BIOLOGICAL RESOURCES AND JURISDICTIONAL DELINEATION REPORT FOR THE BEAUMONT MDP LINE 2 PROJECT BEAUMONT, CALIFORNIA

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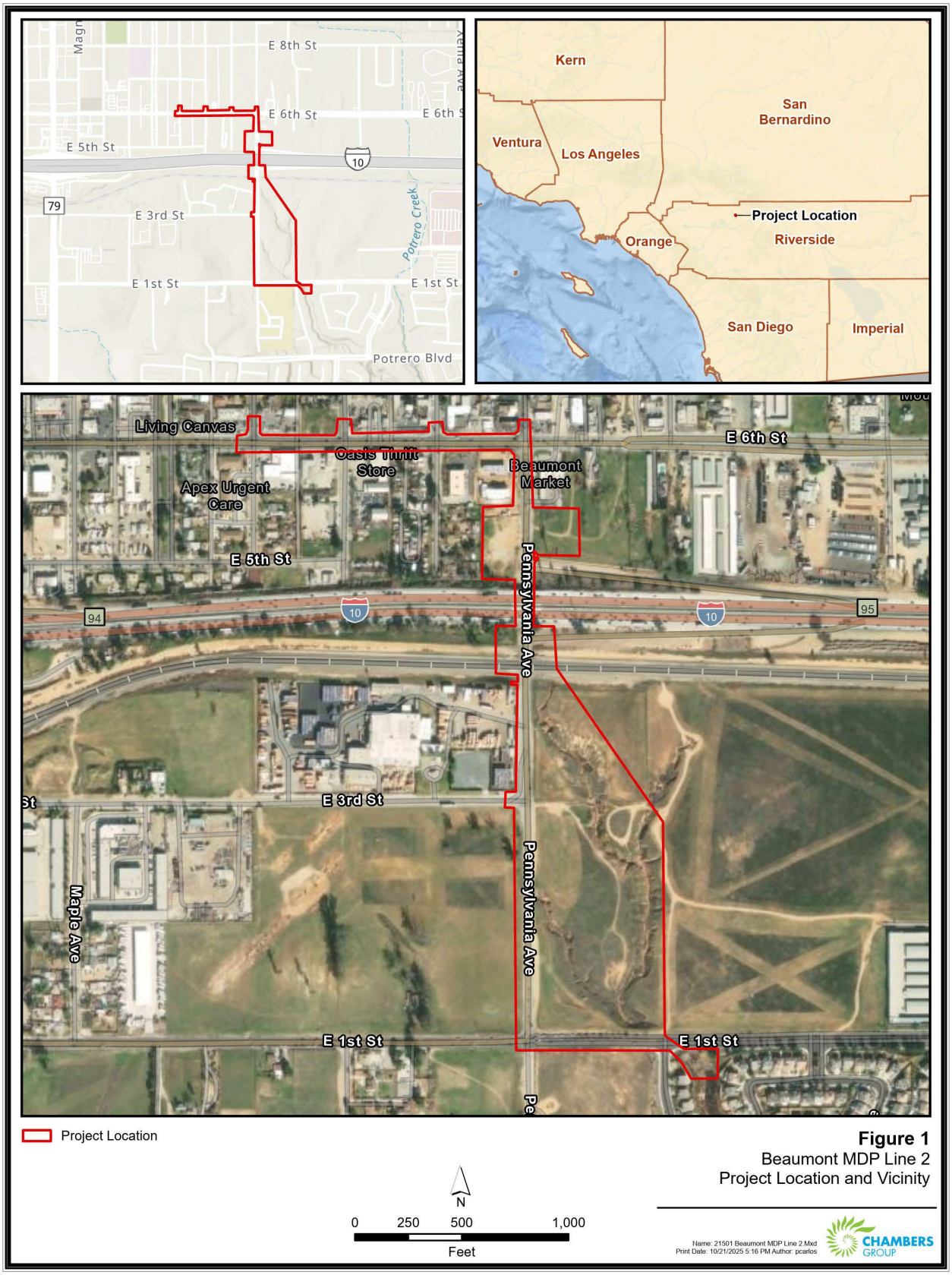
SECTION 1.0 – SUMMARY

This Biological Resources and Jurisdictional Delineation Report has been completed by Chambers Group, Inc. (Chambers Group) to determine the potential for impacts to biological resources associated with construction of the Beaumont Master Drainage Plan (MDP) Line 2 Project (Project). The Project would construct approximately 5,000 linear feet of reinforced concrete pipe (RCP) underground within the existing right-of-way (ROW); (1) along 6th Street from Chestnut Avenue to Pennsylvania Avenue; (2) along Pennsylvania Avenue from 6th Street to East 1st Street; and (3) along East 1st Street from Pennsylvania Avenue to an existing earthen channel in the City of Beaumont (City). No physical changes to surface features are proposed. Throughout this report, Survey Area refers to the Project location as depicted in Figure 1: Project Location and Vicinity. The Survey Area for the reconnaissance-level survey, vegetation mapping, and jurisdictional delineation includes all areas within the Project boundaries.

Chambers Group biologists Heather Madera, Austin Burke, and Alisa Muniz conducted a reconnaissance-level survey and jurisdictional delineation within the Survey Area to identify the potential for occurrence of special status species, vegetation communities, and habitats that could support special status wildlife species. All plant species, wildlife species, and vegetation communities observed within the Survey Area were recorded.

