- With the exception of two isolated soil pits, soils across the PS do not exhibit the saturation indicators or evidence of anaerobic conditions that would support classification as hydric soils. Therefore, the majority of soils at the PS are moderately well-drained and unlikely to pond frequently or long enough to meet hydric soil criteria under NTCHS guidelines.

4.2 PS Hydrology

The PS exhibits a subtle mound-intermound topography, characterized by small, elevated mounds rising 0.5 to 2 feet above the surrounding terrain. The origins of such mounded landscapes, akin to Mima mounds, have been the subject of various theories, including:

- Fossorial Rodent Activity. Some researchers suggest that burrowing animals, such as pocket gophers, have contributed to mound formation through their soil displacement activities.
- Seismic Activity. Another hypothesis proposes that intense ground shaking from major earthquakes could lead to the formation of these mounds.
- Shrink-Swell Processes. The expansion and contraction of finer textured materials present in soils during wet and dry cycles may result in the development of mound and depression patterns, similar to Giglia formations (Hough-Snee et al 2011).

In the context of the PS, the most plausible explanation involves the accumulation of wind-blown (aeolian) sediments around vegetation clumps, leading to the gradual build-up of mounds over time. Rainfall on this undulating surface is differentially intercepted by mounds and intermounds. Mounds, enriched with organic matter, possess more porous soils, facilitating greater water absorption. In contrast, intermound areas, often composed of finer-textured materials, may experience very shallow and short-lived ponding following precipitation events. Additionally, intermounds receive some hydraulic inputs from adjacent mounds through overland flow or toe-slope seepage. However, with groundwater depths exceeding 6.5 feet, there is minimal influence on surface ponding within the PS (SoilWeb 2025a).

According to the NRCS water balance for Oban soils, less than 0.3 inches of surplus water is available for ponding, primarily occurring in February (Appendix C). Similarly, Pond soils exhibit less than 0.2 inches of surplus water, typically in March. Given that February is a cold month in Lancaster, soil saturation or ponding may occasionally occur during the non-growing season. Small ponded areas (mostly vehicular ruts), were observed during the March 9, 2025 field visit. Amargosa Creek traverses the PS and has been subject to channelization in its northern portion, as evidenced by rows of excavated soil along its banks. Beyond the PS, this ephemeral creek continues northeast but is diverted into a human-made basin before reaching Rosamond Dry Lake.

During the delineation field work on February 22 and 23, 2025nine days after a storm event that delivered approximately 0.75 inches of rainfall small areas of ponding water (less than 3 inches deep) were observed in the lowest topographical depressions, generally within deep vehicle ruts. However, the majority of intermound areas remained dry. Wetland hydrology indicators, such as surface soil cracks and salt crusts, were observed across mounds, and intermound areas (Appendix B).

Consequently, additional primary or secondary indicators are necessary to infer wetland hydrology, particularly in concave landscape positions. Polygonal soil cracking was more pronounced in intermound areas, occasionally displaying hexagonal patterns, while mound soils exhibited T-shaped or Y-shaped cracks. Research indicates that hexagonal cracking results from processes similar to annealing, where repeated drying and contraction cycles lead to increasingly complex patterns. Additionally, alkaline soil conditions significantly contribute to the formation of these cracks.

The PS is situated within the Antelope-Fremont Valleys Hydrologic Unit (Hydrologic Unit Code 18090206, Appendix A, Figure 4). Features depicted on the NWI map align with treatment ponds at the offsite water reclamation facility to the north, and other apparent human-made duck ponds within the PS (Appendix A, Figure 5). While the NWI is often used for desk top review, it is based on satellite imagery, and does not appear to be a very accurate data source in the desert. For example, the NWI often picks up dirt roads in desert habitats as riverine. Therefore, ground truthing is very important, and it should not be used jurisdictional determinations. The FEMA (2025) flood zone map is depicted in Appendix A, Figure 6.

Lancaster's climate is characterized by hot, arid summers and cold, partly cloudy winters. Annual temperatures typically range from 33 degrees Fahrenheit (°F) to 97°F. The hot season spans approximately 3.2 months, from June to September, peaking in July with average highs of 96°F and lows of 68°F. The cool season lasts about 3.4 months, from November to March, with December being the coldest month, averaging lows of 33°F and highs of 58°F. Annual precipitation averages 9.6 inches, primarily as rain with occasional snow. The growing season, defined as the longest continuous period of non-freezing temperatures (≥32°F), typically lasts around 7.9 months (242 days), from approximately March to November. Wetland hydrology, characterized by continuous or periodic inundation or soil saturation to the surface for 7% or more of the growing season, equates to a minimum of 17 days (7% of 242 days).

Based on the growing season for Lancaster area and the average rainfall (Appendix C, Table 2) it is highly unlikely that ponding or soil saturation occurs within the intermound areas for at least 17 consecutive days, given the scant rainfall that falls in the second half of March through September in this region.

Lancaster's semi-arid climate is marked by hot, dry summers and cold winters with minimal precipitation. Average annual rainfall is just 9.6 inches, and nearly all of that occurs outside the growing season. The growing season—defined as the period when daily minimum temperatures remain above freezing—typically lasts from March through November, or about 242 days. To meet wetland hydrology criteria, the PS must experience continuous - or periodic inundation or saturation at the surface for at least 7% of the growing season, or approximately 17 consecutive days. However, this threshold is not met at the PS.

1. Rainfall During the Growing Season Is Insufficient.
    a. Based on 41 years of rainfall records (Appendix C, Table 2), the PS receives very little precipitation from mid-March through September.
    b. This makes it highly improbable for ponding or surface saturation to persist for 17 consecutive days during the growing season.

2. Evapotranspiration Far Exceeds Rainfall.
    a. Appendix C, Table 3 clearly shows that in every month of the year, average evapotranspiration exceeds average rainfall.
    b. So, for ponding to occur, rainfall would have to exceed evapotranspiration, which does not happen—even during historically wet years like 1992–1993 (Appendix C, Table 4.F).

3. Soil Storage Delays Saturation.
    a. The soils at the PS (Pond and Oban series) have high water-holding capacity. Before ponding can occur, they must first absorb approximately 4.96 and 3.74 inches of water (California Soil Resource Lab, 2025) respectively (Appendix C, Tables 5.A and 5.B).

b. The monthly rainfall averages don't come close to these thresholds, especially when factoring in evapotranspiration.

In conclusion, while short-term ponding may occasionally occur during the winter months, when temperatures are low and evapotranspiration is minimal, this happens outside the growing season. Consequently, the PS does not meet the criteria for wetland hydrology. Its mound–intermound microtopography, well-drained soils, limited rainfall, and high evaporation rates collectively limit the potential for sustained surface water during the biologically relevant growing season.

4.3 PS Vegetation

The PS is predominantly characterized by desert saltbush scrub vegetation, a plant community adapted to arid conditions and alkaline soils. This habitat features low-growing, grayish shrubs, typically ranging from 1 to 3 feet in height, interspersed with significant areas of bare ground. The vegetation is often dominated by species of the genus *Atriplex*, commonly known as saltbushes. Within the PS, the dominant vegetation comprises non-hydrophytic (non-water-dependent) woody saltbush species, including shadscale (*Atriplex confertifolia*) (Upland [UPL[3]]), fourwing saltbush (*Atriplex casnescens*) (Not Listed [NL[4]]), and allscale saltbush (*Atriplex polycarpha*) (Facultative Upland [FACU[5]]), with and understory of weedy non hydrophytic annual grasses including cheatgrass (*Bromus tectorum*) (NL), Spanish brome (*Bromus madritensis*) (UPL), common Mediterranean grass (*Schismus barbatus*) (NL), and smooth barely (*Hordeum murinum* ssp. *glaucum*) (FACU).

The vast majority of inter-mound areas are not considered wetlands with the exception of Features 2, 3 and 4 within the PS, due to a lack of hydrophytes. The lack of hydrophytes is potentially due to the high alkalinity or salinity in the soil. However, similar habitats (Pleistocene Lake beds) in the Central Valley which have been delineated as wetland have very high pH soil levels and support hydrophytic shrubs as well as herbaceous hydrophytes[6].

The notable absence of hydrophytic vegetation in the intermound areas of the PS suggests that soil alkalinity or salinity is not the limiting factor for plant colonization (Appendix B). As similar habitats in the Central Valley, which have been delineated as wetlands, support hydrophytic shrubs and herbaceous species despite high soil pH levels. Therefore, the scarcity of plant cover in these intermound areas is likely due to the lack of suitable seed beds, resulting from insufficient organic matter and hard substrate, rather than soil chemistry alone. In summary, the PS's vegetation is dominated by non-hydrophytic species adapted to arid, alkaline conditions, with the absence of hydrophytic plants in intermound areas likely due to unsuitable seed beds rather than soil salinity or alkalinity.

---

[3] Plants that occur rarely (estimated probability < 1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions.

[4] Wetland indicator status not assigned. Species is assumed to be upland.

[5] Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands.

[6] For example, in the vicinity of the town of Pond, in Kern County, where the type locality for the Pond soil series, Atriplex species are generally halophytic hydrophytes such as big saltbush (*Atriplex lentiformus*) (Facultative [FAC]), fat-hen (*Atriplex* prostrata) (Facultative Wetland [FACW]), crownscale (*Atriplex coronata*) (FACW), heartscale (*Atriplex cordulata*) (FAC), and spinescale saltbush (*Atriplex spinifera*) (FAC). Similarly, the wildflower displays are dominated by goldfields which are FAC of FACW species including yellow rayed goldfields (*Lastenia glabrata*) (FACW), coastal goldfields (*Lastenia minor*) (FACW), and alkali goldfields (*Lastenia chrysantha*) (FAC). Other halophytic hydrophytes present include alkali weed (*Cressa truxillensis*) (FACW), saltgrass (*Distichilis spicata*) (FAC), alkali barely (*Hordeum depressum*) (FAC), and pepper grasses (*Lepidium dictyotum and L. acutidens*) (FAC), Coville's orach (*Stutzia covillei*) (FACW), bush seep weed (*Sueda nigra*) (OBL), black seed sandspury (*Spergularia atrosperma*) (FACW), and western sea purslane (*Sesuvium verrucosum*) (FACW).

4.4 Waters of the United States (WOTUS)

Following field investigations, hydrologic analyses, and regulatory evaluation, this delineation confirms that no areas within the PS qualify as WOTUS under Section 404 of the CWA. The absence of key hydrologic, soil, and vegetation indicators required for WOTUS designation under 33 CFR Part 328(a) supports this determination.

Key Findings

1. Vegetation Composition – Dominance of Upland Plant Species
    a. The overwhelming dominance of upland vegetation in the intermound areas indicates a lack of hydrophytes necessary for WOTUS classification.
    b. Hydrophytic vegetation, a key requirement for wetland status, is substantially absent from the majority of the PS.
    c. Given that wetland plants require prolonged soil saturation, their absence from most areas within the PS strongly suggests that hydrologic conditions do not support jurisdictional wetlands.

2. Hydrologic Conditions – Insufficient Ponding or Soil Saturation
    a. Hydrologic modeling and NRCS water budget calculations for Pond and Oban soils confirm that ponding and soil saturation are not typically sustained for long enough durations to meet jurisdictional wetland criteria.
    b. Any short-lived, isolated pooling that occurs is ephemeral and does not constitute sustained wetland hydrology under USACE criteria.

3. Soil Characteristics – Distinct Soils
    a. Wetlands require hydric soils, which form under prolonged saturation and anaerobic (oxygen-deprived) conditions during the growing season.
    b. The Pond-Oban complex and its components are not classified as hydric soils by the NRCS.

4. Hydrology Indicators – Surface Features Do Not Indicate Wetlands
    a. Some surface characteristics, such as soil cracking and salt crust formation, are present.
    b. These features are not exclusive to wetlands, and are represented in both mound and intermound areas across the PS.
    c. These observations confirm that the PS lacks distinct hydrologic indicators required to establish jurisdictional WOTUS, or wetland conditions.

5. Absence of Redox Features – No Evidence of Prolonged Saturation
    a. Redoximorphic features (such as soil color patterns caused by loss [depletion] or gain [concentration] of pigment), which indicate prolonged soil saturation and anaerobic conditions during the growing season, were not observed in the majority of soil samples.
    b. Variations in soil pH were recorded, but none of the samples exhibited indicators of sustained hydrology necessary for wetland formation.

6. Anomalies – Isolated, Ephemeral, and Non-Jurisdictional
    a. Less than 0.03% of the PS exhibited any combination of an OHWM, hydrophytic vegetation, hydric soils, or wetland hydrology.
    b. Even in these rare instances, the observed characteristics were ephemeral and lacked a continuous or uninterrupted surface water connection to a downstream WOTUS.

c. The March 12, 2025, Memorandum on Continuous Surface Connection reinforces that only wetlands with a direct, sustained, and unbroken surface connection to a jurisdictional WOTUS qualify for federal regulation.
d. Since no such connection exists within the PS, these features are not USACE jurisdictional.

<u>Final Determination: No WOTUS Identified within the PS</u>

Based on these findings, no features within the PS qualify as WOTUS under 33 CFR Part 328(a).

- Lack of OHWM Indicators.
  - No sustained surface flow or hydrologic connectivity to a jurisdictional water body was observed, except for ephemeral conditions in localized areas that do not meet regulatory thresholds.
- Hydrologic Isolation.
  - All observed features, including Amargosa Creek, are isolated and lack a continuous surface connection to (a)(1) through (a)(5) waters, as defined by federal regulations.
- Termination in a Non-Navigable Basin.
  - Any ephemeral surface flows from the PS ultimately terminate in to a human-made detention basin prior to reaching Rosamond Dry Lake, a non-navigable, closed basin with no hydrologic connectivity to a traditional WOTUS.
- Alignment with the March 12, 2025, Memorandum on Continuous Surface Connection.
  - The memorandum reaffirms that only features with a direct, sustained, and observable surface water connection to a jurisdictional WOTUS qualify for federal protection under the CWA.
  - Ephemeral hydrologic connections do not establish jurisdiction unless there is clear, direct, and consistent connectivity to traditionally navigable waters.
  - The features within the PS fail to meet this standard, confirming that they are not subject to regulation under Section 404 of the CWA.

This delineation represents a scientifically rigorous, regulatory-compliant evaluation of potential WOTUS within the PS. No features meet the criteria necessary for classification as jurisdictional wetlands or WOTUS under USACE jurisdiction.

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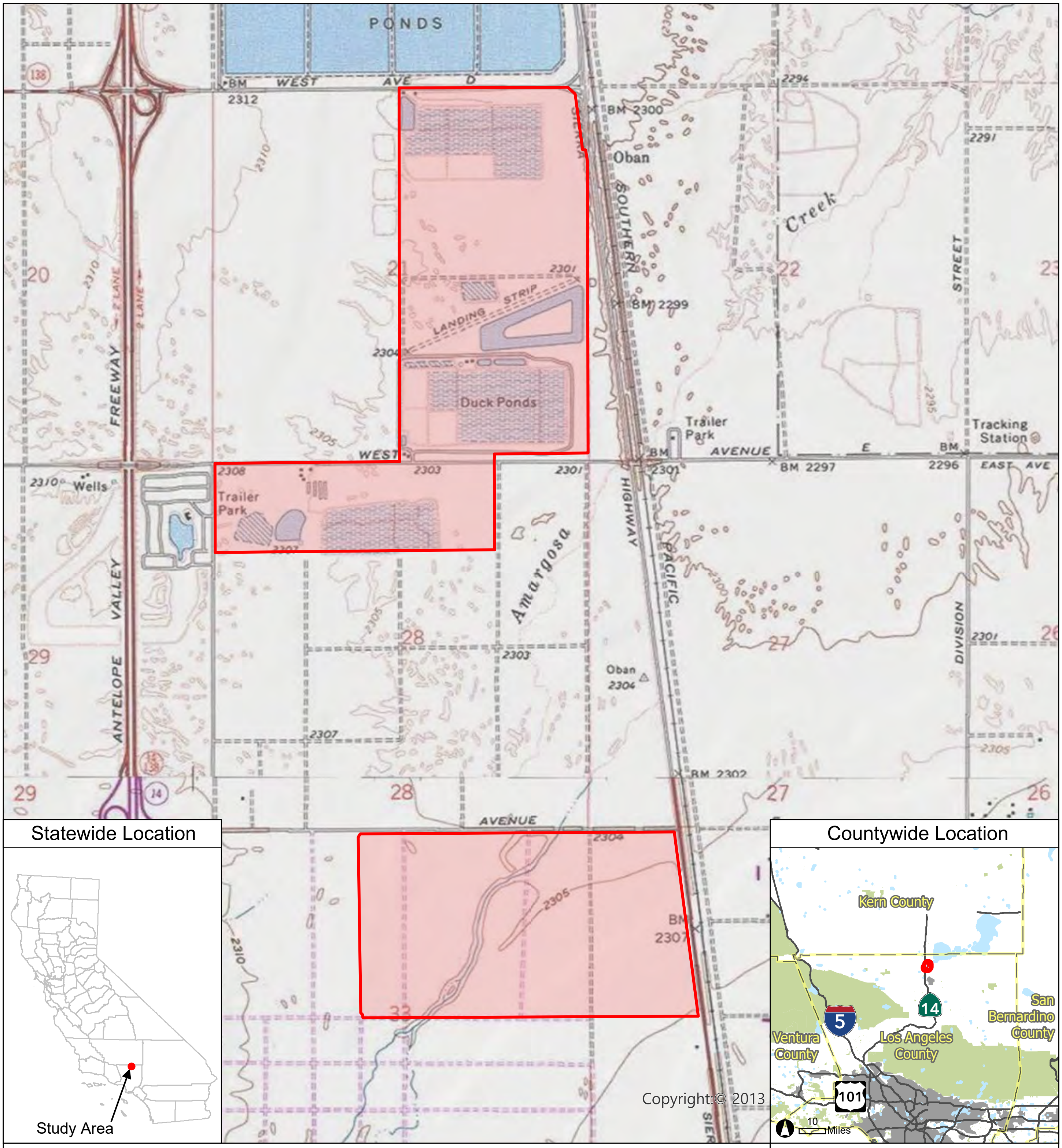
Appendix A Figures



🟥 Project Site

The Project Site is located in Los Angeles County
on the Lancaster West and Rosamond USGS 7.5-minute
quadrangle maps; San Bernardino Meridian,
Township 8N, Range 12W, in Sections 21, 28, 33, 34;

Center coordinates (WGS 1984): 118.227°W 34.635°N

- Interstate or State Highway (inset)
- County Boundary (inset)
- Urban Area (inset)
- Park or National Forest (inset)
- Water Body (inset)

0 1,000 2,000 Feet

1 inch = 2,000 feet

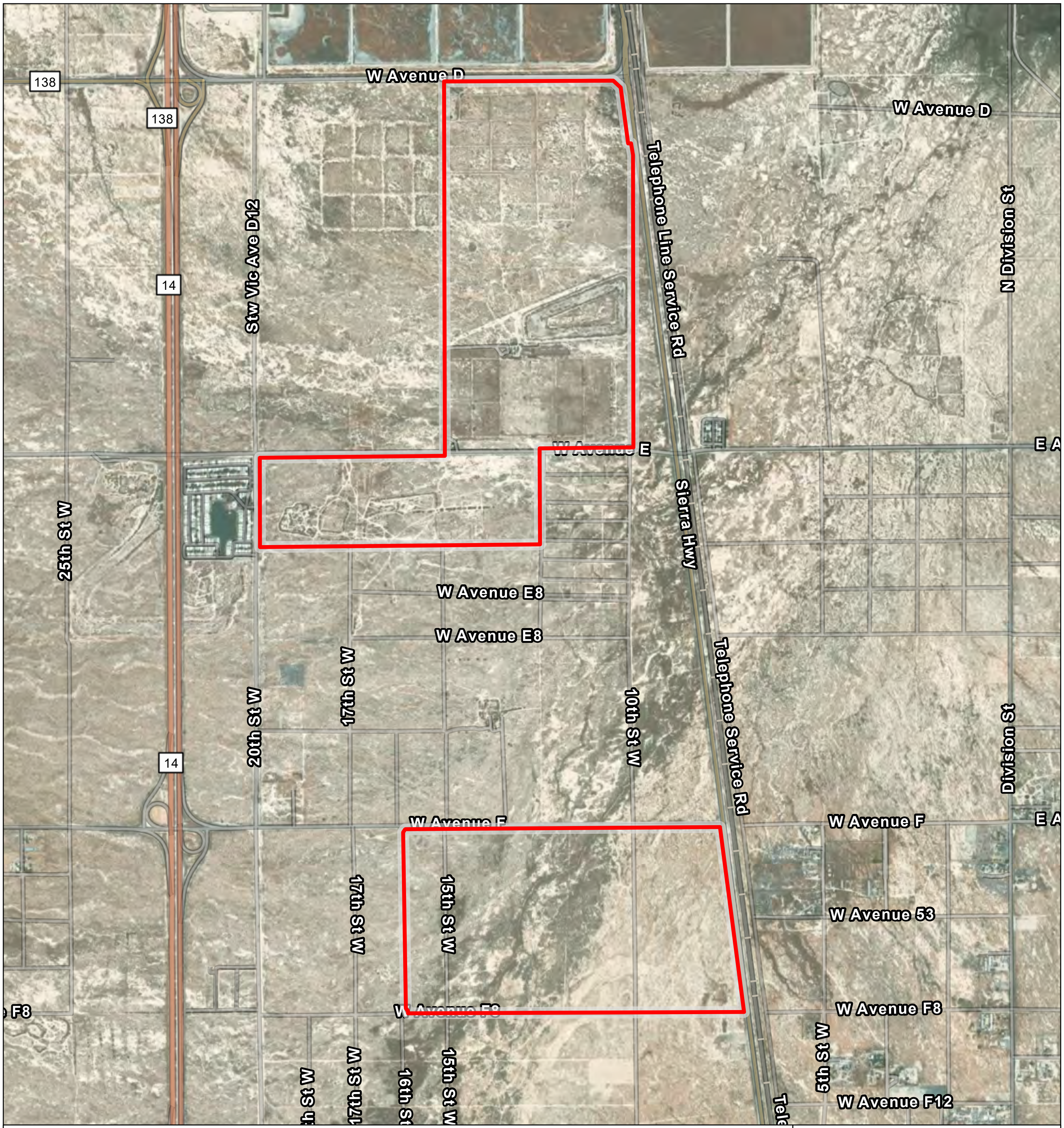
Data Sources:
- California Public Land Survey System 2020
- USGS 7.5-minute quadrangle map
- ESRI US Topo Maps accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 1. Regional Location



🟥 Project Site (714.83 ac)

0 1,000 2,000 Feet

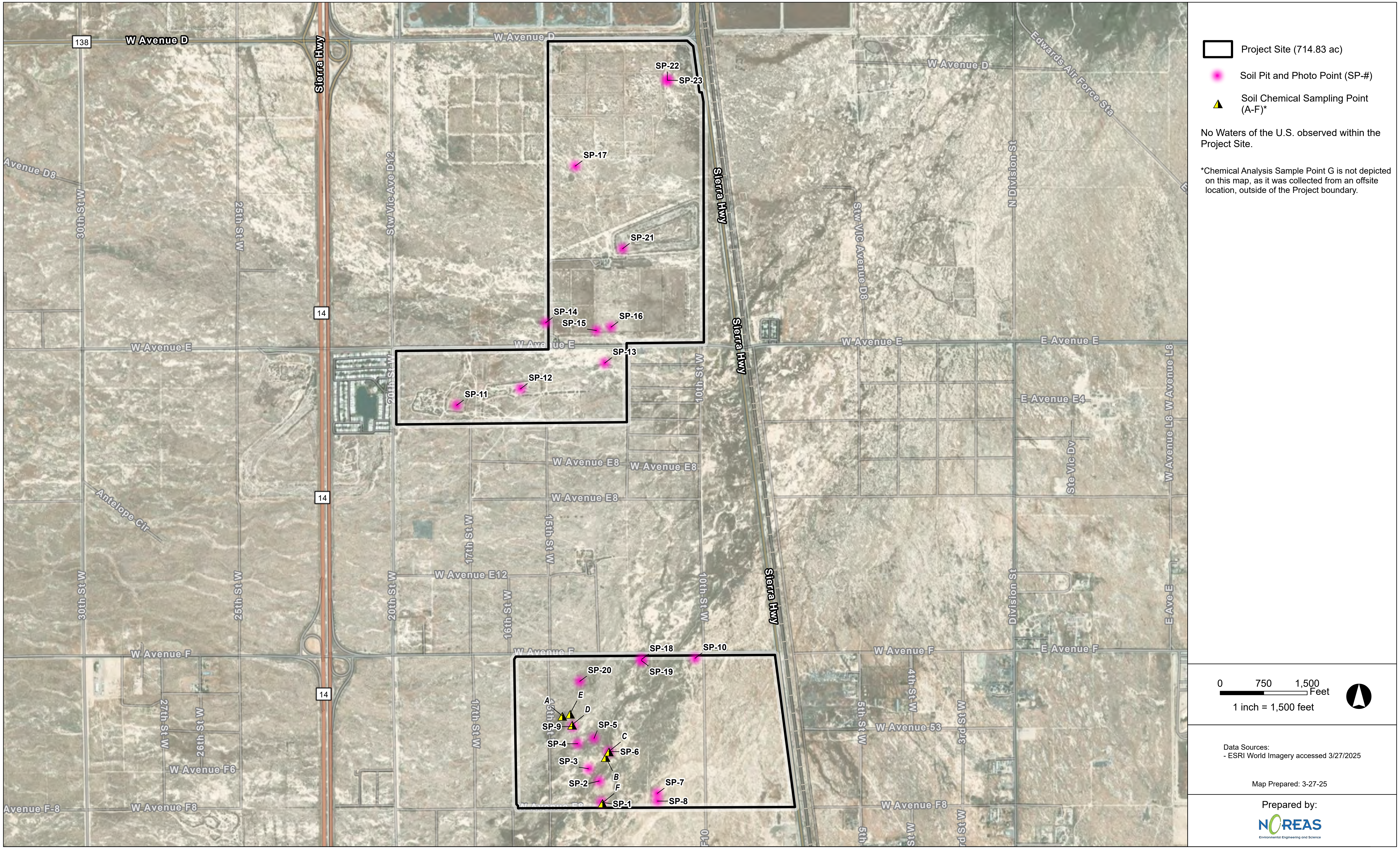
1 inch = 2,000 feet

Data Sources:
- ESRI World Imagery accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 2. Site Vicinity



No Waters of the U.S. observed within the Project Site.

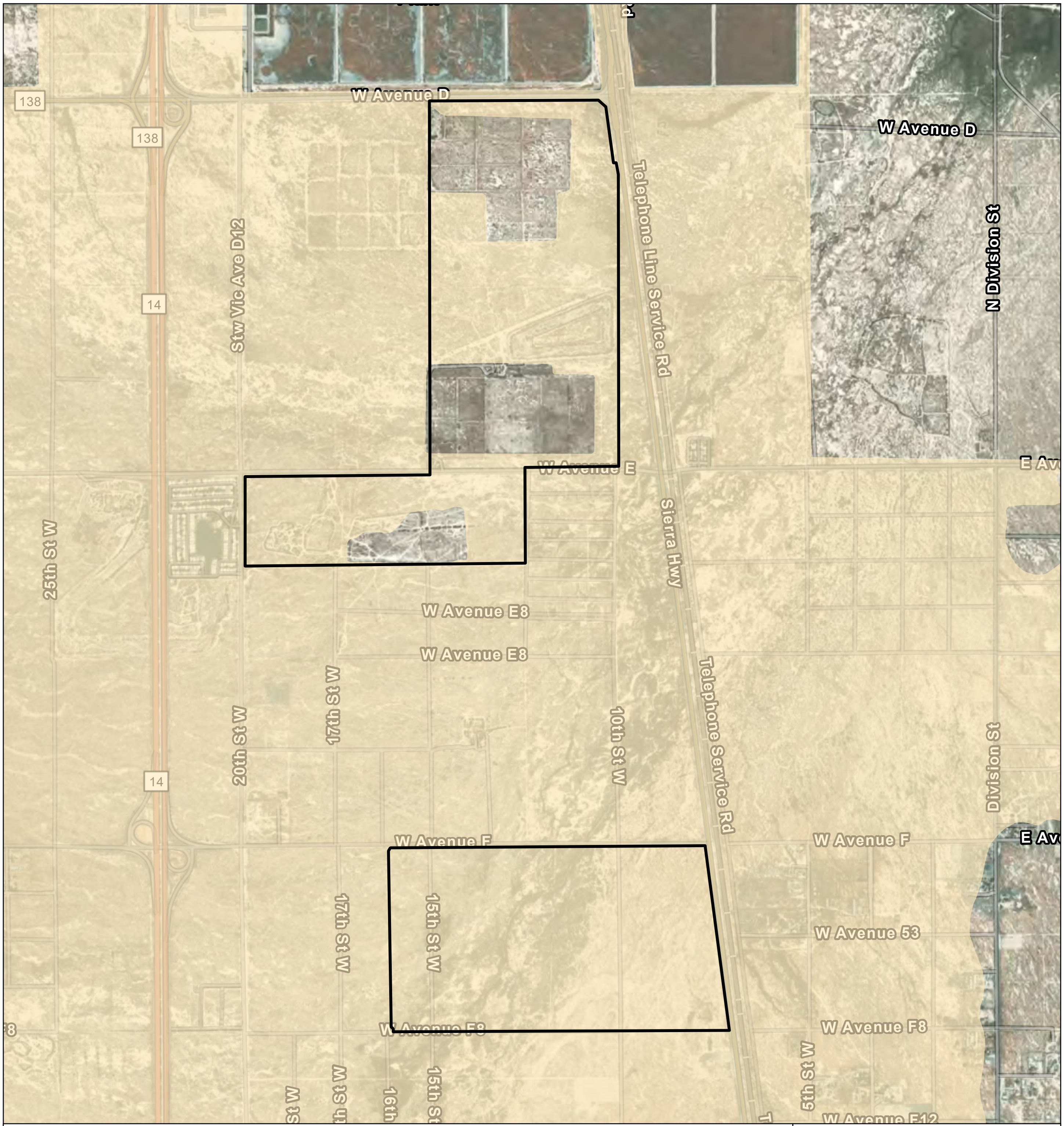
*Chemical Analysis Sample Point G is not depicted on this map, as it was collected from an offsite location, outside of the Project boundary.

Data Sources:
- ESRI World Imagery accessed 3/27/2025

Map Prepared: 3-27-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 3. Waters of the U.S.



▭ Project Site

Soil Type

🟨 Px - Pond-Oban complex

1 inch = 2,000 feet

Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- NRCS Web Soil Survey accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 4. Soils Map

▭ Project Site

Regional Watershed (HUC8)

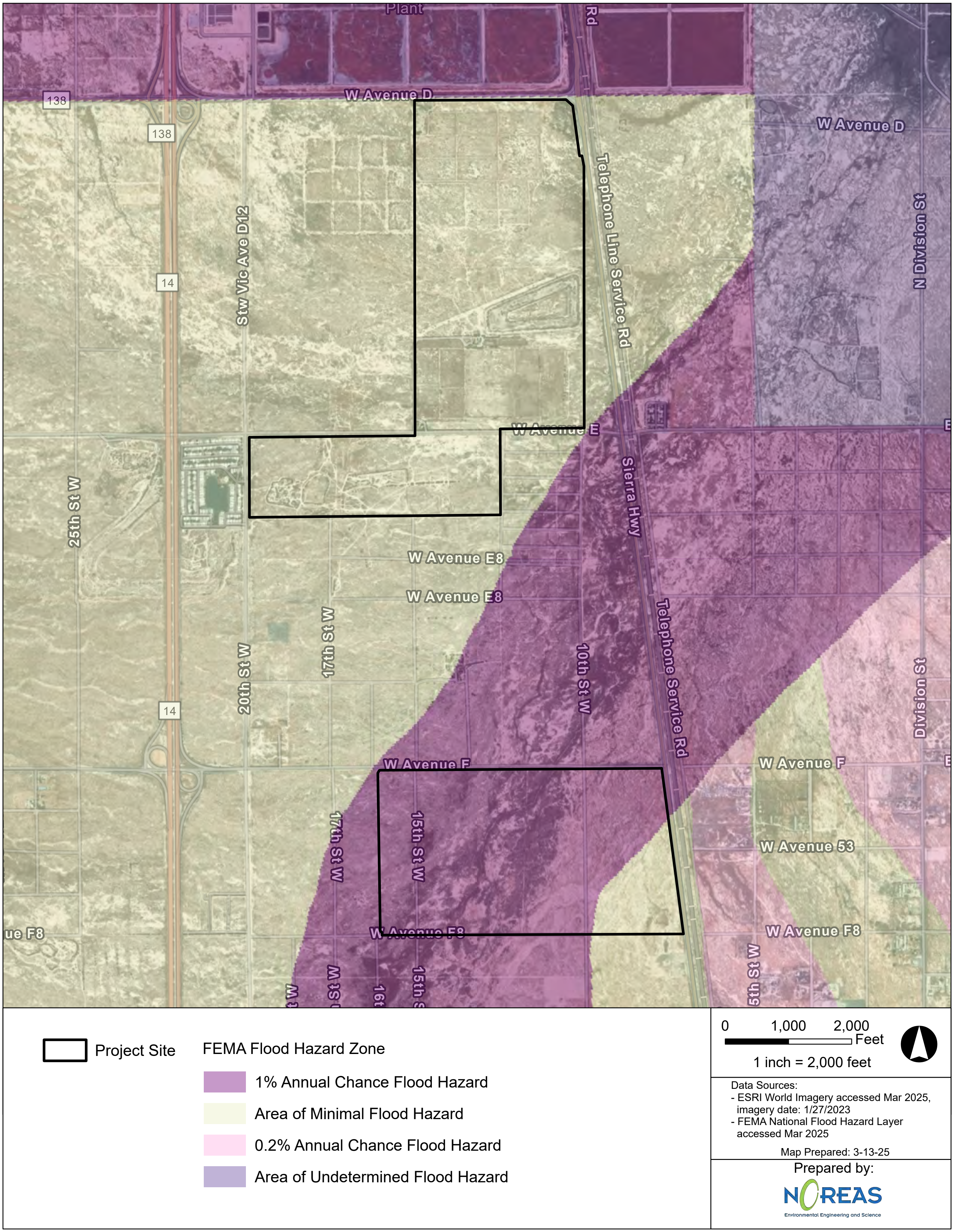
- 🟩 Antelope-Fremont Valleys (18090206)
- 🟪 Los Angeles (18070105)
- 🟥 Middle Kern-Upper Tehachapi-Grapevine (18030003)
- 🟦 Santa Clara (18070102)

Data Sources:
- ESRI World Imagery accessed Mar 2025
- USGS-WBD accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 5. Regional Watershed Map



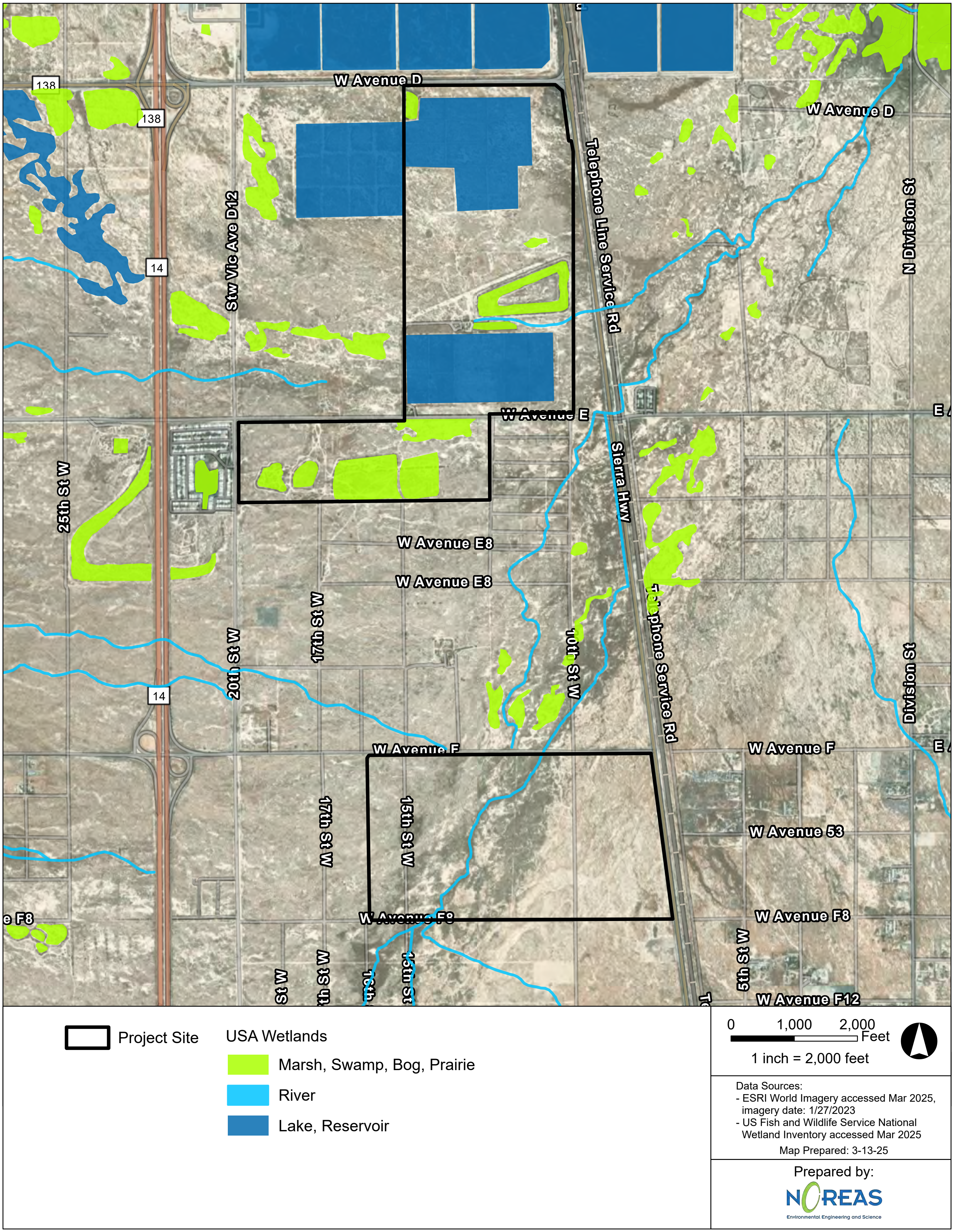
Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- FEMA National Flood Hazard Layer accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 6. FEMA 100-Year Flood Zone



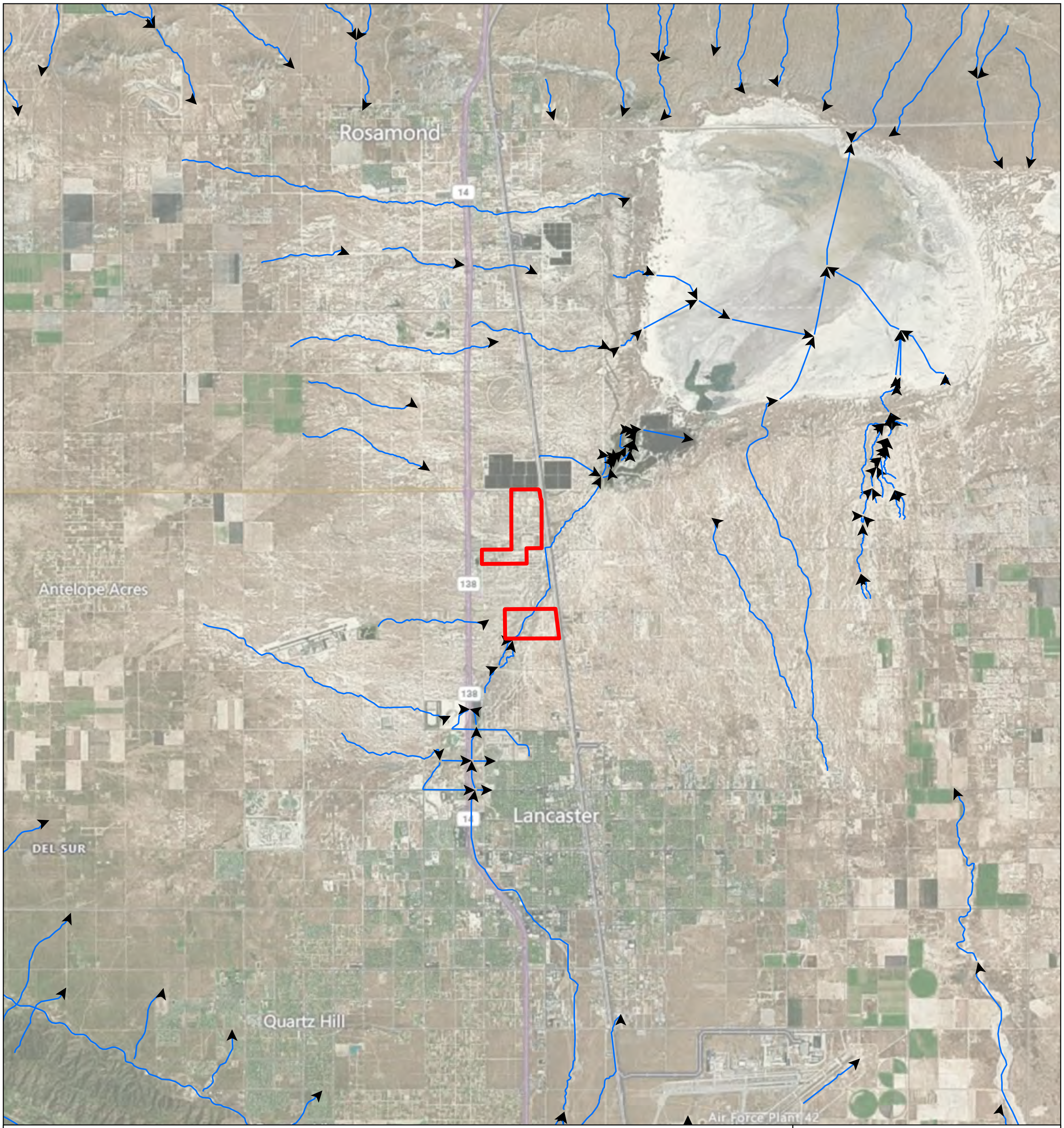
Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- US Fish and Wildlife Service National Wetland Inventory accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 7. National Wetland Inventory



🟥 Project Site

→ Surface Water Flowlines and Flow Direction

0 1.2 2.4 Miles

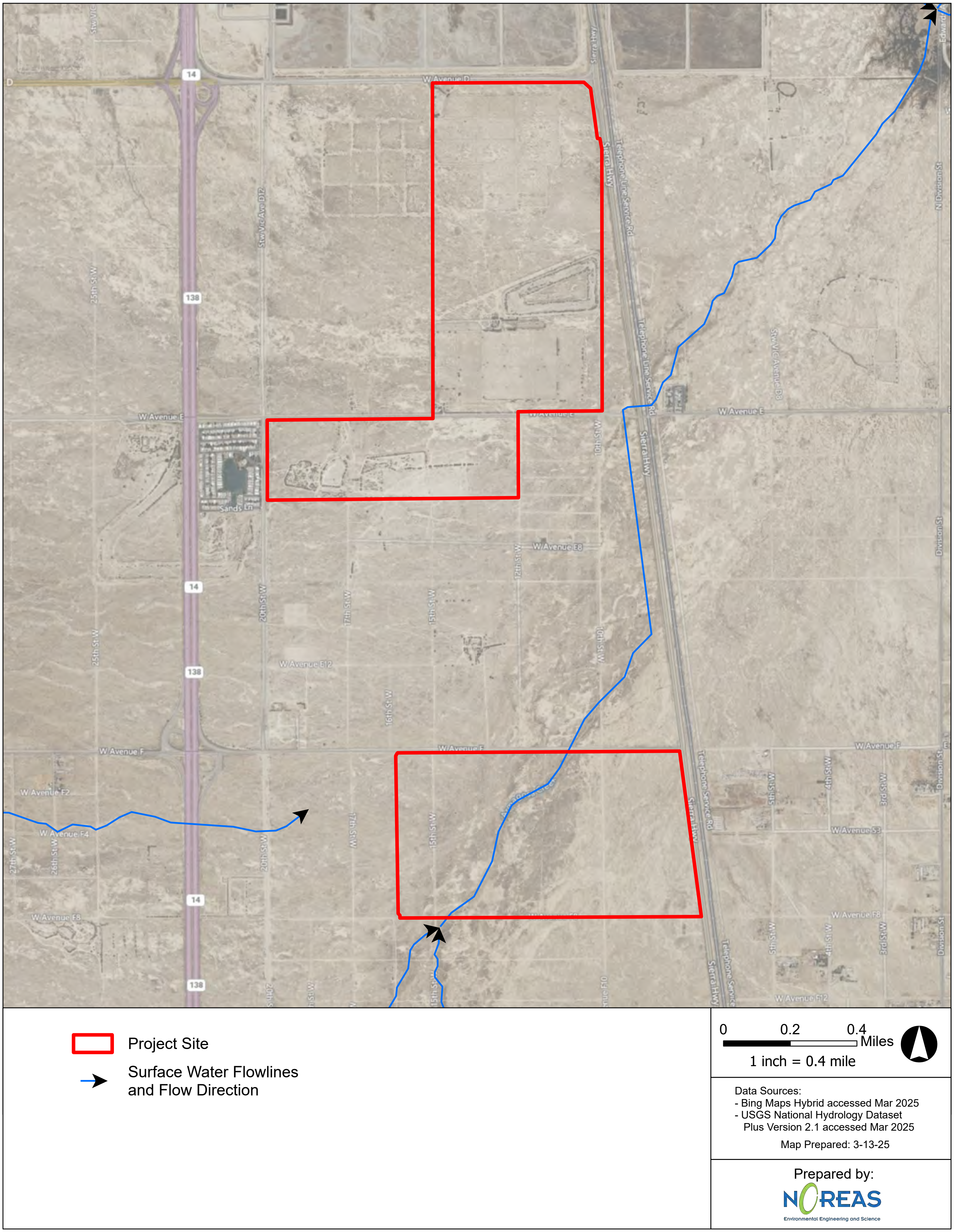
1 inch = 2.4 miles

Data Sources:
- Bing Maps Hybrid accessed Mar 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 8. Surface Water Map (Regional Area)



Data Sources:
- Bing Maps Hybrid accessed Mar 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 9. Surface Water Map (Local Area)

Appendix B Photograph Log

PHOTOGRAPH LOG

Photograph 1 - Soil Pit 1.