Developed and bare ground areas, as well as ten vegetation communities were documented within the Survey Area. No special status plants were observed within the Survey Area. No burrowing owls or active burrows with sign, such as cough pellets or whitewash, were observed within the Survey Area. Potential jurisdictional water features were observed throughout the Survey Area. The boundaries of the hydrological features were mapped and distinguished by the respective Agencies' jurisdiction, based on current Agency guidance documents.

Figure 1: Project Location and Vicinity



SECTION 2.0 – INTRODUCTION

Chambers Group was retained by EXP (Client) to conduct a literature review and reconnaissance-level biological resources survey and jurisdictional waters delineation ("survey," collectively) for the Project. During the survey, biologists identified vegetation communities, potential for the occurrence of special status species or habitats that could support special status wildlife species, and recorded all plants and animals observed or detected within the Project boundary. This Biological Resources and Jurisdictional Delineation Report has been prepared for the City to document that the Project is consistent with the Western Riverside County Regional Conservation Authority (RCA) Multiple Species Habitat Conservation Plan (MSHCP). The information presented in this document adheres to accepted scientific and technical standards that are consistent with the requirements of the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). The MSHCP Consistency Analysis requires project proponents to evaluate a project's adherence to the MSHCP and Implementing Agreement (IA) guidelines and requirements. The Project is located outside of the mapped Criteria Area and, as such, it is only required to comply with "Other Section 6.1.2 Species" discussed further in Section 5.8.6 of this report.

2.1 PROJECT DESCRIPTION AND AREA

Riverside County Flood Control and Water Conservation District (RCFCWCD) has partnered with the City to provide funding for the design and construction of the Project. In July 1983, RCFCWCD developed an MDP for the Beaumont area (titled "Master Drainage Plan for the Beaumont Area Zone Five"). As discussed in the MDP, the City has experienced flooding over the years, and as undeveloped areas become urbanized, flooding damage is expected to increase. Therefore, the installation of drainage systems is required to safely convey stormwater runoff through the areas of concern with minimal interruption to public services. Particularly, the installation of a channel would eliminate flood concerns for properties between East 1st Street and Interstate 10 (I-10).

The approximately 33.18-acre Project falls within the following APNs that may be affected by Project activities: 418-122-021, 418-123-003, 418-123-005, 418-123-011, 418-123-012, 418-160-006, 418-160-007, 418-360-003, 418-770-007, 418-240-011, 418-250-009, 418-772-001, 418-630-011, 418-630-012, and 418-630-030. The construction of approximately 5,000 linear feet of underground RCP would begin at East 6th Street and Chestnut and terminate at East 1st Street and Berkshire Avenue where it would connect to an existing RCP that discharges out of an existing earthen channel immediately east of Berkshire Avenue. Manholes would be constructed for maintenance access at intervals of no more than 500 feet at the end of each line. Additional components to be installed include inlets and outlets to facilitate efficient entry and exit from the system. The RCP would feature grated openings to prevent the accumulation of debris.

The Project would include traffic control measures such as signs, barriers, and flaggers, to ensure safety and maintain vehicle and pedestrian access along the right-of-way. Best management practices (BMPs) would include basins and silt fences to address soil erosion and protect water quality during construction. Existing water features, where present, would be abandoned in place and not filled in. The affected ROW would be restored after installation of the RCP. The RCP would be installed at a depth no greater than 25 feet to allow for future construction and improvements in the area.

2.2 PROJECT LOCATION AND SETTING

The City of Beaumont is located within northwestern Riverside County, bounded by Calimesa to the north/northwest, Banning to the east, and San Jacinto to the south. The Project consists of three segments as follows:

- East 6th Street between Chestnut Avenue and Pennsylvania Avenue
- Pennsylvania Avenue between East 6th Street and East 1st Street; and
- East 1st Street between Pennsylvania Avenue and approximately 100 feet east of Berkshire Avenue.

Land uses around the Project consist of developed and undeveloped parcels and open space. Commercial properties line East 6th Street. Pennsylvania Avenue features commercial properties and open spaces, with I-10 and the Union Pacific Railroad on the north end. East 1st Street consists of open spaces, commercial properties, and single-family residences.

The Project is located in the U.S. Geological Survey (USGS) *Beaumont*, California 7.5-minute topographic quadrangle. The elevation within the Survey Area ranges from 2,610 to 2,550 feet above mean sea level (amsl). The project location and vicinity are provided in Figure 1: Project Location and Vicinity.

SECTION 3.0 – JURISDICTIONAL WATERS REGULATORY OVERVIEW

The limits of jurisdictional waters regulated by the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and CDFW were delineated for the Survey Area. Pursuant to Section 404 of the Clean Water Act (CWA), USACE regulates the discharge of dredged and/or fill material into Waters of the United States (WoUS). The State of California (State) regulates discharge of material into waters of the State pursuant to Section 401 of the Clean Water Act and the California Porter-Cologne Water Quality Control Act (California Water Code, Division 7, §13000 et seq.). Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, 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.

On September 12, 2019, the Environmental Protection Agency (EPA) and Department of the Army signed a final rule repealing the 2015 Clean Water Rule ("2015 Rule") and re-codifying the regulatory text defining "Waters of the United States" that existed prior to the 2015 Rule. The new regulations went into effect on December 23, 2019. One of the proposed changes includes that ephemeral features, those that contain water only during or in response to rainfall, would no longer be considered "Waters of the United States" under the jurisdiction of the USACE. Separately, on August 28, 2019, the Office of Administrative Law approved the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to "Waters of the State". The procedures went into effect on May 28, 2020. Under the new regulations, the State Water Resources Control Board and its nine RWQCBs will assert jurisdiction over all existing "Waters of the United States", and all waters that would have been considered "Waters of the United States" under the 2015 Rule.

The EPA and USACE are in receipt of the U.S. District Court for the District of Arizona's August 30, 2021, order vacating and remanding the Navigable Waters Protection Rule in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency*. On October 22, 2019, the EPA and USACE published a final rule to repeal the 2015 Rule. The final "Revised Definition of 'Waters of the United States'" rule ("2023 Rule") became effective on March 20, 2023. Subsequently, the Conforming 2023 Rule considered *Sackett v. Environmental Protection Agency* and its implications to the definition of WoUS. Therefore, the jurisdictional delineation conducted for this Project is consistent with the 2023 Conforming Rule and includes measurement of the Ordinary High-Water Mark (OHWM) to determine WoUS.

Evaluation of the State jurisdiction follows guidance from the same jurisdictional areas as USACE. In addition, the jurisdictional delineation Survey Area was reviewed for resources potentially regulated under the Porter-Cologne Act (i.e., isolated features).

CDFW regulates impacts or alterations to streambeds, including any obstruction or diversion to the natural flow of a stream, substantial change or use of material from a stream, or a deposit or disposal of any debris into a stream as part of Fish and Game Code Sections 1600-02. CDFW jurisdiction includes water features with a defined bed and bank. Features are delineated by measuring the outer width and length boundaries, consisting of either the top of bank (TOB) measurement or the extent of associated riparian or wetland vegetation (whichever is greater).

The Western Riverside County MSHCP requires that project sites be evaluated for a number of factors to assess how they meet MSHCP criteria. The jurisdictional delineation for the Project includes assessments for riparian/riverine areas (and associated species) and vernal pools (and associated species) pursuant to MSHCP Section 6.1.2; urban/wildlands interface matters pursuant to MSHCP Section 6.1.4; and areas

under the jurisdiction of USACE and/or CDFW as discussed in MSHCP Section 6.1.2. MSHCP riparian/riverine areas are defined as:

"*those lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year*" (RCA 2025a).

Further discussion of the regulatory framework is provided in Appendix A.

SECTION 4.0 – METHODS

4.1 BIOLOGICAL RESOURCES EVALUATION

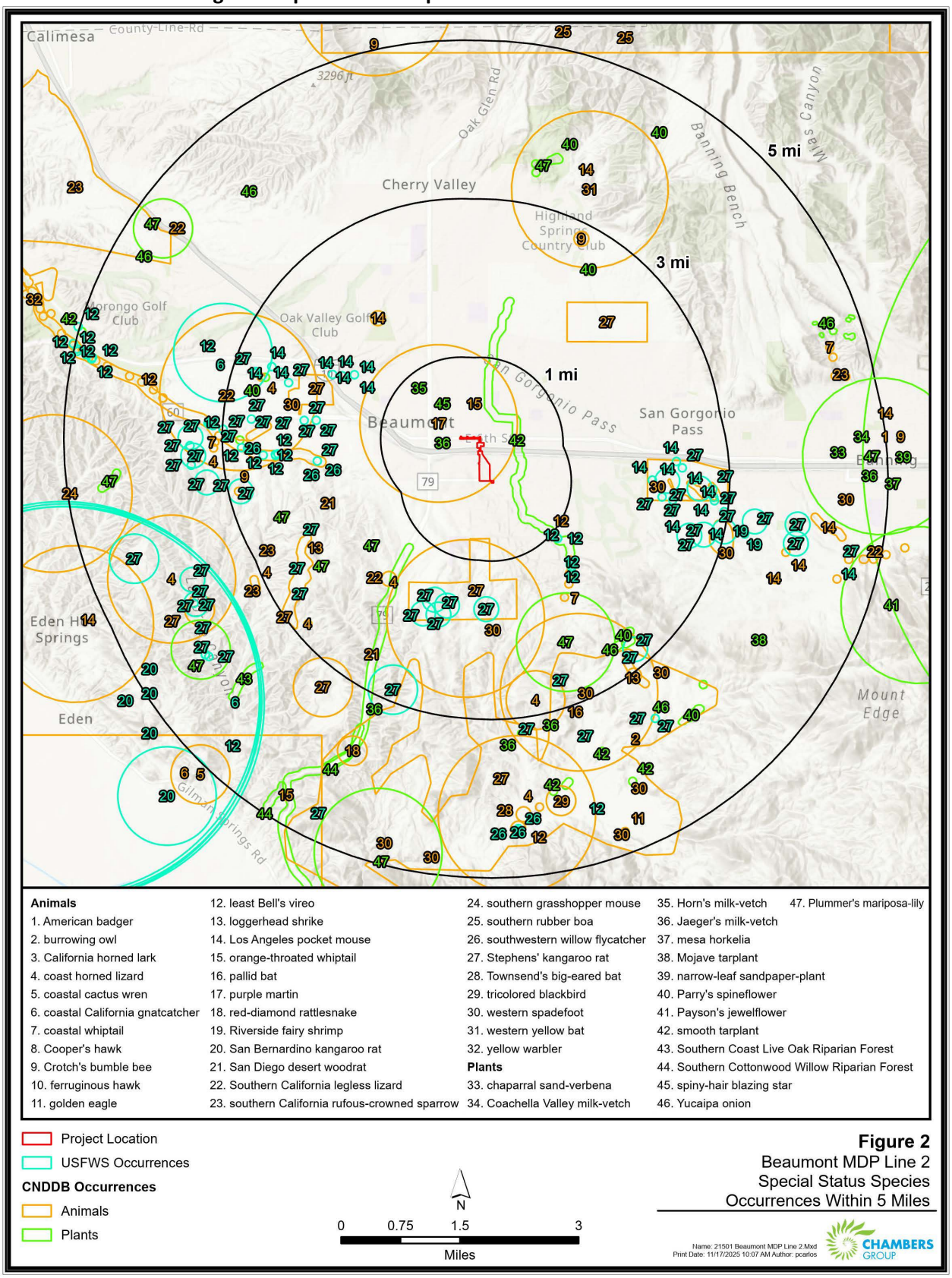
Chambers Group biologists Heather Madera and Austin Burke originally conducted a literature review, reconnaissance-level survey, and jurisdictional delineation for the Project focusing on the ROW following the new RCP installation within the Survey Area on January 14, 2025. The Client later requested Chambers Group include the open lots located on the east side of Pennsylvania Ave, between East 1st Street and I-10. Chambers Group biologists Austin Burke and Alisa Muniz conducted an updated reconnaissance-level survey and jurisdictional delineation for the new Survey Area on October 3, 2025. The methods used by Chambers Group are outlined below. The following geographies were evaluated in determining the potential for special status species to occur:

- Literature review for special status species occurrences: USGS quadrangles containing and surrounding the Survey Area and occurrences within a 5-mile buffer around the Survey Area as shown in Figure 2
- Reconnaissance-level survey: Project location (Survey Area) as shown in Figure 1
- Jurisdictional delineation: Described in Section 5.7
- Vegetation mapping: Described in Section 5.2

4.1.1 Literature Review

Prior to performing the biological reconnaissance-level survey and jurisdictional delineation, existing documentation relevant to the Survey Area was reviewed. The most recent records of the California Natural Diversity Database managed by CDFW (CNDDB; CDFW 2025), the USFWS Critical Habitat Mapper (USFWS 2024), the National Wetlands Inventory (NWI; USFWS 2025a), the USGS's National Hydrography Dataset (NHD) blueline drainages (USGS 2025), the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025), and the California Native Plant Society's (CNPS) Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS 2025a) were reviewed for the following California USGS 7.5-minute quadrangles containing and surrounding the Survey Area: *Beaumont, Yucaipa, Forest Falls, San Gorgonio Mountain, El Casco, Cabazon, Lakeview, San Jacinto,* and *Lake Fulmor*. These databases contain records of reported occurrences of federal- or state-listed threatened or endangered species or habitats that may occur within or in the immediate vicinity of the Survey Area. In addition, the USFWS's Information for Planning and conservation (IPaC) site was searched for federally listed threatened and/or endangered species and critical habitat that could potentially be affected by the Project (USFWS 2025b). A map of special status species occurrences within 5 miles of the Survey Area is included as Figure 2.

Figure 2: Special Status Species Occurrences Within 5 Miles



4.1.2 Biological Reconnaissance-level Survey

Chambers Group biologists Heather Madera and Austin Burke conducted the original biological reconnaissance-level survey within the ROW of the Survey Area to identify the potential for occurrence of special status species, vegetation communities, and habitats that could support special status wildlife species. The original survey was conducted on foot between 0800 and 1300 hours on January 14, 2025. Austin Burke and Alisa Muniz conducted an updated reconnaissance-level survey within the entire Survey Area between 0630 and 1600 on October 3, 2025. Photographs of the Survey Area were taken to document conditions at the time of the survey and are provided in Appendix B – Photo Station Map and Site Photographs.

Vegetation

All plant species and vegetation communities observed within the Survey Area during the reconnaissance-level survey were recorded. Vegetation communities within the Survey Area were identified, qualitatively described, and mapped onto an aerial photograph. The vegetation communities are described following *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Plant nomenclature follows that of *The Jepson Manual, Second Edition* (Baldwin et al. 2012). A comprehensive list of the plant species observed during the surveys are provided in Appendix C.

Wildlife

During the surveys, all wildlife observed and/or detected and wildlife sign, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in habitats most likely to support wildlife (trees were surveyed with binoculars for bird nests or avian activity) or in habitats with the potential to support federal- and/or state-listed or otherwise special status species. Notes were made on the general habitat types, species observed, and the conditions of the Survey Area. A comprehensive list of the wildlife species observed or detected during the surveys are provided in Appendix D.

Soils

Before conducting the survey, soil maps for Riverside County were referenced online to determine the types of soils found within the Survey Area. Soils were determined in accordance with categories set forth by the USDA Soil Conservation Service and by referencing the USDA NRCS Web Soil Survey (USDA 2025). Soils characteristics were assessed on site during the surveys.

4.2 JURISDICTIONAL WATERS

Chambers Group biologists Heather Madera, Austin Burke, and Alisa Muniz performed delineation of potential jurisdictional waters regulated by the USACE, RWQCB, and CDFW within the Survey Area on January 14 and October 3, 2025. The regulatory agencies would determine whether these waters are jurisdictional upon review.