Photograph 2 – Soil Pit 2.

PHOTOGRAPH LOG

	Photograph 3 – Soil Pit 3.
	Photograph 4 – Soil Pit 4.

	Photograph 5 – Soil Pit 5.
	Photograph 6 – Soil Pit 6.

	Photograph 7 – Soil Pit 7.
	Photograph 8 – Soil Pit 8.

	Photograph 9 – Soil Pit 9.
	Photograph 10 – Soil Pit 10.

Photograph 11 – Soil Pit 11.

Photograph 12 – Soil Pit 12.

	Photograph 13 – Soil Pit 13.
	Photograph 14 – Soil Pit 14.

Photograph 15 – Soil Pit 15.

Photograph 16 – Soil Pit 16.

	Photograph 17 – Soil Pit 17.
	Photograph 18 – Soil Pit 18.

	Photograph 19 – Soil Pit 19.
	Photograph 20. – Soil Pit 20.

	Photograph 21 – Soil Pit 21.
	Photograph 22 – Soil Pit 22.

Photograph 23 – Soil Pit 23.

Appendix C Tables

Table 1. Results of Chemical Analysis of Soils Including pH, Conductivity, Total Dissolved Solids, and Salinity

Chemical Analysis Sample Point	**Chemical Analysis***				**Comments**
	pH	**Salinity (PPM)**	**Cond (µs/cm)**	**TDS (PPM)**	
A	10.46	125	398	283	Upland Annual Grassland
B	9.78	141	445	318	Amargosa Creek - Wetland Vegetation
C	9.79	144	461	328	Amargosa Creek - Annual Grasses
D	10.69	255	808	575	Alkali Surface in Intermound adjacent to soil pit 9
E	11.19	N/A	N/A	N/A	Alkali Efflorescence on Surface of Mound
G	8.62	109	346	246	Control Area in Josua tree habitat
F	10.93	274	790	558	Intermound area - Adjacent to soil pit 1
* PPM = Parts per million, Cond = Conductivity, TDS = Total Dissolved Solids					
N/A = not applicable (exceeds limits of instrument)					

Table 2. Rainfall (in Inches) per Month at the Project for the Last 41 Years

Year (Oct–Sep)	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
1983-1984	0.76	0.83	2.45	T	0	0.08	T	0	T	0.7	T	0.22	**5.04**
1984-1985	T	0.76	5.35	0.28	T	0.12	0	0.03	0	T	0	0.23	**6.77**
1985-1986	0.14	1.58	0.13	2	1.08	1.66	0.07	0	0	0.16	T	T	**6.82**
1986-1987	T	0.92	0.55	0.34	0.41	0.69	0.03	0.18	0.24	T	T	0.14	**3.5**
1987-1988	2.39	1.21	1.27	1.93	0.57	0.18	0.53	0.13	T	0.02	0.47	0	**8.7**
1988-1989	0.01	0.13	1.57	0.31	1.59	0.06	0.01	0.23	0	0	0	0.19	**4.1**
1989-1990	0.05	0.05	0	0.76	0.52	0.15	0.11	0.06	T	0	0.01	T	**1.71**
1990-1991	0	0.17	0.07	0.96	—	4.13	0.03	0	0	0.13	T	0.09	**5.58**
1991-1992	0.22	T	1.8	1.82	5.81	2.49	0.16	0.05	0	0.08	0	0	**12.43**
1992-1993	0.9	0	3.13	7.46	5.96	1.21	0	0	0.83	0	T	0	**19.49**
1993-1994	0.3	0.51	0.58	0.22	1.4	0.64	0.4	0.09	0	0	0	T	**4.14**
1994-1995	0.21	0.36	0.57	5.06	0.17	2.74	0.15	0.02	0.2	T	0	0	**9.48**
1995-1996	0	T	0.52	0.72	1.61	0.12	0.03	T	0	0.02	T	0	**3.02**
1996-1997	0.66	0.45	—	0.66	0	0	T	T	0	0.02	0	0.87	**2.66**
1997-1998	T	0.8	2.25	0.95	6.23	2.85	0.34	0.94	0	0	0.16	0.73	**15.25**
1998-1999	T	0.38	0.22	1.35	0.49	T	0.89	T	0.18	0.95	0	T	**4.46**
1999-2000	0	0.04	—	—	1.76	1.12	1.82	0	0.08	0	0.13	0	**4.95**
2000-2001	0.32	0.01	T	1.17	3.73	0.66	0.58	T	0	0.02	0	0	**6.49**
2001-2002	0.24	0.6	0.63	0.2	0.06	0.3	T	0.02	0	0	0	0.01	**2.06**
2002-2003	0.01	0.66	1.19	T	3.55	0.71	0.96	0.27	0	0.11	T	T	**7.46**
2003-2004	0.23	0.32	0.57	0.01	1.88	0.23	0.05	0	0	0	0	T	**3.29**
2004-2005	1.93	0.15	3.65	5.26	4.71	0.72	0.57	0.5	0	0.16	0.01	0.8	**18.46**
2005-2006	1.77	T	0.19	0.83	1	1.02	0.68	0.02	0	0.02	0	0	**5.53**
2006-2007	0.09	T	0.34	0.02	0.71	0.19	T	0	0	T	0.02	0.2	**1.57**
2007-2008	0.18	0.5	0.09	3.73	0.48	T	0.01	0.07	0	T	0	0.02	**5.08**
2008-2009	T	1.55	0.92	0.36	2.38	0.13	0	0.02	0.01	0	T	0	**5.37**

Year (Oct–Sep)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
2009-2010	0.01	T	0.88	3.96	1.68	0.28	0.82	T	0	T	0	T	**7.63**
2010-2011	1.75	0.53	3.97	—	1.32	1.69	0.53	0.05	0.02	0.22	0	0.01	**10.09**
2011-2012	0.19	0.57	0.36	0.1	0.31	0.47	0.82	0	0	T	0.02	0.02	**2.86**
2012-2013	0	0.01	0.11	0.4	0.2	0.35	0	0.15	0	0.02	T	T	**1.24**
2013-2014	0.05	1.45	0.09	0.05	1.82	0.22	0.23	T	0	T	0.03	T	**3.94**
2014-2015	0.14	0.16	2.62	0.96	0.4	0.04	0.01	0.28	0.04	2.34	0	0.64	**7.63**
2015-2016	0.7	0.22	0.37	1.73	0.03	0.62	0.15	0	T	0	0	0	**3.82**
2016-2017	0.18	0.22	1.59	2.47	1.88	0.17	T	0	0	T	0.03	0.07	**6.61**
2017-2018	T	0.02	T	0.95	0.17	1.53	0.09	0	0	0.02	0	0	**2.78**
2018-2019	T	0.17	1.58	1.97	1.92	1	0.05	0.53	T	0.04	T	0	**7.26**
2019-2020	0	1.35	3.81	0.08	T	3.17	2.23	0.02	0	0	T	0	**10.66**
2020-2021	0	0.13	0.37	0.67	0.01	0.14	T	0	T	0.04	0	T	**1.36**
2021-2022	0.28	T	2.61	0.02	0.27	0.31	0.1	0	0.51	T	T	0.44	**4.54**
2022-2023	T	0.58	1.13	2.18	1.86	1.16	0	0.12	0	0	3.66	T	**10.69**
2023-2024	T	0.18	1.02	0.81	3.87	1.92	0.19	0.04	0	T	T	T	**8.03**
Average	**0.43**	**0.5**	**1.31**	**1.43**	**1.63**	**0.9**	**0.36**	**0.11**	**0.06**	**0.17**	**0.16**	**0.16**	**6.4**

Table 3. Net Value of Rainfall (in Inches) After the Subtraction of Evapotranspiration (in Inches) on an Average Monthly Basis

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in inches)	-3.91	-2.2	-0.55	-0.43	-1.17	-3.75	-5.64	-7.95	-8.94	-9.75	-8.52	-6.44	-59.25
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟥	= Months **excluded** from Growing Season											

Table 4.A. Net Value of Rainfall (in Inches) for 2024-2025 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (inr inches) 2024-2025[1]	0	0.18	1.02	0.81	3.87	1.92	0.19	0.04	0	0	0	0	**8.03**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.52	-0.84	-1.05	🟦 1.07	-2.73	-5.81	-8.02	-9	-9.92	-8.68	-6.6	-58.44
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur with out consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.B. Net Value of Rainfall (in Inches) for 2023-2024 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2023-2024[1]	0	0.58	1.13	2.18	1.86	1.16	0	0.12	0	0	3.66	0	**10.69**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.12	-0.73	0.32	-0.94	-3.49	-6	-7.94	-9	-9.92	-5.02	-6.6	-55.78
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.C. Net Value of Rainfall (in Inches) for 2022-2023 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2022-2023[1]	0.28	0	2.61	0.02	0.27	0.31	0.1	0	0.51	0	0	0.44	**4.54**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.06	-2.7	0.75	-1.84	-2.53	-4.34	-5.9	-8.06	-8.49	-9.92	-8.68	-6.16	-61.93
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.D. Net Value of Rainfall (in Inches) for 2021-2022 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2021-2022[1]	0	0.13	0.37	0.67	0.01	0.14	0	0	0	0.04	0	0	**1.36**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.57	-1.49	-1.19	-2.79	-4.51	-6	-8.06	-9	-9.88	-8.68	-6.6	-65.11
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.E. Net Value of Rainfall (in Inches) for 2020-2021 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2020-2021[1]	0	1.35	3.81	0.08	0	3.17	2.23	0.02	0	0	0	0	**10.66**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-1.35	1.95	-1.78	-2.8	-1.48	-3.77	-8.04	-9	-9.92	-8.68	-6.6	-55.81
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.F. Net Value of Rainfall (in Inches) for 1992-1993 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches)1992-1993[1]	0.9	0	3.13	7.46	5.96	1.21	0	0	0.83	0	0	0	19.49
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-3.44	-2.7	1.27	5.6	3.16	-3.44	-6	-8.06	-8.17	-9.92	-8.68	-6.6	-46.98
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 5.A. Amount of Rainfall (in Inches) Per Month Needed to Fill the Water Storage Capacity of Pond Series Soil

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in Inches)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Amount of Rainfall (in Inches) Needed to Saturate Soil to the Surface (Water Storage = 4.96 inches)	4.53	4.03	2.72	1.29	-0.34	-1.24	-1.6	-1.71	-1.77	-1.94	--	--	--
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
	🟦	= first month ponding would occur without consideration of evaporation and transpiration											
	🟥	= Months **excluded** from Growing Season											

Table 5.B. Amount of Rainfall (in Inches) Per Month Needed to Fill the Water Storage Capacity of Oban Series Soil

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (per inch)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Amount of Rainfall (in Inches) Needed to Saturate Soil to the Surface (Water Storage = 3.74 inches)	3.31	2.81	1.5	0.07	-1.56	-2.46	-2.82	-2.93	-2.99	-3.16	--	--	--
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
	🟦	= first month ponding would occur without consideration of evaporation and transpiration											
	🟥	= Months **excluded** from Growing Season											

Appendix D Field Data Forms

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP1

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R 12W

Landform (hillslope, terrace, etc.): Basin-Prehistoric Lake bed Local relief (concave, convex, none): Concave / plane Slope (%): 0-1%

Subregion (LRR): C- Mediterranean California Lat: 34.740781° Long: -117.154687° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Soils have high pH which can mask redox features.

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: 5X5)			
1. Bromus madritensis ssp. rubens	5	Y	UPL
2. Hordeum murinum ssp glaucum	5	Y	FACU
3. Erodium cicutarium	3	Y	NL
4. Stutzia Covillei (Atriplex AtCa phyllostegia)	2	N	FACW
5.			
6.			
7.			
8.			
	15 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	______ = Total Cover		

% Bare Ground in Herb Stratum 85 % Cover of Biotic Crust ______

Remarks:

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (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	2	x 2 = 4
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	8	x 5 = 40
Column Totals:	15 (A)	64 (B)

Prevalence Index = B/A = 4.26

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 X

Intermound

SOIL

Sampling Point: DP 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR 5/4	100					Clay loam	(Polygonal cracking)
0.5-4	10YR 5/4	100					Clay Loam	(No Polygonal cracking)
4-16	10 YR 4/4-10 YR 5/4	100					Clay loam – clay	
16-18	10 YR 5/4	80	10YR 7/3	20			Sandy clay loam – Clay loam	
							Not Redox Feature – Salt nodules.	

[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: Clay loam to Clay
Depth (inches): 4-16

Hydric Soil Present? Yes ______ No X

Remarks:
Polygonal cracking only 0.5 inches deep. Indicating depth of Soil Saturation is very limited.

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**)
X Surface Soil Cracks (B6)
___ Inundation Visible 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 X Depth (inches): ____________
Water Table Present? Yes ______ No X Depth (inches): ____________
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ____________

Wetland Hydrology Present? Yes X No ______

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

Remarks:
Surface soil cracks (B6) is a weak wetland hydrology indicator in this situation because upland mound soils also have cracks due to clay and salt content.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ______ State: CA Sampling Point: DP2
Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W
Landform (hillslope, terrace, etc.): Basin- Prehistoric lakebed Local relief (concave, convex, none): Plane Slope (%): 0-1%
Subregion (LRR): C-Mediterranean California Lat: 34.741926° Long: -118.154795° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Soils have high pH which can potentially mask redox features

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: 5X5)			
1. Atriplex canescens	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 5X5)			
1. Bromus madritensis ssp. rubens	2	Y	UPL
2. Hordeum murinum ssp. glaucum	2	Y	FACU
3. Stutzia covillei	1	Y	FACW
4.			
5.			
6.			
7.			
8.			
= Total Cover	5		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 95 % 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: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	1	x 2 = 2
FAC species	0	x 3 = 0
FACU species	2	x 4 = 8
UPL species	7	x 5 = 35
Column Totals:	10 (A)	45 (B)

Prevalence Index = B/A = 4.5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-0.5	10YR5/3	100					Clay loam - Clay	(Polygonal cracking)
0.5-16	10YR4/3	100					Clay loam - Clay	"

[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: Clay loam to Clay

Depth (inches): 0-16+

Hydric Soil Present? Yes ______ No X

Remarks:

Polygonal cracking is only 0.5 inch deep. Indicating depth of Soil Saturation is very limited.

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**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible 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 X Depth (inches): ___________

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

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

Wetland Hydrology Present? Yes X No ______

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

Remarks:

Surface Soil Cracks (B6) is a weak wetland hydrology indicator in this Situation because upland mound Soils also have Cracks due to Clay and Salt Content.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: WestSide Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ______ State: CA Sampling Point: BP3
Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 1-2%
Subregion (LRR): C Lat: 34.742486° Long: -118.155402° Datum: NAD83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Soils have high pH which can mask redox features.

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: 10 X 10)			
1. Hordeum murinum	5	Y	FACU
2. Bromus madritensis ssp. rubens	4	Y	UPL
3. Schismus barbatus	1	N	NL
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 90 % 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	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	5	x 5 =	25
Column Totals:	10 (A)		45 (B)

Prevalence Index = B/A = 4.5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR5/3						Silty clay loam – Clay loam	
2-6	10YR5/4						Clay loam – Clay	
6-16	10YR4/4						Clay loam – Clay	

[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: Clay loam to clay
Depth (inches): 2-16

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

X 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 Visible 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 X No ___ Depth (inches): 0.5"
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 2"

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 4

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R 12W

Landform (hillslope, terrace, etc.): Basin - Pleistocene Lake Bed Local relief (concave, convex, none): Plane Slope (%): 0-2

Subregion (LRR): C Lat: 34.743703° Long: -118.156029° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Soils have high pH which can mask redox Features

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: 10X10)			
1. Atriplex confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 10X10)			
1. Bromus madritensis ssp rubens	10	Y	UPL
2. Hordeum murinum	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	15		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 85 % 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: 3 (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	5	x 4 =	20
UPL species	15	x 5 =	75
Column Totals:	20 (A)		95 (B)

Prevalence Index = B/A = 4.75

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR 5/3	100					Clay loam	(Polygonal Cracking)
0.5-12	10YR 4/3-4/4	100					Clay loam	
12-18	10YR 4/4	80	10YR 8/2	20			Salt	nodules that are not
							Clay loam	Redox features

[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 X

Remarks:

Polygonal Cracking is only 0.5 inch depth indicating depth of Soil Saturation is very limited.

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 Visible 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 X Depth (inches): ______
Water Table Present? Yes ______ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ______

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

Remarks:

Surface cracks (B6) is a weak hydrologic indicator in this Situation because upland mounds Soils also have cracks due to clay and Salt content.

Mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/ Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 5

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric Lake bed Local relief (concave, convex, none): Convex Slope (%): 3%

Subregion (LRR): C Lat: 34.743916° Long: -118.155211° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X	**Is the Sampled Area within a Wetland?**	**Yes** ______ **No** X
Hydric Soil Present?	Yes ______ No X		
Wetland Hydrology Present?	Yes X No ______		

Remarks:

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: 5X5)			
1. Schitzmus barbatus	25	Y	NL
2. Erodium cicutarium	15	Y	NL
3. Bromus madritensis ssp rubens	20	Y	UPL
4.			
5.			
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 40 % 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:	3	(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	60	x 5 = 300
Column Totals:	60 (A)	300 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Mound

SOIL

Sampling Point: DP5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2	10YR5/3	100					Sandy Clay loam	(polygonal Cracking)
2-16	10YR5/3	100					Sandy loam	

[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 X

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**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:

See comment regarding Surface Soil Cracks (B6) in DP1.

Amagosa Creek

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/23/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 6

Investigator(s): Brent Helm Section, Township, Range: S 33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin- Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 2%

Subregion (LRR): C Lat: 34.74336° Long: -118.154242° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: River

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil X, 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 X No ____

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

See comment on DP1

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: 5x5)			
1. Polypogon monspeliensis	20	Y	FACW
2. Epilobium densiflorum	20	Y	FACW
3. Distichlis spicata	5	Y	FAC
4. Centromadia pungens	5	Y	FAC
5.			
6.			
7.			
8.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- X 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 X No ____

Remarks:

Amargosa Creek

SOIL

Sampling Point: DP6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/3	100					Sandy loam	(Polygonal Cracking)
2-16	10YR 5/3	100					Sandy loam	

[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 X

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 Visible 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 X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

See comment on DP1

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 7
Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Plane Slope (%): 0-1%
Subregion (LRR): C Lat: 34.741331° Long: -118.154461° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X	Is the Sampled Area within a Wetland? Yes ______ No X
Hydric Soil Present?	Yes ______	No X	
Wetland Hydrology Present?	Yes X	No ______	

Remarks:
See Comment on DP1

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: 10X10)			
1. Schismus barbatus	4	Y	NL
2. Bromus madritensis ssp. rubens	2	Y	UPL
3. Hordeum murinum ssp. glaucum	1	N	FACU
4.			
5.			
6.			
7.			
8.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 93 % 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	0	x 3 = 0
FACU species	1	x 4 = 4
UPL species	6	x 5 = 30
Column Totals:	7 (A)	34 (B)

Prevalence Index = B/A = 4.8

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 7

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.25	10YR 5/3	100					Clay loam - Clay	(Polygonal Cracking)
0.25-16	10YR 4/3	100					Clay loam - clay	

[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: Clay loam - Clay
Depth (inches): 0-16

Hydric Soil Present? Yes ☐ No ☒

Remarks:

See comment on DP1.

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 Visible 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:

See comment on DP1.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 8
Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin-Prehistoric lake bed Local relief ([✓ concave], convex, none): Plane / Concave Slope (%): 1%
Subregion (LRR): C Lat: 34.740899° Long: -118.151457° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present?	Yes ______	No X
Wetland Hydrology Present?	Yes X	No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP1

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: 10X10)			
1. Atriplex confertifolia	7	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	7		
Herb Stratum (Plot size: 10X10)			
1. Bromus madritensis ssp. rubens	4	Y	UPL
2. Hordeum murinum	1	N	FACU
3. Schismus barbatus	1	N	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	6		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 94 % 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	0	x 3 = 0
FACU species	1	x 4 = 4
UPL species	12	x 5 = 60
Column Totals:	13 (A)	64 (B)

Prevalence Index = B/A = 4.92

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 8

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/3	100					Clay loam	Saturated to Surface
4-16	10YR 4/3	100					Clay-Clay loam	

[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: Clay - Clay loam
Depth (inches): 4-18

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) **(Nonriverine)**
___ Sediment Deposits (B2) **(Nonriverine)**
___ Drift Deposits (B3) **(Nonriverine)**
X Surface Soil Cracks (B6)
___ Inundation Visible 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 X No ___ Depth (inches): 2 inches
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4 inch

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 2/23/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 9

Investigator(s): Brent Helm and Lenord Molo Section, Township, Range: S33, T8N, and R 12W

Landform (hillslope, terrace, etc.): Basin- Prehistoric Lake bed Local relief (concave, convex, none): Plane Slope (%): 1-3%

Subregion (LRR): C Lat: 34.744482° Long: -181.156332° Datum: NAD83

Soil Map Unit Name: PC: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP1.

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: 5x5)			
1. Atriplex Confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 5x5)			
1. Bromus madritensis ssp. rubra	10	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	10		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 90 % 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	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	15 (A)		75 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP9

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type¹	Loc²		
0-1.5"	10YR 5/3	100					Clay loam	(Polygonal Cracking)
1.5-16	10YR 4/3	100					Clay-clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: 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 Soils³:

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

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

Restrictive Layer (if present):

Type: Clay-clay loam

Depth (inches): 1.5-16

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 Visible 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:
mostly barren ground; however, the majority is 1' to 2' higher in elevation than area where data point was taken.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/23/2025
Applicant/Owner: ________ State: CA Sampling Point: DP 10
Investigator(s): Brent Helm and Lenard Molo Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin-Prehistoric Lake Bed Local relief (concave, convex, none): Plane / Concave Slope (%): 0-1%
Subregion (LRR): C Lat: 34.747771° Long: -181.149436° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
See comment on DP1.

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: 10X10)			
1. Hordeum murinum	5	Y	FACU
2. Stutzia covillei	1	N	FACW
3. Erodium Cicutarium	3	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	9		
Woody Vine Stratum (Plot size: ________)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 91 % 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	1	x 2 = 2
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	3	x 5 = 15
Column Totals:	9 (A)	37 (B)

Prevalence Index = B/A = 4.11

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 10

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.25	10YR 4/4	100					Clay loam	polygonal cracking
0.25-18	10YR 4/3-4/4	100					Clay loam	

[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:

See comment on DP1 Form.

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 Visible 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): 0.5 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:

Human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 11

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Plane Slope (%): 0-1%

Subregion (LRR): C Lat: 34.759688° Long: -181.163003° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Marsh, Swamp, Bog, Prairie

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Top layer of soil has been removed to create a berm that surrounds this artificial basin
Soils have high pH which can mask redox features.

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: 10 X 10)			
1. Tamarix ramosissima	20	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	20		
Herb Stratum (Plot size: 10 X 10)			
1. Bromus tectorum	5	Y	NL
2. Bromus madritensis	3	N	UPL
3. Descurainia sophia	5	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	13		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 87 % 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: 3 (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	35	x 5 = 175
Column Totals:	35 (A)	175 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: DP 11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2	10YR 6/3	100					Silt loam	
2-5	10YR6/3	100					Silt loam	
5-10	10YR 7/2	100					Silt loam	
10-18	10YR6/1	85	2.5YR4/8	15	C	M	loamy Sand	

[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 X

Remarks:

The top layer of the Soil has been removed to create a human-made berm that surrounds the artificial basin

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 Visible 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 X Depth (inches): ______
Water Table Present? Yes ______ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes ______ No X

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

Remarks:

Human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 12

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin-Human-made Local relief (concave, convex, none): Plane Slope (%): 1-2%

Subregion (LRR): C Lat: 34.760455° Long: -118.159334° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Compex NWI classification: Marsh, Swamp, Bog, Prairie

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

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: 10X10)			
1. Tamarix ramosissima	10	Y	NL
2. Atriplex polycarpa	20	Y	FACU
3.			
4.			
5.			
= Total Cover	30		
Herb Stratum (Plot size: 10X10)			
1. Bromus madritensis	5	Y	UPL
2. Schismus barbatus	3	Y	NL
3. Eriogonum angulosum	2	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	10		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 90 % 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: 5 (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	10	x 3 =	30
FACU species	20	x 4 =	80
UPL species	20	x 5 =	100
Column Totals:	40 (A)		210 (B)

Prevalence Index = B/A = 5.55

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 X

Remarks:

Human-made basin

SOIL

Sampling Point: DP12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					Sandy loam	
5-18	10YR 5/3	80	10YR 8/2	20			Sandy clay loam	
								Salt nodules not Redox features

[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 X

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 Visible 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 X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 13

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin – Prehistoric lake bed Local relief (concave, convex, none): Plane / Concave Slope (%): 2%

Subregion (LRR): C Lat: 34.761652° Long: -118.154441° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil X, 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 X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
See comments on DP 11 Form

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: 10 X 10)			
1. Atriplex confertifolia	10	Y	NL
2. Ericameria nauseosa var. mohavensis	10	Y	NL
3.			
4.			
5.			
= Total Cover	20		
Herb Stratum (Plot size: 10 X 10)			
1. Distichlis spicata	15	Y	FAC
2. Schismus barbatus	15	Y	NL
3. Matricaria occidentalis	2	N	FACW
4. Bromus madritensis	5	N	UPL
5. Bromus tectorum	3	N	NL
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	2	x 2 = 4
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	43	x 5 = 215
Column Totals:	60 (A)	264 (B)

Prevalence Index = B/A = 4.4

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/3	100					Silty loam	
2-10	10YR 4/4	100					Silty loam	
10-12	10YR 6/3	80	10YR 8/2	18			Sandy loam	
			10YR 4/3	2	C	PL		Salt nodules not a redox
12-18	10YR 6/3	80	10YR 8/2	20			Sandy loam	features

[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 X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)
__ High Water Table (A2)
X Saturation (A3)
__ Water Marks (B1) **(Nonriverine)**
__ Sediment Deposits (B2) **(Nonriverine)**
__ Drift Deposits (B3) **(Nonriverine)**
X Surface Soil Cracks (B6)
__ Inundation Visible 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 X No ___ Depth (inches): 2
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 2

Wetland Hydrology Present? Yes X No ___

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

Remarks:

roadside drainage
Ditch

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 14
Investigator(s): Brent Helm Section, Township, Range: S 21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric Lake Bed Local relief (concave, convex, none): Concave Slope (%): 1-2%
Subregion (LRR): C Lat: 34.763583° Long: -118.157896° Datum: NAD 83
Soil Map Unit Name: Px: Pond - Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comments of DP1 form.

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: 10 X 10)			
1. Ericameria nauseosa var. mohavensis	10	Y	NL
2. Atriplex polycarpha	10	Y	FACU
3.			
4.			
5.			
= Total Cover	20		
Herb Stratum (Plot size: 10 X 10)			
1. Distichlis spicata	35	Y	FAC
2. Bromus madritensis	25	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	60		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 40 % 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: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	45	x 5 =	225
Column Totals:	80 (A)		435 (B)

Prevalence Index = B/A = 5.4

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 X

Remarks:

Roadside drainage ditch

SOIL

Sampling Point: DP14

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR5/3	100					Silty clay loam	(Polygonal cracking)
1-18	10YR5/3	80	10YR8/2	20			Sandy clay loam	
								Salt nodules not redox features

[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 X

Remarks:

Depth of soil cracking was only 1 inch thick revealing how little hydrology the site supports

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 Visible 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 X Depth (inches): ____________

Water Table Present? Yes ____ No X Depth (inches): ____________

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____________

Wetland Hydrology Present? Yes X No ____

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

Remarks:

See comments on DP1 form.

human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 15

Investigator(s): Brent Helm Section, Township, Range: S28, T 8N, and R 12W

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Plane Slope (%): 1%

Subregion (LRR): C Lat: 34.765231° Long: -118.155006° Datum: NAD83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Lake, Reservoir

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

Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X
Hydric Soil Present?	Yes ___	No X
Wetland Hydrology Present?	Yes X	No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

See comment on DP11 Form.

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: 10X10)			
1. Tomarix ramosissima	20	Y	NL
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 10 X 10)			
1. Bromus madritensis	10	Y	UPL
2. Amsinkia tessellata	3	N	NL
3. Descurainia sophia	2	N	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	15		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 85 % 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	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	35	x 5 = 175
Column Totals:	35 (A)	175 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: 15

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					Silty loam	
5-18	10YR 4/3	100					Sandy loam	

[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 _X_

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**)
_X_ Surface Soil Cracks (B6)
___ Inundation Visible 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 _X_ Depth (inches): ______
Water Table Present? Yes ___ No _X_ Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ___ No _X_ Depth (inches): ______

Wetland Hydrology Present? Yes _X_ No ___

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

Remarks:

See comment on DP1 form.

Human-Made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 16

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin – human-made Local relief (concave, convex, none): Plane Slope (%): 1-2%

Subregion (LRR): C Lat: 34.763356° Long: -118.154152° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Lake, Reservoir

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

Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

See comment on DP 11 form.

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: 10 X 10)			
1. Ericameria nauseosa var mohavensis	5	Y	NL
2.			
3.			
4.			
5.	5		
= Total Cover			
Herb Stratum (Plot size: 10 X 10)			
1. Frankenia salina	25	Y	FACW
2. Bromus madritensis	20	Y	UPL
3. Bromus tectorum	15	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	60		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 40 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	40	x 5 = 200
Column Totals:	65 (A)	250 (B)

Prevalence Index = B/A = 3.8

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: 16

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					loamy Sand to Sandy loam	
5-10	10YR 5/3	100					Sandy loam	
10-18	10YR 5/3	80	10YR 8/2	20			Sandy loam	
								Salt nodules not redox features

[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 Visible 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:

Intermand

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ______ State: CA Sampling Point: 17
Investigator(s): Brent Welm Section, Township, Range: S2
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Plane Slope (%): 1-2%
Subregion (LRR): C Lat: 34.770963° Long: 118.156250° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See commen on DP1 form

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: 10 X 10)			
1. Atriplex confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: ______)			
1. Bromus matritensis	3	Y	UPL
2. Schismus barbatus	1	N	NL
3. Eriogonum angulosum	1	N	NL
4. Stutzia covillei	3	Y	FACW
5.			
6.			
7.			
8.			
= Total Cover	8		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 92 % 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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	3	x 2 = 6
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	10	x 5 = 50
Column Totals:	13 (A)	56 (B)

Prevalence Index = B/A = 4.3

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 X

Remarks:

Intermound

SOIL

Sampling Point: 17

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type¹	Loc²		
0-0.5	10YR5/3	100					Sandy loam	Polygonal Cracking
0.5-18	10YR5/3	100					Silty clay to Silty clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: 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 Soils³:

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

³Indicators 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** X

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**)
X Surface Soil Cracks (B6)
__ Inundation Visible 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 X Depth (inches): ______
Water Table Present? Yes ___ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ______

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

Seasonal wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: 18
Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 1%
Subregion (LRR): C Lat: 34.747659° Long: -181.152392° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ______
Hydric Soil Present? Yes ? No ______
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? ? Yes ______ No ______

Remarks:
First habitat dominated by hydrophytes, with more than surface cracks (B6) or salt crust (B11) as wetland hydrology indicators.

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: 10 X 10)			
1. Plagiobothrys leptocladus	25	Y	OBL
2. Hordeum depressum	5	N	FACW
3. Hordeum murinum	2	N	FACU
4.			
5.			
6.			
7.			
8.			
= Total Cover	32		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 68 % 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: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- X 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 X No ______

Remarks:

US Army Corps of Engineers Arid West – Version 2.0

Seasonal Wetland

SOIL

Sampling Point: DP 18

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/3	100					Clay to clay loam	Polygonal Cracking
10-18	10YR 4/3	100					clay loam to clay	✓

[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:

Polygonal Cracking was up to 10 inches deep which is in the area of Soil horizons that if redox features were present could be considered hydric.

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 Visible 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 X Depth (inches): ____
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 19
Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric lakebed Local relief ([✓ concave], convex, none): ______ Slope (%): 2%
Subregion (LRR): C Lat: 34.747624° Long: -118.152359° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X	Is the Sampled Area within a Wetland?	Yes ___ No X
Hydric Soil Present?	Yes ___ No X		
Wetland Hydrology Present?	Yes ___ No X		

Remarks:

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: 10x10)			
1. Hordeum murinum	15	Y	FACU
2. Hordeum depressum	10	Y	FACW
3. Bromus madritensis	15	Y	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	15	x 4 = 60
UPL species	15	x 5 = 75
Column Totals:	40 (A)	155 (B)

Prevalence Index = B/A = 3.875

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 X

Remarks:

mound

SOIL

Sampling Point: DP 19

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/4	100					Clay loam	

[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** X

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 Visible 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 X Depth (inches): ____________

Water Table Present? Yes ______ No X Depth (inches): ____________

Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ____________

Wetland Hydrology Present? Yes ______ **No** X

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

Remarks:

mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 20
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin – Human-made Local relief (concave, convex, none): Plane Slope (%): 0-1%
Subregion (LRR): C Lat: 34.746613° Long: -118.155882° Datum: NAD83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Lake, Reservoir
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP 11 form.

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: 10 x 10)			
1. Frankenia Salina	10	Y	FACW
2. Bromus madritensis ssp rubens	15	Y	UPL
3. Schismus barbatus	10	Y	NL
4. Hordeum Murinum	5	N	FACU
5. Erodium Cicutarium	5	N	NL
6.			
7.			
8.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 55 % 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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	30	x 5 = 150
Column Totals:	45 (A)	190 (B)

Prevalence Index = B/A = 4.22

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 X

Remarks:

Mound

SOIL

Sampling Point: DP28

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR5/2	100					Sandy loam	
10-18	10YR5/4	90	10YR8/2	10			Sandy loam	Calcium Concentration *
								Salt nodules not redox features

[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 X

Remarks: * Not redox features

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 Visible 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

human-made basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 21

Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin-Artificial Duck Pond Local relief (concave, convex, none): Plane Slope (%): <1%

Subregion (LRR): C Lat: 34.767071° Long: -118.153641° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Marsh, Swamp, Bog, prairie

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

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: 10 X 10)			
1. Tamarix ramosissima	4	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	4		
Herb Stratum (Plot size: 10 X 10)			
1. Erodium Cicutarium	30	Y	NL
2. Schismus barbatus	10	Y	NL
3. Bromus madritensis ssp. rubens	5	N	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	45		
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: 3 (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	49	x 5 = 245
Column Totals:	49 (A)	245 (B)

Prevalence Index = B/A = 5.0

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 X

Remarks:

Boot Pond
Human-made basin

SOIL

Sampling Point: DP 21

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 5/2	100					Silty loam	with organics
4-18	2.5Y 5/2	85	10YR 8/2	15			Sandy	loam with Calcium nodules
								not redox features

[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 X

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 Visible 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**)
X 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 X Depth (inches): ______
Water Table Present? Yes ___ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ______

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Seasonal wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 22
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - human-made basin Local relief ([✓ concave], convex, none): Concave Slope (%): 1%
Subregion (LRR): C Lat: 34.776053° Long: -118.153249° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Lake, Reservoir
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X No ______
Hydric Soil Present? Yes ? No ______
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? ? Yes ______ No ______

Remarks:
See Comments on DP11 Form.

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: 10X10)			
1. Distichlis spicata	30		FAC
2. Hordeum depressum	10		FAC
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- X 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 X No ______

Remarks:

Seasonal wetland

SOIL

Sampling Point: DP22

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 5/4	100						
2-18	2.5Y 4/4	100						

[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:

Soils are olive colored but not yet gleyed.