Climate and flow frequency were considered when observing watermarks and drift lines. For the purpose of determining hydrologic connectivity to a Traditional Navigable Water (TNW), aerial photos, NWI and NHD maps, and USGS quadrangle maps were reviewed; all features were inspected in the field on- and off-site for true connectivity. Potential USACE, RWQCB, and CDFW jurisdictional areas identified during

the literature search and aerial image analysis were field checked for the presence of definable channels, soils, wetland vegetation, riparian habitat, and hydrology. The biologists visually inspected all potential waters within the Survey Area to provide 100 percent coverage. Data was recorded for the presence or absence of fluvial activity, boundaries of geomorphic units, changes in plant species composition between different geomorphic units, soil types and textures, and mapping the watercourse and watercourse boundaries. Each of the hydrological features were examined in the field, and the channel banks were examined for signs of flow, terraces, drift deposits, and other indicators that would aid in determining the location and approximate measurement of the OHWM and bank to bank (B2B). Data was collected using a combination of records entered into ESRI ArcGIS Field Maps© and hand-written field notes.

Potential wetland habitats were evaluated using the methodology set forth in the *1987 Corps of Engineers Wetlands Delineation Manual* (1987 Wetland Manual; USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (*version 2.0*) (2008 Arid West Supplement; USACE 2008). The methods set forth in the 1987 Wetland Manual and the 2008 Arid West Supplement involve the delineation of wetlands based on the presence of three wetland parameters: a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology. These wetland parameters are discussed in greater detail below.

Likewise, current CDFW procedures and guidance were used to identify and delineate any streambeds, rivers, or associated riparian habitat potentially subject to CDFW jurisdiction, pursuant to Section 1600 et seq. of the California Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds (Vyverberg 2010).

Hydrophytic Vegetation

Hydrophytic vegetation is defined as “the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content” (USACE 1987).

The biologists walked potential wetland areas within the Survey Area and noted any observations of hydrophytic vegetation. Areas supporting plant life potentially indicative of wetlands were evaluated in the field according to current USACE wetland delineation procedures described in the 1987 Wetland Manual (USACE 1987) and the 2008 Arid West Supplement (USACE 2008). The dominant and subdominant plant species present in the sample soil pits of these potential wetland areas were identified and their wetland indicator status was noted based on the current USACE *National Wetland Plant List – Arid West Region* (USACE 2022).

Hydric Soils

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (USACE 1987). Hydric soil indicators are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds due to periods of anaerobic conditions in the soil (USACE 2008). The hydric soil criterion is considered satisfied at a location if, based upon the conclusions inferred from the field observations, a high groundwater table, evidence of prolonged soil saturation, or any indicators suggesting a long-term reducing environment in the upper 18 inches of the soil profile, are present.

Potential hydric soils were investigated within the Survey Area. Sample soil pit locations were selected, and a hole was dug to a typical depth of 18 inches (unless prevented by some occluding material) or occasionally deeper to determine soil color, evidence of soil saturation, depth to shallow groundwater, and indicators of a reducing soil environment (e.g., redox concentrations or pore linings, gleyed soils, hydrogen sulfide odor). Soil matrix colors were classified using the Munsell Soil-Color Charts (Munsell Color 2009).

Wetland Hydrology

The presence of wetland hydrology indicators confirms that inundation or saturation has occurred on a site but may not provide information about the timing, duration, or frequency of the event. Hydrological features are generally the most ephemeral of the three wetland parameters (USACE 2008).

Hydrologic information for the site was obtained by reviewing USGS topographic maps and by directly observing hydrologic indicators in the field. The wetland hydrology criterion is considered satisfied at a location if, based upon the conclusions inferred from the field observations, an area has a high probability of being periodically inundated or has soils saturated to the surface at some time during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987). If at least one primary or two secondary indicators are found at a sample soil pit, the wetland hydrology criterion is considered satisfied.

4.3 MSHCP CONSISTENCY ANALYSIS

The MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on the conservation of species and their associated habitats within Western Riverside County. The MSHCP is composed of five management units, which are broad areas for overall management of the MSHCP conservation areas. MSHCP conservation areas include land for the conservation of 146 covered species. Reserve Assembly components include Criteria Cells (generally 160 acres in size each, used to organize and track conservation and development within the Criteria Areas), Criteria Areas (the mapped area of all Criteria Cells identified for potential conservation), Core Areas (a block of habitat within the reserve that provide resources to support species covered under the MSHCP), and Linkages (narrow habitat corridors that connect Core Areas, maintaining wildlife movement and genetic exchange), identified for species conservation (RCA 2025a).

Data obtained from the literature review and field surveys for the Project were reviewed to determine consistency with the MSHCP. The MSHCP Information Map was queried to determine requirements for habitat assessment(s), potential focused survey(s), or other issues related to biological resources that could exist within the Survey Area (RCA 2025b). The MSHCP Information Map was also used to identify any Covered Roads, Covered Public Access Activities (e.g., trails), and Public Quasi-Public Lands. Section 6.1.2 of the MSHCP requires that an assessment of the Survey Area be completed to identify any potential Project-related effects on biological resources, including riparian/riverine areas, vernal pools, fairy shrimp, and riparian birds, if applicable. All Section 6.1.2 plant and wildlife species are also required to be assessed in the context of impacts to riparian/riverine areas and vernal pools. Section 6.1.3 of the MSHCP requires an assessment of the site for narrow endemic plant species for sites located within a Narrow Endemic Plant Species Survey Area. Section 6.3.2 of the MSHCP outlines additional survey needs and procedures for projects that fall within a mapped survey area for Criteria Area Plant Species, Amphibians, Burrowing Owl, Mammals, Delhi Sands flower-loving fly, Coastal California gnatcatcher, and Species Not Adequately Conserved. In addition, Section 6.1.4 of the MSHCP requires that an Urban/Wildlands Interface analysis

be conducted to address the indirect effects associated with locating proposed development in the proximity of MSHCP Conservation Areas.

SECTION 5.0 – RESULTS

5.1 BIOLOGICAL RECONISSANCE-LEVEL SURVEY

Weather conditions during the original January 14, 2025, survey included temperatures ranging from 46 to 58 degrees Fahrenheit (°F), with no cloud cover and no precipitation. Wind speeds ranged between 12 and 20 miles per hour (mph).

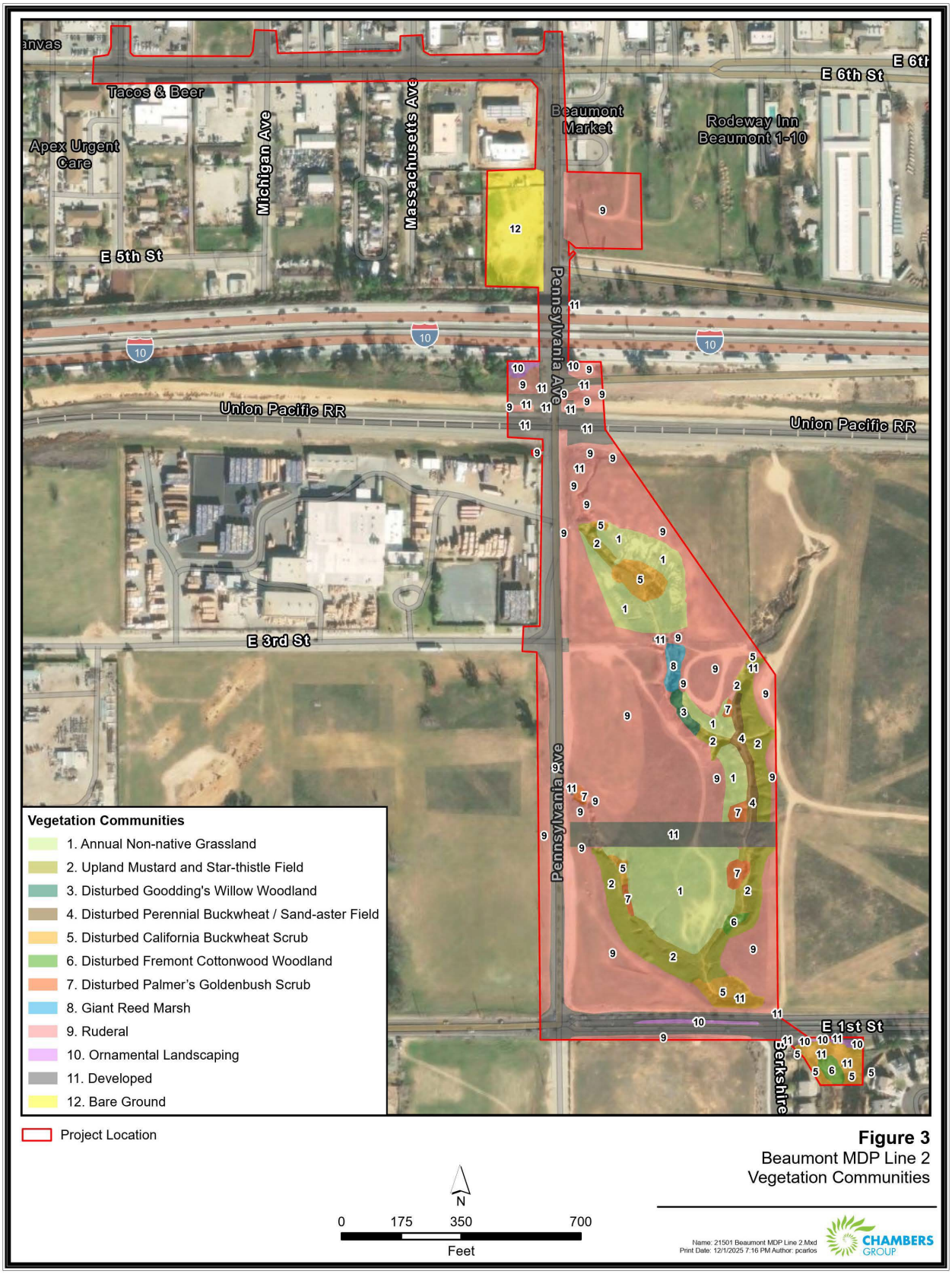
Weather conditions during the October 3, 2025, survey included temperatures ranging from 55 to 72 °F with 0 to 45 percent cloud cover and no precipitation. Wind speeds ranged between 0 and 3 mph.

5.2 VEGETATION COMMUNITIES

Ten vegetation communities were documented within the Survey Area: Annual Non-native Grassland, Upland Mustard and Star-thistle Field, Disturbed Goodding's Willow Woodland, Disturbed Perennial Buckwheat/Sand-aster Field, Disturbed California Buckwheat Scrub, Disturbed Fremont Cottonwood Woodland, Disturbed Palmer's Goldenbush Scrub, Giant Reed Marsh, Ruderal, and Ornamental Landscaping. In addition, two other land cover types were present in the Survey Area: Bare Ground and Developed.

The following sections summarize the principal characteristics of the vegetation communities and land cover types, including the general locations of these areas within the Survey Area. Total acreages for each habitat type are presented in Table 1, and mapped vegetation communities and land cover types within the Survey Area are depicted in Figure 3.