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**)
X Surface Soil Cracks (B6)
__ Inundation Visible 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 X Depth (inches): ______
Water Table Present? Yes ______ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ______

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

Remarks:

Mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 23
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Convex Slope (%): 2%
Subregion (LRR): C Lat: 34.776052° Long: -118.153237° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: ______
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

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: 10 X 10)			
1. Schismus barbatus	35	Y	NL
2. Centromadia pungens	15	N	FAC
3. Bromus madritensis	30	Y	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	80		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 20 % 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 (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	65	x 5 = 325
Column Totals:	80 (A)	370 (B)

Prevalence Index = B/A = 4.6

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 X

Remarks:

Mound

SOIL

Sampling Point: DP 23

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/4	100					Sandy loam	

[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 X

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 Visible 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 X Depth (inches): ________
Water Table Present? Yes _____ No X Depth (inches): ________
Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): ________

Wetland Hydrology Present? Yes ______ No X

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

Remarks:

Westside Annexation and Specific Plan Project Delineation of Waters of the United States

April 2025

Prepared By

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Certification

The undersigned certify - under penalty of law, that they have personally examined and are familiar with the information submitted in this document and all attachments and that, based on an inquiry of those individuals immediately responsible for obtaining the information, believe that the information is true, accurate, and complete. The undersigned are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

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TABLES

APPENDICES

COMMON ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
APT	Antecedent Precipitation Tool
CFR	Code of Federal Regulations
CWA	Clean Water Act
°F	degrees Fahrenheit
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
USEPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning Systems
HUC	Hydrologic Unit Code
KMZ	Keyhole Markup Language Zipped
NI	No Indicator
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
NOREAS	NOREAS Inc.
NTCHS	National Technical Committee for Hydric Soils
OBL	Obligate Wetland
OHWM	Ordinary High-Water Mark
PS	Project Site
RPW	Relatively Permanent Waters
SSURGO	Soil Survey Geographic Database
TNW	Traditional Navigable Waters
UPL	Upland
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1.0 INTRODUCTION AND SUMMARY OF FINDINGS

This Waters of the United States (WOTUS) delineation evaluates potential jurisdictional features within Planning Areas 2, 4, 6, 7, and 8 of the Westside Annexation and Specific Plan Project (Project), located in unincorporated Los Angeles County, California. The Project falls within Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, and 29, 32, 33, 34, Township 8 North, Range 12 West, and San Bernadino Meridian on the U.S. Geological Survey's (USGS) Lancaster West and Rosamond, California 7.5-minute topographic quadrangle maps. This delineation was conducted to determine the extent of features within the approximately 714.83-acres Project Site (PS) that may be subject to regulation by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA).

The PS is part of a larger 7,153-acre proposal for annexation into the City of Lancaster and is within the boundaries of the proposed North Lancaster Industrial Specific Plan (Specific Plan). The Specific Plan envisions the development of 38.5 million square feet of industrial uses, with a five-year buildout planned for Planning Areas 2, 4, 6, 7, and 8 (hereafter, these Planning Areas shall be referred to as the PS Appendix A, Figures 1 and 2). As shown within Appendix A, Figures 1 and 2, the PS, consists of a distinct northern and southern section.

This delineation has been conducted in accordance with the evolving definition of "WOTUS" under the CWA. The initial rule, published in the Federal Register on January 18, 2023, became effective on March 20, 2023. Subsequently, in response to the U.S. Supreme Court's decision in Sackett v. Environmental Protection Agency (USEPA) on May 25, 2023, the rule was amended to align with the Court's findings, with the conforming rule published on August 29, 2023, and effective as of September 8, 2023. Notably, on March 12, 2025, the U.S. Department of the Army, the U.S. Army Corps of Engineers, and the Environmental Protection Agency issued a memorandum providing further clarification on the implementation of the "continuous surface water connection" standard established by the Supreme Court in Sackett. This memorandum emphasizes that only wetlands and permanent bodies of water with a continuous surface connection to traditional interstate navigable waters fall under the jurisdiction of the CWA. In light of this memorandum, this delineation specifically assessed the presence of continuous surface connections between wetlands and traditionally navigable waters within the Lancaster area. This approach safeguards compliance with the latest regulatory guidance and accurately reflects the current scope of waters protected under the CWA.

This delineation utilized current and historical imagery, hydrologic databases, analytical tools, on-the-ground analyses and measurements, and a thorough review of pertinent regulations, manuals, and guidance documents to accurately identify the geographic limits of WOTUS. Subject matter experts conducted field assessments of the PS and its watershed in February and March 2025 (i.e., on February 22nd and 23rd, and March 5th, 8th, 9th, 10th and 11th) to evaluate the presence of jurisdictional aquatic features—such as wetlands, stream channels, and riparian habitats—based on hydrophytic vegetation, hydric soils, and hydrologic indicators. Historic and current aerial photography of the PS were also reviewed - prior to, and during the field assessments. Aerial photography was informative with deference to the state and function of land resources in both the present, and historic context. The USEPA WATERS GeoViewer tool also provided access to spatial data sets - such as interactive upstream and downstream search capabilities, to assist in determining the jurisdictional status of resources detected within the region. Additionally, the Federal Emergency Management Agency (FEMA) flood zone was reviewed, and the National Wetland Inventory (NWI) which is maintained by the U.S. Fish and Wildlife Service (USFWS). This was all done to support the identification of potential WOTUS within the PS.

This delineation of potential WOTUS was conducted following guidance in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (USACE 2008c). The Ordinary High-Water Mark (OHWM) of potential other WOTUS was delineated, following the guidance in A Field Guide to the Identification of the Ordinary High-Water Mark in the Arid West Region in the Western United States (Lichvar and McColley 2008). This delineation also uses the current USACE Arid West Wetland Determination Data Sheet and OHWM Data Form – as appropriate, which have not yet been updated to reflect the recent U.S. Supreme Court decision in Sackett v. USEPA. With that said, the new WOTUS rule introduces additional requirements beyond the traditional OHWM and three-parameter test to define WOTUS, and wetlands. The new rule mandates a relatively permanent, continuous - or uninterrupted, surface water connection to an (a)(1) through (a)(5) Waters (See Section 2.1.1 under Regulatory Setting below for additional information). Therefore, although the physical, chemical, and biological criteria for a WOTUS may be superficially satisfied, an individual feature may not meet the legal definition of a WOTUS - under the CWA, and related legal jurisdiction.

This delineation confirms that no WOTUS are present within the PS. Extensive analysis, conducted in accordance with the most current federal regulations, field methods, and guidance—including the March 12, 2025, Memorandum on Continuous Surface Connection—demonstrates that the hydrologic features within the PS lack the necessary criteria to qualify as jurisdictional WOTUS under the CWA.

Key Findings

1. Absence of an OHWM.
    a. With the exception of Amargosa Creek, none of the signatures observed within the PS exhibit physical indicators of an OHWM, which is a primary criterion for establishing jurisdiction under 33 Code of Federal Regulations (CFR) Part 328(a).
    b. Without a well-defined OHWM, there is no evidence of sustained flow, bed-and-bank development, or long-term hydrologic connectivity to downstream navigable waters.

2. Lack of a Continuous Surface Water Connection
    a. All detected features, including Amargosa Creek, are isolated and do not maintain a continuous, uninterrupted surface water connection to any jurisdictional (a)(1) through (a)(5) Waters under WOTUS.
    b. Ephemeral surface flows within the PS ultimately terminate in to a human-made detention basin prior reaching to Rosamond Dry Lake, a non-navigable, closed basin that does not function as a downstream water body under federal jurisdiction.
    c. The March 12, 2025 Memorandum further clarifies that hydrologic connections must be direct, observable, and sustained to meet the WOTUS definition. Seasonal, ephemeral, or event-driven flow does not establish jurisdiction.

3. Regulatory Compliance and Scientific Rigor
    a. This delineation was conducted using current and historic aerial imagery, hydrologic modeling, site-specific field assessments, and the latest regulatory framework from the USACE.
    b. All applicable indicators were analyzed, ensuring compliance with the revised WOTUS rule and the latest USACE and USEPA guidance on continuous surface connection.

Based on the best available science, site-specific data, and the latest federal regulatory definitions, no features or signatures within the PS satisfy the criteria required to be classified as WOTUS or a USACE jurisdictional wetland. While this analysis represents a thorough, technically sound, and regulatory-compliant delineation, only the USACE has the authority to make a final jurisdictional determination regarding aquatic resources at the PS. However, given the lack of hydrologic connectivity and absence of jurisdictional features, it is highly unlikely that USACE would assert jurisdiction over any portion of the PS under current law.

2.0 REGULATORY SETTING

2.1 Regulatory Review

2.1.1 Army Corps of Engineers

Pursuant to Section 404 of the CWA, the Corps regulates the discharge of dredged and/or fill material into WOTUS. The term "WOTUS" is defined in USACE regulations at 33 CFR Part 328.3(a) as:

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

(2) Impoundments of waters otherwise defined as WOTUS under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

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

(4) Wetlands adjacent to the following waters:
  (i) Waters identified in paragraph (a)(1) of this section; or
  (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

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

USACE regulations in 33 CFR Part 328.3(b) exclude the following from being "WOTUS" even where they otherwise meet the terms of paragraphs (a)(2) through (5) above:

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

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

(3) Ditches (including roadside ditches) excavated wholly in and draining

only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of WOTUS; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(c)(4) as:

> ...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

“Adjacent” wetlands are defined by 33 CFR 328.3(c)(2) as having a “continuous surface connection” to other WOTUS.

Wetland Definition Pursuant to Section 404 of the CWA

The term “wetlands” (a subset of WoUS) is defined at 33 CFR 328.3(b) as:

> "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions."

Wetlands under USACE jurisdiction must have the following field indicators:

1. Hydrophytic vegetation (A prevalence of vegetation typically adapted for life in saturated soil conditions in which more than 50 percent of the dominant plants are obligate wetland plants [OBL], facultative wetland plants [FACW] and facultative plants [FAC] (Environmental Laboratory 1987).

   Plant wetland indicator status from The National Wetland Plant List: 2016 Update of Wetland Ratings (NWPL) (Lichvar et al. 2016) is abbreviated as follows:

    a. OBL = Obligate wetland plants. Almost always occur in wetlands.
    b. FACW = Facultative wetland plants. Usually occur in wetlands but may occur in non-wetlands.
    c. FAC = Facultative plants. Occur in wetlands and non-wetlands.
    d. FACU = Facultative upland plants. Usually occur in non-wetlands but may occur in wetlands.
    e. UPL = Obligate upland plants. Almost never occur in wetlands.
    f. For species not listed in the NWPL, “Not Listed” (NL) is used to indicate their absence in the list. These species can be assumed to be upland species.

2. Hydric soils (soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part) (Natural Resources Conservation Services [NRCS] 2018); and

3. Wetland hydrology (areas that are periodically inundated or have soils saturated to the surface at some time during the growing season; where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively [Environmental Laboratory 1987]).

Growing season dates are determined through onsite observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperatures. Growing season dates may be approximated by using Climate Analysis for Wetlands (WETS) (tables available from the NRCS National Water and Climate Center (NWCC) to determine the median dates of 28 degrees Fahrenheit (°F) (-2.2 degree Celsius) air temperatures in spring and fall based on long-term records gathered at the nearest appropriate National Weather Service meteorological station (USACE 2008a).

The USACE defines “water body” as any area that in a normal year has water flowing or standing above ground to the extent that evidence of an OHWM is established (FR Volume 67, Number 10, Tuesday January 15, 2002). Water bodies are not required to be dominated by hydrophytic vegetation or to have positive hydric soil indicators to be considered USACE-jurisdictional.

March 12, 2025, Memorandum on “Continuous Surface Connection” in WOTUS Delineation

On March 12, 2025, the U.S. Department of the Army, USACE, and the USEPA issued a Memorandum to the Field clarifying the proper implementation of the “continuous surface connection” standard under the WOTUS definition within the CWA. This memorandum provides further regulatory guidance following the Supreme Court’s decision in Sackett v. USEPA (2023), reinforcing a narrower interpretation of jurisdictional waters by emphasizing that only wetlands and water features with an unbroken, physical surface water connection to a traditionally navigable water body qualify as WOTUS.

Key Considerations from the Memorandum

1. Strict Interpretation of “Continuous Surface Connection”
    a. A surface water connection must be direct, persistent, and unbroken to a jurisdictional water (i.e., navigable-in-fact waters, interstate waters, or tributaries with relatively permanent flow).
    b. Ephemeral, intermittent, or indirect hydrologic connections, including subsurface or groundwater links, do not establish jurisdiction.
    c. Water features that only connect during extreme weather events, seasonal rainfall, or infrequent flooding are not considered WOTUS under this memorandum.

2. Implications for Adjacent Wetlands
    a. Wetlands must have an active, observable, and sustained surface water connection to WOTUS.
    b. If a wetland is separated from jurisdictional waters by upland areas, natural barriers, or constructed levees, it does not meet the definition of WOTUS, even if hydrologically influenced by proximity.

3. Delineation and Assessment Method
    a. The burden of proof now requires clear documentation of a continuous, uninterrupted surface water connection in field delineations.
    b. Hydrologic indicators such as an OHWM, direct overland flow, or sustained surface connectivity must be present year-round or consistently during normal hydrologic conditions.
    c. Remote sensing data, historical imagery, or occasional ponding alone cannot establish jurisdiction unless there is physical evidence of continuous connectivity to WOTUS.

3.0 METHODS

Documentation relevant to the PS and surrounding area was reviewed using the methods below.

3.1 Literature Reviews

Prior to conducting fieldwork, the following information was reviewed to determine watershed characteristics, locations and types of aquatic resources that may be present within the PS:

- Natural Resource Conservation Service, Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2025a) (Appendix A, Figure 4);
- Natural Resource Conservation Service, Watershed Boundary Dataset (USDA-NRCS 2025b) (Appendix A, Figure 5);
- Federal Emergency Management Agency (FEMA 2025) (Appendix A, Figure 6);
- NWI maintained by the US Fish and Wildlife Service (USFWS 2025) (Appendix A, Figure 7);
- USGS 7.5-minute Topographic Map Lancaster West and Rosamond, California, (USGS 1987);
- 2025 color aerial photographs (Bing Maps 2025);
- Google Earth version 5.2.1.1588 (March 2025);
- Agricultural Applied Climate Information System's precipitation data and seasonal temperature information (AgACIS 2024);
- USACE Navigable Waterways in the Los Angeles District (USACE 2025b);
- FrameFinder (University of California 2025);
- Environmental Protection Agency Enviromapper for Water (USEPA 2025a);
- U.S. Environmental Protection Agency (USEPA) (2025b) WATERS GeoViewer Tool (epa.maps.arcgis.com/apps/webappviewer) (Appendix A, Figures 8 and 9);
- USEPA Antecedent Precipitation Tool (APT) (2025c) (epa.gov/wotus/antecedent-precipitation-tool-apt); and
- Western Regional Climate Center Data California Weather Station (WRCC 2025).

The above documents were reviewed. The PS was assessed for the presence of indicators of jurisdictional aquatic resources, including an OHWM, hydrophytic vegetation, hydric soils, and evidence of surface hydrology. The intent of this assessment was to determine where water may flow, or may not flow - or terminate, and was used to determine efficient locations for visual inspections to occur in the field.

3.1.1 Aerial Photography

Historic and current aerial photography of the PS were reviewed, prior to and during the field assessments. Aerial photography was used to view land resources in both the present, and historic context. Inundation and vegetative signatures on aerial images can imply the presence - or absence, of lakes, rivers, or streambed systems within a discrete location.

3.1.2 U.S. Fish and Wildlife Service National Wetland Inventory Data and Environmental Protection Agency WATERS GeoViewer

The USEPA WATERS GeoViewer tool provided access to spatial data sets (Appendix A, Figures 8 and 9) - such as interactive Upstream/Downstream search capabilities, and interactive watersheds, to assist in determining the jurisdictional status of resources detected within the PS (epa.maps.arcgis.com/apps/webappviewer). Additionally, the FEMA flood zone is depicted in Appendix A, Figure 6. Furthermore, the NWI – which is maintained by the USFWS, was reviewed to support the identification of potential jurisdictional resources within the PS. However, this database (i.e., the NWI) is not used for regulatory jurisdictional review.

3.1.3 Antecedent Precipitation Tool

The Antecedent Precipitation Tool (APT) was also utilized to determine whether field observations are representative of typical climatic conditions (i.e., those that have been experienced over the past thirty years). This tool is informative when assessing whether certain field conditions are observed during typical, as opposed to atypical rainfall cycles. The APT queries data from weather stations that are located within a 30-mile radius from the Project.

3.1.4 Topography

USGS topographic maps were reviewed as well (Appendix A, Figure 1). These maps tend to illustrate elevation contours, drainage patterns, and hydrography within the PS. USGS 7.5-Minute Topographic Quadrangles "*Lancaster West and Rosamond*" was evaluated to facilitate identification of potential drainage features within the PS - as indicated from topographic changes, blue-line features, or visible drainage patterns in order to characterized features.

3.2 Procedures and Field Data Collection Techniques

Potential USACE-defined wetlands, and other WOTUS, and additional riverine resources were evaluated in the field with a handheld Global Positioning System (GPS) receiver. The surface area of each feature was then calculated within a Geographic Information System (GIS) to determine total jurisdiction area within the PS. KMZ (Keyhole Markup Language Zipped) files and GIS/ESRI shapefiles are available for all mapped resources, upon request, as aquatic resource boundaries were not permanently flagged, or demarked within the PS at the time of the delineation.

3.2.1 Waters of the United States Delineation Techniques

The specific delineation of signatures tied to WOTUS was conducted within the PS using a combination of on the ground quantification, remote sensing and ground verification via pedestrian surveys on February 22nd and 23rd, and March 5th, 8th, 9th, 10th and 11th of 2025. Assessment of the presence - or absence, of an OHWM was based on observations - evidence of flow, and unique characteristics indicating the presence of active water flow, shelving, drift lines, disturbed vegetation, etc. Or other indicators identified in the "Field Guide to Identification of the OHWM in the Arid West Region of the Western United States" (Lichvar and McColley 2008). OHWM characteristics in this region would primarily consist of sediment sorting, destruction of terrestrial vegetation, and a change in substrate in the feature as compared to the surrounding upland area. However, features were excluded from this assessment if they are human-made ditches, exhibited swales or erosional characteristics, etc., in accordance with USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United States[1].

Data collected included digital format GPS locations, and photos (Appendix B). Both a routine off-site and on-site field determination was conducted for USACE-defined wetlands, and non-wetland WOTUS. This delineation also uses the current USACE Arid West Wetland Determination Data Sheet and OHWM Data Form (Appendix D), which have not yet been updated to reflect the recent U.S. Supreme Court decision in Sackett v. USEPA, or the recent 2025 Memorandum on "Continuous Surface Connection." With that

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[1] USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United States – In summary, ditches, swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow, are not WOTUS.

said, the new WOTUS rule introduces additional requirements beyond the traditional OHWM and three-parameter test to define WOTUS and wetlands. The new rule now mandates a relatively permanent, continuous - or uninterrupted, surface water connection to an (a)(1) through (a)(5) Waters. Therefore, although the physical, chemical, and biological criteria for a WOTUS may be superficially satisfied, an individual feature may not meet the legal definition of a WOTUS under the CWA, and related legal jurisdiction. The term continuous surface water connection to a Traditional Navigable Water (TNW) or Relatively Permanent Water (RPW)is used only for wetlands. Connected to - or tributary to, are terms used for non-wetland aquatic resources and the relative permanence of a hydrological connection to TNW.

Features that did not meet the hydrophytic vegetation wetland criteria are also reviewed to determine if they met the definition of other WOTUS (i.e., had evidence of an OHWM). Data collected from georeferenced aerial photographs, topographic maps, and soils data are viewed on handheld mobile devices, and used to target areas with potential to be WOTUS. During fieldwork, all accessible areas within the PS were visually surveyed for hydrophytic vegetation, standing water, scoured areas, etc. Inaccessible areas were viewed from the elevated locales with the aid of binoculars, aerial photographs, and so forth. Areas that were determined to have an OHWM, defined bed/bank or suspected of being WOTUS, wetlands or other sensitive riparian/riverine communities were further analyzed for a dominance of hydrophytic vegetation, hydric soils, and hydrology as described below. The evaluation process for USACE-defined wetlands considered vegetation, soils, and hydrological parameters of suspected features. The location of the OHWM, is defined based on clear lines visible on banks; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; and differences in vegetation species, composition or structure.

3.2.2 Vegetation

The dominance and/or prevalence of hydrophytic vegetation was determined using USACE methods. Plant species not readily identifiable in the field were determined based on diagnostic keys from the Jepson Manual: Vascular Plants of California (Second Edition) (Baldwin et al. 2012). The wetland indicator status of plant species was based on the National Wetland Plant List (NWPL): 2018 Update of Wetland Ratings (Lichvar et al. 2018) - Table 1.

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Plants that occur almost always (estimated probability > 99%) in wetlands under natural conditions
Facultative Wetland (FACW)	Plants that occur usually (estimated probability >67% to 99%) in wetlands, but also occur (estimated probability 1% to 33%) in non-wetlands
Facultative (FAC)	Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands
Facultative Upland (FACU)	Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands
Obligate Upland (UPL)	Plants that occur rarely (estimated probability < 1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions
No Indicator (NI)	Wetland indicator status not assigned. Species is assumed to be upland.

The wetland vegetation criterion was considered met when more than 50 percent of the dominant plant species across all strata were rated OBL, FACW, or FAC, or if the aerial cover of hydrophytic plant species resulted in a prevalence rating of 3.0 or less. The USACE defines “dominant” plant species as those with at least 20 percent coverage of the total canopy.

The "50/20 rule" method was utilized to determine plant dominance (USACE 2024a). The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50% of the total dominance measure for the stratum, plus any additional species that individually comprise 20% or more of the total dominance measure for the stratum. The list of dominant species is then combined across strata (McIntosh 2011).

The USACE defines an area to be vegetated if it has 5 percent or more total plant cover at the peak of the growing season. Those sites supporting either a dominance or prevalence of hydrophytes under USACE definition or a dominance or absence of hydrophytes under Water Boards definition were further examined for indicators of hydric soils and wetland hydrology discussed below.

3.2.3 Soils

Soil texture, matrix, redoximorphic features (i.e., mottles), and any presence of subsoil layers impervious to water infiltration were documented from hand-excavated soil pits to the greatest extent practical. Soils were examined for positive hydric soil indicators such as low chroma, mottles (e.g., iron or manganese concretions), histic epipedons, organic layers, gleization, sulfidic odor or other primary hydric soil indicators listed on an Arid West Wetland Determination Data Form – as appropriate. Soil color and characteristics were determined from moist soil peds using Munsell Soil Color Book (Munsell Color 2000). When possible, soils were evaluated in the field to a depth of approximately 8–20 inches, where possible. GPS position data are collected at each soil pit and detailed within Project figures – when this type of sampling is appropriate. If warranted, upland and wetland soil pits are evaluated as well to delineate the wetland/upland boundary – when necessary. Hydric soil assessments were predominately based upon the guidance provided in the Arid West Regional Supplement (USACE 2008c). General soil information for the PS was obtained from the online GIS that provides the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) with soil data (USDA-NRCS 2025a).

3.2.4 Hydrology & Impounded Features

Hydrology was evaluated in areas suspected of seasonal inundation and/or saturation to the surface during the growing season. Recent precipitation data was analyzed to evaluate the frequency and amount of rainfall events within the PS, and on surrounding lands. Hydrological information was also determined for features by signatures on aerial photographs over time, as well as field analysis of the presence/absence of primary - or secondary hydrological indicators (i.e., surface water, saturation, sediment or drift deposits, watermarks, soil cracks, oxidized root channels, and/or biotic or salt crusts). Personnel also examined if there was any physical evidence of a continuous surface water connection, or uninterrupted surface water connection to any (a)(1) through (a)(5) Waters, as described in Title 33 CFR Part 328(a). Additionally, impounded features – if observed, were assessed to determine if they possessed natural characteristics with indicators of all three (3) wetland parameters: 1) dominance of hydrophytic vegetation (or Facultative Neutral), 2) possess hydric soils in the upper part, and 3) wetland hydrology.

4.0 RESULTS

The Antelope Valley, located in northern Los Angeles County, California, has undergone significant ecological transformations over millennia. During the Pleistocene epoch, this region was submerged under Lake Thompson, a vast body of water covering approximately 950 square kilometers. This lake extended over present-day areas, including Rogers Dry Lake, Rosamond Dry Lake, and Buckhorn Dry Lake. The cooler, wetter climate of that era supported extensive pluvial lakes surrounded by lush marshlands.

Around 10,000 years ago, during the Early Holocene, a significant climatic shift brought warmer and drier conditions, leading to the desiccation of these wetlands. As Lake Thompson evaporated, soluble salts accumulated on the exposed lakebed, creating a highly alkaline substrate. This environment was initially colonized by hydrophytic (water-loving) and halophytic (salt-tolerant) plant species. Over time, wind-driven sediments accumulated around these vegetation clusters, forming elevated mounds that stabilized the landscape. Gradually transforming the once-open lakebed into an upland desert shrubland ecosystem. This transition reflects the dynamic interplay between climatic factors and biological processes in shaping the region's current arid landscape.

Presently, the PS is characterized by a predominantly upland desert ecosystem, a result of thousands of years of aridification following the recession of Lake Thompson. While remnants of ancient lake sediments persist beneath the surface, the PS is largely established as an upland desert system. The PS includes Amargosa Creek in the southwestern area. Amargosa Creek is an ephemeral drainage that historically conveyed flows into the Rosamond Dry Lake bed. The human-made ponds that were pumped full with ground water attracted water fowl as well as the seasonal water in Rosamond Lake in the early 20th century.

Several duck hunting clubs, such as the Oasis Duck Club, the Crystal Wells Gun Club, and the Piute Gun Club, were established in the Lancaster area during the 1930s. These clubs actively modified the landscape within and around the PS to create hunting opportunities by constructing dikes, holding ponds, hunting blinds, and filled by pumping groundwater. They effectively transformed notable portions of the PS into a recreational hub for hunters, and vacationers alike. According to the USGS 1933 topographic map, the duck ponds in the northern terminus of the PS were labeled Hoffman Club, and the southern ponds - north of Avenue E were labeled Clarke Club. Both clubs were added onto the USGS 1947 topographic map, including the ponds south of Avenue E (unlabeled). The last additions occurred prior to 1973, with the deep boat pond and small section between both clubs (USGS 1973). The number of ponds inundated seem to decrease through time, after the 1980s' until the 2000s' where they are all completely fallowed.

Several factors contributed to the decline of these duck hunting ponds over the past half-century:

- Land Acquisition by the Government. The U.S. government acquired large tracts of land in the Antelope Valley for military purposes, including areas occupied by duck clubs. This acquisition led to the dissolution of clubs like the Piute Gun Club in 1961.
- Changes in Water Management. As Lancaster's population grew, water management priorities shifted. Artificial ponds in the area were historically maintained by pumping groundwater. However, continued pumping caused groundwater levels to drop, making it more expensive and energy-intensive to access. Rising electricity costs further compounded the issue, and ultimately, water resources were redirected to meet growing urban demands. As a result, maintaining these ponds became less feasible and was no longer prioritized.
- Shifts in Recreational Trends. Over time, recreational preferences changed, leading to a decline in the popularity of local duck hunting.

Today, remnants of these once-thriving duck hunting ponds can still be observed in the PS. Visible infrastructure such as dikes, docks, and water control systems serve as historical markers of the area's past recreational use. The PS remains a relatively flat, well-drained upland landscape with limited water retention potential. Subtle mound-intermound topography, shaped over time by natural geologic and climatic processes, characterizes the area. Despite its undulating surfaces, the PS exhibits rapid rainwater infiltration—meaning precipitation is quickly absorbed into the well-drained soils. Any ponding that does occur is shallow, short-lived, and generally dissipates fast. These conditions are not sustained long enough to create anaerobic soil environments or develop hydric soil indicators. Groundwater is too deep to influence surface conditions, reinforcing the site's well-drained nature. This historical and ecological context is crucial for understanding the current state of the PS.

4.1 PS Geology and Soils

The PS is underlain by Quaternary deposits from the Pliocene to Holocene epochs, primarily comprising non-marine alluvium, lake, playa, and terrace deposits (Jennings et al. 1977). According to the NRCS SoilWeb database (Soil Survey, NRCS, USDA, accessed February 2025), the predominant soil mapping unit within the PS is the Pond-Oban complex (457884). Despite its name, the Pond soil series does not occur in ponded areas but was named after the town of Pond in Kern County, California, where this soil type was first identified. Similarly, the Oban soil series was named after the nearby landmark neighborhood of Oban, located adjacent to the northeast corner of the PS.

It's important to note that the Soil Survey for the Lancaster Area, California, from which SoilWeb data is derived, is nearly a century old and contains outdated information. For instance, it mentions a "high-water table," which is inconsistent with current conditions. Additionally, there are no soil map units for the Pond Soil Series within Kern County, and the type locality for this series is now mapped by the NRCS as Calfax clay loam, saline, 0 to 2 percent slopes, MLRA 17. Furthermore, the Pond-Oban complex map unit lacks components -or inclusions of geographically associated soils listed in the official series descriptions, such as Chino, Fresno, Lewis, Traver, Waukena, and Hacienda.

During this investigation, a total of seven (7) chemical analysis soil sample points were collected and twenty-three (23) soil pits were hand excavated within the PS (Appendix A, Figure 3, Appendix B, and Appendix D). Chemical analysis of the seven samples indicated - as expected, that the soils onsite are alkaline (Appendix C, Table 1). With the exception of soil sample G – obtained outside the PS (which would be considered strongly alkaline [pH of 8.5 – 19.0]), all of the soils sampled for pH are considered very strongly alkaline (pH > 9.0).

The excavated soil pits exhibited remarkable consistency (Appendix B and D), with minor variations in the depth and texture of the A horizon, generally aligning with NRCS soil component descriptions (e.g., fine sandy loam within the A Horizon's 0 to 4 inches). The topsoil predominantly consisted of fine sandy loam and silty clay loam, underlain by a mineral layer. Most notably, almost all soils within the PS displayed polygonal soil cracking in intermound areas, occasionally forming hexagonal patterns, while mound soils exhibited T-shaped or Y-shaped cracks.

Research indicates that such polygonal (hexagonal) cracking results from natural desiccation processes influenced by drying and shrinking cycles, rather than sustained wet conditions (Goehring and Morris 2014). Over time, annealing processes-gradual changes due to repeated drying and contraction lead to increasingly complex hexagonal crack patterns. Alkaline soil conditions significantly contribute to the formation of these cracks, meaning areas with higher soil pH are more prone to this type of cracking (Zhang et al., 2023). Therefore, the presence of these cracks within the PS is attributed to natural desiccation cycles, a function of climate, soil chemistry, and drying cycles, rather than persistent water saturation (Appendix B). Consequently, their presence alone does not indicate sustained hydrology, nor serve as an indicator of hydric soils.

While the polygonal cracks were more defined and deeper (up to 2 inches) in the intermound areas compared to the mound areas, redox features were notably absent in most intermound areas, except for soil pits 18 and 22 (Appendix A, Figure 3). This absence suggests that the dominant soils within the PS only experience short-duration seasonal ponding in low-lying depressions following precipitation events. The isolated presence of redoximorphic features (soil pits 18) and olive-colored soils (soil pit 22) in the aforementioned samples, indicates that periodic anaerobic conditions occur only in these specific locations - serving as potential hydric soil indicators. Both of these soil pits occurred in human-made duck ponds that historically were artificially inundated continuously for several months out of the year. In summary, the vast majority of soils within the PS are moderately well-drained, with depths greater than 6.5 feet to a restrictive layer or groundwater. To that end, potential hydric soils were only identified in the two specific soil pits mentioned above.

The key take aways are as follows:

- Deeper, more prominent soil cracks were observed in the low-lying intermound areas of the PS, indicating drying and shrinkage. However, clear indicators of prolonged soil saturation—such as redoximorphic features, including rust-colored mottling or gray soils—were only present around the artificially flooded duck ponds. These signatures were absent in the more natural intermound areas, suggesting they do not retain water long enough to develop hydric soil characteristics.
- Only two specific soil pits within the PS showed signs of occasional wetness that could qualify as hydric soils, and these were located in historic duck ponds that were inundated with pumped ground water.
- Overall, the majority of the PS is well-drained and doesn't pond water for long enough - or often enough, to satisfy the official criteria for hydric soils.

According to the 2012 National Technical Committee for Hydric Soils (NTCHS[2]) - a committee established by the USDA to provide technical guidance on identifying and classifying hydric soils (i.e., soils formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil), mandatory hydric soil criterion number 3 asserts the following:

- "soils frequently ponded for more than 7 consecutive days during the growing season may qualify as hydric, but only if they also show key field indicators."
    - These indicators, which are essential for confirming the hydric nature of the soil, include:
        - Redox Features. These are color patterns in the soil profile that indicate the presence of reduced iron compounds, a sign of anaerobic conditions.
        - Reduced Soil Colors: These are colors that are indicative of the lack of oxygen in the soil, such as greys, blues, or greens.
- "Frequently" means ponding must occur in more than 50% of years, or at least 50 out of 100 years.

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[2] The NTCHS is responsible for: Developing the official definition of hydric soils; Publishing the "Hydric Soils of the United States" list; Providing and updating the "Field Indicators of Hydric Soils;" and supporting the scientific framework used in wetland delineations and regulatory decisions under the Clean Water Act.

- Based on 41 years of site-specific rainfall data and field observations, the growing season (March–November) at the PS receives limited rainfall, and lacks the sustained inundation required to meet this standard (Appendix C, Table 2).
- With the exception of two isolated soil pits, soils across the PS do not exhibit the saturation indicators or evidence of anaerobic conditions that would support classification as hydric soils. Therefore, the majority of soils at the PS are moderately well-drained and unlikely to pond frequently or long enough to meet hydric soil criteria under NTCHS guidelines.

4.2 PS Hydrology

The PS exhibits a subtle mound-intermound topography, characterized by small, elevated mounds rising 0.5 to 2 feet above the surrounding terrain. The origins of such mounded landscapes, akin to Mima mounds, have been the subject of various theories, including:

- Fossorial Rodent Activity. Some researchers suggest that burrowing animals, such as pocket gophers, have contributed to mound formation through their soil displacement activities.
- Seismic Activity. Another hypothesis proposes that intense ground shaking from major earthquakes could lead to the formation of these mounds.
- Shrink-Swell Processes. The expansion and contraction of finer textured materials present in soils during wet and dry cycles may result in the development of mound and depression patterns, similar to Giglia formations (Hough-Snee et al 2011).

In the context of the PS, the most plausible explanation involves the accumulation of wind-blown (aeolian) sediments around vegetation clumps, leading to the gradual build-up of mounds over time. Rainfall on this undulating surface is differentially intercepted by mounds and intermounds. Mounds, enriched with organic matter, possess more porous soils, facilitating greater water absorption. In contrast, intermound areas, often composed of finer-textured materials, may experience very shallow and short-lived ponding following precipitation events. Additionally, intermounds receive some hydraulic inputs from adjacent mounds through overland flow or toe-slope seepage. However, with groundwater depths exceeding 6.5 feet, there is minimal influence on surface ponding within the PS (SoilWeb 2025a).

According to the NRCS water balance for Oban soils, less than 0.3 inches of surplus water is available for ponding, primarily occurring in February (Appendix C). Similarly, Pond soils exhibit less than 0.2 inches of surplus water, typically in March. Given that February is a cold month in Lancaster, soil saturation or ponding may occasionally occur during the non-growing season. Small ponded areas (mostly vehicular ruts), were observed during the March 9, 2025 field visit. Amargosa Creek traverses the PS and has been subject to channelization in its northern portion, as evidenced by rows of excavated soil along its banks. Beyond the PS, this ephemeral creek continues northeast but is diverted into a human-made basin before reaching Rosamond Dry Lake.

During the delineation field work on February 22 and 23, 2025nine days after a storm event that delivered approximately 0.75 inches of rainfall small areas of ponding water (less than 3 inches deep) were observed in the lowest topographical depressions, generally within deep vehicle ruts. However, the majority of intermound areas remained dry. Wetland hydrology indicators, such as surface soil cracks and salt crusts, were observed across mounds, and intermound areas (Appendix B).

Consequently, additional primary or secondary indicators are necessary to infer wetland hydrology, particularly in concave landscape positions. Polygonal soil cracking was more pronounced in intermound areas, occasionally displaying hexagonal patterns, while mound soils exhibited T-shaped or Y-shaped cracks. Research indicates that hexagonal cracking results from processes similar to annealing, where repeated drying and contraction cycles lead to increasingly complex patterns. Additionally, alkaline soil conditions significantly contribute to the formation of these cracks.

The PS is situated within the Antelope-Fremont Valleys Hydrologic Unit (Hydrologic Unit Code 18090206, Appendix A, Figure 4). Features depicted on the NWI map align with treatment ponds at the offsite water reclamation facility to the north, and other apparent human-made duck ponds within the PS (Appendix A, Figure 5). While the NWI is often used for desk top review, it is based on satellite imagery, and does not appear to be a very accurate data source in the desert. For example, the NWI often picks up dirt roads in desert habitats as riverine. Therefore, ground truthing is very important, and it should not be used jurisdictional determinations. The FEMA (2025) flood zone map is depicted in Appendix A, Figure 6.

Lancaster's climate is characterized by hot, arid summers and cold, partly cloudy winters. Annual temperatures typically range from 33 degrees Fahrenheit (°F) to 97°F. The hot season spans approximately 3.2 months, from June to September, peaking in July with average highs of 96°F and lows of 68°F. The cool season lasts about 3.4 months, from November to March, with December being the coldest month, averaging lows of 33°F and highs of 58°F. Annual precipitation averages 9.6 inches, primarily as rain with occasional snow. The growing season, defined as the longest continuous period of non-freezing temperatures (≥32°F), typically lasts around 7.9 months (242 days), from approximately March to November. Wetland hydrology, characterized by continuous or periodic inundation or soil saturation to the surface for 7% or more of the growing season, equates to a minimum of 17 days (7% of 242 days).

Based on the growing season for Lancaster area and the average rainfall (Appendix C, Table 2) it is highly unlikely that ponding or soil saturation occurs within the intermound areas for at least 17 consecutive days, given the scant rainfall that falls in the second half of March through September in this region.

Lancaster's semi-arid climate is marked by hot, dry summers and cold winters with minimal precipitation. Average annual rainfall is just 9.6 inches, and nearly all of that occurs outside the growing season. The growing season—defined as the period when daily minimum temperatures remain above freezing—typically lasts from March through November, or about 242 days. To meet wetland hydrology criteria, the PS must experience continuous - or periodic inundation or saturation at the surface for at least 7% of the growing season, or approximately 17 consecutive days. However, this threshold is not met at the PS.

1. Rainfall During the Growing Season Is Insufficient.
    a. Based on 41 years of rainfall records (Appendix C, Table 2), the PS receives very little precipitation from mid-March through September.
    b. This makes it highly improbable for ponding or surface saturation to persist for 17 consecutive days during the growing season.

2. Evapotranspiration Far Exceeds Rainfall.
    a. Appendix C, Table 3 clearly shows that in every month of the year, average evapotranspiration exceeds average rainfall.
    b. So, for ponding to occur, rainfall would have to exceed evapotranspiration, which does not happen—even during historically wet years like 1992–1993 (Appendix C, Table 4.F).

3. Soil Storage Delays Saturation.
    a. The soils at the PS (Pond and Oban series) have high water-holding capacity. Before ponding can occur, they must first absorb approximately 4.96 and 3.74 inches of water (California Soil Resource Lab, 2025) respectively (Appendix C, Tables 5.A and 5.B).

b. The monthly rainfall averages don’t come close to these thresholds, especially when factoring in evapotranspiration.

In conclusion, while short-term ponding may occasionally occur during the winter months, when temperatures are low and evapotranspiration is minimal, this happens outside the growing season. Consequently, the PS does not meet the criteria for wetland hydrology. Its mound–intermound microtopography, well-drained soils, limited rainfall, and high evaporation rates collectively limit the potential for sustained surface water during the biologically relevant growing season.

4.3 PS Vegetation

The PS is predominantly characterized by desert saltbush scrub vegetation, a plant community adapted to arid conditions and alkaline soils. This habitat features low-growing, grayish shrubs, typically ranging from 1 to 3 feet in height, interspersed with significant areas of bare ground. The vegetation is often dominated by species of the genus *Atriplex*, commonly known as saltbushes. Within the PS, the dominant vegetation comprises non-hydrophytic (non-water-dependent) woody saltbush species, including shadscale (*Atriplex confertifolia*) (Upland [UPL[3]]), fourwing saltbush (*Atriplex casnescens*) (Not Listed [NL[4]]), and allscale saltbush (*Atriplex polycarpha*) (Facultative Upland [FACU[5]]), with and understory of weedy non hydrophytic annual grasses including cheatgrass (*Bromus tectorum*) (NL), Spanish brome (*Bromus madritensis*) (UPL), common Mediterranean grass (*Schismus barbatus*) (NL), and smooth barely (*Hordeum murinum* ssp. *glaucum*) (FACU).

The vast majority of inter-mound areas are not considered wetlands with the exception of Features 2, 3 and 4 within the PS, due to a lack of hydrophytes. The lack of hydrophytes is potentially due to the high alkalinity or salinity in the soil. However, similar habitats (Pleistocene Lake beds) in the Central Valley which have been delineated as wetland have very high pH soil levels and support hydrophytic shrubs as well as herbaceous hydrophytes[6].

The notable absence of hydrophytic vegetation in the intermound areas of the PS suggests that soil alkalinity or salinity is not the limiting factor for plant colonization (Appendix B). As similar habitats in the Central Valley, which have been delineated as wetlands, support hydrophytic shrubs and herbaceous species despite high soil pH levels. Therefore, the scarcity of plant cover in these intermound areas is likely due to the lack of suitable seed beds, resulting from insufficient organic matter and hard substrate, rather than soil chemistry alone. In summary, the PS’s vegetation is dominated by non-hydrophytic species adapted to arid, alkaline conditions, with the absence of hydrophytic plants in intermound areas likely due to unsuitable seed beds rather than soil salinity or alkalinity.

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[3] Plants that occur rarely (estimated probability < 1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions.

[4] Wetland indicator status not assigned. Species is assumed to be upland.

[5] Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands.

[6] For example, in the vicinity of the town of Pond, in Kern County, where the type locality for the Pond soil series, Atriplex species are generally halophytic hydrophytes such as big saltbush (*Atriplex lentiformus*) (Facultative [FAC]), fat-hen (*Atriplex* prostrata) (Facultative Wetland [FACW]), crownscale (*Atriplex coronata*) (FACW), heartscale (*Atriplex cordulata*) (FAC), and spinescale saltbush (*Atriplex spinifera*) (FAC). Similarly, the wildflower displays are dominated by goldfields which are FAC of FACW species including yellow rayed goldfields (*Lastenia glabrata*) (FACW), coastal goldfields (*Lastenia minor*) (FACW), and alkali goldfields (*Lastenia chrysantha*) (FAC). Other halophytic hydrophytes present include alkali weed (*Cressa truxillensis*) (FACW), saltgrass (*Distichilis spicata*) (FAC), alkali barely (*Hordeum depressum*) (FAC), and pepper grasses (*Lepidium dictyotum and L. acutidens*) (FAC), Coville’s orach (*Stutzia covillei*) (FACW), bush seep weed (*Sueda nigra*) (OBL), black seed sandspury (*Spergularia atrosperma*) (FACW), and western sea purslane (*Sesuvium verrucosum*) (FACW).

4.4 Waters of the United States (WOTUS)

Following field investigations, hydrologic analyses, and regulatory evaluation, this delineation confirms that no areas within the PS qualify as WOTUS under Section 404 of the CWA. The absence of key hydrologic, soil, and vegetation indicators required for WOTUS designation under 33 CFR Part 328(a) supports this determination.

Key Findings

1. Vegetation Composition – Dominance of Upland Plant Species
    a. The overwhelming dominance of upland vegetation in the intermound areas indicates a lack of hydrophytes necessary for WOTUS classification.
    b. Hydrophytic vegetation, a key requirement for wetland status, is substantially absent from the majority of the PS.
    c. Given that wetland plants require prolonged soil saturation, their absence from most areas within the PS strongly suggests that hydrologic conditions do not support jurisdictional wetlands.

2. Hydrologic Conditions – Insufficient Ponding or Soil Saturation
    a. Hydrologic modeling and NRCS water budget calculations for Pond and Oban soils confirm that ponding and soil saturation are not typically sustained for long enough durations to meet jurisdictional wetland criteria.
    b. Any short-lived, isolated pooling that occurs is ephemeral and does not constitute sustained wetland hydrology under USACE criteria.

3. Soil Characteristics – Distinct Soils
    a. Wetlands require hydric soils, which form under prolonged saturation and anaerobic (oxygen-deprived) conditions during the growing season.
    b. The Pond-Oban complex and its components are not classified as hydric soils by the NRCS.

4. Hydrology Indicators – Surface Features Do Not Indicate Wetlands
    a. Some surface characteristics, such as soil cracking and salt crust formation, are present.
    b. These features are not exclusive to wetlands, and are represented in both mound and intermound areas across the PS.
    c. These observations confirm that the PS lacks distinct hydrologic indicators required to establish jurisdictional WOTUS, or wetland conditions.

5. Absence of Redox Features – No Evidence of Prolonged Saturation
    a. Redoximorphic features (such as soil color patterns caused by loss [depletion] or gain [concentration] of pigment), which indicate prolonged soil saturation and anaerobic conditions during the growing season, were not observed in the majority of soil samples.
    b. Variations in soil pH were recorded, but none of the samples exhibited indicators of sustained hydrology necessary for wetland formation.

6. Anomalies – Isolated, Ephemeral, and Non-Jurisdictional
    a. Less than 0.03% of the PS exhibited any combination of an OHWM, hydrophytic vegetation, hydric soils, or wetland hydrology.
    b. Even in these rare instances, the observed characteristics were ephemeral and lacked a continuous or uninterrupted surface water connection to a downstream WOTUS.

c. The March 12, 2025, Memorandum on Continuous Surface Connection reinforces that only wetlands with a direct, sustained, and unbroken surface connection to a jurisdictional WOTUS qualify for federal regulation.
d. Since no such connection exists within the PS, these features are not USACE jurisdictional.

<u>Final Determination: No WOTUS Identified within the PS</u>

Based on these findings, no features within the PS qualify as WOTUS under 33 CFR Part 328(a).

- Lack of OHWM Indicators.
    - No sustained surface flow or hydrologic connectivity to a jurisdictional water body was observed, except for ephemeral conditions in localized areas that do not meet regulatory thresholds.
- Hydrologic Isolation.
    - All observed features, including Amargosa Creek, are isolated and lack a continuous surface connection to (a)(1) through (a)(5) waters, as defined by federal regulations.
- Termination in a Non-Navigable Basin.
    - Any ephemeral surface flows from the PS ultimately terminate in to a human-made detention basin prior to reaching Rosamond Dry Lake, a non-navigable, closed basin with no hydrologic connectivity to a traditional WOTUS.
- Alignment with the March 12, 2025, Memorandum on Continuous Surface Connection.
    - The memorandum reaffirms that only features with a direct, sustained, and observable surface water connection to a jurisdictional WOTUS qualify for federal protection under the CWA.
    - Ephemeral hydrologic connections do not establish jurisdiction unless there is clear, direct, and consistent connectivity to traditionally navigable waters.
    - The features within the PS fail to meet this standard, confirming that they are not subject to regulation under Section 404 of the CWA.

This delineation represents a scientifically rigorous, regulatory-compliant evaluation of potential WOTUS within the PS. No features meet the criteria necessary for classification as jurisdictional wetlands or WOTUS under USACE jurisdiction.

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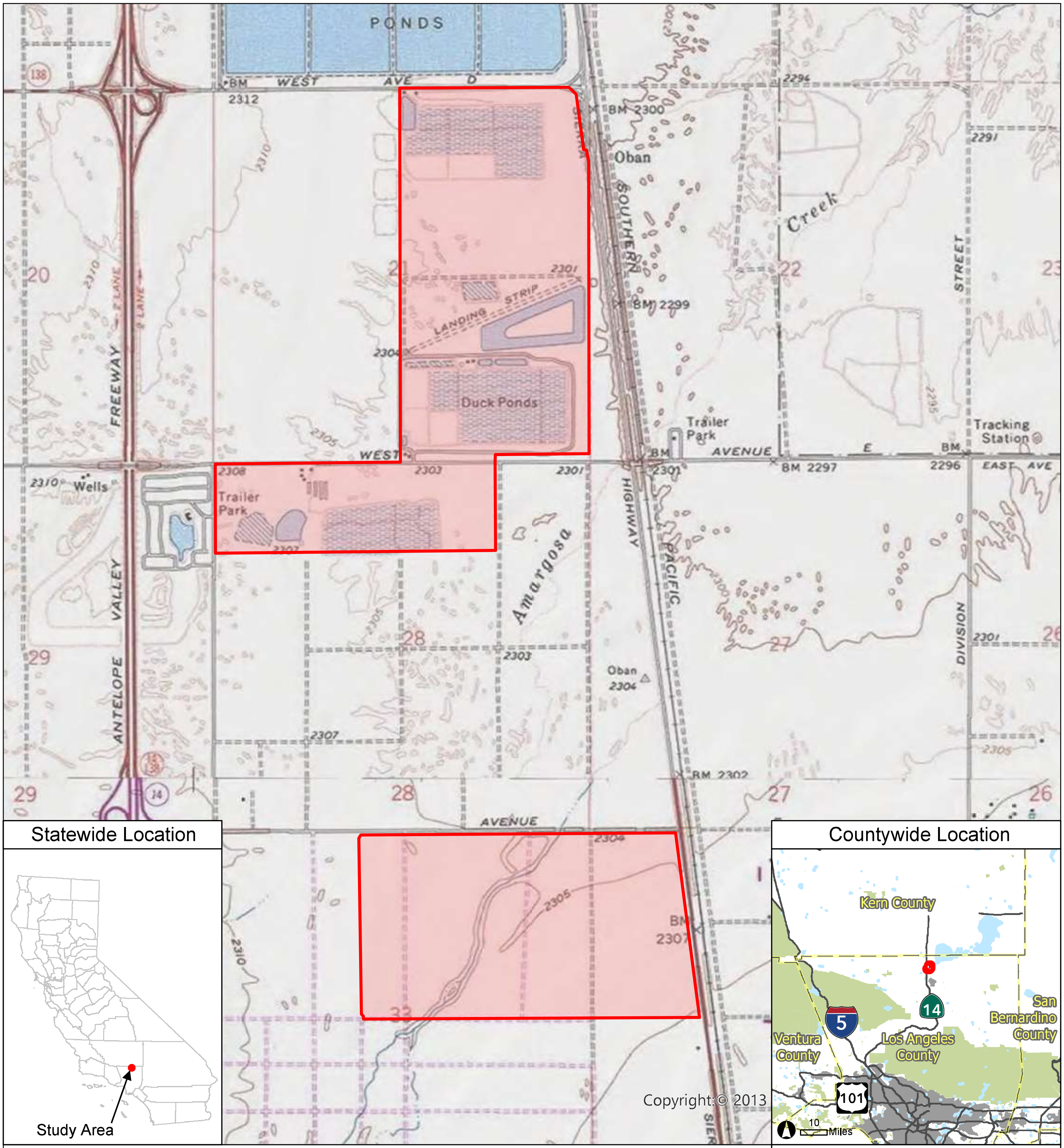
Appendix A Figures



🟥 Project Site

Interstate or State Highway (inset)

County Boundary (inset)

Urban Area (inset)

Park or National Forest (inset)

Water Body (inset)

0 1,000 2,000 Feet

1 inch = 2,000 feet

The Project Site is located in Los Angeles County on the Lancaster West and Rosamond USGS 7.5-minute quadrangle maps; San Bernardino Meridian, Township 8N, Range 12W, in Sections 21, 28, 33, 34;

Center coordinates (WGS 1984): 118.227°W 34.635°N

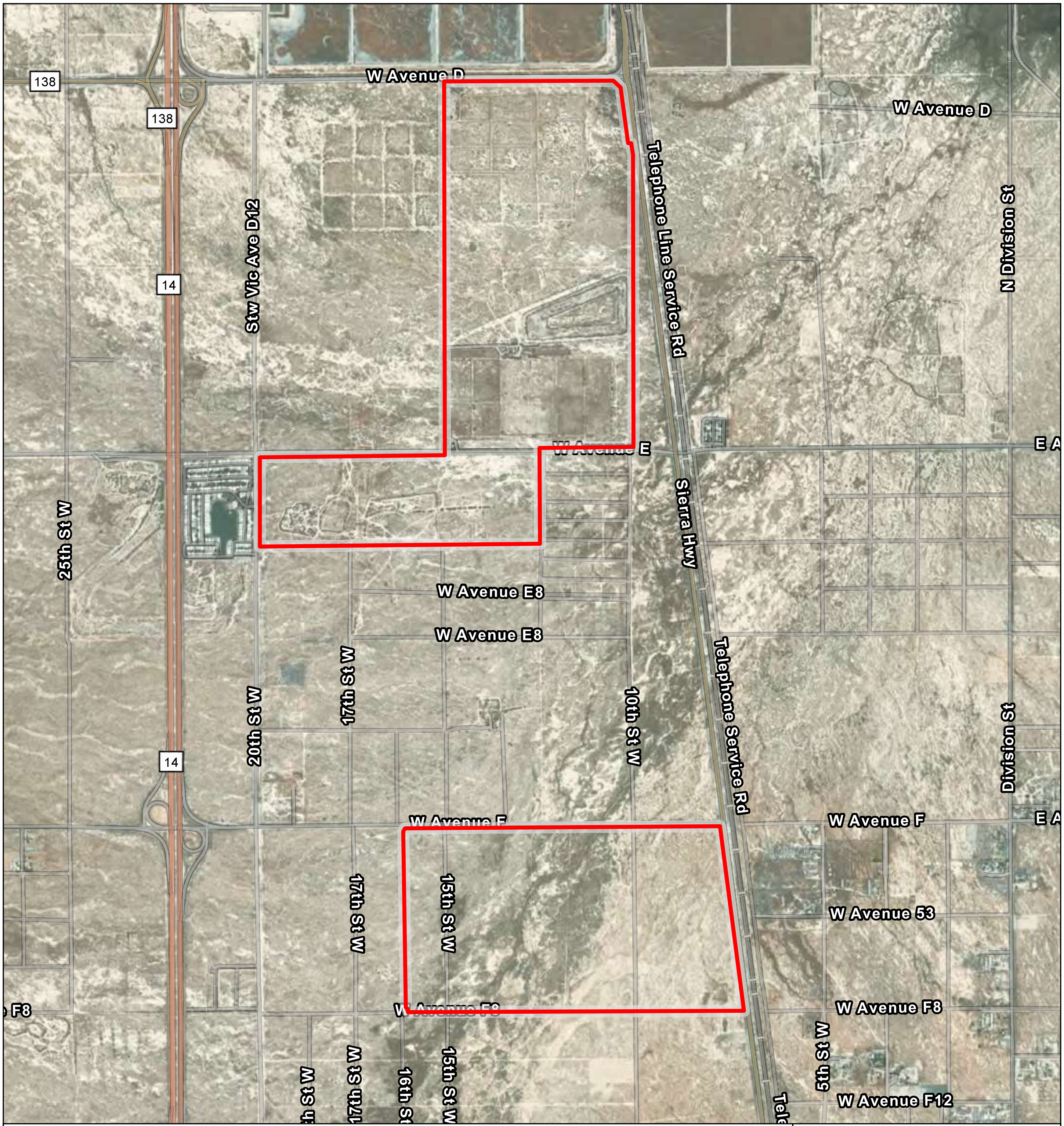
Data Sources:
- California Public Land Survey System 2020
- USGS 7.5-minute quadrangle map
- ESRI US Topo Maps accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 1. Regional Location



☐ Project Site (714.83 ac)

0 1,000 2,000 Feet

1 inch = 2,000 feet

Data Sources:
- ESRI World Imagery accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 2. Site Vicinity

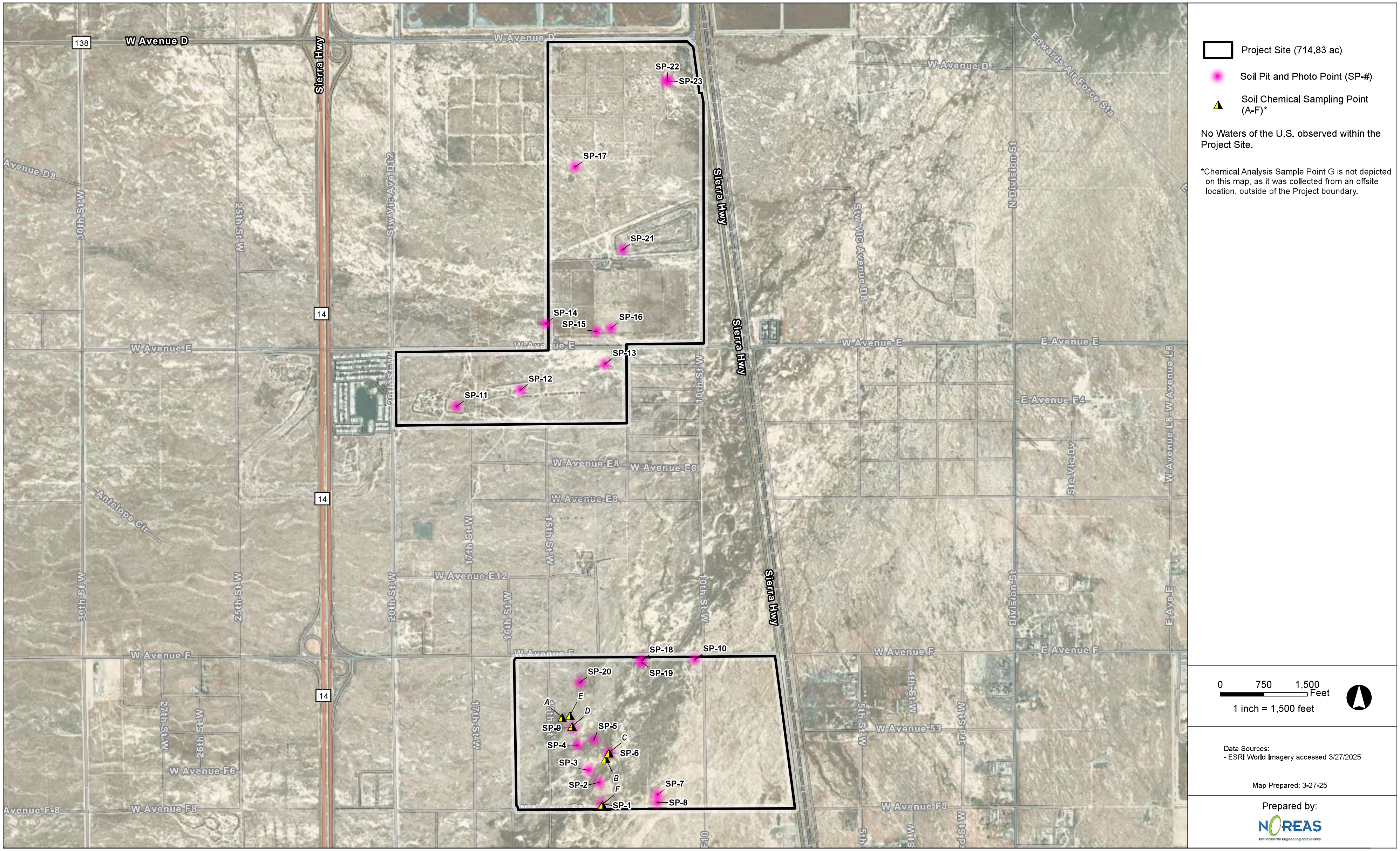
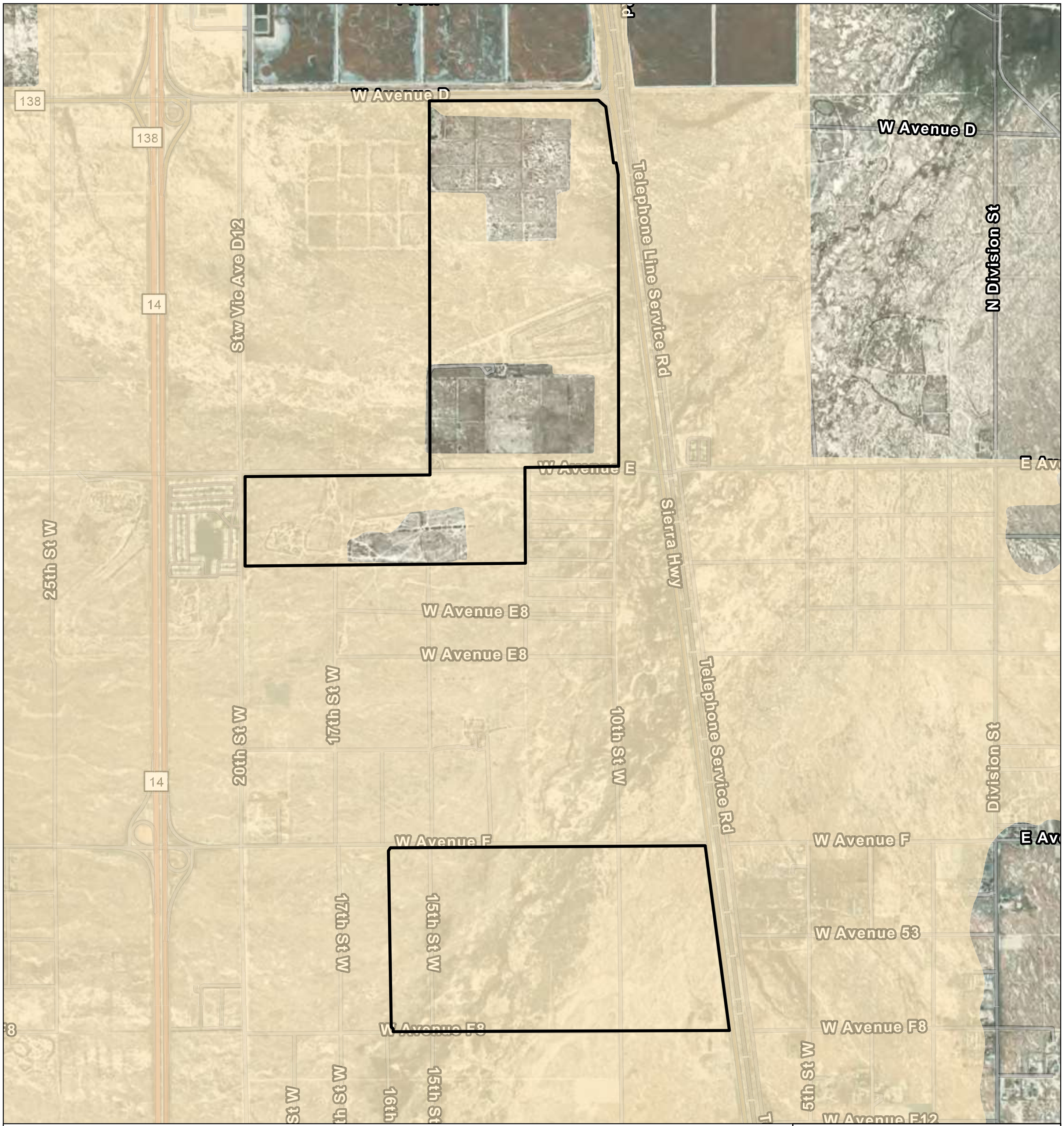


Figure 3. Waters of the U.S.



Project Site

Soil Type

▨ Px - Pond-Oban complex

0 1,000 2,000 Feet

1 inch = 2,000 feet

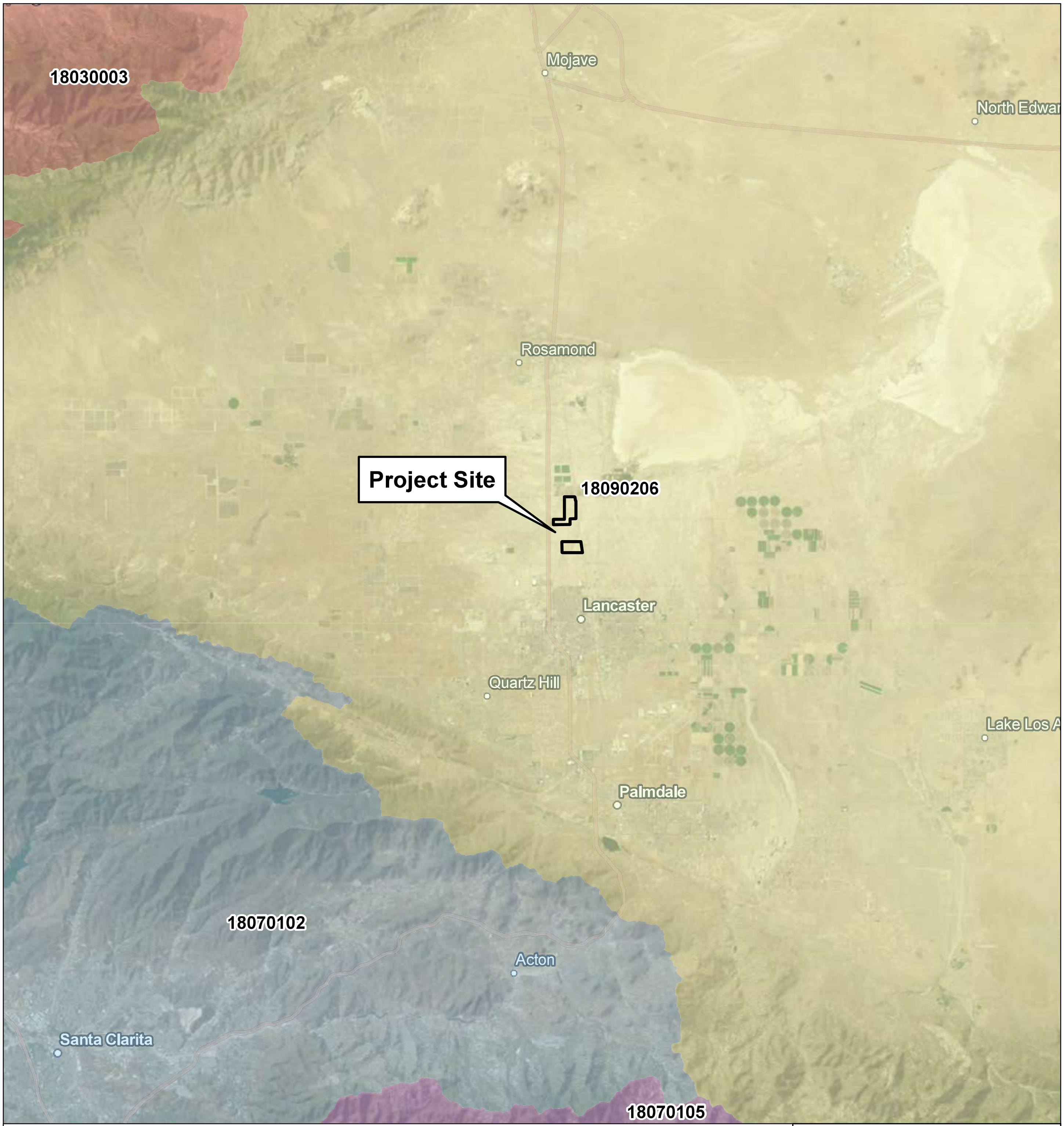
Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- NRCS Web Soil Survey accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 4. Soils Map



☐ Project Site

Regional Watershed (HUC8)

- 🟩 Antelope-Fremont Valleys (18090206)
- 🟪 Los Angeles (18070105)
- 🟥 Middle Kern-Upper Tehachapi-Grapevine (18030003)
- 🟦 Santa Clara (18070102)

0 3 6 Miles

1 inch = 6 miles

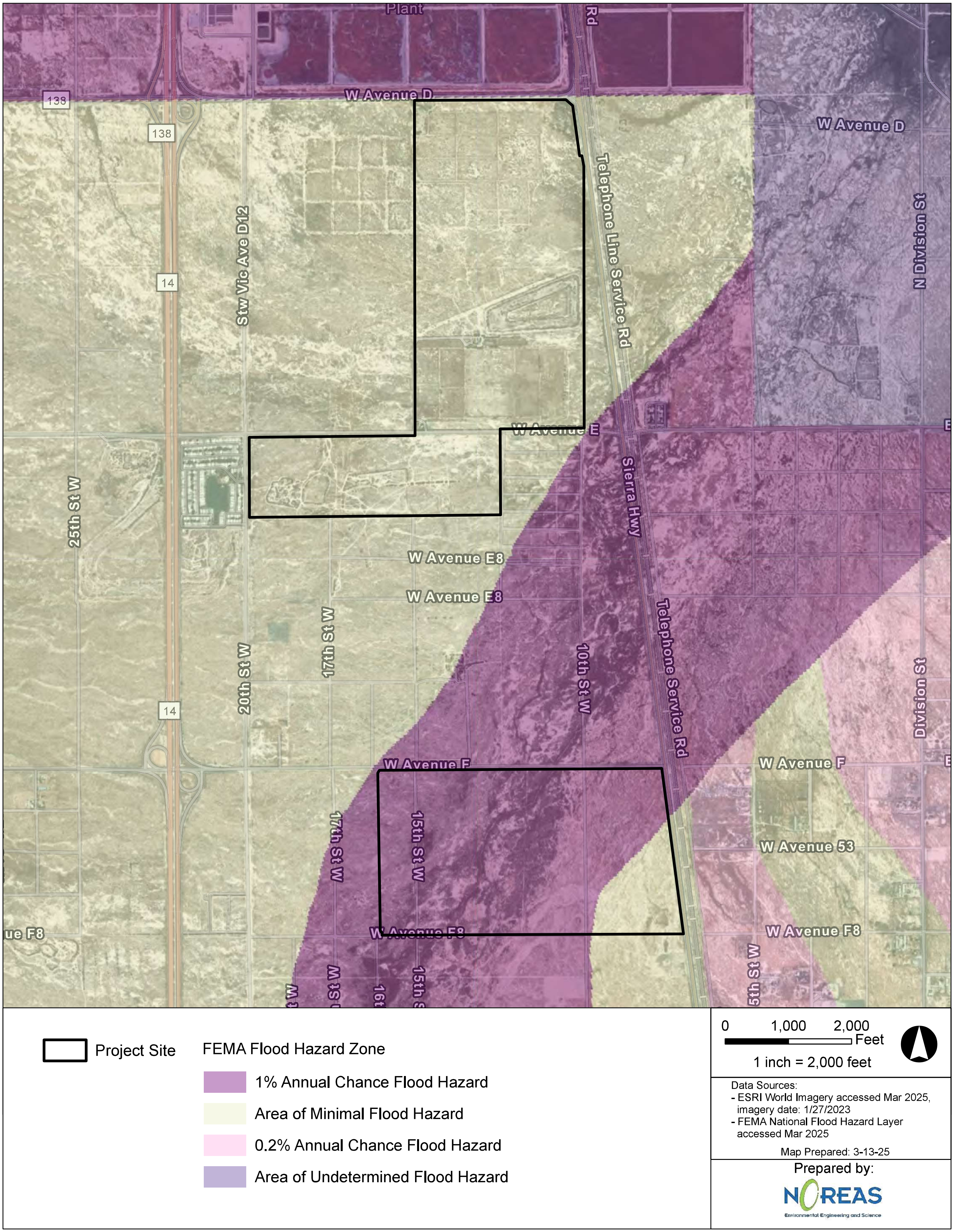
Data Sources:
- ESRI World Imagery accessed Mar 2025
- USGS-WBD accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

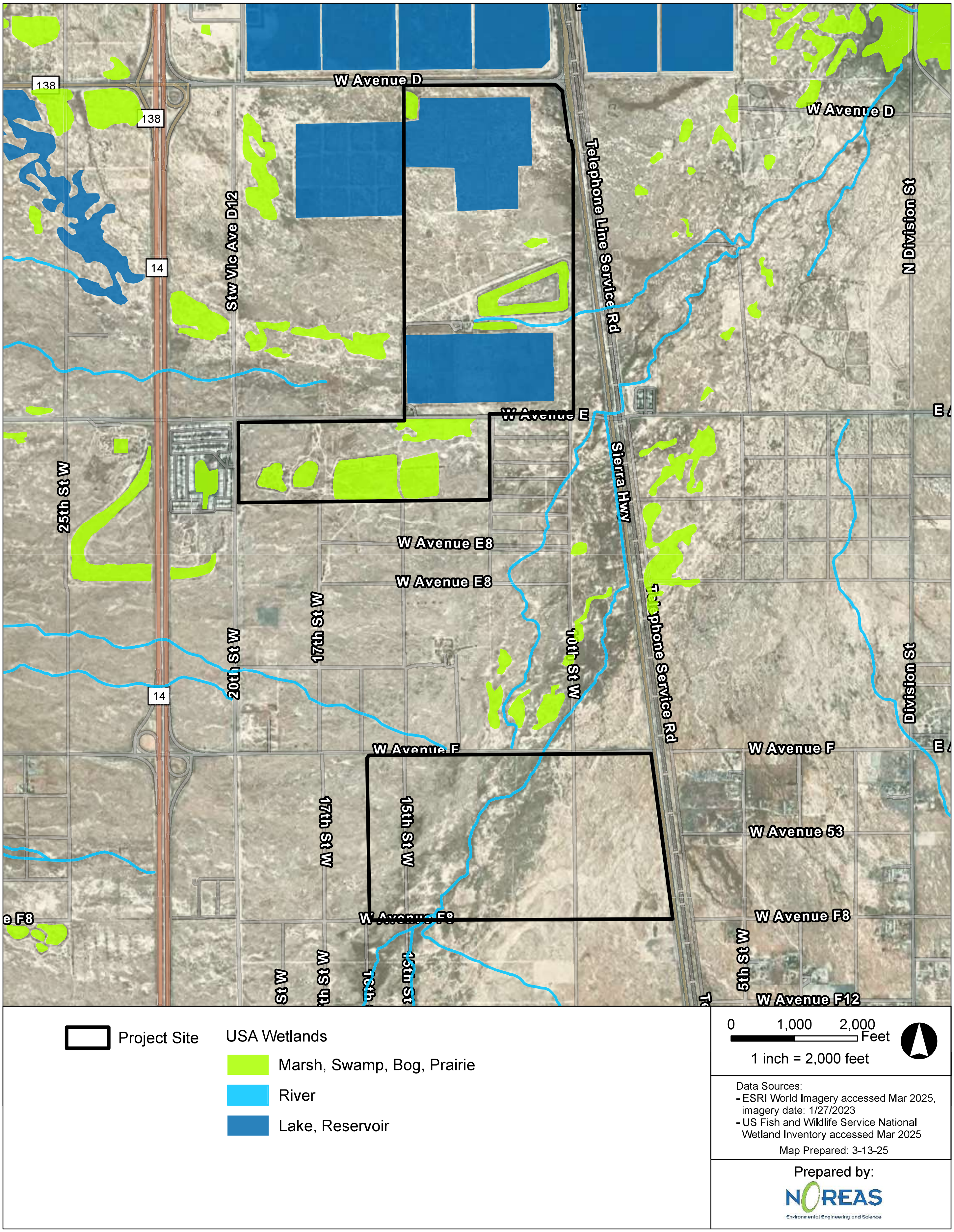
Figure 5. Regional Watershed Map



Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- FEMA National Flood Hazard Layer accessed Mar 2025

Map Prepared: 3-13-25

Figure 6. FEMA 100-Year Flood Zone

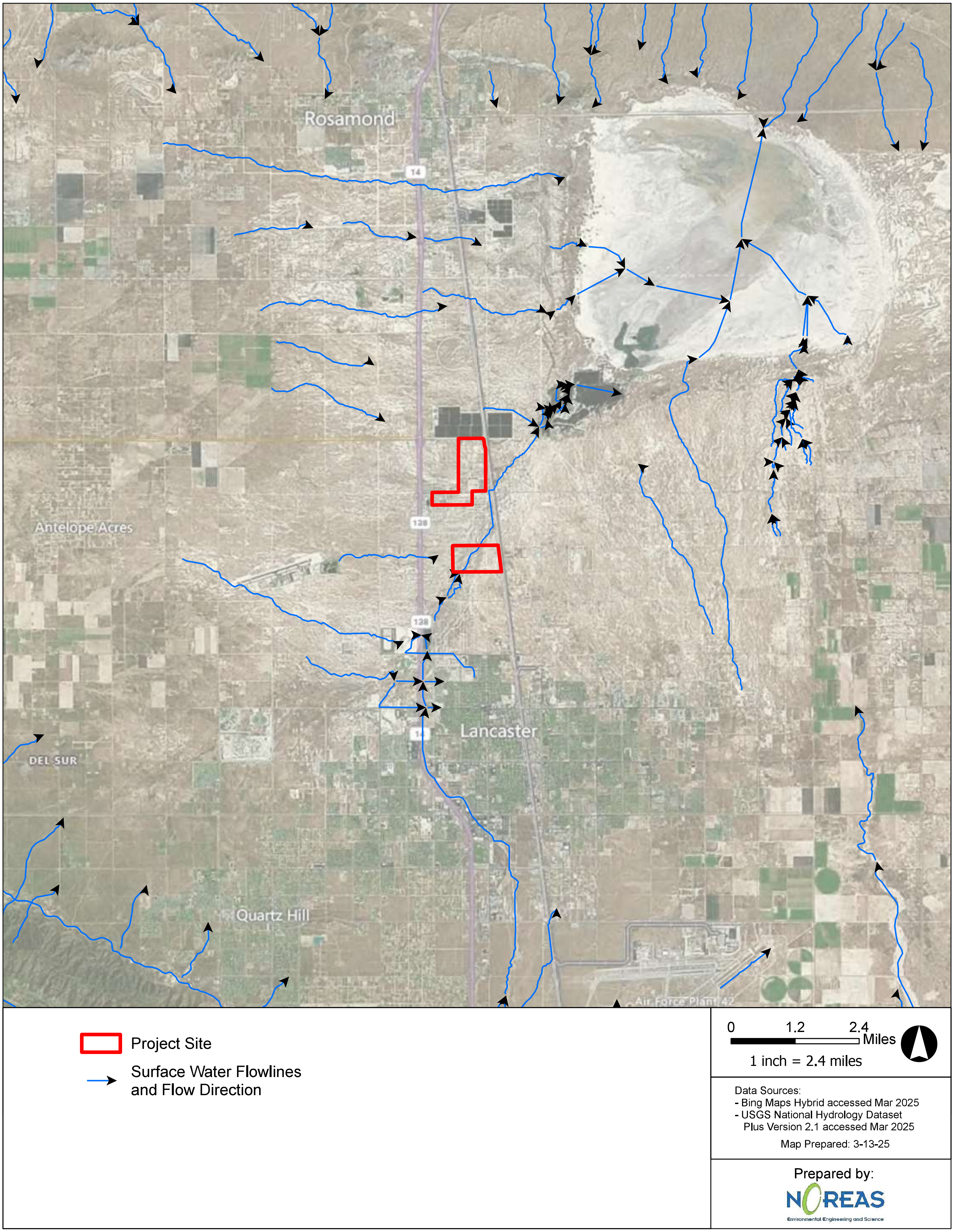


Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- US Fish and Wildlife Service National Wetland Inventory accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 7. National Wetland Inventory

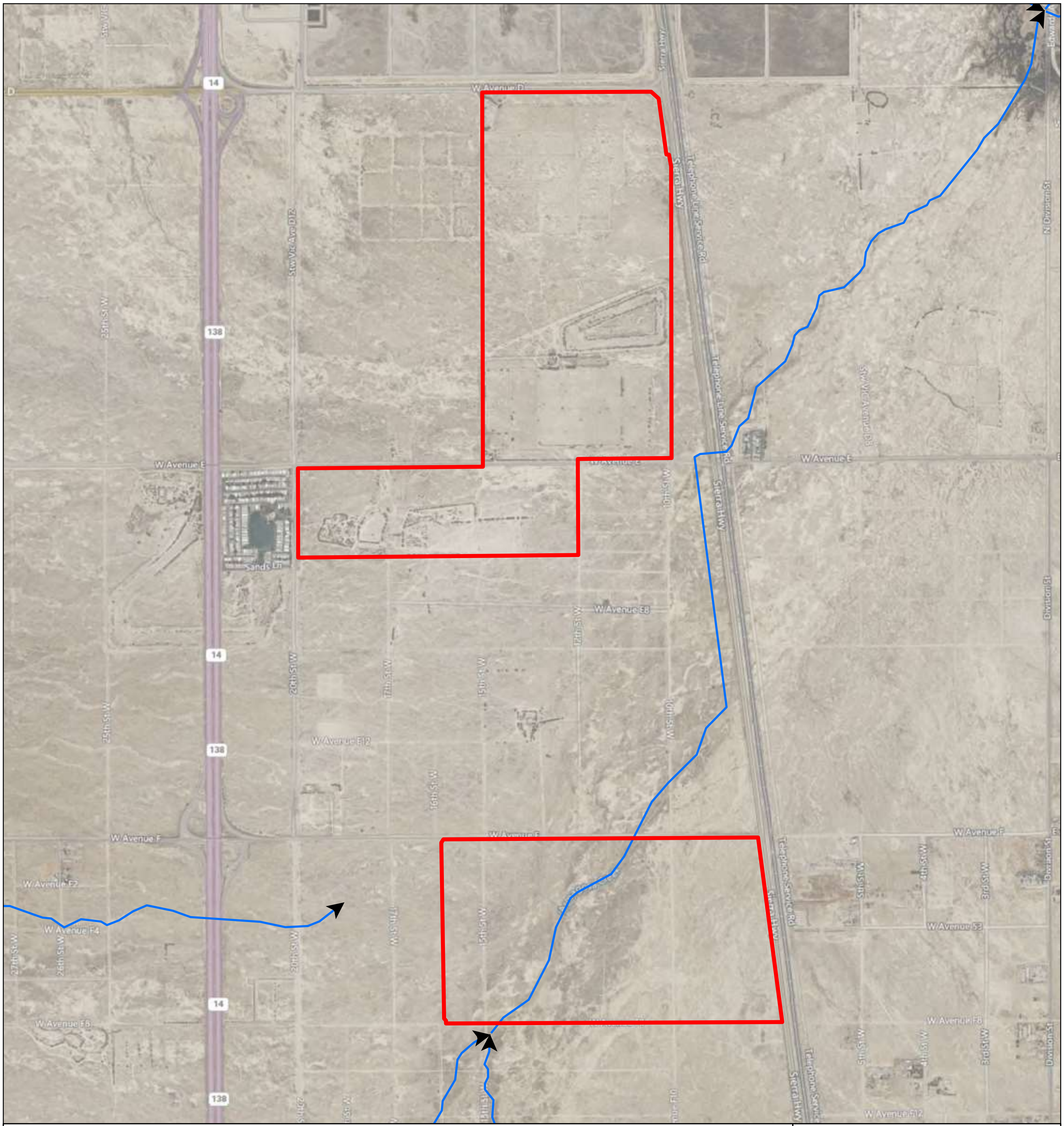


Data Sources:
- Bing Maps Hybrid accessed Mar 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 8. Surface Water Map (Regional Area)



🟥 Project Site

→ Surface Water Flowlines and Flow Direction

Data Sources:
- Bing Maps Hybrid accessed Mar 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 9. Surface Water Map (Local Area)

Appendix B Photograph Log

<table>
<tr><td></td><td>Photograph 1 - Soil Pit 1.</td></tr>
<tr><td></td><td>Photograph 2 – Soil Pit 2.</td></tr>
</table>

PHOTOGRAPH LOG

	Photograph 3 – Soil Pit 3.
	Photograph 4 – Soil Pit 4.