Figure 3: Vegetation Communities



5.2.1 Annual Non-native Grassland

Annual Non-native Grassland is a semi-natural herbaceous community that is dominated by non-native grasses in the herbaceous layer with only scattered or emergent shrubs present at low cover. It can be found in all topographic settings in foothills, waste places, rangelands, or openings in woodlands (Sawyer et al. 2009). Soils are clays to sandy loams and the herbaceous layer is less than 4 feet high with open to continuous cover (Sawyer et al. 2009). This is a non-native vegetation community.

Annual Non-native Grassland covers approximately 3.55 acres of the Survey Area and was mapped mainly in the upland areas on both sides the drainages, though the community was potentially more extensive prior to the surrounding areas being disturbed. It appeared that much of the Survey Area had been recently mowed and/or disked resulting in large areas of Ruderal vegetation where the topography is flat. Based on historical aerial imagery, these areas appear to be regularly mowed/maintained, presumably to reduce fire fuel load and mitigate fire risk to surrounding residential areas. Annual Non-native Grassland potentially covered more of the Survey Area prior to the disturbance. Native plant species found within the Survey Area as mapped within this vegetation community included slender woolly buckwheat (*Eriogonum gracile*), turkey-mullein (*Croton setiger*), miniature lupine (*Lupinus bicolor*), vinegar weed (*Trichostema lanceolatum*), jimson weed (*Datura wrightii*), and occasional small California buckwheat (*Eriogonum fasciculatum*). Non-native species included ripgut grass (*Bromus diandrus*), foxtail brome (*Bromus madritensis*), wild oat (*Avena fatua*), shortpod mustard (*Hirschfeldia incana*), yellow star-thistle (*Centaurea solstitialis*), erodium (*Erodium* sp.), tocalote (*Centaurea melitensis*), and Russian-thistle (*Salsola australis*).

5.2.2 Upland Mustard and Star-thistle Field

Upland Mustard and Star-thistle Field is a non-native vegetation community consisting of dense stands of upland mustards and/or ecologically similar non-native forbs that overgrow and choke out other plants, both native and non-native. It can be found in fallow fields, rangelands, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, cleared roadsides, and waste places (Sawyer et al. 2009). The community responds positively to regular frequent disturbance, such as fire, disking, intermittent flooding, or heavy grazing and persists after disturbance (D'Antonio et al. 2007, Sawyer et al 2009). Species indicative of this vegetation community include black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), shortpod mustard, Italian thistle (*Carduus pycnocephalus*), yellow star-thistle, wild radish (*Raphanus sativus*), tocalote, carnation spurge (*Euphorbia terracina*), and other similar ruderal forbs. Soils are clays to sandy loams and the herbaceous layer is less than 10 feet in height with open to continuous cover (Sawyer et al. 2009). Sparse emergent trees and shrubs may also be present. This is a non-native community.

Upland Mustard and Star-thistle Field vegetation covers approximately 2.08 acres of the Survey Area and occurs mainly within Drainages 1, 2, and 3, as well as along the margins of the drainages in the eastern and southern portions of the site. Shortpod mustard is the dominant or codominant species in this community within the Survey Area followed by yellow star-thistle. Non-native vegetation in this community was much denser within the drainages and flatter areas in the south, with higher proportions of yellow star-thistle. Patches of giant reed (*Arundo donax*) were present within this community in the southern portion of the site. Scattered native vegetation was also present in this community within the Survey Area including western ragweed (*Ambrosia psilostachya*), telegraph weed (*Heterotheca grandiflora*), rough cocklebur (*Xanthium strumarium*), fragrant everlasting (*Pseudognaphalium*

beneolens), Canada horseweed (*Erigeron canadensis*), sand-aster (*Corethrogyne filaginifolia*), jimson weed, and common sunflower (*Helianthus annuus*). A single blue elderberry (*Sambucus nigra* subsp. *caerulea*) was observed within this community in the eastern portion of the site. The more southern portions of these drainages had much denser non-native vegetation and a higher proportion of yellow star-thistle compared to the central and northern sections which had denser shortpod mustard. Other non-native species found in this community within the Survey Area include Russian-thistle, ripgut grass, foxtail brome, wild oat, tocalote, and London rocket (*Sisymbrium irio*).

5.2.3 Disturbed Goodding's Willow Woodland

Goodding's Willow Woodland can be found on terraces along large rivers, canyons, along floodplains of streams, seeps, springs, ditches, lake edges, and low-gradient depositions (Sawyer et al. 2009). In this community, Goodding's willow (*Salix gooddingii*) may be dominant or codominant in the tree and/or shrub canopy with red willow (*Salix laevigata*), boxelder (*Acer negundo*), buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), or canyon live oak (*Quercus chrysoplepis*). Shrubs may include mule fat (*Baccharis salicifolia*), American dogwood (*Cornus sericea*), narrowleaf willow (*Salix exigua*), Himalayan blackberry (*Rubus armeniacus*), or California wild rose (*Rosa californica*). It forms an open to continuous canopy that is typically less than 100 feet in height. The shrub layer is sparse to continuous and the herbaceous layer is variable (Sawyer et al. 2009). The USACE *National Wetland Plant List – Arid West Region* (2022) recognizes Goodding's willow as a FACW (Facultative Wetland indicator species; i.e., it usually occurs in wetlands but may occur in non-wetlands) plant. Because the community was also composed of more than 25 percent non-native species in the herbaceous understory, this community has been classified as Disturbed.