	Photograph 5 – Soil Pit 5.
	Photograph 6 – Soil Pit 6.

Photograph 7 – Soil Pit 7.

Photograph 8 – Soil Pit 8.

	Photograph 9 – Soil Pit 9.
	Photograph 10 – Soil Pit 10.

	Photograph 11 – Soil Pit 11.
	Photograph 12 – Soil Pit 12.

	Photograph 13 – Soil Pit 13.
	Photograph 14 – Soil Pit 14.

	Photograph 15 – Soil Pit 15.
	Photograph 16 – Soil Pit 16.

	Photograph 17 – Soil Pit 17.
	Photograph 18 – Soil Pit 18.

Photograph 19 – Soil Pit 19.

Photograph 20. – Soil Pit 20.

	Photograph 21 – Soil Pit 21.
	Photograph 22 – Soil Pit 22.

	Photograph 23 – Soil Pit 23.

Appendix C Tables

Table 1. Results of Chemical Analysis of Soils Including pH, Conductivity, Total Dissolved Solids, and Salinity

Chemical Analysis Sample Point	**Chemical Analysis***				**Comments**
	pH	**Salinity (PPM)**	**Cond (µs/cm)**	**TDS (PPM)**	
A	10.46	125	398	283	Upland Annual Grassland
B	9.78	141	445	318	Amargosa Creek - Wetland Vegetation
C	9.79	144	461	328	Amargosa Creek - Annual Grasses
D	10.69	255	808	575	Alkali Surface in Intermound adjacent to soil pit 9
E	11.19	N/A	N/A	N/A	Alkali Efflorescence on Surface of Mound
G	8.62	109	346	246	Control Area in Josua tree habitat
F	10.93	274	790	558	Intermound area - Adjacent to soil pit 1

* PPM = Parts per million, Cond = Conductivity, TDS = Total Dissolved Solids

N/A = not applicable (exceeds limits of instrument)

Table 2. Rainfall (in Inches) per Month at the Project for the Last 41 Years

Year (Oct–Sep)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
1983-1984	0.76	0.83	2.45	T	0	0.08	T	0	T	0.7	T	0.22	**5.04**
1984-1985	T	0.76	5.35	0.28	T	0.12	0	0.03	0	T	0	0.23	**6.77**
1985-1986	0.14	1.58	0.13	2	1.08	1.66	0.07	0	0	0.16	T	T	**6.82**
1986-1987	T	0.92	0.55	0.34	0.41	0.69	0.03	0.18	0.24	T	T	0.14	**3.5**
1987-1988	2.39	1.21	1.27	1.93	0.57	0.18	0.53	0.13	T	0.02	0.47	0	**8.7**
1988-1989	0.01	0.13	1.57	0.31	1.59	0.06	0.01	0.23	0	0	0	0.19	**4.1**
1989-1990	0.05	0.05	0	0.76	0.52	0.15	0.11	0.06	T	0	0.01	T	**1.71**
1990-1991	0	0.17	0.07	0.96	—	4.13	0.03	0	0	0.13	T	0.09	**5.58**
1991-1992	0.22	T	1.8	1.82	5.81	2.49	0.16	0.05	0	0.08	0	0	**12.43**
1992-1993	0.9	0	3.13	7.46	5.96	1.21	0	0	0.83	0	T	0	**19.49**
1993-1994	0.3	0.51	0.58	0.22	1.4	0.64	0.4	0.09	0	0	0	T	**4.14**
1994-1995	0.21	0.36	0.57	5.06	0.17	2.74	0.15	0.02	0.2	T	0	0	**9.48**
1995-1996	0	T	0.52	0.72	1.61	0.12	0.03	T	0	0.02	T	0	**3.02**
1996-1997	0.66	0.45	—	0.66	0	0	T	T	0	0.02	0	0.87	**2.66**
1997-1998	T	0.8	2.25	0.95	6.23	2.85	0.34	0.94	0	0	0.16	0.73	**15.25**
1998-1999	T	0.38	0.22	1.35	0.49	T	0.89	T	0.18	0.95	0	T	**4.46**
1999-2000	0	0.04	—	—	1.76	1.12	1.82	0	0.08	0	0.13	0	**4.95**
2000-2001	0.32	0.01	T	1.17	3.73	0.66	0.58	T	0	0.02	0	0	**6.49**
2001-2002	0.24	0.6	0.63	0.2	0.06	0.3	T	0.02	0	0	0	0.01	**2.06**
2002-2003	0.01	0.66	1.19	T	3.55	0.71	0.96	0.27	0	0.11	T	T	**7.46**
2003-2004	0.23	0.32	0.57	0.01	1.88	0.23	0.05	0	0	0	0	T	**3.29**
2004-2005	1.93	0.15	3.65	5.26	4.71	0.72	0.57	0.5	0	0.16	0.01	0.8	**18.46**
2005-2006	1.77	T	0.19	0.83	1	1.02	0.68	0.02	0	0.02	0	0	**5.53**
2006-2007	0.09	T	0.34	0.02	0.71	0.19	T	0	0	T	0.02	0.2	**1.57**
2007-2008	0.18	0.5	0.09	3.73	0.48	T	0.01	0.07	0	T	0	0.02	**5.08**
2008-2009	T	1.55	0.92	0.36	2.38	0.13	0	0.02	0.01	0	T	0	**5.37**

Year (Oct–Sep)	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
2009-2010	0.01	T	0.88	3.96	1.68	0.28	0.82	T	0	T	0	T	**7.63**
2010-2011	1.75	0.53	3.97	—	1.32	1.69	0.53	0.05	0.02	0.22	0	0.01	**10.09**
2011-2012	0.19	0.57	0.36	0.1	0.31	0.47	0.82	0	0	T	0.02	0.02	**2.86**
2012-2013	0	0.01	0.11	0.4	0.2	0.35	0	0.15	0	0.02	T	T	**1.24**
2013-2014	0.05	1.45	0.09	0.05	1.82	0.22	0.23	T	0	T	0.03	T	**3.94**
2014-2015	0.14	0.16	2.62	0.96	0.4	0.04	0.01	0.28	0.04	2.34	0	0.64	**7.63**
2015-2016	0.7	0.22	0.37	1.73	0.03	0.62	0.15	0	T	0	0	0	**3.82**
2016-2017	0.18	0.22	1.59	2.47	1.88	0.17	T	0	0	T	0.03	0.07	**6.61**
2017-2018	T	0.02	T	0.95	0.17	1.53	0.09	0	0	0.02	0	0	**2.78**
2018-2019	T	0.17	1.58	1.97	1.92	1	0.05	0.53	T	0.04	T	0	**7.26**
2019-2020	0	1.35	3.81	0.08	T	3.17	2.23	0.02	0	0	T	0	**10.66**
2020-2021	0	0.13	0.37	0.67	0.01	0.14	T	0	T	0.04	0	T	**1.36**
2021-2022	0.28	T	2.61	0.02	0.27	0.31	0.1	0	0.51	T	T	0.44	**4.54**
2022-2023	T	0.58	1.13	2.18	1.86	1.16	0	0.12	0	0	3.66	T	**10.69**
2023-2024	T	0.18	1.02	0.81	3.87	1.92	0.19	0.04	0	T	T	T	**8.03**
Average	**0.43**	**0.5**	**1.31**	**1.43**	**1.63**	**0.9**	**0.36**	**0.11**	**0.06**	**0.17**	**0.16**	**0.16**	**6.4**

Table 3. Net Value of Rainfall (in Inches) After the Subtraction of Evapotranspiration (in Inches) on an Average Monthly Basis

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in inches)	-3.91	-2.2	-0.55	-0.43	-1.17	-3.75	-5.64	-7.95	-8.94	-9.75	-8.52	-6.44	-59.25
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟥	= Months **excluded** from Growing Season											

Table 4.A. Net Value of Rainfall (in Inches) for 2024-2025 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (inr inches) 2024-2025[1]	0	0.18	1.02	0.81	3.87	1.92	0.19	0.04	0	0	0	0	**8.03**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.52	-0.84	-1.05	1.07	-2.73	-5.81	-8.02	-9	-9.92	-8.68	-6.6	-58.44
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur with out consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.B. Net Value of Rainfall (in Inches) for 2023-2024 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2023-2024[1]	0	0.58	1.13	2.18	1.86	1.16	0	0.12	0	0	3.66	0	**10.69**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.12	-0.73	0.32	-0.94	-3.49	-6	-7.94	-9	-9.92	-5.02	-6.6	-55.78

[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025

[2] = Averages based on reference evaporation zones (California Irrigation management Information System: wwwcimis.water.ca.gov 2025)

🟦 = Month ponding would occur without consideration of water storage

🟥 = Months **excluded** from Growing Season

Table 4.C. Net Value of Rainfall (in Inches) for 2022-2023 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct** 🟥	**Nov** 🟥	**Dec** 🟥	**Jan** 🟥	**Feb** 🟥	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2022-2023[1]	0.28	0	2.61	0.02	0.27	0.31	0.1	0	0.51	0	0	0.44	**4.54**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.06	-2.7	🟦 0.75	-1.84	-2.53	-4.34	-5.9	-8.06	-8.49	-9.92	-8.68	-6.16	-61.93

[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025

[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)

🟦 = Month ponding would occur without consideration of water storage

🟥 = Months **excluded** from Growing Season

Table 4.D. Net Value of Rainfall (in Inches) for 2021-2022 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2021-2022[1]	0	0.13	0.37	0.67	0.01	0.14	0	0	0	0.04	0	0	**1.36**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.57	-1.49	-1.19	-2.79	-4.51	-6	-8.06	-9	-9.88	-8.68	-6.6	-65.11
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.E. Net Value of Rainfall (in Inches) for 2020-2021 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2020-2021[1]	0	1.35	3.81	0.08	0	3.17	2.23	0.02	0	0	0	0	**10.66**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-1.35	1.95	-1.78	-2.8	-1.48	-3.77	-8.04	-9	-9.92	-8.68	-6.6	-55.81
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.F. Net Value of Rainfall (in Inches) for 1992-1993 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches)1992-1993[1]	0.9	0	3.13	7.46	5.96	1.21	0	0	0.83	0	0	0	19.49
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-3.44	-2.7	1.27	5.6	3.16	-3.44	-6	-8.06	-8.17	-9.92	-8.68	-6.6	-46.98
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 5.A. Amount of Rainfall (in Inches) Per Month Needed to Fill the Water Storage Capacity of Pond Series Soil

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in Inches)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Amount of Rainfall (in Inches) Needed to Saturate Soil to the Surface (Water Storage = 4.96 inches)	4.53	4.03	2.72	1.29	-0.34	-1.24	-1.6	-1.71	-1.77	-1.94	--	--	--

[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025

🟦 = first month ponding would occur without consideration of evaporation and transpiration

🟥 = Months **excluded** from Growing Season

Table 5.B. Amount of Rainfall (in Inches) Per Month Needed to Fill the Water Storage Capacity of Oban Series Soil

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (per inch)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Amount of Rainfall (in Inches) Needed to Saturate Soil to the Surface (Water Storage = 3.74 inches)	3.31	2.81	1.5	0.07	-1.56	-2.46	-2.82	-2.93	-2.99	-3.16	--	--	--

[1] **= Average based on last 41 years of data taken at the William J. Fox Air station 2025**

🟦 = first month ponding would occur without consideration of evaporation and transpiration

🟥 = Months **excluded** from Growing Season

Appendix D Field Data Forms

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ____ State: CA Sampling Point: DP1
Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R 12W
Landform (hillslope, terrace, etc.): Basin-Prehistoric Lake bed Local relief (concave, convex, none): Concave / plane Slope (%): 0-1%
Subregion (LRR): C- Mediterranean California Lat: 34.740781° Long: -117.154687° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
Soils have high pH which can mask redox features.

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: 5X5)			
1. Bromus madritensis ssp. rubens	5	Y	UPL
2. Hordeum murinum ssp glaucum	5	Y	FACU
3. Erodium cicutarium	3	Y	NL
4. Stutzia Covillei (Atriplex ARCA phyllostegia)	2	N	FACW
5.			
6.			
7.			
8.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 85 % 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: 3 (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	2	x 2 = 4
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	8	x 5 = 40
Column Totals:	15 (A)	64 (B)

Prevalence Index = B/A = 4.26

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 X

Remarks:

US Army Corps of Engineers

Arid West – Version 2.0

Intermound

SOIL

Sampling Point: DP 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR 5/4	100					Clay loam	(Polygonal crackings)
0.5-4	10YR 5/4	100					Clay Loam	(No Polygonal cracking)
4-16	10YR 4/4-10YR 5/4	100					Clay loam - clay	
16-18	10YR 5/4	80	10YR 7/3	20			Sandy clay loam - Clay loam	
							Not Redox Feature - Salt nodules.	

[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: Clay loam to Clay

Depth (inches): 4-16

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Polygonal cracking only 0.5 inches deep. Indicating depth of Soil Saturation is very limited.

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 Visible 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:

Surface soil cracks (B6) is a weak wetland hydrology indicator in this Situation because upland mound soils also have cracks due to clay and salt content.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ______ State: CA Sampling Point: DP2
Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R 12W
Landform (hillslope, terrace, etc.): Basin- Prehistoric lakebed Local relief (concave, convex, none): Plane Slope (%): 0-1%
Subregion (LRR): C-Mediterranean California Lat: 34.741928° Long: -118.154795° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X
Hydric Soil Present?	Yes ___	No X
Wetland Hydrology Present?	Yes X	No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
Soils have high pH which can potentially mask redox features

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: 5X5)			
1. Atriplex Conescens	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 5X5)			
1. Bromus madritensis ssp. rubens	2	Y	UPL
2. Hordeum murinum ssp. glaucum	2	Y	FACU
3. Stutzia Covillei	1	Y	FACW
4.			
5.			
6.			
7.			
8.			
= Total Cover	5		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 95 % 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:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	25	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	1	x 2 = 2
FAC species	0	x 3 = 0
FACU species	2	x 4 = 8
UPL species	7	x 5 = 35
Column Totals:	10 (A)	45 (B)

Prevalence Index = B/A = 4.5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR5/3	100					Clay loam - Clay	(Polygonal cracking)
0.5-16	10YR4/3	100					Clay loam - Clay	

[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: Clay loam to clay

Depth (inches): 0-16+

Hydric Soil Present? **Yes** ☐ **No** ☒

Remarks:

Polygonal cracking is only 0.5 inch deep. Indicating depth of Soil Saturation is very limited.

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 Visible 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:

Surface Soil Cracks (B6) is a weak wetland hydrology indicator in this Situation because upland mound Soils also have Cracks due to Clay and Salt Content.

Interdound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: WestSide Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP3

Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 1-2%

Subregion (LRR): C Lat: 34.742486° Long: -118.155401° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Soils have high pH which can mask redox features.

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: 10 X 10)			
1. Hordeum murinum	5	Y	FACU
2. Bromus madritensis ssp. rubens	4	Y	UPL
3. Schismus barbatus	1	N	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	10		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 90 % 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	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	5	x 5 =	25
Column Totals:	10 (A)		45 (B)

Prevalence Index = B/A = 4.5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR5/3						Silty clay loam – Clay loam	
2-6	10YR5/4						Clay loam – Clay	
6-16	10YR4/4						Clay loam – Clay	

[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: Clay loam to Clay
Depth (inches): 2-16

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

X 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 Visible 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 X No ___ Depth (inches): 0.5"
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 2"

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 4

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R 12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric Lake Bed Local relief (concave, convex, none): Plane Slope (%): 0-2

Subregion (LRR): C Lat: 34.743703° Long: -118.156029° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Soils have high pH which can mask redox features

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: 10 X 10)			
1. Atriplex confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 10 X 10)			
1. Bromus madritensis ssp rubens	10	Y	UPL
2. Hordeum murinum	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	15		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 85 % 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: 3 (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	5	x 4 =	20
UPL species	15	x 5 =	75
Column Totals:	20 (A)		95 (B)

Prevalence Index = B/A = 4.75

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR 5/3	100					Clay loam	(Polygonal Cracking)
0.5-12	10YR 4/3-4/4	100					Clay loam	
12-18	10YR 4/4	80	10YR 8/2	20			→ Salt	nodules that are not
							Clay loam	Redox features

[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 X

Remarks:

Polygonal Cracking is only 0.5 inch depth indicating depth of Soil Saturation is very limited.

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 Visible 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 X Depth (inches): ______

Water Table Present? Yes ______ No X Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ______

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

Remarks:

Surface cracks (B6) is a weak hydrologic indicator in this situation because upland mounds soils also have cracks due to clay and salt content.

Mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 5

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin-Prehistoric Lake Bed Local relief (concave, convex, none): Convex Slope (%): 3%

Subregion (LRR): C Lat: 34.743916° Long: -118.155211° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X
Hydric Soil Present?	Yes ______	No X
Wetland Hydrology Present?	Yes X	No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

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: 5X5)			
1. Schitzmus borbatus	25	Y	NL
2. Erodium cicutarium	15	Y	NL
3. Bromus madritensis ssp rubens	20	Y	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	60		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 40 % 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: 3 (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	60	x 5 = 300
Column Totals:	60 (A)	300 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Mound

SOIL

Sampling Point: DP5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2	10YR5/3	100					Sandy Clay loam	(polygonal Cracking)
2-16	10YR5/3	100					Sandy loam	

[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 X

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**)
- X Surface Soil Cracks (B6)
- __ Inundation Visible 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 X Depth (inches): ______

Water Table Present? Yes ______ No X Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ______

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

Remarks:

See comment regarding Surface Soil Cracks (B6) in DP1.

Amagosa Creek

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/23/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 6
Investigator(s): Brent Helm Section, Township, Range: S 33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin-Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 2%
Subregion (LRR): C Lat: 34.74336° Long: -118.154242° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: River
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X No ______
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP1

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: 5x5)			
1. Polypogon monspeliensis	20	Y	FACW
2. Epilobium densiflorum	20	Y	FACW
3. Distichlis spicata	5	Y	FAC
4. Centromadia pungens	5	Y	FAC
5.			
6.			
7.			
8.			
= Total Cover	50		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- X 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 X No ______

Remarks:

Amargosa Creek

SOIL

Sampling Point: DP 6

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2	10YR 5/3	100					Sandy loam	(Polygonal Cracking)
2-16	10YR 5/3	100					Sandy loam	

[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** X

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**)
X Surface Soil Cracks (B6)
___ Inundation Visible 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**)
X 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 X Depth (inches): ______
Water Table Present? Yes ______ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes X **No** ______

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

Remarks:

See comment on DP1

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 7

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Plane Slope (%): 0-1%

Subregion (LRR): C Lat: 34.741331° Long: -118.15461° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP1

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: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 10X10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Schismus barbatus	4	Y	NL
2. Bromus madritensis ssp. ruben	2	Y	UPL
3. Hordeum murinum ssp. glaucum	1	N	FACU
4.			
5.			
6.			
7.			
8.			
	7	= Total Cover	

Woody Vine Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 93 % 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	0	x 3 = 0
FACU species	1	x 4 = 4
UPL species	6	x 5 = 30
Column Totals:	7 (A)	34 (B)

Prevalence Index = B/A = 4.8

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-0.25	10YR 5/3	100					Clay loam - Clay	(Polygonal Cracking)
0.25-16	10YR 4/3	100					Clay loam - clay	

[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: Clay loam - Clay

Depth (inches): 0-16

Hydric Soil Present? Yes ☐ No ☒

Remarks:

See comment on DP1.

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 Visible 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:

See comment on DP1.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 8
Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin-Prehistoric lake bed Local relief ([✓ concave], convex, none): Plane / Concave Slope (%): 1%
Subregion (LRR): C Lat: 34.740899° Long: -118.151457° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP1

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: 10X10)			
1. Atriplex confertifolia	7	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	7		
Herb Stratum (Plot size: 10X10)			
1. Bromus madritensis ssp. rubens	4	Y	UPL
2. Hordeum murinum	1	N	FACU
3. Schismus barbatus	1	N	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	6		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 94 % 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	0	x 3 = 0
FACU species	1	x 4 = 4
UPL species	12	x 5 = 60
Column Totals:	13 (A)	64 (B)

Prevalence Index = B/A = 4.92

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-4	10YR5/3	100					Clay loam	Saturated to Surface
4-16	10YR 4/3	100					Clay-Clay loam	

[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: Clay -Clay loam

Depth (inches): 4-18

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
X Surface Soil Cracks (B6)
___ Inundation Visible 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 X No ___ Depth (inches): 2 inches
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4 inches

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 2/23/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 9

Investigator(s): Brent Helm and Lenord Malo Section, Township, Range: S33, T8N, and R 12W

Landform (hillslope, terrace, etc.): Basin- Prehistoric Lake bed Local relief (concave, convex, none): Plane Slope (%): 1-3%

Subregion (LRR): C Lat: 34.744482° Long: -181.156332° Datum: NAD 83

Soil Map Unit Name: PC: Pond-Oban Complex NWI classification: None

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

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
See comment on DP1.

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: 5x5)			
1. Atriplex Confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 5x5)			
1. Bromus madritensis ssp. rubra	10	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	10		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 90 % 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	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	15 (A)		75 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP9

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-1.5"	10YR 5/3	100					Clay loam	(Polygonal Cracking)
1.5-16	10YR 4/3	100					Clay-clay loam	

[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: Clay-Clay loam

Depth (inches): 1.5-16

Hydric Soil Present? Yes ___ No _X_

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)**
- _X_ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- _X_ 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 _X_ Depth (inches): ___

Water Table Present? Yes ___ No _X_ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No _X_ Depth (inches): ___

Wetland Hydrology Present? Yes _X_ No ___

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

Remarks:
mostly barren ground; however, the majority is 1' to 2' higher in elevation than area where data point was taken.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/23/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 10
Investigator(s): Brent Helm and Lenard Molo Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin-Prehistoric Lake bed Local relief (concave, convex, none): Plane / Concave Slope (%): 0-1%
Subregion (LRR): C Lat: 34.747771° Long: -181.149436° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP 1.

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: 10X10)			
1. Hordeum murinum	5	Y	FACU
2. Stutzia covillei	1	N	FACW
3. Erodium cicutarium	3	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	9		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 91 % 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	1	x 2 = 2
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	3	x 5 = 15
Column Totals:	9 (A)	37 (B)

Prevalence Index = B/A = 4.11

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 10

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-0.25	10YR 4/4	100					Clay loam	polygonal cracking
0.25-18	10YR 4/3-4/4	100					Clay loam	

[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:

See comment on DP1 Form.

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 Visible 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): 0.5 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:

Human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: State: CA Sampling Point: DP 11
Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Plane Slope (%): 0-1%
Subregion (LRR): C Lat: 34.7596880° Long: -181.163003° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Marsh, Swamp, Bog, Prairie
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
Top layer of soil has been removed to create a berm that surrounds this artificial basin
Soils have high pH which can mask redox features.

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: 10X10)			
1. Tamarix ramosissima	20	Y	NL
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 10 X10)			
1. Bromus tectorum	5	Y	NL
2. Bromus madritensis	3	N	UPL
3. Descurainia Sophia	5	Y	NL
4.			
5.			
6.			
7.			
8.			
	13 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 87 % 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: 3 (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	35	x 5 = 175
Column Totals:	35 (A)	175 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: DP 11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 6/3	100					Silt loam	
2-5	10YR6/3	100					Silt loam	
5-10	10YR 7/2	100					Silt loam	
10-18	10YR6/1	85	2.5YR4/8	15	C	M	Loamy Sand	

[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 X

Remarks:

The top layer of the Soil has been removed to create a human-made berm that surrounds the artificial basin

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 Visible 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 X Depth (inches): ____________

Water Table Present? Yes ____ No X Depth (inches): ____________

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____________

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 12
Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin-Human-made Local relief (concave, convex, none): Plane Slope (%): 1-2%
Subregion (LRR): C Lat: 34.760455° Long: -118.159334° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Compex NWI classification: Marsh, Swamp, Bog, Prairie
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

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: 10X10)			
1. Tamarix ramosissima	10	Y	NL
2. Atriplex polycarpa	20	Y	FACU
3.			
4.			
5.			
= Total Cover	30		
Herb Stratum (Plot size: 10X10)			
1. Bromus madritensis	5	Y	UPL
2. Schismus barbatus	3	Y	NL
3. Eriogonum angulosum	2	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	10		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 90 % 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: 5 (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	10	x 3 = 30
FACU species	20	x 4 = 80
UPL species	20	x 5 = 100
Column Totals:	40 (A)	210 (B)

Prevalence Index = B/A = 5.55

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 X

Remarks:

Human-made basin

SOIL

Sampling Point: DP 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					Sandy loam	
5-18	10YR 5/3	80	10YR 8/2	20			Sandy Clay loam	
								Salt nodules not Redox features

[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 X

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 Visible 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**)
X 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 X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 13

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin – Prehistoric lake bed Local relief (concave, convex, none): Plane / Concave Slope (%): 2%

Subregion (LRR): C Lat: 34.761652° Long: -118.154441° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

See comments on DP 11 Form

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: 10 X 10)			
1. Atriplex confertifolia	10	Y	NL
2. Ericameria nauseosa var. mohavensis	10	Y	NL
3.			
4.			
5.			
= Total Cover	20		
Herb Stratum (Plot size: 10 X 10)			
1. Distichlis spicata	15	Y	FAC
2. Schismus barbatus	15	Y	NL
3. Matricaria occidentalis	2	N	FACW
4. Bromus madritensis	5	N	UPL
5. Bromus tectorum	3	N	NL
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	2	x 2 = 4
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	43	x 5 = 215
Column Totals:	60 (A)	264 (B)

Prevalence Index = B/A = 4.4

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 13

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2	10YR 4/3	100					Silty loam	
2-10	10YR 4/4	100					Silty loam	
10-12	10YR 6/3	80	10YR 8/2	18			Sandy loam	
			10YR 4/3	2	C	PL		Salt nodules not a redox
12-18	10YR 6/3	70	10YR 8/2	20			Sandy loam	features

[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 X

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 Visible 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 X No ____ Depth (inches): 2
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 2

Wetland Hydrology Present? Yes X No ____

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

Remarks:

road side drainage
Ditch

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 14
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric Lake Bed Local relief (concave, convex, none): Concave Slope (%): 1-2%
Subregion (LRR): C Lat: 34.763583° Long: -118.157896° Datum: NAD 83
Soil Map Unit Name: Px: Pond - Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comments of DP1 form.

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: 10 X 10)			
1. Ericameria nauseosa var mohavensis	10	Y	NL
2. Atriplex polycarpha	10	Y	FACU
3.			
4.			
5.			
= Total Cover	20		
Herb Stratum (Plot size: 10 X 10)			
1. Distichlis Spicata	35	Y	FAC
2. Bromus madritensis	25	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	60		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 40 % 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: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	35	x 3 = 105
FACU species	0	x 4 = 0
UPL species	45	x 5 = 225
Column Totals:	80 (A)	435 (B)

Prevalence Index = B/A = 5.4

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 X

Remarks:

Roadside drainage ditch

SOIL

Sampling Point: DP14

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 5/3	100					Silty clay loam	(Polygonal cracking)
1-18	10YR 5/3	80	10YR 8/2	20			Sandy clay loam	
								Salt nodules not redox features

[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 X

Remarks:

Depth of Soil Cracking was only 1 inch thick revealing how little hydrology the Site Supports

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)**
X Surface Soil Cracks (B6)
__ Inundation Visible 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 X Depth (inches): ______
Water Table Present? Yes ____ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ____

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

Remarks:

See comments on DP1 Form.

human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: State: CA Sampling Point: DP 15
Investigator(s): Brent Helm Section, Township, Range: S28, T 8N, and R 12W
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Plane Slope (%): 1%
Subregion (LRR): C Lat: 34.765231° Long: -118.155006° Datum: NAD83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Lake, Reservoir
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
See comment on DP11 Form.

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: 10X10)			
1. Tamarix ramosissima	20	Y	NL
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 10 X 10)			
1. Bromus madritensis	10	Y	UPL
2. Amsinkia tessellata	3	N	NL
3. Descurainia sophia	2	N	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	15		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 85 % 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	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	35	x 5 = 175
Column Totals:	35 (A)	175 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: 15

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type¹	Loc²	Texture	Remarks
0-5	10YR 4/3	100					Silty loam	
5-18	10YR 4/3	100					Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: 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 Soils³:

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

³Indicators 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 Visible 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:

See comment on DP1 form.

Human-Made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 16

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin – human-made Local relief (concave, convex, none): Plane Slope (%): 1-2%

Subregion (LRR): C Lat: 34.763356° Long: -118.154152° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Lake, Reservoir

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

Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

See comment on DP 11 form.

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: 10 X 10)			
1. Ericameria nauseosa var mohavensis	5	Y	NL
2.			
3.			
4.			
5.	5		
= Total Cover			
Herb Stratum (Plot size: 10 X 10)			
1. Frankenia Salina	25	Y	FACW
2. Bromus madritensis	20	Y	UPL
3. Bromus tectorum	15	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	60		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 40 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	65 (A)		250 (B)

Prevalence Index = B/A = 3.8

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: 16

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					loamy Sand to Sandy loam	
5-10	10YR 5/3	100					Sandy loam	
10-18	10YR 5/3	80	10YR 8/2	20			Sandy loam	
								Salt nodules not redox features

[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 Visible 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:

Intermand

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ______ State: CA Sampling Point: 17
Investigator(s): Brent Helm Section, Township, Range: S2
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Plane Slope (%): 1-2%
Subregion (LRR): C Lat: 34.770963° Long: 118.156250° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See commen on DP1 form

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: 10 X 10)			
1. Atriplex confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: ______)			
1. Bromus matritensis	3	Y	UPL
2. Schismus barbatus	1	N	NL
3. Eriogonum angulosum	1	N	NL
4. Stutzia covillei	3	Y	FACW
5.			
6.			
7.			
8.			
= Total Cover	8		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 92 % 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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	3	x 2 = 6
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	10	x 5 = 50
Column Totals:	13 (A)	56 (B)

Prevalence Index = B/A = 4.3

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 X

Remarks:

Intermound

SOIL

Sampling Point: 17

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR5/3	100					Sandy loam	Polygonal Cracking
0.5-18	10YR5/3	100					Silty clay	to Silty clay loam

[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 Visible 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:

Seasonal Wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: 18

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric Lake bed Local relief (concave, convex, none): Concave Slope (%): 1%

Subregion (LRR): C Lat: 34.747659° Long: -181.152392° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____

Hydric Soil Present? Yes ? No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? ? Yes ____ No ____

Remarks:
First habitat dominated by hydrophytes, with more than surface cracks (B6) or salt crust (B11) as wetland hydrology indicators.

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: 10 X 10)			
1. Plagiobothrys leptocladus	25	Y	OBL
2. Hordeum depressum	5	N	FACW
3. Hordeum murinum	2	N	FACU
4.			
5.			
6.			
7.			
8.			
= Total Cover	32		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 68 % 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: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- X 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 X No ____

Remarks:

Seasonal Wetland

SOIL

Sampling Point: DP 18

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-10	10YR 4/3	100					clay to clay loam	Polygonal Cracking
10-18	10YR 4/3	100					clay loam to clay	√

[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:

Polygonal Cracking was up to 10 inches deep which is in the area of soil horizons that if redox features were present could be considered hydric.

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)**
X Surface Soil Cracks (B6)
___ Inundation Visible 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)

X Water Marks (B1) **(Riverine)**
___ Sediment Deposits (B2) **(Riverine)**
___ Drift Deposits (B3) **(Riverine)**
X 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 X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 19

Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W

Landform (hillslope, terrace, etc.): Basin-Prehistoric lakebed Local relief ([✓ concave], convex, none): ______ Slope (%): 2%

Subregion (LRR): C Lat: 34.747624° Long: -118.152359° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

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: 10x10)			
1. Hordeum murinum	15	Y	FACU
2. Hordeum depressum	10	Y	FACW
3. Bromus madritensis	15	Y	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	15	x 4 = 60
UPL species	15	x 5 = 75
Column Totals:	40 (A)	155 (B)

Prevalence Index = B/A = 3.875

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 X

Remarks:

mound

SOIL

Sampling Point: DP 19

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/4	100					Clay loam	

[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** X

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 Visible 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 X Depth (inches): ______

Water Table Present? Yes ______ No X Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes ______ **No** X

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

Remarks:

mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 20

Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin – Human-made Local relief (concave, convex, none): Plane Slope (%): 0-1%

Subregion (LRR): C Lat: 34.746613° Long: -118.155882° Datum: NAD83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Lake, Reservoir

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

See comment on DP 11 form.

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: 10 x 10)			
1. Frankenia salina	10	Y	FACW
2. Bromus madritensis ssp rubens	15	Y	UPL
3. Schismus barbatus	10	Y	NL
4. Hordeum murinum	5	N	FACU
5. Erodium cicutarium	5	N	NL
6.			
7.			
8.			
= Total Cover	45		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 55 % 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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	30	x 5 = 150
Column Totals:	45 (A)	190 (B)

Prevalence Index = B/A = 4.22

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 X

Remarks:

Mound

SOIL

Sampling Point: DP30

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR5/2	100					Sandy loam	
10-18	10YR5/4	90	(10YR8/2	10)			Sandy loam	Calcium Concentration *
							Salt nodules not redox features	

[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 X

Remarks: * Not redox features

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 Visible 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 X Depth (inches): ____________
Water Table Present? Yes ______ No X Depth (inches): ____________
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ____________

Wetland Hydrology Present? Yes ______ No X

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

Remarks:

human-made basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 21
Investigator(s): Brent Helm Section, Township, Range: S 21, T 8N, and R 12W
Landform (hillslope, terrace, etc.): Basin-Artificial Duck Pond Local relief (concave, convex, none): Plane Slope (%): <1%
Subregion (LRR): C Lat: 34.767071° Long: -118.153641° Datum: NAD83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Marsh, Swamp, Bog, prairie
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

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: 10 X 10)			
1. Tamarix ramosissima	4	Y	NL
2.			
3.			
4.			
5.			
	4 = Total Cover		
Herb Stratum (Plot size: 10 X 10)			
1. Erodium cicutarium	30	Y	NL
2. Schismus barbatus	10	Y	NL
3. Bromus madritensis ssp. rubens	5	N	UPL
4.			
5.			
6.			
7.			
8.			
	45 = 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: 3 (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	49	x 5 = 245
Column Totals:	49 (A)	245 (B)

Prevalence Index = B/A = 5.0

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 X

Remarks:

Boot Pond
Human-made basin

SOIL

Sampling Point: DP 21

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 5/2	100					Silty loam	with organics
4-18	2.5Y 5/2	85	10YR 8/2	15			Sandy loam	with calcium nodules → not redox features

[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 X

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 Visible 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**)
X 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 X Depth (inches): ______
Water Table Present? Yes ___ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ______

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Seasonal Wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 22
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - human-made basin Local relief ([✓ concave], convex, none): Concave Slope (%): 1%
Subregion (LRR): C Lat: 34.776053° Long: -118.153249° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Lake, Reservoir
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X No ______
Hydric Soil Present? Yes ? No ______
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? ? Yes ______ No ______

Remarks:

See Comments on DP11 form.

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: 10X10)			
1. Distichilis Spicata	30		FAC
2. Hordeum depressum	10		FAC
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

X 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 X No ______

Remarks:

Seasonal Wetland

SOIL

Sampling Point: DP22

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 5/4	100						
2-18	2.5Y 4/4	100						

[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:

Soils are olive colored but not yet gleyed.

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 Visible 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 X Depth (inches): ____________
Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____________

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 23
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Convex Slope (%): 2%
Subregion (LRR): C Lat: 34.776652° Long: -118.153237° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: ______
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

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: 10 X 10)			
1. Schismus barbatus	35	Y	NL
2. Centromadia pungens	15	N	FAC
3. Bromus madritensis	30	Y	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	80		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 20 % 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 (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	65	x 5 = 325
Column Totals:	80 (A)	370 (B)

Prevalence Index = B/A = 4.6

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 X

Remarks:

Mound

SOIL

Sampling Point: DP 23

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/4	100					Sady loam	

[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 X

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 Visible 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 X Depth (inches): ______________
Water Table Present? Yes ______ No X Depth (inches): ______________
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______________

Wetland Hydrology Present? Yes ______ No X

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

Remarks:

human-made basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 21

Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin-Artificial Duck Pond Local relief (concave, convex, none): Plane Slope (%): <1%

Subregion (LRR): C Lat: 34.767071° Long: -118.153641° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Marsh, Swamp, Bog, prairie

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

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: 10 X 10)			
1. Tamarix ramosissima	4	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	4		
Herb Stratum (Plot size: 10 X 10)			
1. Erodium cicutarium	30	Y	NL
2. Schismus barbatus	10	Y	NL
3. Bromus madritensis ssp. rubens	5	N	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	45		
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: 3 (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	49	x 5 =	245
Column Totals:	49 (A)		245 (B)

Prevalence Index = B/A = 5.0

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 X

Remarks:

Boot Pond
Human-made basin

SOIL

Sampling Point: DP 21

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 5/2	100					Silty loam	with organics
4-18	2.5Y 5/2	85	10YR 8/2	15			Sandy loam	with calcium nodules → not redox features

[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 X

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 Visible 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 X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Seasonal Wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 22

Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin – human-made basin Local relief ([✓ concave], convex, none): Concave Slope (%): 1%

Subregion (LRR): C Lat: 34.776053° Long: -118.153249° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Lake, Reservoir

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X No ______

Hydric Soil Present? Yes ? No ______

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? ? **Yes** ______ **No** ______

Remarks:

See Comments on DP11 Form.

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: 10X10)			
1. Distichlis Spicata	30		FAC
2. Hordeum depressum	10		FAC
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- X 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 X No ______

Remarks:

Seasonal Wetland

SOIL

Sampling Point: DP22

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 5/4	100						
2-18	2.5Y 4/4	100						

[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:

Soils are olive colored but not yet gleyed.

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**)
X Surface Soil Cracks (B6)
___ Inundation Visible 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 X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 23

Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W

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

Subregion (LRR): C Lat: 34.776052° Long: -118.153237° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: ______

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

Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X
Hydric Soil Present?	Yes ___	No X
Wetland Hydrology Present?	Yes ___	No X

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

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: 10 X 10)			
1. Schismus barbatus	35	Y	NL
2. Centromadia pungens	15	N	FAC
3. Bromus madritensis	30	Y	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	80		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 20 % 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 (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	65	x 5 =	325
Column Totals:	80 (A)		370 (B)

Prevalence Index = B/A = 4.6

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 X

Remarks:

Mound

SOIL

Sampling Point: DP 23

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-16	10YR 5/4	100					Sandy loam	

[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 X

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 Visible 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 X Depth (inches): ______
Water Table Present? Yes ___ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ______

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Westside Annexation and Specific Plan Project
Delineation of Waters of the State

April 2025

Prepared By

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Certification

The undersigned certify - under penalty of law, that they have personally examined and are familiar with the information submitted in this document and all attachments and that, based on an inquiry of those individuals immediately responsible for obtaining the information, believe that the information is true, accurate, and complete. The undersigned are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

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TABLES

APPENDICES

COMMON ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
APT	Antecedent Precipitation Tool
CDFW	California Department of Fish and Wildlife
CDFG	California Department of Fish and Game
CFGC	California Fish and Game Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
CWC	California Water Code
°F	degrees Fahrenheit
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning Systems
HUC	Hydrologic Unit Code
KMZ	Keyhole Markup Language Zipped
LRSs	Lake, River, or Streambed subject to Section 1600 of the California Fish and Game Code
MESA	Mapping Episodic Stream Activity Field Guide
NOREAS	NOREAS Inc.
NRCS	National Resources Conservation Service
NTCHS	National Technical Committee for Hydric Soils
NWI	National Wetlands Inventory
PS	Project Site
RWQCB	Regional Water Quality Control Board
SSURGO	Soil Survey Geographic Database USDA United States Department of Agriculture
SWRCB	State Water Resources Control Board
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTS	Waters of the State
WDR	Waste Discharge Requirements

1.0 INTRODUCTION AND SUMMARY OF FINDINGS

This Waters of the State (WOTS) delineation evaluates potential jurisdictional features within Planning Areas 2, 4, 6, 7, and 8 of the Westside Annexation and Specific Plan Project (Project), located in unincorporated Los Angeles County, California. The Project falls within Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, and 29, 32, 33, 34, Township 8 North, Range 12 West, and San Bernadino Meridian on the U.S. Geological Survey's (USGS) Lancaster West and Rosamond, California 7.5-minute topographic quadrangle maps. This delineation was conducted in accordance with Section 1600 (et seq.) of the California Fish and Game Code (CFGC) and Section 13260 of the California Water Code (CWC), which regulate streams, wetlands, and other aquatic features under state jurisdiction.

The Project Site (PS) is part of a larger 7,153-acre area proposed for annexation into the City of Lancaster and is within the boundaries of the proposed North Lancaster Industrial Specific Plan (Specific Plan). The Specific Plan envisions the development of 38.5 million square feet of industrial uses, with a five-year buildout planned for Planning Areas 2, 4, 6, 7, and 8 (hereafter, these Planning Areas shall be referred to as the PS, Appendix A, Figures 1 and 2).

As shown within Appendix A, Figure 2, the PS consists of distinct northern and southern sections. This delineation has been completed using data acquired from current and historic imagery, hydrologic databases, analytic tools, physical on the ground analyses and measurements, and a review of the regulations, manuals, and guidance documentation created to identify features regulated under the aforementioned CFGC and CWC sections. A description of mapped WOTS within the PS and a discussion of their characteristics, and regulatory status is provided herein. This delineation was conducted following provisions of the CFGC, as well as guidance created by California Department of Fish and Wildlife (CDFW) and the State Water Resources Control Board (SWRCB 2004) and the Regional Water Quality Control Board (RWQCB) (together referred to as "Water Boards").

In February and March 2025 (i.e., on February 22nd and 23rd, and March 5th, 8th, 9th, 10th and 11th), subject matter experts surveyed the PS and its adjacent watershed for features potentially subject to CDFW and State Water Board jurisdiction, including streambeds, riparian corridors, and wetlands, using standard indicators of hydrology, soils, and vegetation. Historic and current aerial photography of the PS were also reviewed - prior to, and during the field assessments. Aerial photography was informative with deference to the state and function of land resources in both the present, and historic context. The United States Environmental Protection Agency (USEPA) WATERS GeoViewer tool also provided access to spatial data sets - such as interactive upstream and downstream search capabilities, to assist in determining the jurisdictional status of resources detected within the region. Additionally, the Federal Emergency Management Agency (FEMA) flood zone was reviewed, and the National Wetland Inventory (NWI) which is maintained by the U.S. Fish and Wildlife Service (USFWS). This was all done to support the identification of potential WOTS within the PS.

This document identifies four distinct areas within the PS that qualify as WOTS based on their geomorphic, hydrologic, soil and vegetative characteristics. These four areas (Appendix A, Figure 3 - Features 1, 2, 3 and 4) are subject to regulation under CFGC Section 1600 and CWC Section 13260 because they exhibit at least one of the following:

1. Well-Defined Bed, Bank, and Channel
    a. Amargosa Creek (Feature 1), is a historically modified ephemeral drainage, is the only significant watercourse within the PS.
    b. It has a clearly defined bed and banks, as well as localized dominance of hydrophytic vegetation in some areas.

2. Satisfaction of the State Wetland Definition
    a. Three isolated features (2, 3 and 4) within the PS exhibit a dominance of hydrophytic vegetation, possible hydric soils, and wetland hydrology indicators.
    b. These areas meet the minimum criteria for wetlands, but their extent is small and spatially isolated.
3. Provision of Riparian or Aquatic Habitat
    a. All four features included depressions that experience adequate – albeit short lived, hydrology suitable to support aquatic life, riparian vegetation, or potentially stream-dependent terrestrial wildlife resources.

The identification of these signatures as WOTS reflects a combination of natural hydrologic processes, historic land use modifications, and the PS's position within the Antelope Valley watershed. While the PS is predominantly upland, these four isolated features remain subject to state regulatory oversight. This delineation represents NOREAS Inc.'s best professional judgment, utilizing the most current regulatory policies, scientific methods, and technical guidance from CDFW and RWQCB. Appendix A, Figure 3, provides a spatial representation of these four delineated WOTS within the PS.

2.0 REGULATORY SETTING

2.1 Regulatory Review

The SWRQB and each of its nine Regional Water Quality Control Boards (RWQCB) regulate the discharge of waste (dredged or fill material) into WOTS. WOTS are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (CWC 13050[e]).

When a project could impact waters outside of federal jurisdiction, the RWQCB has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act (CWA) Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

State Wetland Definition

The SWRQB Definition and Procedures define an area as wetland as follows:

> *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.*

The following wetlands are WOTS:

1. *Natural wetlands;*

2. *Wetlands created by modification of a surface water of the state*[1]*; and*

3. *Artificial wetlands*[2] *that meet any of the following criteria:*

    a. Approved by an agency as compensatory mitigation for impacts to other WOTS, except where the approving agency explicitly identifies the mitigation as being of limited duration;

    b. Specifically identified in a water quality control plan as a wetland or other water of the state;

    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or

    d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not WOTS unless they also satisfy the criteria set forth in 2, 3a, or 3b):
        i. Industrial or municipal wastewater treatment or disposal,
        ii. Settling of sediment,

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[1] “Created by modification of a surface water of the state” means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

[2] Artificial wetlands are wetlands that result from human activity.

iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,
viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not WOTS. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

2.1.1 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the CFGC, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. In its most general sense, CFGC Sections 1600 (et seq.) establishes a fee-based process to safeguard that projects conducted in and around lakes, rivers, or streams do not adversely impact fish, aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife resources. Or, when adverse impacts cannot be avoided, compliance with the aforesaid CFGC Sections safeguards that adequate mitigation and/or compensation is provided.

While there is no definition for the term lake in the CFGC or associated regulations, the term stream, which includes creeks and rivers, is defined within Title 14, California Code of Regulations, Section 1.72:

- "A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and ***supports fish or other aquatic life***. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation." (Emphasis added.)

Sections 1600-1602 of the California Fish and Game Code Definition

1600. The Legislature finds and declares that the protection and conservation of the fish and wildlife resources of this state are of utmost public interest. Fish and wildlife are the property of the people and provide a major contribution to the economy of the state, as well as providing a significant part of the people's food supply; therefore, their conservation is a proper responsibility of the state.

This chapter is enacted to provide conservation for these resources.

1601. The following definitions apply to this chapter:

(a) "Agreement" means a lake or streambed alteration agreement.
(b) "Day" means calendar day.
(c) "Emergency" has the same definition as in Section 21060.3 of the Public Resources Code.
(d) "Entity" means any person, state or local governmental agency, or public utility that is subject to this chapter.

1602. (a) An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement ***where it may pass into any river, stream, or lake***, unless all of the following occur:

(1) The department receives written notification regarding the activity in the manner prescribed by the department. The notification shall include, but is not limited to, all of the following:

(A) A detailed description of the project's location and a map.

(B) The name, if any, of the river, stream, or lake affected.

(C) A detailed project description, including, but not limited to, construction plans and drawings, if applicable.

(D) A copy of any document prepared pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(E) A copy of any other applicable local, state, or federal permit or agreement already issued.

(F) Any other information required by the department.

(2) The department determines the notification is complete in accordance with Chapter 4.5 (commencing with Section 65920) of Division 1 of Title 7 of the Government Code, irrespective of whether the activity constitutes a development project for the purposes of that chapter.

(3) The entity pays the applicable fees, pursuant to Section 1609.

(4) One of the following occurs:

(A)

(i) The department informs the entity, in writing, that the activity will not substantially adversely affect an existing fish or wildlife resource, and that the entity may commence the activity without an agreement, if the entity conducts the activity as described in the notification, including any measures in the notification that are intended to protect fish and wildlife resources.

(ii) Each region of the department shall log the notifications of activities where no agreement is required. The log shall list the date the notification was received by the department, a brief description of the proposed activity, and the location of the activity. Each item shall remain on the log for one year. Upon written request by any person, a regional office shall send the log to that person monthly for one year. A request made pursuant to this clause may be renewed annually.

(B) The department determines that the activity may substantially adversely affect an existing fish or wildlife resource and issues a final agreement to the entity that includes reasonable measures necessary to protect the resource, and the entity conducts the activity in accordance with the agreement.

(C) A panel of arbitrators issues a final agreement to the entity in accordance with subdivision (b) of Section 1603, and the entity conducts the activity in accordance with the agreement.

(D) The department does not issue a draft agreement to the entity within 60 days from the date notification is complete, and the entity conducts the activity as described in the notification, including any measures in the notification that are intended to protect fish and wildlife resources.

(b) (1) If an activity involves the routine maintenance and operation of water supply, drainage, flood control, or waste treatment and disposal facilities, notice to and agreement with the department shall not be required after the initial notification and agreement, unless the department determines either of the following:

(A) The work described in the agreement has substantially changed.

(B) Conditions affecting fish and wildlife resources have substantially changed, and those resources are adversely affected by the activity conducted under the agreement.

(2) This subdivision applies only if notice to, and agreement with, the department was attained prior to January 1, 1977, and the department has been provided a copy of the agreement or other proof of the existence of the agreement that satisfies the department, if requested.

(c) It is unlawful for any person to violate this chapter.

3.0 METHODS

Documentation relevant to the PS and surrounding area was reviewed using the methods below.

3.1 Literature Reviews

Prior to conducting fieldwork, the following information was reviewed to determine watershed characteristics, locations and types of aquatic resources that may be present within the PS:

- Natural Resource Conservation Service (NRCS), Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2025a) (Appendix A, Figure 4);
- NRCSWatershed Boundary Dataset (USDA-NRCS 2025b) (Appendix A, Figure 5);
- FEMA 2025 (Appendix A, Figure 6);
- NWI maintained by the US Fish and Wildlife Service (USFWS 2025) (Appendix A, Figure 7);
- *Lancaster West and Rosamond*, California, USGS 7.5-minute Topographic Map (USGS 1987);
- 2025 color aerial photographs (Bing Maps 2025);
- Google Earth version 5.2.1.1588 (March 2025);
- Agricultural Applied Climate Information System's precipitation data and seasonal temperature information (AgACIS 2024);
- USACE Navigable Waterways in the Los Angeles District (USACE 2025b);
- FrameFinder (University of California 2025);
- USEPA Enviromapper for Water (USEPA 2025a);
- USEPA WATERS GeoViewer Tool (epa.maps.arcgis.com/apps/webappviewer) (2025b) (Appendix A, Figures 8 and 9);
- USEPA Antecedent Precipitation Tool (APT) (2025c) (epa.gov/wotus/antecedent-precipitation-tool-apt); and
- Western Regional Climate Center Data California Weather Station (WRCC 2025).

The above documents were reviewed. Subject matter experts conducted field assessments of the PS and its surrounding watershed in February and March 2025 to evaluate the presence of Waters of the State—including streambeds, riparian habitats, and wetlands—based on indicators such as hydrophytic vegetation, hydric soils, and evidence of surface hydrology. The intent of this assessment was to determine where water may flow, or may not flow - or terminate.

3.1.1 Aerial Photography

Historic and current aerial photography of the PS were reviewed prior to and during the field assessments. Aerial photography was used to view land resources in both the present and historic context. Inundation and vegetative signatures on aerial images can imply the presence - or absence, of lakes, rivers, or streambed systems within a discrete location.

3.1.2 U.S. Fish and Wildlife Service National Wetland Inventory Data and Environmental Protection Agency WATERS GeoViewer

The USEPA WATERS GeoViewer tool provided access to spatial data sets (Appendix A, Figures 8 and 9) - such as interactive Upstream/Downstream search capabilities, and interactive watersheds, to assist in determining the jurisdictional status of resources detected within the PS (epa.maps.arcgis.com/apps/webappviewer). Additionally, the FEMA flood zone is depicted in Appendix A, Figure 6. Furthermore, the NWI – which is maintained by the USFWS, was reviewed to support the identification of potential jurisdictional resources within the PS. However, this database (i.e., the NWI) is not used for regulatory jurisdictional review, and the PS has not been ground-truthed by NWI, as it depicts marsh habitat where none exists.

3.1.3 Antecedent Precipitation Tool

The APT was also utilized to determine whether field observations are representative of typical climatic conditions (i.e., those that have been experienced over the past thirty years). This tool is informative when assessing whether certain field conditions are observed during typical, as opposed to atypical rainfall cycles. The APT queries data from weather stations that are located within a 30-mile radius from the Project.

3.1.4 Topography

USGS topographic maps were reviewed as well (Appendix A, Figure 1). These maps tend to illustrate elevation contours, drainage patterns, and hydrography within the PS. USGS 7.5-Minute Topographic Quadrangle maps "*Lancaster West and Rosamond*" were evaluated to facilitate identification of potential drainage features within the PS - as indicated from topographic changes, blue-line features, or visible drainage patterns in order to characterized features.

3.2 Procedures and Field Data Collection Techniques

The delineation defined areas within the PS subject to regulation under Section 1600 (et seq.) of the CFGC and Section 13260 of the CWC. Potential WOTS were delineated in the field with a handheld Global Positioning System (GPS) receiver. The surface area of each feature was then calculated within a Geographic Information System (GIS) to determine total jurisdictional area within the PS. KMZ (Keyhole Markup Language Zipped) files and GIS/ESRI shapefiles are available for all mapped resources, upon request, as aquatic resource boundaries were not permanently flagged or demarked within the PS at the time of delineation in 2025.

The field delineation for WOTS was conducted within the PS using a combination of on the ground quantification, and remote sensing with on the ground verification via pedestrian surveys on February 22nd and 23rd, and March 5th, 8th, 9th, 10th and 11th of 2025. With respect to suspected WOTS; they were assessed in the field for the presence of definable streambeds (i.e., having a bed, bank, and channel) and any associated riparian habitat. Streambeds and suspected riparian habitats were also evaluated using the CFGC Section 1600 (et seq.), direction described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG 2025) and the recommendations detailed within the Mesa Field Guide: Mapping Episodic Stream Activity (MESA) (Brady and Vyverberg 2014).

Accordingly, CFGC Section 1600 (et seq.) jurisdiction is presumed to extend to the following features:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects, and riparian vegetation will be treated like natural waterways.
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated as natural waterways.
- Artificial waterways without the attributes of natural waterways should generally not be subject to CFGC provisions.

In this context, WOTS include rivers, streams, lakes, and riparian vegetation associated with these features. A dominance of hydrophytic vegetation, where associated with a stream channel, was used to determine regulated riparian areas, where appropriate. Streambeds and other waterways were also delineated using the Cowan and Wallace classification system— a framework used to classify environments based on observed species distribution patterns —and environmental variables such as elevation, climate, and vegetation. Additionally, WOTS were delineated based on watercourse characteristics present in the field, which include surface flow, sediment transportation and sorting, physical indicators of channel forms, channel morphology, and riparian habitat associated with a streambed**.**

4.0 RESULTS

The Antelope Valley, located in northern Los Angeles County, California, has undergone significant ecological transformations over millennia. During the Pleistocene epoch, this region was submerged under Lake Thompson, a vast body of water covering approximately 950 square kilometers. This lake extended over present-day areas, including Rogers Dry Lake, Rosamond Dry Lake, and Buckhorn Dry Lake. The cooler, wetter climate of that era supported extensive pluvial lakes surrounded by lush marshlands.

Around 10,000 years ago, during the Early Holocene, a significant climatic shift brought warmer and drier conditions, leading to the desiccation of these wetlands. As Lake Thompson evaporated, soluble salts accumulated on the exposed lakebed, creating a highly alkaline substrate. This environment was initially colonized by hydrophytic (water-loving) and halophytic (salt-tolerant) plant species. Over time, wind-driven sediments accumulated around these vegetation clusters, forming elevated mounds that stabilized the landscape. Gradually transforming the once-open lakebed into an upland desert shrubland ecosystem. This transition reflects the dynamic interplay between climatic factors and biological processes in shaping the region's current arid landscape.

Presently, the PS is characterized by a predominantly upland desert ecosystem, a result of thousands of years of aridification following the recession of Lake Thompson. While remnants of ancient lake sediments persist beneath the surface, the PS is largely established as an upland desert system. The PS includes Amargosa Creek in the southwestern area. Amargosa Creek is an ephemeral drainage that historically conveyed flows into the Rosamond Dry Lake bed. The human-made ponds that were pumped full with ground water attracted water fowl as well as the seasonal water in Rosamond Lake in the early 20th century.

Several duck hunting clubs, such as the Oasis Duck Club, the Crystal Wells Gun Club, and the Piute Gun Club, were established in the Lancaster area during the 1930s. These clubs actively modified the landscape within and around the PS to create hunting opportunities by constructing dikes, holding ponds, hunting blinds, and filled by pumping groundwater. They effectively transformed notable portions of the PS into a recreational hub for hunters, and vacationers alike. According to the USGS 1933 topographic map, the duck ponds in the northern terminus of the PS were labeled Hoffman Club, and the southern ponds - north of Avenue E were labeled Clarke Club. Both clubs were added onto the USGS 1947 topographic map, including the ponds south of Avenue E (unlabeled). The last additions occurred prior to 1973, with the deep boat pond and small section between both clubs (USGS 1987). The number of ponds inundated seem to decrease through time, after the 1980s' until the 2000s' where they are all completely fallowed.

Several factors contributed to the decline of these duck hunting ponds over the past half-century:

- Land Acquisition by the Government. The U.S. government acquired large tracts of land in the Antelope Valley for military purposes, including areas occupied by duck clubs. This acquisition led to the dissolution of clubs like the Piute Gun Club in 1961.
- Changes in Water Management. As Lancaster's population grew, water management priorities shifted. Artificial ponds in the area were historically maintained by pumping groundwater. However, continued pumping caused groundwater levels to drop, making it more expensive and energy-intensive to access. Rising electricity costs further compounded the issue, and ultimately, water resources were redirected to meet growing urban demands. As a result, maintaining these ponds became less feasible and was no longer prioritized.

- Shifts in Recreational Trends. Over time, recreational preferences changed, leading to a decline in the popularity of local duck hunting.

Today, remnants of these once-thriving duck hunting ponds can still be observed in the PS. Visible infrastructure such as old berms, docks, and water control systems serve as historical markers of the area's past recreational use. The PS remains a relatively flat, well-drained upland landscape with limited water retention potential. Subtle mound-intermound topography, shaped over time by natural geologic and climatic processes, characterizes the area. Despite its undulating surfaces, the PS exhibits rapid rainwater infiltration—meaning precipitation is quickly absorbed into the well-drained soils. Any ponding that does occur is shallow, short-lived, and generally dissipates fast. These conditions are not sustained long enough to create anaerobic soil environments or develop hydric soil indicators. Groundwater is too deep to influence surface conditions, reinforcing the site's well-drained nature. This historical and ecological context is crucial for understanding the current state of the PS.

4.1 PS Geology and Soils

The PS is underlain by Quaternary deposits from the Pliocene to Holocene epochs, primarily comprising non-marine alluvium, lake, playa, and terrace deposits (Jennings et al. 1977). According to the NRCS SoilWeb database (Soil Survey, NRCS, USDA, accessed February 2025), the predominant soil mapping unit within the PS is the Pond-Oban complex (457884). Despite its name, the Pond soil series does not occur in ponded areas but was named after the town of Pond in Kern County, California, where this soil type was first identified. Similarly, the Oban soil series was named after the nearby landmark neighborhood of Oban, located adjacent to the northeast corner of the PS.

It's important to note that the Soil Survey for the Lancaster Area, California, from which SoilWeb data is derived, is nearly a century old and contains outdated information. For instance, it mentions a "high-water table," which is inconsistent with current conditions. Additionally, there are no soil map units for the Pond Soil Series within Kern County, and the type locality for this series is now mapped by the NRCS as Calfax clay loam, saline, 0 to 2 percent slopes, MLRA 17. Furthermore, the Pond-Oban complex map unit lacks components or inclusions of geographically associated soils listed in the official series descriptions, such as Chino, Fresno, Lewis, Traver, Waukena, and Hacienda.

During this investigation, a total of seven (7) chemical analysis soil sample points were collected and twenty-three (23) soil pits were hand excavated within the PS (Appendix A, Figure 3, Appendix B, and Appendix D). Chemical analysis of the seven samples indicated - as expected, that the soils onsite are alkaline (Appendix C, Table 1). With the exception of soil sample G – obtained outside the PS (which would be considered strongly alkaline [pH of 8.5 – 19.0]), all of the soils sampled for pH are considered very strongly alkaline (pH > 9.0).

The excavated soil pits exhibited remarkable consistency (Appendices B and D), with minor variations in the depth and texture of the A horizon, generally aligning with NRCS soil component descriptions (e.g., fine sandy loam within the A Horizon's 0 to 4 inches). The topsoil predominantly consisted of fine sandy loam and silty clay loam, underlain by a mineral layer. Most notably, almost all soils within the PS displayed polygonal soil cracking in intermound areas, occasionally forming hexagonal patterns, while mound soils exhibited T-shaped or Y-shaped cracks.

Research indicates that such polygonal (hexagonal) cracking results from natural desiccation processes influenced by drying and shrinking cycles, rather than sustained wet conditions (Goehring and Morris 2014). Over time, annealing processes-gradual changes due to repeated drying and contraction lead to increasingly complex hexagonal crack patterns. Alkaline soil conditions significantly contribute to the formation of these cracks, meaning areas with higher soil pH are more prone to this type of cracking (Zhang et al., 2023). Therefore, the presence of these cracks within the PS is attributed to natural desiccation cycles, a function of climate, soil chemistry, and drying cycles, rather than persistent water saturation (Appendix B). Consequently, their presence alone does not indicate sustained hydrology, nor serve as an indicator of hydric soils.

While the polygonal cracks were more defined and deeper (up to 2 inches) in the intermound areas compared to the mound areas, redox features were notably absent in most intermound areas, except for soil pits 18 and 22 (Appendix A, Figure 3). This absence suggests that the dominant soils within the PS only experience short-duration seasonal ponding in low-lying depressions following precipitation events. The isolated presence of redoximorphic features (soil pits 18) and olive-colored soils (soil pit 22) in the aforementioned samples, indicates that periodic anaerobic conditions occur only in these specific locations - serving as potential hydric soil indicators. Both of these soil pits occurred in human-made duck ponds that historically were artificially inundated continuously for several months out of the year. In summary, the vast majority of soils within the PS are moderately well-drained, with depths greater than 6.5 feet to a restrictive layer or groundwater. To that end, potential hydric soils were only identified in the two specific soil pits mentioned above.

The key take aways are as follows:

- Deeper, more prominent soil cracks were observed in the low-lying intermound areas of the PS, indicating drying and shrinkage. However, clear indicators of prolonged soil saturation—such as redoximorphic features, including rust-colored mottling or gray soils—were only present around the artificially flooded duck ponds. These signatures were absent in the more natural intermound areas, suggesting they do not retain water long enough to develop hydric soil characteristics.
- Only two specific soil pits within the PS showed signs of occasional wetness that could qualify as hydric soils, and these were located in historic duck ponds that were inundated with pumped ground water.
- Overall, the majority of the PS is well-drained and doesn't pond water for long enough - or often enough, to satisfy the official criteria for hydric soils. Therefore, these soils would not be considered hydric, and do not support species adapted for life in anerobic soil conditions.

According to the 2012 National Technical Committee for Hydric Soils (NTCHS[3]) - a committee established by the USDA to provide technical guidance on identifying and classifying hydric soils (i.e., soils formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil), mandatory hydric soil criterion number 3 asserts the following:

- "soils frequently ponded for more than 7 consecutive days during the growing season may qualify as hydric, but only if they also show key field indicators."
  - These indicators, which are essential for confirming the hydric nature of the soil, include:
    - Redox Features. These are color patterns in the soil profile that indicate the presence of reduced iron compounds, a sign of anaerobic conditions.

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[3] The NTCHS is responsible for: Developing the official definition of hydric soils; Publishing the "Hydric Soils of the United States" list; Providing and updating the "Field Indicators of Hydric Soils;" and supporting the scientific framework used in wetland delineations and regulatory decisions under the Clean Water Act.

    - Reduced Soil Colors: These are colors that are indicative of the lack of oxygen in the soil, such as greys, blues, or greens.
- “Frequently” means ponding must occur in more than 50% of years, or at least 50 out of 100 years.
- Based on 41 years of site-specific rainfall data and field observations, the growing season (March –November) at the PS receives limited rainfall, and lacks the sustained inundation required to meet this standard (Appendix C, Table 2).
- With the exception of two isolated soil pits, soils across the PS do not exhibit the saturation indicators or evidence of anaerobic conditions that would support classification as hydric soils. Therefore, the majority of soils at the PS are moderately well-drained and unlikely to pond frequently or long enough to meet hydric soil criteria under NTCHS guidelines.

4.2 PS Hydrology

The PS exhibits a subtle mound-intermound topography, characterized by small, elevated mounds rising 0.5 to 2 feet above the surrounding terrain. The origins of such mounded landscapes, akin to Mima mounds, have been the subject of various theories, including

- Fossorial Rodent Activity. Some researchers suggest that burrowing animals, such as pocket gophers, have contributed to mound formation through their soil displacement activities.
- Seismic Activity. Another hypothesis proposes that intense ground shaking from major earthquakes could lead to the formation of these mounds.
- Shrink-Swell Processes. The expansion and contraction of finer textured materials present in soils during wet and dry cycles may result in the development of mound and depression patterns, similar to Giglia formations (Hough-Snee et al 2011).

In the context of the PS, the most plausible explanation involves the accumulation of wind-blown (aeolian) sediments around vegetation clumps, leading to the gradual build-up of mounds over time. Rainfall on this undulating surface is differentially intercepted by mounds and intermounds. Mounds, enriched with organic matter, possess more porous soils, facilitating greater water absorption. In contrast, intermound areas, often composed of finer-textured materials, may experience very shallow and short-lived ponding following precipitation events. Additionally, intermounds receive some hydraulic inputs from adjacent mounds through overland flow or toe-slope seepage. However, with groundwater depths exceeding 6.5 feet, there is minimal influence on surface ponding within the PS (SoilWeb 2025).

According to the NRCS water balance for Oban soils, less than 0.3 inches of surplus water is available for ponding, primarily occurring in February (Appendix C). Similarly, Pond soils exhibit less than 0.2 inches of surplus water, typically in March. Given that February is a cold month in Lancaster, soil saturation or ponding may occasionally occur during the non-growing season. Small ponded areas (mostly vehicular ruts), were observed during the March 9, 2025 field visit. Amargosa Creek traverses the PS and has been subject to channelization in its northern portion, as evidenced by rows of excavated soil along its banks. Beyond the PS, this ephemeral creek continues northeast but is diverted into a human-made basin before reaching Rosamond Dry Lake.

During the delineation field work on February 22 and 23, 2025, nine days after a storm event that delivered approximately 0.75 inches of rainfall small areas of ponding water (less than 3-inches deep) were observed in the lowest topographical depressions, generally within deep vehicle ruts. However, the majority of intermound areas remained dry. Wetland hydrology indicators, such as surface soil cracks and salt crusts, were observed equally across mounds, and intermound areas (Appendix B).

Consequently, additional primary or secondary indicators are necessary to infer wetland hydrology, particularly in concave landscape positions. Polygonal soil cracking was more pronounced in intermound areas, occasionally displaying hexagonal patterns, while mound soils exhibited T-shaped or Y-shaped cracks. Research indicates that hexagonal cracking results from processes similar to annealing, where repeated drying and contraction cycles lead to increasingly complex patterns. Additionally, alkaline soil conditions significantly contribute to the formation of these cracks.

The PS is situated within the Antelope-Fremont Valleys Hydrologic Unit (Hydrologic Unit Code 18090206, Appendix A, Figure 4). Features depicted on the NWI map align with treatment ponds at the offsite water reclamation facility to the north, and other apparent human-made duck ponds within the PS (Appendix A, Figure 5). While the NWI is often used for desk top review, it is based on satellite imagery, and does not appear to be a very accurate data source in the desert. For example, the NWI often picks up dirt roads in desert habitats as riverine. Therefore, ground truthing is very important, and it should not be used jurisdictional determinations. The FEMA (2025) flood zone map is depicted in Appendix A, Figure 6.

Lancaster's climate is characterized by hot, arid summers and cold, partly cloudy winters. Annual temperatures typically range from 33 degrees Fahrenheit (°F) to 97°F. The hot season spans approximately 3.2 months, from June to September, peaking in July with average highs of 96°F and lows of 68°F. The cool season lasts about 3.4 months, from November to March, with December being the coldest month, averaging lows of 33°F and highs of 58°F. Annual precipitation averages 9.6 inches, primarily as rain with occasional snow. The growing season, defined as the longest continuous period of non-freezing temperatures (≥32°F), typically lasts around 7.9 months (242 days), from approximately March to November. Wetland hydrology, characterized by continuous or periodic inundation or soil saturation to the surface for 7% or more of the growing season, equates to a minimum of 17 days (7% of 242 days).

Based on the growing season for Lancaster area and the average rainfall (Appendix C, Table 2) it is highly unlikely that ponding or soil saturation occurs within the intermound areas for at least 17 consecutive days, given the scant rainfall that falls in the second half of March through September in this region. Lancaster's semi-arid climate is marked by hot, dry summers and cold winters with minimal precipitation. Average annual rainfall is just 9.6 inches, and nearly all of that occurs outside the growing season. The growing season—defined as the period when daily minimum temperatures remain above freezing—typically lasts from March through November, or about 242 days. To meet wetland hydrology criteria, the PS must experience continuous - or periodic inundation or saturation at the surface for at least 7% of the growing season, or approximately 17 consecutive days. However, this threshold is not met at the PS.

1. Rainfall During the Growing Season Is Insufficient.
    a. Based on 41 years of rainfall records (Appendix C, Table 2), the PS receives very little precipitation from mid-March through September.
    b. This makes it highly improbable for ponding or surface saturation to persist for 17 consecutive days during the growing season.

2. Evapotranspiration Far Exceeds Rainfall.
    a. Appendix C, Table 3 clearly shows that in every month of the year, average evapotranspiration exceeds rainfall.
    b. So, for ponding to occur, rainfall would have to exceed evapotranspiration, which does not happen—even during historically wet years like 1992–1993 (Appendix C, Table 4.F).

3. Soil Storage Delays Saturation.
    a. The soils at the PS (Pond and Oban series) have high water-holding capacity. Before ponding can occur, they must first absorb approximately 4.96 and 3.74 inches of water (California Soil Resource Lab, 2025) respectively (Appendix C, Tables 5.A and 5.B).
    b. The monthly rainfall averages don't come close to these thresholds, especially when factoring in evapotranspiration.

In conclusion, while short-term ponding may occasionally occur during the winter months, when temperatures are low and evapotranspiration is minimal, this happens outside the growing season. Consequently, the PS does not meet the criteria for wetland hydrology. Its mound–intermound microtopography, well-drained soils, limited rainfall, and high evaporation rates collectively limit the potential for sustained surface water during the biologically relevant growing season.

4.3 PS Vegetation

The PS is predominantly characterized by desert saltbush scrub vegetation, a plant community adapted to arid conditions and alkaline soils. This habitat features low-growing, grayish shrubs, typically ranging from 1 to 3 feet in height, interspersed with significant areas of bare ground. The vegetation is often dominated by species of the genus *Atriplex*, commonly known as saltbushes.

Within the PS, the dominant vegetation comprises non-hydrophytic (non-water-dependent) woody saltbush species, including shadscale (*Atriplex confertifolia*) (Upland [UPL[4]]), fourwing saltbush (*Atriplex casnescens*) (Not Listed [NL[5]]), and allscale saltbush (*Atriplex polycarpha*) (Facultative Upland [FACU[6]]), with and understory of weedy non hydrophytic annual grasses including cheatgrass (*Bromus tectorum*) (NL), Spanish brome (*Bromus madritensis*) (UPL), common Mediterranean grass (*Schismus barbatus*) (NL), and smooth barely (*Hordeum murinum* ssp. *glaucum*) (FACU).

The vast majority of inter-mound areas are not considered wetlands - with the exception of Features 2, 3 and 4 within the PS, due to a lack of hydrophytes. The lack of hydrophytes is potentially due to the high alkalinity or salinity in the soil. However, similar habitats (Pleistocene Lake beds) in the Central Valley which have been delineated as wetlands have very high pH soil levels and support hydrophytic shrubs as well as herbaceous hydrophytes[7].

The notable absence of hydrophytic vegetation in the intermound areas of the PS suggests that soil alkalinity or salinity is not the limiting factor for plant colonization (Appendix B). As similar habitats in the Central Valley, which have been delineated as wetlands, support hydrophytic shrubs and herbaceous species despite high soil pH levels. Therefore, the scarcity of plant cover in these

---

[4] Plants that occur rarely (estimated probability < 1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions.

[5] Wetland indicator status not assigned. Species is assumed to be upland.

[6] Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands.

[7] For example, in the vicinity of the town of Pond, in Kern County, where the type locality for the Pond soil series, Atriplex species are generally halophytic hydrophytes such as big saltbush (*Atriplex lentiformus*) (Facultative [FAC]), fat-hen (*Atriplex* prostrata) (Facultative Wetland [FACW]), crownscale (*Atriplex coronata*) (FACW), heartscale (*Atriplex cordulata*) (FAC), and spinescale saltbush (*Atriplex spinifera*) (FAC). Similarly, the wildflower displays are dominated by goldfields which are FAC of FACW species including yellow rayed goldfields (*Lastenia glabrata*) (FACW), coastal goldfields (*Lastenia minor*) (FACW), and alkali goldfields (*Lastenia chrysantha*) (FAC). Other halophytic hydrophytes present include alkali weed (*Cressa truxillensis*) (FACW), saltgrass (*Distichilis spicata*) (FAC), alkali barely (*Hordeum depressum*) (FAC), and pepper grasses (*Lepidium dictyotum and L. acutidens*) (FAC), Coville's orach (*Stutzia covillei*) (FACW), bush seep weed (*Sueda nigra*) (OBL), black seed sandspury (*Spergularia atrosperma*) (FACW), and western sea purslane (*Sesuvium verrucosum*) (FACW).

intermound areas is likely due to the lack of suitable seed beds, resulting from insufficient organic matter and hard substrate, rather than soil chemistry alone. In summary, the PS's vegetation is dominated by non-hydrophytic species adapted to arid, alkaline conditions, with the absence of hydrophytic plants in intermound areas likely due to unsuitable seed beds rather than soil salinity or alkalinity.

4.4 Waters of the States (WOTS)

Based on field investigations, hydrologic analysis, and regulatory criteria, the majority of the intermound areas within the PS do not qualify as wetlands under the State's definition, nor are they subject to regulation under CFGC Section 1600 due to the following:

- Vegetation Composition – The intermound areas are almost entirely dominated by upland plant species with no substantial presence of hydrophytic vegetation.
- Hydrologic Conditions – Insufficient ponding or soil saturation exists for long enough durations to meet wetland criteria, as confirmed by NRCS water budget calculations for Pond and Oban soils.
- Soil Characteristics – The Pond-Oban complex and its components are not classified as hydric soils by NRCS.
- Hydrology Indicators – While surface soil cracks and salt crusts are present, these features are not exclusive to wetland conditions, and are represented in both mound and intermound areas.
- Absence of Redox Features – Despite variations in soil pH, no redoximorphic features indicative of prolonged anaerobic conditions were observed.

However, four distinct areas within the PS do meet the criteria for WOTS based on their geomorphic, hydrologic, soil, and vegetative characteristics (Features 1, 2, 3 and 4, Appendix A, Figure 3). These features are subject to regulation under CFGC Section 1600 and CWC Section 13260 because they exhibit one or more of the following:

1. Presence of a Well-Defined Bed, Bank, and Channel
    a. Amargosa Creek (Feature 1) is the only significant drainage feature within the PS. It is an ephemeral watercourse that has been historically modified by excavation and channel straightening.
    b. The creek has a clearly defined bed and banks, with localized dominance of hydrophytic vegetation in deeper portions of the channel.

2. Compliance with the State Wetland Definition
    a. Three isolated depressions (Features 2 and 3 – south wetlands, and Feature 4 – north wetland) exhibit hydrophytic vegetation, potential hydric soils, primary and secondary wetland hydrology indicators.
    b. While these features are spatially isolated and relatively small in extent, they satisfy the minimum criteria for wetlands under state regulations.

3. Provision of Riparian or Aquatic Habitat
    a. All four features included depressions that experience adequate – albeit short lived, hydrological influence suitable to support aquatic life, riparian vegetation, or potentially stream-dependent terrestrial wildlife resources.

The identification of these features as WOTS reflects a combination of natural hydrological processes, historical land use modifications, and the PS's position within the Antelope Valley watershed. While the PS is predominantly upland, these delineated features remain subject to state regulatory oversight.

Appendix A, Figure 3 provides a spatial representation of the identified WOTS. Table 1 provides a summary of each feature.

Table 1. Summary of Features Evaluated[8]

Feature Identifier	Status	Rationale	Total PS (Acres)	Linear Feet
1	WOTS	Amargosa Creek does not qualify as a wetland, but is a regulated WOTS due to its defined bed and bank.	1.00	3,514
2	WOTS	Satisfies the State wetland definition due to the presence of hydrophytic vegetation, assumed hydric soils, and sustained hydrology. Sustained hydrologic input allows for intermittent saturation, potentially supporting aquatic organisms, water-loving vegetation, and possibly stream-dependent terrestrial wildlife.	0.16	572
3	WOTS	Satisfies the State wetland definition due to the presence of hydrophytic vegetation, potential hydric soils, and sustained hydrology. Sustained hydrologic input allows for intermittent saturation, potentially supporting aquatic organisms, water-loving vegetation, and possibly stream-dependent terrestrial wildlife.	0.004	36
4	WOTS	Satisfies the State wetland definition due to the presence of hydrophytic vegetation, potential hydric soils, and sustained hydrology. Sustained hydrologic input allows for intermittent saturation, potentially supporting aquatic organisms, water-loving vegetation, and possibly stream-dependent terrestrial wildlife.	0.003	18

Feature 1 – Amargosa Creek

Within the PS, Amargosa Creek is characterized by a human-modified ephemeral drainage with a "U-shaped" cross-section channel, deepened and straightened by past excavation.

The channel's vegetation composition varies by depth:

- Shallow Areas. Dominated by upland grasses, including cheatgrass (*Bromus tectorum*) (NL), Spanish brome (*Bromus madritensis*) (UPL), Mediterranean grass (*Schismus barbatus*) (NL), and smooth barley (*Hordeum murinum ssp. glaucum*) (FACU).
- Deeper Areas. Support a mix of facultative wetland species, including rabbitsfoot grass (*Polypogon monspeliensis*) (FACW), denseflower willowherb (*Epilobium densiflorum*) (FACW), alkali heath (*Frankenia salina*) (FACW), and salt grass (*Distichlis spicata*) (FAC).

Despite localized hydrophytic vegetation, Amargosa Creek lacks hydric soil indicators. The channel's sandy loam soils exhibit brown (10YR 5/3) matrix coloration without redox features, confirming their upland characteristics.

The hydrology of Amargosa Creek is driven by:

- A large upslope watershed that includes extensive impervious surfaces (roads, rooftops, and urban infrastructure) within the City of Lancaster.
- The flash flood potential of desert soils, resulting in short-duration flows following major storm events or snowmelt.

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[8] Due to rounding error, the sum of individual acreages differs from the subtotals.

Observed hydrology indicators include surface soil cracking and an obvious drainage pattern. However, Amargosa Creek lacks continuous or uninterrupted surface flow connections to a downstream water body. But due to its defined bed and bank, it qualifies as a WOTS. The creek ultimately terminates in to a human-made detention basin prior to reaching Rosamond Dry Lake.

Feature 2 – South Wetland

Located in the southern portion of the PS, this isolated depression meets the State's wetland definition due to:

- Hydrophytic Vegetation – Dominated by facultative wetland plants.
- Hydric Soil Indicators – soils confirm periodic anaerobic conditions.
- Wetland Hydrology – Sustained hydrologic input allows for intermittent saturation, potentially supporting aquatic organisms, water-loving vegetation, and possibly stream-dependent terrestrial wildlife.

Field investigations confirmed persistent hydrology, with excavated soil pits satisfying hydric soil criteria. This feature is a state-regulated wetland due to its periodic saturation and anaerobic soil conditions.

Feature 3 – South Wetland

Located in the southern portion of the PS as well, this isolated depression meets the State's wetland definition due to:

- Hydrophytic Vegetation – Dominated by facultative wetland plants.
- Hydric Soil Indicators – Gleying and redoximorphic features in finer-textured soils confirm some periodic anaerobic conditions.
- Wetland Hydrology – Sustained hydrologic input allows for intermittent saturation, potentially supporting aquatic organisms, water-loving vegetation, and possibly stream-dependent terrestrial wildlife.

Field investigations confirmed primary and secondary hydrology indicators, with potential hydric soil observed within excavated soil pits. This feature is a state-regulated wetland due to its periodic saturation and assumed anaerobic soil conditions.

Feature 4 – North Wetland (Former Duck Ponds)

The North Wetland is a remnant from the historic duck ponds used by gun clubs that once operated in this region. Unlike purely natural wetland depressions, the topography here was artificially created.

Despite decades of natural infilling, erosion, and sediment redistribution, the remnants of these old ponds still influence localized hydrology in discrete areas within the PS creating conditions where:

- Hydrophytic Vegetation persists in these areas.
- Occasional Hydric Soil Indicators – olive-colored soils getting closer to gley colors confirm that past the impoundment created prolonged anaerobic soil conditions in finer-textured areas.
- Ephemeral Hydrology – While water retention is now minimal, periodic stormwater collection and slow infiltration continue to sustain conditions necessary for aquatic organisms, wetland plants, and possibly riparian-associated wildlife.

This wetland feature is an artifact of historical land use, highlighting how human activity can shape long-lasting ecological legacies. Though the hydrologic influence of the old ponds has significantly diminished, the remaining wetland characteristics meet the State's criteria for regulation.

Final Determination

The majority of the PS consists of upland habitat, which lacks wetland hydrology, hydrophytic vegetation, or hydric soils. These areas do not qualify as WOTS under California law.

Nonetheless, four distinct features meet the criteria for WOTS under CFGC Section1600 and CWC Section13260.

- Feature 1 (Amargosa Creek) does not qualify as a wetland, but is a regulated WOTS due to its defined bed and bank.
- Features 2, 3 and 4 qualify as wetlands due to the presence of hydrophytic vegetation, possible hydric soils, and primary and secondary indicators indicating wetland hydrology.