Disturbed Goodding's Willow Woodland covers approximately 0.10 acre of the Survey Area located in the center of Drainage 2, north of where it converges with Drainage 3. The area was highly disturbed and filled with sediment as well as trash and debris. Native plant species found on the Survey Area typical of this vegetation community included Goodding's willow and western ragweed. Non-native species included giant reed, yellow star-thistle, ripgut grass, foxtail brome, and shortpod mustard.

5.2.4 Disturbed Perennial Buckwheat/Sand-aster Field

Perennial Buckwheat/Sand-aster Field vegetation is found on upland slopes, hills, or flats. Soils are sandy to loamy and can be derived from many substrates, including granitic, gabbro, sedimentary, and serpentinite (Sawyer et al. 2009). Membership rules for this community include having greater than 30 percent to 50 percent relative cover of longstem buckwheat (*Eriogonum elongatum*) as well as other herb species which can be codominant, including sand-aster, naked buckwheat (*Eriogonum nudum*), gum-plant (*Grindelia camporum*), and golden aster (*Heterotheca sessiliflora*; Sawyer et al. 2009, Buck-Diaz and Evens 2011, Kittel et al. 2012). Other commonly associated herbs in this community include ripgut grass, foxtail brome, sand mat (*Cardionema ramosissimum*), miniature lupine, and species in the genera *Clarkia*, *Erodium*, *Gutierrezia*, and *Mentzelia*. Shrubs may be present at low cover including coyote brush (*Baccharis pilularis*), California buckwheat, or grape soda lupine (*Lupinus excubitus*). The herbaceous layer is less than 3 feet high with open to intermittent cover. Because the community was also composed of more than 25 percent non-native species in the herbaceous understory, this community has been classified as Disturbed.

Disturbed Perennial Buckwheat/Sand-aster Field vegetation covers approximately 0.25 acre of the Survey Area located along Drainage 3 and where Drainage 3 meets Drainage 2. This area of the drainages is more open with longstem buckwheat and sand-aster dominating the banks with patches of western ragweed and sparse Canada horseweed and fragrant everlasting scattered throughout the area. Native plant species found on the Survey Area typical of this vegetation community included: longstem buckwheat, sand-aster, western ragweed, fragrant everlasting, Canada horseweed, and telegraph weed. Non-native species included: ripgut grass, foxtail brome, shortpod mustard, wild oat, and Russian-thistle.

5.2.5 Disturbed California Buckwheat Scrub

California Buckwheat Scrub is found in upland slopes, intermittently flooded arroyos, channels and washes, and rarely flooded low-gradient deposits. Soils are coarse, well drained, and moderately acidic to slightly saline (Sawyer et al. 2009). Stands do well on rocky sites and in shallow soils, and they establish after disturbance by fire or flood or after heavy grazing. In southern coastal California, this alliance is usually one of the first of the coastal scrubs to establish in mechanically disturbed areas such as road cuts or slope failures, and it persists in areas with light to moderate grazing (Sawyer et al. 2009). In this vegetation community, California buckwheat or yucca (*Hesperoyucca whipplei*) is dominant or co-dominant in the shrub canopy in cismontane stands with California sagebrush (*Artemisia californica*), coyote brush, sticky monkeyflower (*Diplacus aurantiacus*), brittlebush sunflower (*Encelia californica*), brittlebush (*Encelia farinosa*), coast goldenbush (*Isocoma menziesii*), deerweed (*Acmispon glaber*), white sage (*Salvia apiana*), or black sage (*Salvia mellifera*). The herbaceous layer is variable and may be grassy (Sawyer et al. 2009). Because the community was also composed of more than 25 percent non-native species in the herbaceous understory, this community has been classified as Disturbed.

Areas with Disturbed California Buckwheat Scrub cover approximately 1.00 acre of the Survey Area located in patches along the edges of Drainages 1 and 2 as well as on the hillsides surrounding the culvert in Drainage 4. The patch located in the northern portion of Drainage 2 was more open with less non-native cover than the southern patches. Vegetation was generally sparser in this area and surrounded by Annual Non-native Grassland and Ruderal vegetation including foxtail brome and erodium. Areas within the channel were more open and contained sparse native forbs including western ragweed, vinegar weed, and telegraph weed. The small patch along the northern portion of Drainage 1 was located along the edges of a more deeply incised channel and included denser non-native cover including shortpod mustard, yellow star-thistle, and ripgut grass. The patch located in the southern portion of the site where Drainage 1 and Drainage 2 converge just north of East 1st Street contained denser California buckwheat surrounded by yellow star-thistle, shortpod mustard, and non-native grasses, as well as sparse Ruderal vegetation. This portion of the drainage itself was also generally more open and contained more native cover including ragweed and rough cocklebur (*Xanthium strumarium*). The patch located in the southern portion of the site south of East 1st Street and surrounding Drainage 4 appears to be regularly maintained as a fuel reduction zone. The species located in this area were likely planted as an erosion-control buffer and appear to receive regular thinning and mowing. Native species observed in this area had a different composition than other areas of Disturbed California Buckwheat Scrub within the Survey Area and included deerweed, white sage, black sage, coyote brush, and California sagebrush. Native plant species found on the Survey Area typical of this vegetation community included California buckwheat, sand-aster, miniature lupine, Canada horseweed, cudweed (*Pseudognaphalium* sp