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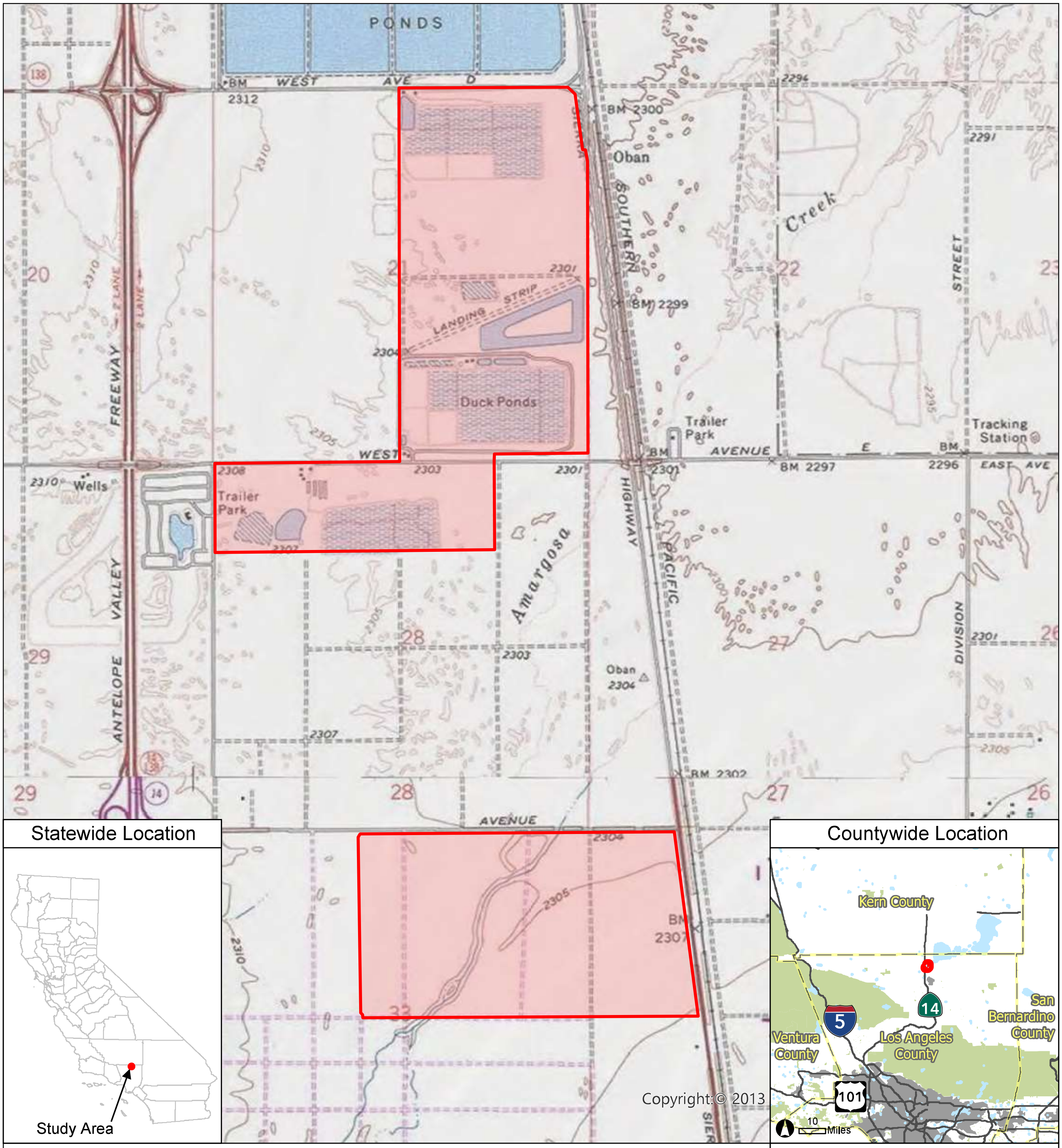
Appendix A Figures



🟥 Project Site

Interstate or State Highway (inset)

County Boundary (inset)

Urban Area (inset)

Park or National Forest (inset)

Water Body (inset)

0 1,000 2,000 Feet

1 inch = 2,000 feet

The Project Site is located in Los Angeles County
on the Lancaster West and Rosamond USGS 7.5-minute
quadrangle maps; San Bernardino Meridian,
Township 8N, Range 12W, in Sections 21, 28, 33, 34;

Center coordinates (WGS 1984): 118.227°W 34.635°N

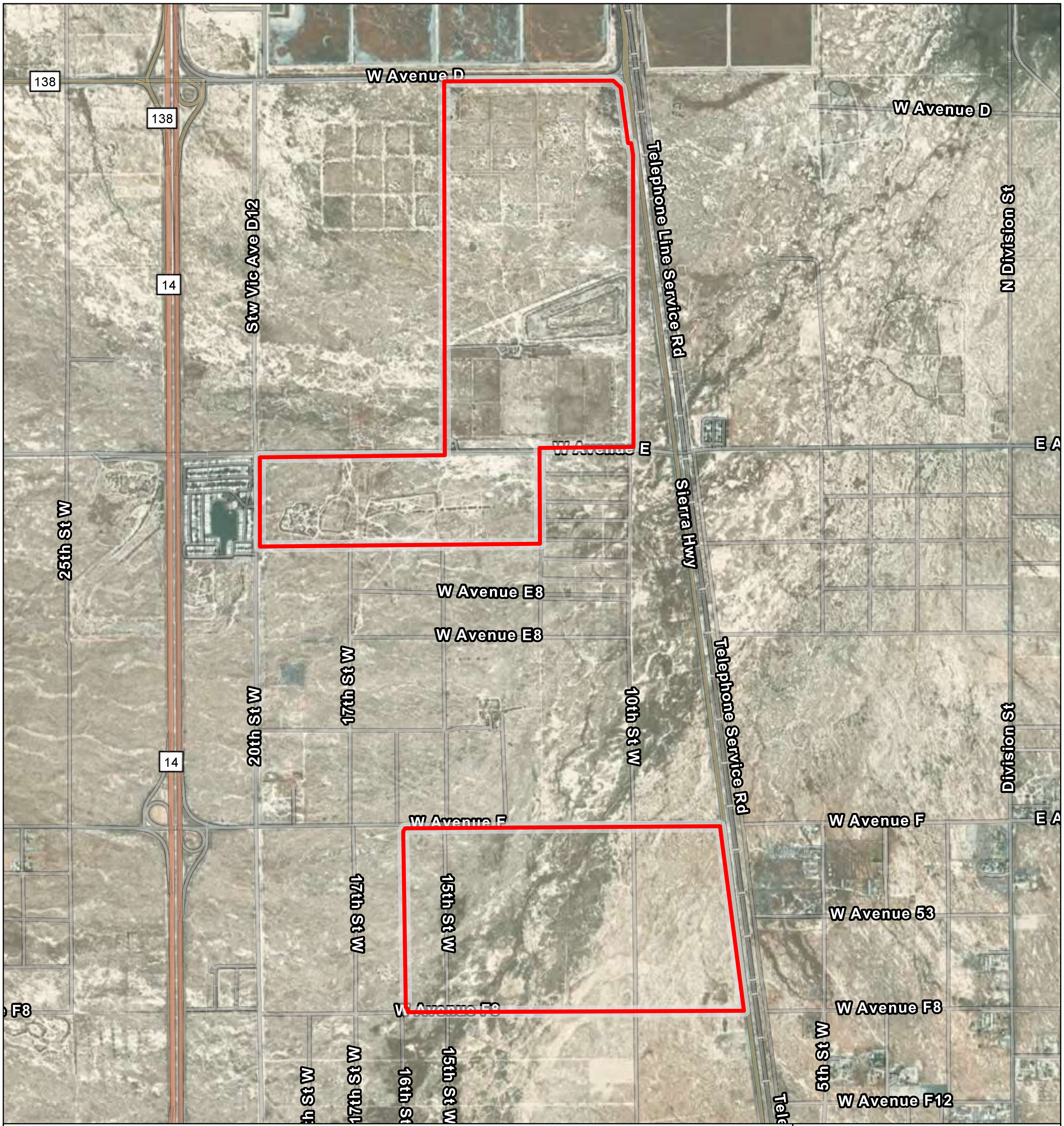
Data Sources:
- California Public Land Survey System 2020
- USGS 7.5-minute quadrangle map
- ESRI US Topo Maps accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 1. Regional Location



🟥 Project Site (714.83 ac)

0 1,000 2,000 Feet

1 inch = 2,000 feet

Data Sources:
- ESRI World Imagery accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 2. Site Vicinity

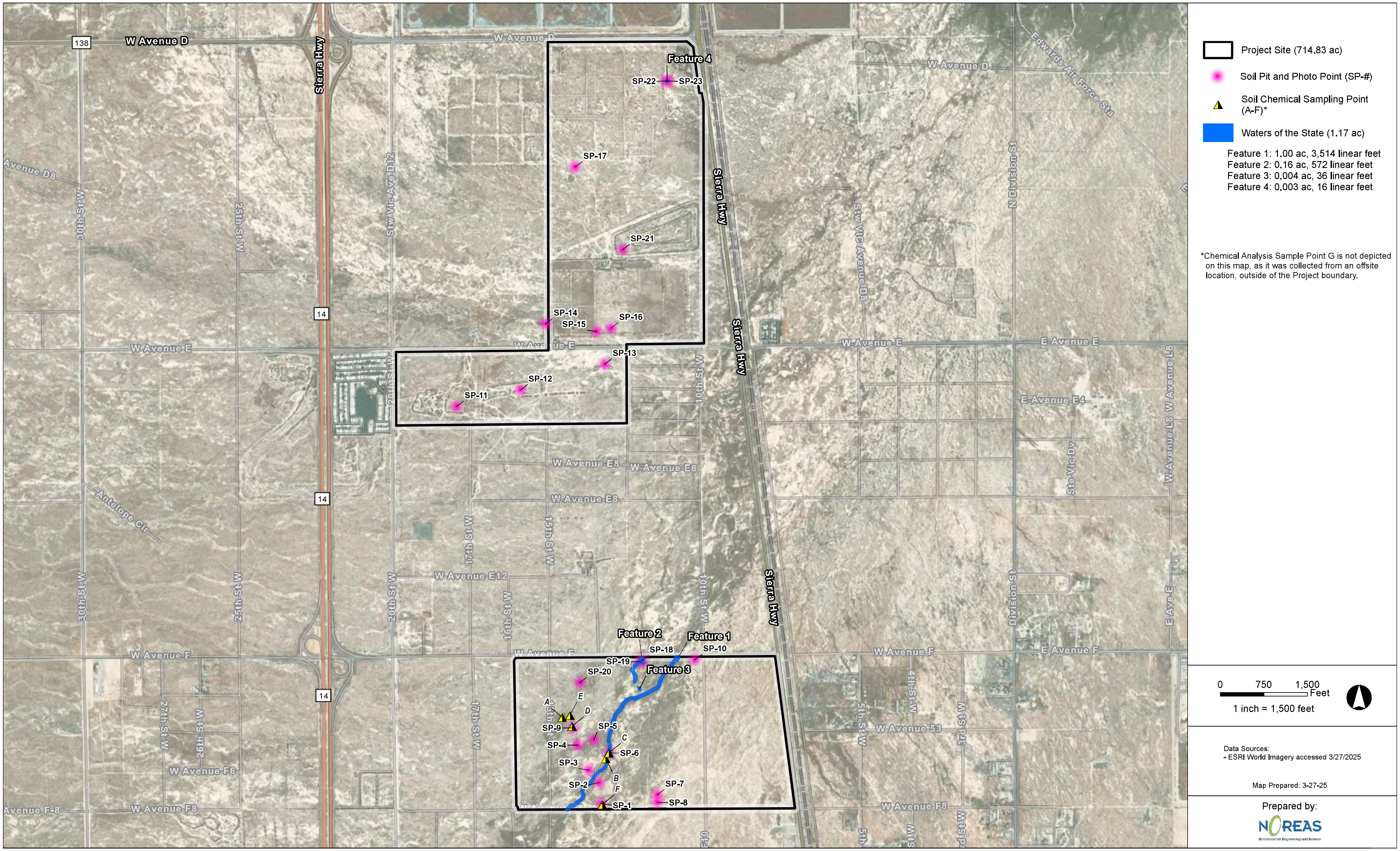


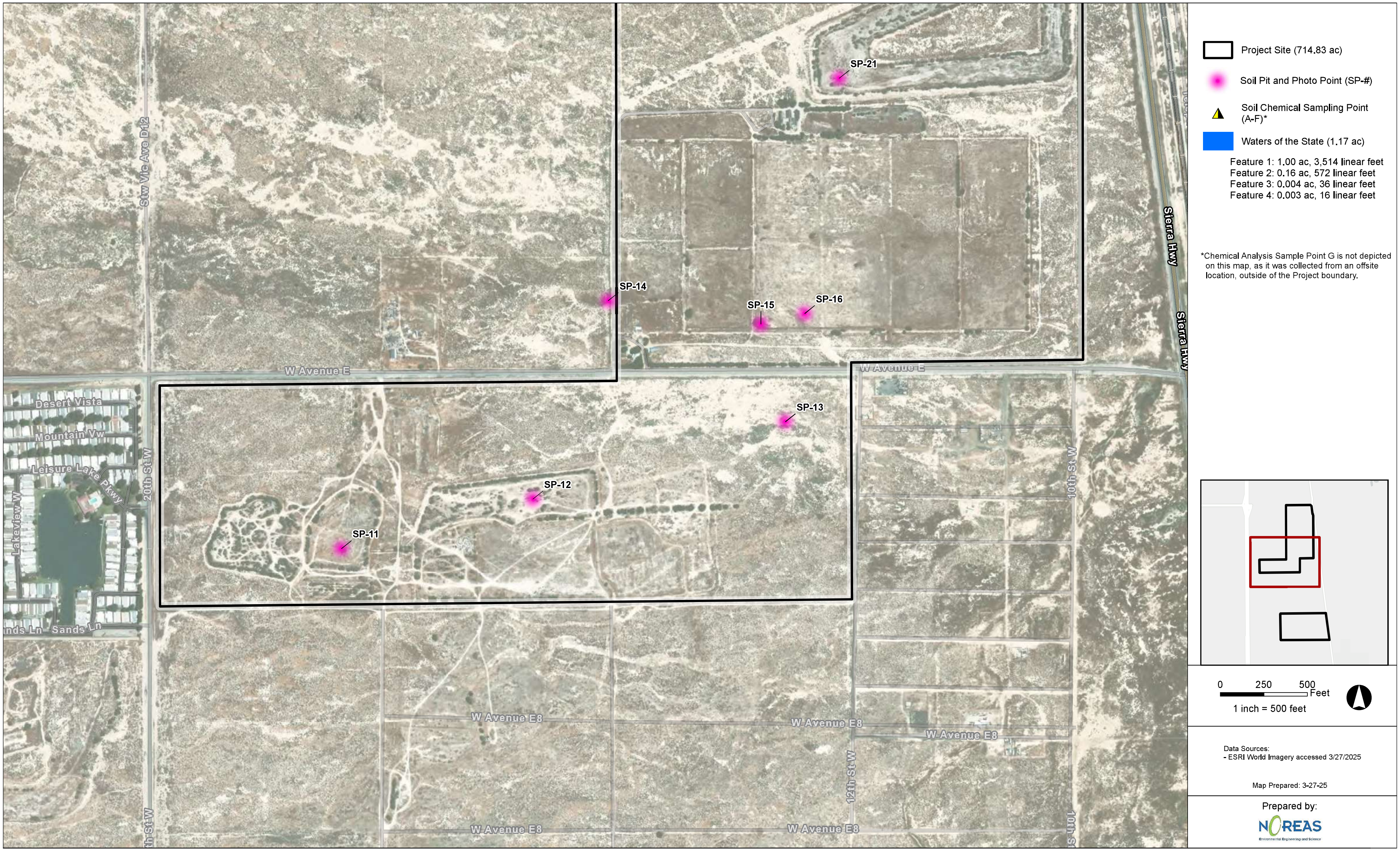
Figure 3. Waters of the State - Overview Map

*Chemical Analysis Sample Point G is not depicted on this map, as it was collected from an offsite location, outside of the Project boundary.

Data Sources:
- ESRI World Imagery accessed 3/27/2025

Map Prepared: 3-27-25

Figure 3a. Waters of the State



*Chemical Analysis Sample Point G is not depicted on this map, as it was collected from an offsite location, outside of the Project boundary.

Data Sources:
- ESRI World Imagery accessed 3/27/2025

Map Prepared: 3-27-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 3b. Waters of the State

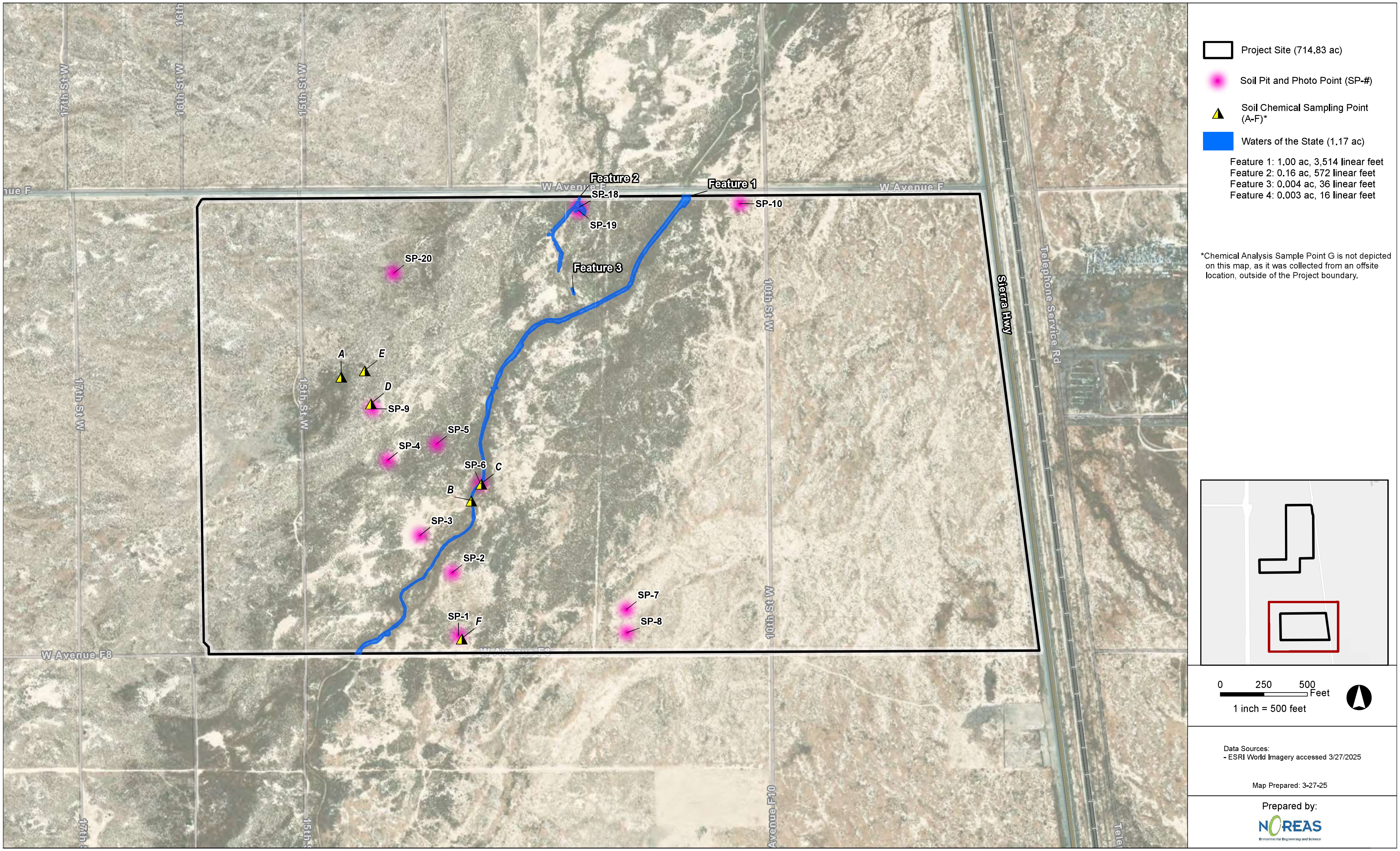
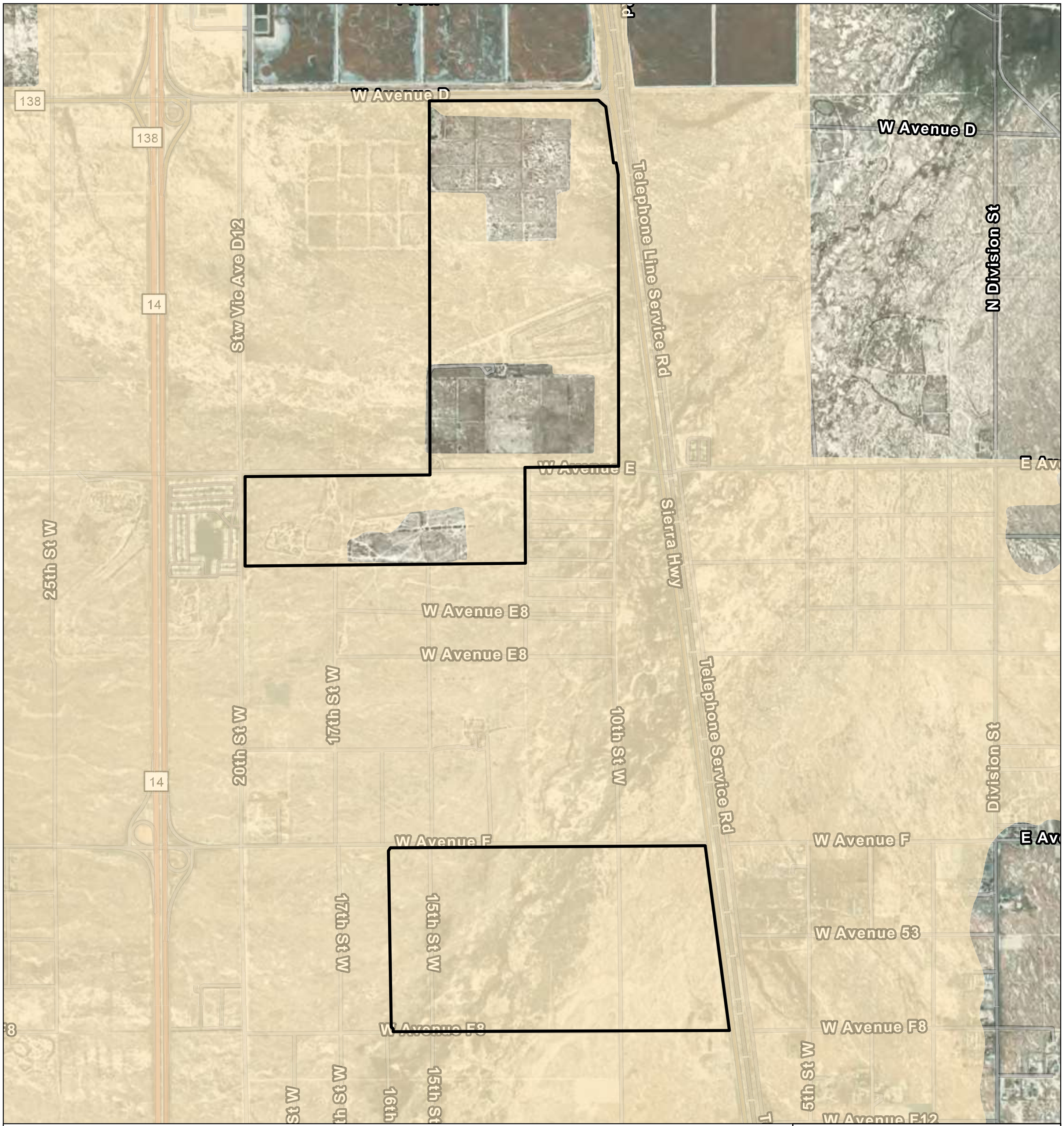


Figure 3c. Waters of the State



▭ Project Site

Soil Type

🟨 Px - Pond-Oban complex

0 1,000 2,000 Feet

1 inch = 2,000 feet

Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- NRCS Web Soil Survey accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 4. Soils Map

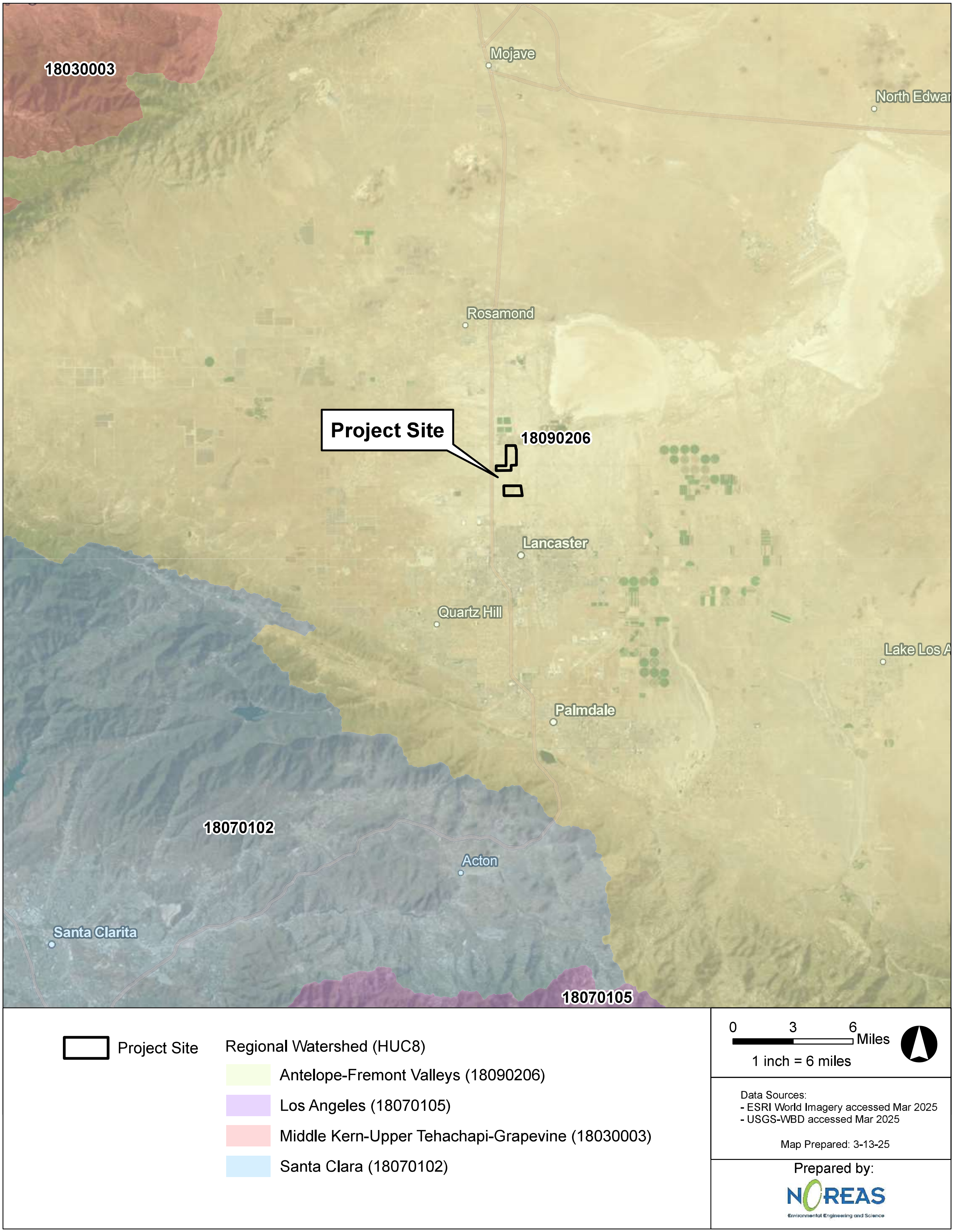
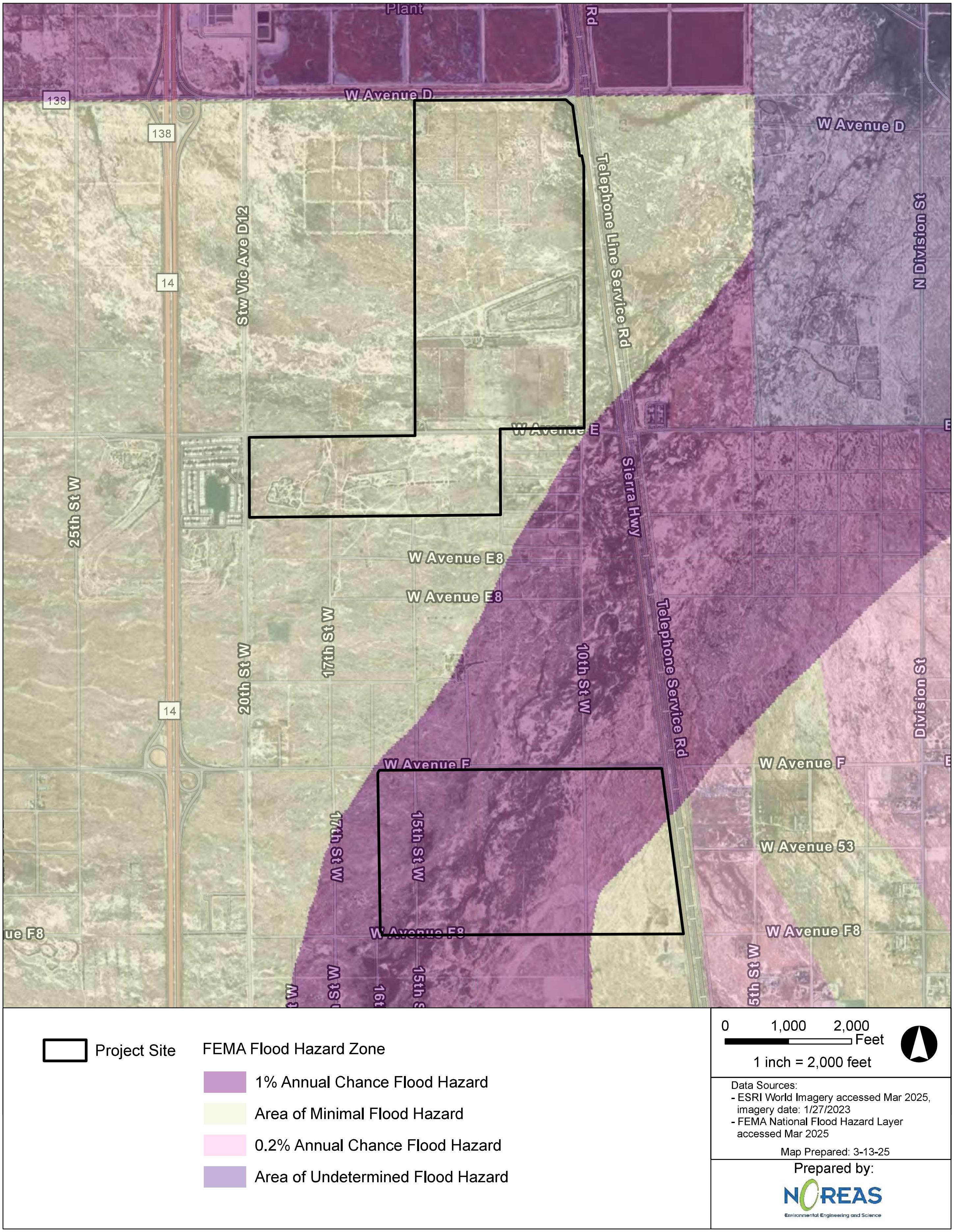


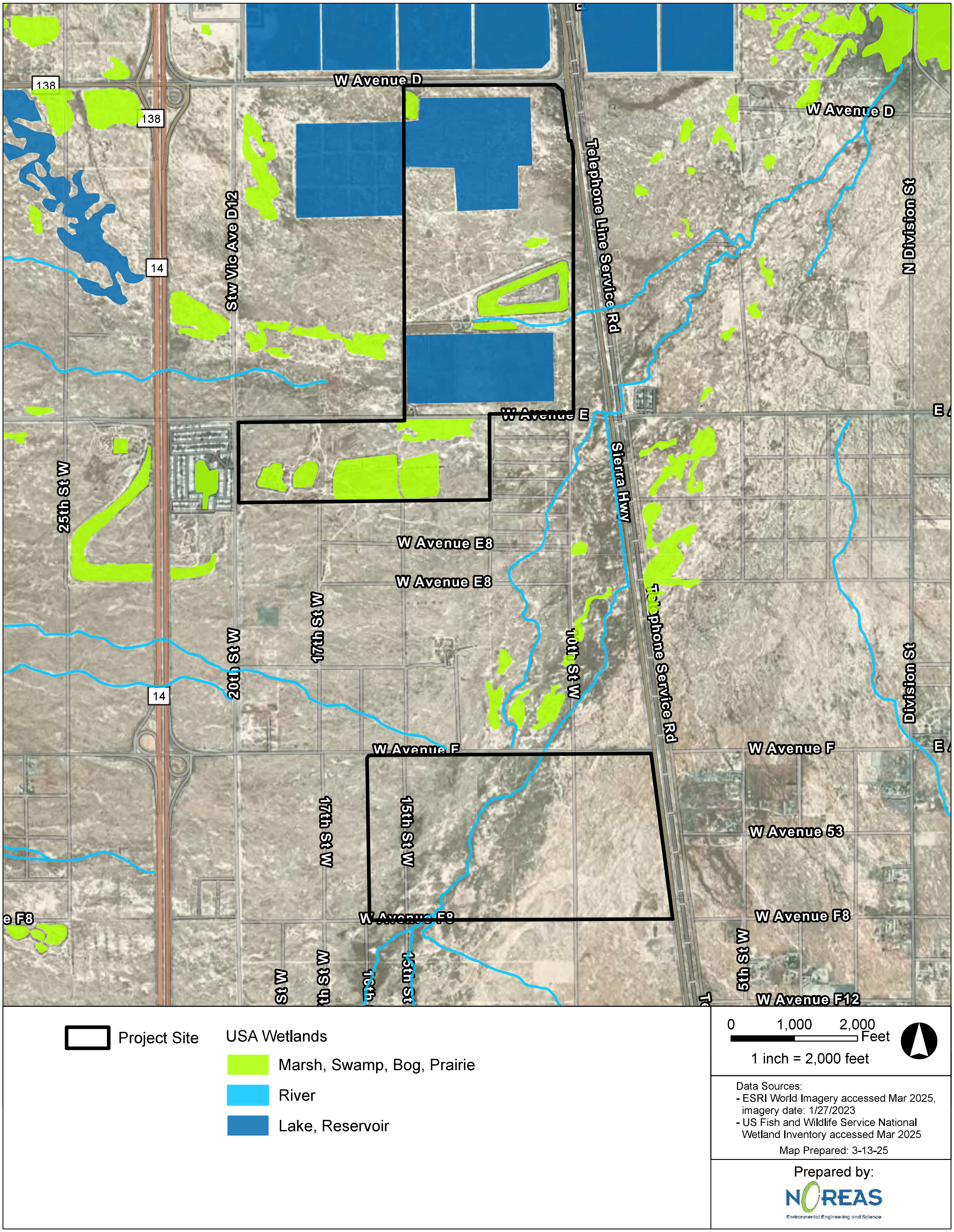
Figure 5. Regional Watershed Map



Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- FEMA National Flood Hazard Layer accessed Mar 2025

Map Prepared: 3-13-25

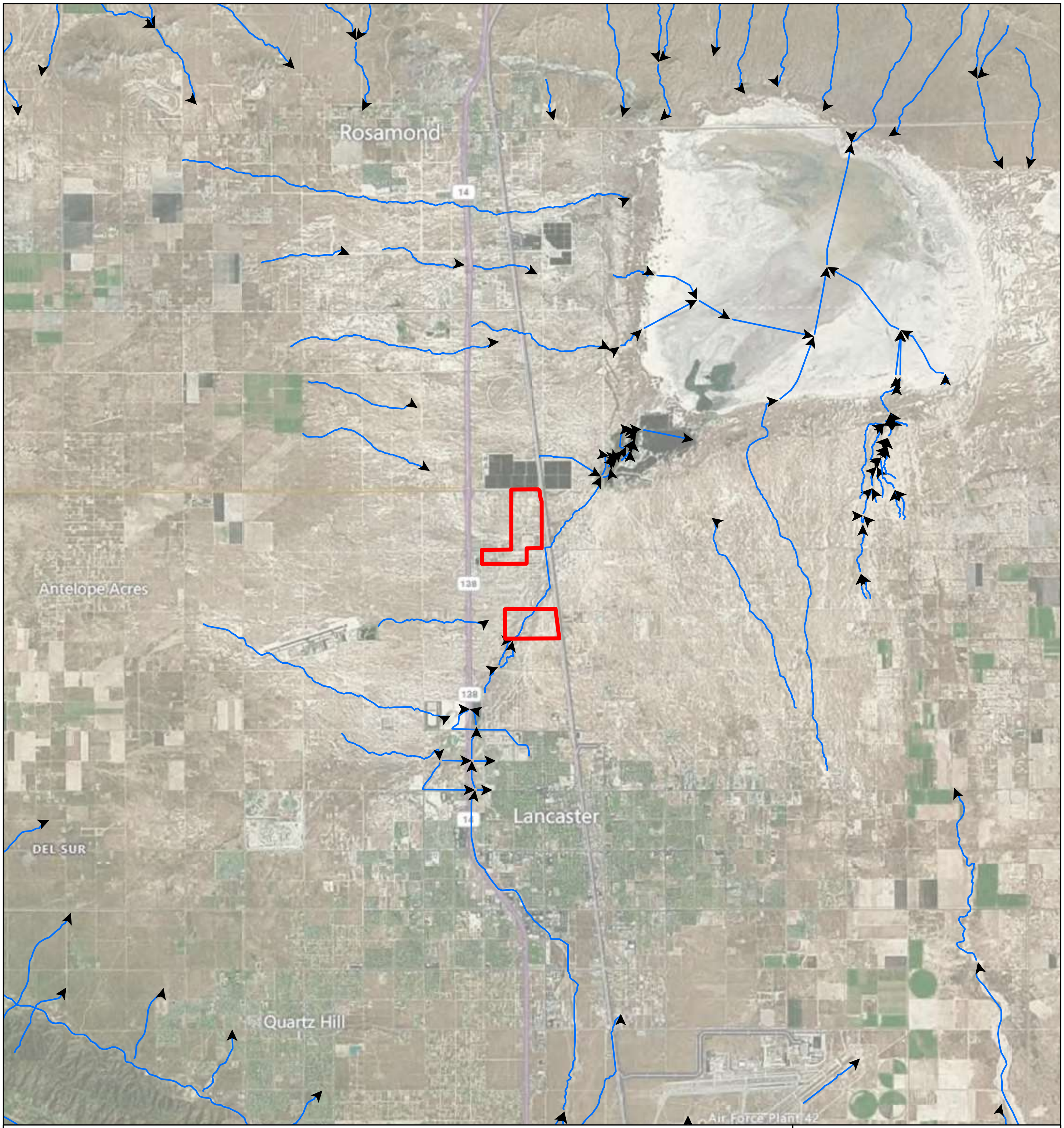
Figure 6. FEMA 100-Year Flood Zone



Data Sources:
- ESRI World Imagery accessed Mar 2025, imagery date: 1/27/2023
- US Fish and Wildlife Service National Wetland Inventory accessed Mar 2025

Map Prepared: 3-13-25

Figure 7. National Wetland Inventory



🟥 Project Site

→ Surface Water Flowlines and Flow Direction

0 1.2 2.4 Miles

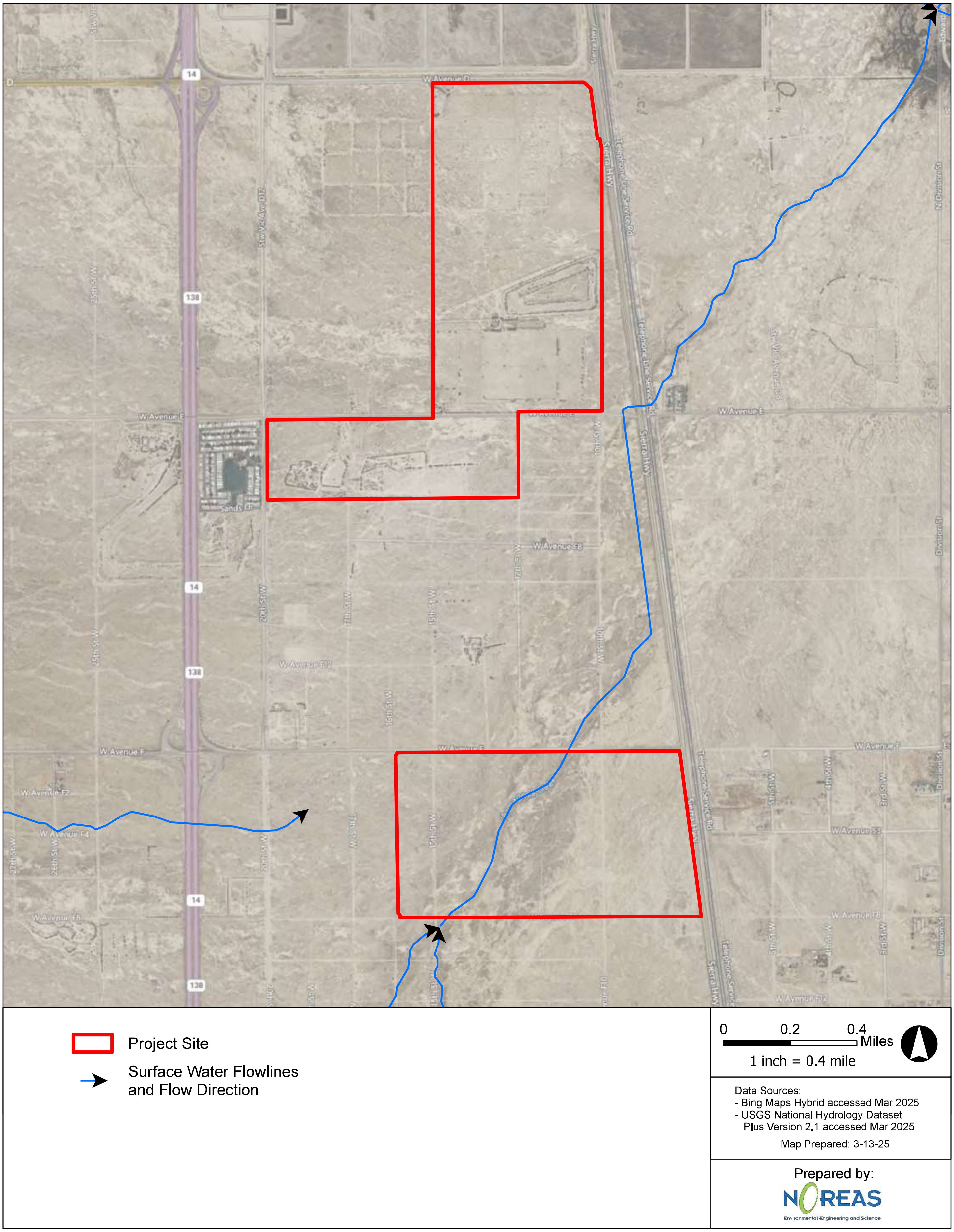
1 inch = 2.4 miles

Data Sources:
- Bing Maps Hybrid accessed Mar 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 8. Surface Water Map (Regional Area)



Data Sources:
- Bing Maps Hybrid accessed Mar 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Mar 2025

Map Prepared: 3-13-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 9. Surface Water Map (Local Area)

Appendix B Photograph Log

PHOTOGRAPH LOG

	Photograph 1 - Soil Pit 1.
	Photograph 2 – Soil Pit 2.

PHOTOGRAPH LOG

Photograph 3 – Soil Pit 3.

Photograph 4 – Soil Pit 4.

PHOTOGRAPH LOG

Photograph 5 – Soil Pit 5.

Photograph 6 – Soil Pit 6.

PHOTOGRAPH LOG

	Photograph 7 – Soil Pit 7.
	Photograph 8 – Soil Pit 8.

PHOTOGRAPH LOG

Photograph 9 – Soil Pit 9.

Photograph 10 – Soil Pit 10.

PHOTOGRAPH LOG

Photograph 11 – Soil Pit 11.

Photograph 12 – Soil Pit 12.

PHOTOGRAPH LOG

Photograph 13 – Soil Pit 13.

Photograph 14 – Soil Pit 14.

PHOTOGRAPH LOG

	Photograph 15 – Soil Pit 15.
	Photograph 16 – Soil Pit 16.

PHOTOGRAPH LOG

Photograph 17 – Soil Pit 17.

Photograph 18 – Soil Pit 18.

PHOTOGRAPH LOG

	Photograph 19 – Soil Pit 19.
	Photograph 20. – Soil Pit 20.

PHOTOGRAPH LOG

Photograph 21 – Soil Pit 21.

Photograph 22 – Soil Pit 22.

PHOTOGRAPH LOG

	Photograph 23 – Soil Pit 23.

Appendix C Tables

Table 1. Results of Chemical Analysis of Soils Including pH, Conductivity, Total Dissolved Solids, and Salinity

Chemical Analysis Sample Point	**Chemical Analysis***				**Comments**
	pH	**Salinity (PPM)**	**Cond (µs/cm)**	**TDS (PPM)**	
A	10.46	125	398	283	Upland Annual Grassland
B	9.78	141	445	318	Amargosa Creek - Wetland Vegetation
C	9.79	144	461	328	Amargosa Creek - Annual Grasses
D	10.69	255	808	575	Alkali Surface in Intermound adjacent to soil pit 9
E	11.19	N/A	N/A	N/A	Alkali Efflorescence on Surface of Mound
G	8.62	109	346	246	Control Area in Josua tree habitat
F	10.93	274	790	558	Intermound area - Adjacent to soil pit 1

* PPM = Parts per million, Cond = Conductivity, TDS = Total Dissolved Solids

N/A = not applicable (exceeds limits of instrument)

Table 2. Rainfall (in Inches) per Month at the Project for the Last 41 Years

Year (Oct–Sep)	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
1983-1984	0.76	0.83	2.45	T	0	0.08	T	0	T	0.7	T	0.22	**5.04**
1984-1985	T	0.76	5.35	0.28	T	0.12	0	0.03	0	T	0	0.23	**6.77**
1985-1986	0.14	1.58	0.13	2	1.08	1.66	0.07	0	0	0.16	T	T	**6.82**
1986-1987	T	0.92	0.55	0.34	0.41	0.69	0.03	0.18	0.24	T	T	0.14	**3.5**
1987-1988	2.39	1.21	1.27	1.93	0.57	0.18	0.53	0.13	T	0.02	0.47	0	**8.7**
1988-1989	0.01	0.13	1.57	0.31	1.59	0.06	0.01	0.23	0	0	0	0.19	**4.1**
1989-1990	0.05	0.05	0	0.76	0.52	0.15	0.11	0.06	T	0	0.01	T	**1.71**
1990-1991	0	0.17	0.07	0.96	—	4.13	0.03	0	0	0.13	T	0.09	**5.58**
1991-1992	0.22	T	1.8	1.82	5.81	2.49	0.16	0.05	0	0.08	0	0	**12.43**
1992-1993	0.9	0	3.13	7.46	5.96	1.21	0	0	0.83	0	T	0	**19.49**
1993-1994	0.3	0.51	0.58	0.22	1.4	0.64	0.4	0.09	0	0	0	T	**4.14**
1994-1995	0.21	0.36	0.57	5.06	0.17	2.74	0.15	0.02	0.2	T	0	0	**9.48**
1995-1996	0	T	0.52	0.72	1.61	0.12	0.03	T	0	0.02	T	0	**3.02**
1996-1997	0.66	0.45	—	0.66	0	0	T	T	0	0.02	0	0.87	**2.66**
1997-1998	T	0.8	2.25	0.95	6.23	2.85	0.34	0.94	0	0	0.16	0.73	**15.25**
1998-1999	T	0.38	0.22	1.35	0.49	T	0.89	T	0.18	0.95	0	T	**4.46**
1999-2000	0	0.04	—	—	1.76	1.12	1.82	0	0.08	0	0.13	0	**4.95**
2000-2001	0.32	0.01	T	1.17	3.73	0.66	0.58	T	0	0.02	0	0	**6.49**
2001-2002	0.24	0.6	0.63	0.2	0.06	0.3	T	0.02	0	0	0	0.01	**2.06**
2002-2003	0.01	0.66	1.19	T	3.55	0.71	0.96	0.27	0	0.11	T	T	**7.46**
2003-2004	0.23	0.32	0.57	0.01	1.88	0.23	0.05	0	0	0	0	T	**3.29**
2004-2005	1.93	0.15	3.65	5.26	4.71	0.72	0.57	0.5	0	0.16	0.01	0.8	**18.46**
2005-2006	1.77	T	0.19	0.83	1	1.02	0.68	0.02	0	0.02	0	0	**5.53**
2006-2007	0.09	T	0.34	0.02	0.71	0.19	T	0	0	T	0.02	0.2	**1.57**
2007-2008	0.18	0.5	0.09	3.73	0.48	T	0.01	0.07	0	T	0	0.02	**5.08**
2008-2009	T	1.55	0.92	0.36	2.38	0.13	0	0.02	0.01	0	T	0	**5.37**

Year (Oct–Sep)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
2009-2010	0.01	T	0.88	3.96	1.68	0.28	0.82	T	0	T	0	T	**7.63**
2010-2011	1.75	0.53	3.97	—	1.32	1.69	0.53	0.05	0.02	0.22	0	0.01	**10.09**
2011-2012	0.19	0.57	0.36	0.1	0.31	0.47	0.82	0	0	T	0.02	0.02	**2.86**
2012-2013	0	0.01	0.11	0.4	0.2	0.35	0	0.15	0	0.02	T	T	**1.24**
2013-2014	0.05	1.45	0.09	0.05	1.82	0.22	0.23	T	0	T	0.03	T	**3.94**
2014-2015	0.14	0.16	2.62	0.96	0.4	0.04	0.01	0.28	0.04	2.34	0	0.64	**7.63**
2015-2016	0.7	0.22	0.37	1.73	0.03	0.62	0.15	0	T	0	0	0	**3.82**
2016-2017	0.18	0.22	1.59	2.47	1.88	0.17	T	0	0	T	0.03	0.07	**6.61**
2017-2018	T	0.02	T	0.95	0.17	1.53	0.09	0	0	0.02	0	0	**2.78**
2018-2019	T	0.17	1.58	1.97	1.92	1	0.05	0.53	T	0.04	T	0	**7.26**
2019-2020	0	1.35	3.81	0.08	T	3.17	2.23	0.02	0	0	T	0	**10.66**
2020-2021	0	0.13	0.37	0.67	0.01	0.14	T	0	T	0.04	0	T	**1.36**
2021-2022	0.28	T	2.61	0.02	0.27	0.31	0.1	0	0.51	T	T	0.44	**4.54**
2022-2023	T	0.58	1.13	2.18	1.86	1.16	0	0.12	0	0	3.66	T	**10.69**
2023-2024	T	0.18	1.02	0.81	3.87	1.92	0.19	0.04	0	T	T	T	**8.03**
Average	**0.43**	**0.5**	**1.31**	**1.43**	**1.63**	**0.9**	**0.36**	**0.11**	**0.06**	**0.17**	**0.16**	**0.16**	**6.4**

Table 3. Net Value of Rainfall (in Inches) After the Subtraction of Evapotranspiration (in Inches) on an Average Monthly Basis

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in inches)	-3.91	-2.2	-0.55	-0.43	-1.17	-3.75	-5.64	-7.95	-8.94	-9.75	-8.52	-6.44	-59.25
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟥	= Months **excluded** from Growing Season											

Table 4.A. Net Value of Rainfall (in Inches) for 2024-2025 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (inr inches) 2024-2025[1]	0	0.18	1.02	0.81	3.87	1.92	0.19	0.04	0	0	0	0	**8.03**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.52	-0.84	-1.05	1.07	-2.73	-5.81	-8.02	-9	-9.92	-8.68	-6.6	-58.44
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur with out consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.B. Net Value of Rainfall (in Inches) for 2023-2024 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2023-2024[1]	0	0.58	1.13	2.18	1.86	1.16	0	0.12	0	0	3.66	0	**10.69**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.12	-0.73	0.32	-0.94	-3.49	-6	-7.94	-9	-9.92	-5.02	-6.6	-55.78
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.C. Net Value of Rainfall (in Inches) for 2022-2023 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2022-2023[1]	0.28	0	2.61	0.02	0.27	0.31	0.1	0	0.51	0	0	0.44	**4.54**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.06	-2.7	0.75	-1.84	-2.53	-4.34	-5.9	-8.06	-8.49	-9.92	-8.68	-6.16	-61.93
[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025													
[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.D. Net Value of Rainfall (in Inches) for 2021-2022 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches) 2021-2022[1]	0	0.13	0.37	0.67	0.01	0.14	0	0	0	0.04	0	0	**1.36**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-2.57	-1.49	-1.19	-2.79	-4.51	-6	-8.06	-9	-9.88	-8.68	-6.6	-65.11

[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025

[2] = Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)

🟦 = Month ponding would occur without consideration of water storage

🟥 = Months **excluded** from Growing Season

Table 4.E. Net Value of Rainfall (in Inches) for 2020-2021 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Average Rainfall (in inches) 2020-2021[1]	0	1.35	3.81	0.08	0	3.17	2.23	0.02	0	0	0	0	**10.66**
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-4.34	-1.35	1.95	-1.78	-2.8	-1.48	-3.77	-8.04	-9	-9.92	-8.68	-6.6	-55.81
[1] **= Average based on last 41 years of data taken at the William J. Fox Air station 2025**													
[2] **= Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)**													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 4.F. Net Value of Rainfall (in Inches) for 1992-1993 Wet-season After the Subtraction of the Average Monthly Evapotranspiration (in Inches)

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in inches)1992-1993[1]	0.9	0	3.13	7.46	5.96	1.21	0	0	0.83	0	0	0	19.49
Average Evapotranspiration (in inches)[2]	4.34	2.7	1.86	1.86	2.8	4.65	6	8.06	9	9.92	8.68	6.6	66.47
Net Value (Rainfall minus Evapotranspiration in Inches)	-3.44	-2.7	1.27	5.6	3.16	-3.44	-6	-8.06	-8.17	-9.92	-8.68	-6.6	-46.98
[1] **= Average based on last 41 years of data taken at the William J. Fox Air station 2025**													
[2] **= Averages based on reference evaporation zones (California Irrigation Management Information System: wwwcimis.water.ca.gov 2025)**													
	🟦	= Month ponding would occur without consideration of water storage											
	🟥	= Months **excluded** from Growing Season											

Table 5.A. Amount of Rainfall (in Inches) Per Month Needed to Fill the Water Storage Capacity of Pond Series Soil

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (in Inches)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Amount of Rainfall (in Inches) Needed to Saturate Soil to the Surface (Water Storage = 4.96 inches)	4.53	4.03	2.72	1.29	-0.34	-1.24	-1.6	-1.71	-1.77	-1.94	--	--	--

[1] = Average based on last 41 years of data taken at the William J. Fox Air station 2025

🟦 = first month ponding would occur without consideration of evaporation and transpiration

🟥 = Months **excluded** from Growing Season

Table 5.B. Amount of Rainfall (in Inches) Per Month Needed to Fill the Water Storage Capacity of Oban Series Soil

Months	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Total**
Average Rainfall (per inch)[1]	0.43	0.5	1.31	1.43	1.63	0.9	0.36	0.11	0.06	0.17	0.16	0.16	7.22
Amount of Rainfall (in Inches) Needed to Saturate Soil to the Surface (Water Storage = 3.74 inches)	3.31	2.81	1.5	0.07	-1.56	-2.46	-2.82	-2.93	-2.99	-3.16	--	--	--

[1] **= Average based on last 41 years of data taken at the William J. Fox Air station 2025**

🟦 = first month ponding would occur without consideration of evaporation and transpiration

🟥 = Months **excluded** from Growing Season

Appendix D Field Data Forms

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP1

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R 12W

Landform (hillslope, terrace, etc.): Basin-Prehistoric Lake bed Local relief (concave, convex, none): Concave / plane Slope (%): 0-1%

Subregion (LRR): C- Mediterranean California Lat: 34.740781° Long: -117.154687° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

Soils have high pH which can mask redox features.

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: 5X5)			
1. Bromus madritensis ssp. rubens	5	Y	UPL
2. Hordeum murinum ssp glaucum	5	Y	FACU
3. Erodium cicutarium	3	Y	NL
4. Stutzia Covillei (Atriplex ARCA phyllostegia)	2	N	FACW
5.			
6.			
7.			
8.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 85 % 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: 3 (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	2	x 2 = 4
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	8	x 5 = 40
Column Totals:	15 (A)	64 (B)

Prevalence Index = B/A = 4.26

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-0.5	10YR5/4	100					Clay loam	(Polygonal cracking)
0.5-4	10YR5/4	100					Clay Loam	(No Polygonal cracking)
4-16	10YR4/4-10YR5/4	100					Clay loam - clay	
16-18	10YR5/4	80	10YR7/3	20			Sandy clay loam - Clay loam	
							Not Redox Feature - Salt nodules.	

[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: Clay loam to Clay

Depth (inches): 4-16

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Polygonal cracking only 0.5 inches deep. Indicating depth of Soil Saturation is very limited.

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 Visible 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

Surface soil cracks (B6) is a weak wetland hydrology indicator in this situation because upland mound soils also have cracks due to clay and salt content.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP2

Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W

Landform (hillslope, terrace, etc.): Basin- Prehistoric lakebed Local relief (concave, convex, none): Plane Slope (%): 0-1%

Subregion (LRR): C-Mediterranean California Lat: 34.741926° Long: -118.154795° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

Soils have high pH which can potentially mask redox features

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: 5X5)			
1. Atriplex canescens	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 5X5)			
1. Bromus madritensis ssp. rubens	2	Y	UPL
2. Hordeum murinum ssp. glaucum	2	Y	FACU
3. Stutzia covillei	1	Y	FACW
4.			
5.			
6.			
7.			
8.			
= Total Cover	5		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 95 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	1	x 2 = 2
FAC species	0	x 3 = 0
FACU species	2	x 4 = 8
UPL species	7	x 5 = 35
Column Totals:	10 (A)	45 (B)

Prevalence Index = B/A = 4.5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP2

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-0.5	10YR5/3	100					Clay loam - Clay	(Polygonal cracking)
0.5-16	10YR4/3	100					Clay loam - Clay	"

[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: Clay loam to clay

Depth (inches): 0-16+

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Polygonal cracking is only 0.5 inch deep. Indicating depth of Soil Saturation is very limited.

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 Visible 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:

Surface Soil Cracks (B6) is a weak wetland hydrology indicator in this Situation because upland mound Soils also have Cracks due to Clay and Salt Content.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: WestSide Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP3

Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 1-2%

Subregion (LRR): C Lat: 34.742486° Long: -118.155401° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X	**Is the Sampled Area within a Wetland?** Yes ______ No X
Hydric Soil Present?	Yes ______ No X	
Wetland Hydrology Present?	Yes X No ______	

Remarks:
Soils have high pH which can mask redox features.

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: 10 X 10)			
1. Hordeum murinum	5	Y	FACU
2. Bromus madritensis ssp. rubens	4	Y	UPL
3. Schismus barbatus	1	N	NL
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 90 % 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	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	5	x 5 = 25
Column Totals:	10 (A)	45 (B)

Prevalence Index = B/A = 4.5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR5/3						Silty clay loam ~ Clay loam	
2-6	10YR5/4						Clay loam - Clay	
6-16	10YR4/4						Clay loam - Clay	

[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: Clay loam to clay
Depth (inches): 2-16

Hydric Soil Present? Yes ______ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

X 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 Visible 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 X No ____ Depth (inches): 0.5"
Water Table Present? Yes ____ No X Depth (inches): ________
Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 2"

Wetland Hydrology Present? Yes X No ______

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 4

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R 12W

Landform (hillslope, terrace, etc.): Basin - Pleistocene Lake Bed Local relief (concave, convex, none): Plane Slope (%): 0-2

Subregion (LRR): C Lat: 34.743703° Long: -118.156029° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Soils have high pH which can mask redox features

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: 10 X 10)			
1. Atriplex confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 10 X 10)			
1. Bromus madritensis ssp rubens	10	Y	UPL
2. Hordeum marinum	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	15		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 85 % 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: 3 (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	5	x 4 =	20
UPL species	15	x 5 =	75
Column Totals:	20 (A)		95 (B)

Prevalence Index = B/A = 4.75

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR 5/3	100					Clay loam	(Polygonal Cracking)
0.5-12	10YR 4/3-4/4	100					Clay loam	
12-18	10YR 4/4	80	10YR 8/2	20			→ Salt	nodules that are not
							Clay loam	Redox features

[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 X

Remarks:

Polygonal Cracking is only 0.5 inch depth indicating depth of Soil Saturation is very limited.

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 Visible 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 X Depth (inches): ______

Water Table Present? Yes ______ No X Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ______

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

Remarks:

Surface cracks (B6) is a weak hydrologic indicator in this Situation because upland mounds soils also have cracks due to clay and Salt content.

Mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 2/23/2025

Applicant/Owner: ______ State: CA Sampling Point: DP5

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistor Lake bed Local relief (concave, convex, none): Convex Slope (%): 3%

Subregion (LRR): C Lat: 34.743916° Long: -118.155211° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:

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: 5X5)			
1. Schitzmus barbatus	25	Y	NL
2. Erodium cicutarium	15	Y	NL
3. Bromus madritensis ssp rubens	20	Y	UPL
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 40 % 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: 3 (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	60	x 5 = 300
Column Totals:	60 (A)	300 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Mound

SOIL

Sampling Point: DP5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR5/3	100					Sandy Clay loam	(polygonal Cracking)
2-16	10YR5/3	100					Sandy loam	

[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 X

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 Visible 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 X Depth (inches): ____________
Water Table Present? Yes ______ No X Depth (inches): ____________
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ____________

Wetland Hydrology Present? Yes X No ______

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

Remarks:

See comment regarding Surface Soil Cracks (B6) in DP1.

US Army Corps of Engineers

Arid West – Version 2.0

Amagosa Creek

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/23/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 6
Investigator(s): Brent Helm Section, Township, Range: S 33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin-Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 2%
Subregion (LRR): C Lat: 34.74336° Long: -118.154242° Datum: NAD 83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: River
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X	No ______	Is the Sampled Area within a Wetland? Yes ______ No X
Hydric Soil Present?	Yes ______	No X	
Wetland Hydrology Present?	Yes X	No ______	

Remarks:
See comment on DP1

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: 5x5)			
1. Polypogon monspeliensis	20	Y	FACW
2. Epilobium densiflorum	20	Y	FACW
3. Distichlis spicata	5	Y	FAC
4. Centromadia pungens	5	Y	FAC
5.			
6.			
7.			
8.			
	50 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	______ = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- X 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 X No ______

Remarks:

Amargosa Creek

SOIL

Sampling Point: DP6

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/3	100					Sandy loam	(Polygonal Cracking)
2-16	10YR 5/3	100					Sandy loam	

[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 X

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**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible 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**)
- X 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:

See comment on DP1

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025
Applicant/Owner: ______ State: CA Sampling Point: DP7
Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Plane Slope (%): 0-1%
Subregion (LRR): C Lat: 34.741331° Long: -118.154161° Datum: NAD83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP1

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: 10X10)			
1. Schismus barbatus	4	Y	NL
2. Bromus madritensis ssp. rubens	2	Y	UPL
3. Hordeum murinum ssp. glaucum	1	N	FACU
4.			
5.			
6.			
7.			
8.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 93 % 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	0	x 3 =	0
FACU species	1	x 4 =	4
UPL species	6	x 5 =	30
Column Totals:	7 (A)		34 (B)

Prevalence Index = B/A = 4.8

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 7

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.25	10YR 5/3	100					Clay loam - Clay	(Polygonal Cracking)
0.25-16	10YR 4/3	100					Clay loam - clay	

[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: Clay loam - Clay

Depth (inches): 0-16

Hydric Soil Present? Yes ☐ No ☒

Remarks:

See comment on DP1.

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 Visible 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:

See comment on DP1.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 2/22/2025

Applicant/Owner: ________ State: CA Sampling Point: DP 8

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin-Prehistoric lake bed Local relief ([✓ concave], convex, none): Plane / Concave Slope (%): 1%

Subregion (LRR): C Lat: 34.740899° Long: -118.151457° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil X, 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 X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes X	No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

See comment on DP1

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: 10X10)			
1. Atriplex confertifolia	7	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	7		
Herb Stratum (Plot size: 10X10)			
1. Bromus madritensis ssp. rubens	4	Y	UPL
2. Hordeum murinum	1	N	FACU
3. Schismus barbatus	1	N	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	6		
Woody Vine Stratum (Plot size: ________)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 94 % 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	0	x 3 = 0
FACU species	1	x 4 = 4
UPL species	12	x 5 = 60
Column Totals:	13 (A)	64 (B)

Prevalence Index = B/A = 4.92

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-4	10YR5/3	100					Clay loam	Saturated to Surface
4-16	10YR 4/3	100					Clay-Clay loam	

[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: Clay - Clay loam
Depth (inches): 4-18

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) **(Nonriverine)**
__ Sediment Deposits (B2) **(Nonriverine)**
__ Drift Deposits (B3) **(Nonriverine)**
X Surface Soil Cracks (B6)
__ Inundation Visible 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 X No ___ Depth (inches): 2 inches
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4 inches

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 2/23/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 9
Investigator(s): Brent Helm and Lenord Molo Section, Township, Range: S33, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin- Prehistoric Lake bed Local relief (concave, convex, none): Plane Slope (%): 1-3%
Subregion (LRR): C Lat: 34.744482° Long: -181.156332° Datum: NAD83
Soil Map Unit Name: Pk: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
See comment on DP1.

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: 5x5)			
1. Atriplex Confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: 5x5)			
1. Bromus madritensis ssp. rubra	10	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	10		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 90 % 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	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	15	x 5 = 75
Column Totals:	15 (A)	75 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP9

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-1.5"	10YR 5/3	100					Clay loam	(Polygonal Cracking)
1.5-16	10YR 4/3	100					Clay-clay loam	

[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: Clay-clay loam

Depth (inches): 1.5-16

Hydric Soil Present? Yes ___ No _X_

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)**
- _X_ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- _X_ 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 _X_ Depth (inches): ___

Water Table Present? Yes ___ No _X_ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No _X_ Depth (inches): ___

Wetland Hydrology Present? Yes _X_ No ___

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

Remarks:
mostly barren ground; however, the majority is 1' to 2' higher in elevation than area where data point was taken.

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 2/23/2025

Applicant/Owner: ______ State: CA Sampling Point: DP10

Investigator(s): Brent Helm and Lenard Molo Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin-Prehistoric Lake bed Local relief (concave, convex, none): Plane/Concave Slope (%): 0-1%

Subregion (LRR): C Lat: 34.747771° Long: -181.149436° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X
Hydric Soil Present?	Yes ______	No X
Wetland Hydrology Present?	Yes X	No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:

See comment on DP1.

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: 10X10)			
1. Hordeum Murinum	5	Y	FACU
2. Stutzia Covillei	1	N	FACW
3. Erodium Cicutarium	3	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	9		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 91 % Cover of Biotic Crust ______

Remarks:

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	1	x 2 = 2
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	3	x 5 = 15
Column Totals:	9 (A)	37 (B)

Prevalence Index = B/A = 4.11

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 X

Intermound

SOIL

Sampling Point: DP 10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-0.25	10YR 4/4	100					Clay loam	polygonal cracking
0.25-18	10YR 4/3-4/4	100					Clay loam	

[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:

See comment on DP1 Form.

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 Visible 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): 0.5 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:

Human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 11

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Plane Slope (%): 0-1%

Subregion (LRR): C Lat: 34.759688° Long: -181.163003° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Marsh, Swamp, Bog, Prairie

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

Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil X, 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 X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
Top layer of soil has been removed to create a berm that surrounds this artificial basin
Soils have high pH which can mask redox features.

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: 10 X 10)			
1. Tamarix ramosissima	20	Y	NL
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 10 X 10)			
1. Bromus tectorum	5	Y	NL
2. Bromus madritensis	3	N	UPL
3. Descurainia Sophia	5	Y	NL
4.			
5.			
6.			
7.			
8.			
	13	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 87 % 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: 3 (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	35	x 5 = 175
Column Totals:	35 (A)	175 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: DP 11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2	10YR 6/3	100					Silt loam	
2-5	10YR6/3	100					Silt loam	
5-10	10YR 7/2	100					Silt loam	
10-18	10YR6/1	85	2.5YR4/8	15	C	M	Loamy Sand	

[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 X

Remarks:

The top layer of the Soil has been removed to create a human-made berm that surrounds the artificial basin

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 Visible 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 X Depth (inches): ______

Water Table Present? Yes ______ No X Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes ______ No X

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

Remarks:

Human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster/Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 12

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin-Human-made Local relief (concave, convex, none): Plane Slope (%): 1-2%

Subregion (LRR): C Lat: 34.760455° Long: -118.159334° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Compex NWI classification: Marsh, Swamp, Bog, Prairie

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

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil X, 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 X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

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: 10X10)			
1. Tamarix ramosissima	10	Y	NL
2. Atriplex polycarpa	20	Y	FACU
3.			
4.			
5.			
= Total Cover	30		
Herb Stratum (Plot size: 10X10)			
1. Bromus madritensis	5	Y	UPL
2. Schismus barbatus	3	Y	NL
3. Eriogonum angulosum	2	Y	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	10		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 90 % 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: 5 (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	10	x 3 = 30
FACU species	20	x 4 = 80
UPL species	20	x 5 = 100
Column Totals:	40 (A)	210 (B)

Prevalence Index = B/A = 5.55

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 X

Remarks:

Human-made basin

SOIL

Sampling Point: DP 12

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-5	10YR 4/3	100					Sandy loam	
5-18	10YR 5/3	80	(10YR 8/2	20			Sandy Clay loam	
								Salt nodules not Redox features

[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 _X_

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 Visible 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**)
_X_ 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 _X_ Depth (inches): ______
Water Table Present? Yes ____ No _X_ Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ____ No _X_ Depth (inches): ______

Wetland Hydrology Present? Yes ____ No _X_

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

Remarks:

Intermound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 13

Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin – Prehistoric lake bed Local relief (concave, convex, none): Plane / Concave Slope (%): 2%

Subregion (LRR): C Lat: 34.761652° Long: -118.154441° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X

Hydric Soil Present? Yes ______ No X

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comments on DP 11 Form

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: 10 X 10)			
1. Atriplex confertifolia	10	Y	NL
2. Ericameria nauseosa var. mohavensis	10	Y	NL
3.			
4.			
5.			
= Total Cover	20		
Herb Stratum (Plot size: 10 X 10)			
1. Distichlis spicata	15	Y	FAC
2. Schismus barbatus	15	Y	NL
3. Matricaria occidentalis	2	N	FACW
4. Bromus madritensis	5	N	UPL
5. Bromus tectorum	3	N	NL
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	2	x 2 = 4
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	43	x 5 = 215
Column Totals:	60 (A)	264 (B)

Prevalence Index = B/A = 4.4

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 X

Remarks:

Intermound

SOIL

Sampling Point: DP 13

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-2	10YR 4/3	100					Silty loam	
2-10	10YR 4/4	100					Silty loam	
10-12	10YR 6/3	80	10YR 8/2	18			Sandy loam	
			10YR 4/3	2	C	PL		Salt nodules not a redox features
12-18	10YR 6/3	80	10YR 8/2	20			Sandy loam	

[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 Visible 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): 2

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 2

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

roadside drainage
Ditch

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 14
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin - Prehistoric Lake Bed Local relief (concave, convex, none): Concave Slope (%): 1-2%
Subregion (LRR): C Lat: 34.763583° Long: -118.157896° Datum: NAD 83
Soil Map Unit Name: Px : Pond - Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
See comments on DP1 form.

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: 10 X 10)			
1. Ericameria nauseosa var mohavensis	10	Y	NL
2. Atriplex polycarpha	10	Y	FACU
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 10 X 10)			
1. Distichlis Spicata	35	Y	FAC
2. Bromus madritensis	25	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 40 % 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: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	35	x 3 = 105
FACU species	0	x 4 = 0
UPL species	45	x 5 = 225
Column Totals:	80 (A)	435 (B)

Prevalence Index = B/A = 5.4

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 X

Remarks:

Roadside drainage ditch

SOIL

Sampling Point: DP 14

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 5/3	100					Silty Clay loam	(Polygonal cracking)
1-18	10YR 5/3	80	10YR 8/2	20			Sandy clay loam	Salt nodules not redox Features

[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 X

Remarks:

Depth of Soil Cracking was only 1 inch thick revealing how little hydrology the Site Supports

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 Visible 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 X Depth (inches): ____
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

See comments on DP1 Form.

human-made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: State: CA Sampling Point: DP 15
Investigator(s): Brent Helm Section, Township, Range: S28, T 8N, and R 12W
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Plane Slope (%): 1%
Subregion (LRR): C Lat: 34.765231° Long: -118.155006° Datum: NAD83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Lake, Reservoir
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
See comment on DP 11 Form.

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: 10 X 10)			
1. Tamarix ramosissima	20	Y	NL
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 10 X 10)			
1. Bromus madritensis	10	Y	UPL
2. Amsinkia tessellata	3	N	NL
3. Descurainia sophia	2	N	NL
4.			
5.			
6.			
7.			
8.			
= Total Cover	15		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 85 % 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	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	35	x 5 = 175
Column Totals:	35 (A)	175 (B)

Prevalence Index = B/A = 5

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: 15

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					Silty loam	
5-18	10YR 4/3	100					Sandy loam	

[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 X

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 Visible 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 X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

See comment on DP1 form.

Human-Made Basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 16
Investigator(s): Brent Helm Section, Township, Range: S28, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin – human-made Local relief (concave, convex, none): Plane Slope (%): 1-2%
Subregion (LRR): C Lat: 34.763356° Long: -118.154152° Datum: NAD 83
Soil Map Unit Name: Px: Ponda-Oban Complex NWI classification: Lake, Reservoir
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil X, 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 X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
See comment on DP 11 form.

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: 10 X 10)			
1. Ericameria nauseosa ver mohavensis	5	Y	NL
2.			
3.			
4.			
5.	5		
		= Total Cover	
Herb Stratum (Plot size: 10 X 10)			
1. Frankenia Salina	25	Y	FACW
2. Bromus madritensis	20	Y	UPL
3. Bromus tectorum	15	Y	NL
4.			
5.			
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 40 % 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: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	65 (A)		250 (B)

Prevalence Index = B/A = 3.8

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 X

Remarks:

Human-made Basin

SOIL

Sampling Point: 16

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					loamy sand to sandy loam	
5-10	10YR 5/3	100					sandy loam	
10-18	10YR 5/3	80	10YR 8/2	20			sandy loam	Salt nodules not redox features

[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 X

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**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Intermand

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/8/2025
Applicant/Owner: ____ State: CA Sampling Point: 17
Investigator(s): Brent Welm Section, Township, Range: S2
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): plane Slope (%): 1-2%
Subregion (LRR): C Lat: 34.770963° Long: 118.156250° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X	Is the Sampled Area within a Wetland?	Yes ____ No X
Hydric Soil Present?	Yes ____ No X		
Wetland Hydrology Present?	Yes X No ____		

Remarks:

See commen on DP1 Form

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: 10 X 10)			
1. Atriplex confertifolia	5	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	5		
Herb Stratum (Plot size: ____)			
1. Bromus matritensis	3	Y	UPL
2. Schismus barbatus	1	N	NL
3. Eriogonum angulosum	1	N	NL
4. Stutzia covillei	3	Y	FACW
5.			
6.			
7.			
8.			
= Total Cover	8		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 92 % 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	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	13 (A)		56 (B)

Prevalence Index = B/A = 4.3

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 X

Remarks:

Intermound

SOIL

Sampling Point: 17

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	10YR5/3	100					Sandy loam	Polygonal Cracking
0.5-18	10YR5/3	100					Silty clay to Silty clay loam	

[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 X

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**)
X Surface Soil Cracks (B6)
___ Inundation Visible 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 X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Seasonal Wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster | Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: 18

Investigator(s): Brent Helm Section, Township, Range: S33, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric lake bed Local relief (concave, convex, none): Concave Slope (%): 1%

Subregion (LRR): C Lat: 34.747659° Long: -181.152392° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ______

Hydric Soil Present? Yes ? No ______

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? ? Yes ______ No ______

Remarks:
Flat habitat dominated by hydrophytes, with more than surface cracks (B6) or salt crust (B11) as wetland hydrology indicators.

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: 10 X 10)			
1. Plagiobothrys leptocladus	25	Y	OBL
2. Hordeum depressum	5	N	FACW
3. Hordeum murinum	2	N	FACU
4.			
5.			
6.			
7.			
8.			
= Total Cover	32		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 68 % 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: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- X 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 X No ______

Remarks:

Seasonal Wetland

SOIL

Sampling Point: DP 18

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-10	10YR4/3	100					clay to clay loam	Polygonal Cracking
10-18	10YR4/3	100					clay loam to clay	✓

[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:

Polygonal Cracking was up to 10 inches deep which is in the area of Soil horizons that if redox features were present could be considered hydric.

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**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible 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)

- X Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X 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 X Depth (inches): ______

Water Table Present? Yes ___ No X Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ___

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

Remarks:

mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3 | 9 | 2025

Applicant/Owner: ____ State: CA Sampling Point: DP 19

Investigator(s): Brent Helm Section, Township, Range: S33, T8N and R12W

Landform (hillslope, terrace, etc.): Basin - Prehistoric lakebed Local relief [✓ concave], convex, none): ____ Slope (%): 2%

Subregion (LRR): C Lat: 34.747624° Long: -118.152359° Datum: NAD 83

Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: None

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil X, 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 X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

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: 10x10)			
1. Hordeum murinum	15	Y	FACU
2. Hordeum depressum	10	Y	FACW
3. Bromus Madritensis	15	Y	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	40		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 60 % 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	15	x 5 =	75
Column Totals:	40 (A)		155 (B)

Prevalence Index = B/A = 3.875

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 X

Remarks:

mound

SOIL

Sampling Point: DP 19

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/4	100					Clay loam	

[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** X

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 Visible 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 X Depth (inches): ____________
Water Table Present? Yes ______ No X Depth (inches): ____________
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ____________

Wetland Hydrology Present? Yes ______ **No** X

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

Remarks:

mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ______ State: CA Sampling Point: DP 20
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin – Human-made Local relief (concave, convex, none): Plane Slope (%): 0-1%
Subregion (LRR): C Lat: 34.746613° Long: -118.155882° Datum: NAD83
Soil Map Unit Name: Px: Pond-Oban Complex NWI classification: Lake, Reservoir
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)
Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______
Are Vegetation ______, Soil X, 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 X
Hydric Soil Present? Yes ______ No X
Wetland Hydrology Present? Yes ______ No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
See comment on DP 11 form.

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: 10 x 10)			
1. Frankenia Salina	10	Y	FACW
2. Bromus madritensis ssp rubens	15	Y	UPL
3. Schismus barbatus	10	Y	NL
4. Hordeum Murinum	5	N	FACU
5. Erodium Cicutarium	5	N	NL
6.			
7.			
8.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 55 % 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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	5	x 4 = 20
UPL species	30	x 5 = 150
Column Totals:	45 (A)	190 (B)

Prevalence Index = B/A = 4.22

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 X

Remarks:

Mound

SOIL

Sampling Point: DP 20

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/3	100					Sandy loam	
10-18	10YR 5/4	90	10YR 8/2	10			Sandy loam	Calcium Concentration *
								Salt nodules not redox features

[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 X

Remarks: * Not redox features

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 Visible 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 X Depth (inches): ________

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

human-made basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 21

Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin–Artificial Duck Pond Local relief (concave, convex, none): Plane Slope (%): <1%

Subregion (LRR): C Lat: 34.767071° Long: -118.153641° Datum: NAD83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Marsh, Swamp, Bog, prairie

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

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

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: 10 X 10)			
1. Tamarix ramosissima	4	Y	NL
2.			
3.			
4.			
5.			
= Total Cover	4		
Herb Stratum (Plot size: 10 X 10)			
1. Erodium cicutarium	30	Y	NL
2. Schismus barbatus	10	Y	NL
3. Bromus madritensis ssp. rubens	5	N	UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	45		
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: 3 (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	49	x 5 = 245
Column Totals:	49 (A)	245 (B)

Prevalence Index = B/A = 5.0

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 X

Remarks:

Boot Pond
Human-made basin

SOIL

Sampling Point: DP 21

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 5/2	100					Silty loam	with organics
4-18	2.5Y 5/2	85	10YR 8/2	15			Sandy	loam with Calcium nodules
								not redox features

[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 Visible 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:

Seasonal wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025

Applicant/Owner: ______ State: CA Sampling Point: DP 22

Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W

Landform (hillslope, terrace, etc.): Basin - human-made basin Local relief ([✓ concave], convex, none): Concave Slope (%): 1%

Subregion (LRR): C Lat: 34.776053° Long: -118.153249° Datum: NAD 83

Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: Lake, Reservoir

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

Are Vegetation ______, Soil X, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil X, 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 X No ______

Hydric Soil Present? Yes ? No ______

Wetland Hydrology Present? Yes X No ______

Is the Sampled Area within a Wetland? Yes ? No ______

Remarks:

See Comments on DP11 form.

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: 10X10)			
1. Distichilis Spicata	30		FAC
2. Hordeum depressum	10		FAC
3.			
4.			
5.			
6.			
7.			
8.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

X 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 X No ______

Remarks:

Seasonal Wetland

SOIL

Sampling Point: DP22

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 5/4	100						
2-18	2.5Y 4/4	100						

[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:

Soils are olive colored but not yet gleyed.

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**)
X Surface Soil Cracks (B6)
___ Inundation Visible 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 X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes X No ______

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

Remarks:

Mound

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Westside Annexation City/County: Lancaster / Los Angeles Sampling Date: 3/9/2025
Applicant/Owner: ____ State: CA Sampling Point: DP 23
Investigator(s): Brent Helm Section, Township, Range: S21, T8N, and R12W
Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Convex Slope (%): 2%
Subregion (LRR): C Lat: 34.776052° Long: -118.153237° Datum: NAD 83
Soil Map Unit Name: PX: Pond-Oban Complex NWI classification: ____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil X, 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 X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

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: 10 X 10)			
1. Schismus barbatus	35	Y	NL
2. Centromadia pungens	15	N	FAC
3. Bromus madritensis	30	Y	UPL
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20 % 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 (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	65	x 5 = 325
Column Totals:	80 (A)	370 (B)

Prevalence Index = B/A = 4.6

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 X

Remarks:

Mound

SOIL

Sampling Point: DP 23

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/4	100					Sandy loam	

[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 X

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 Visible 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks: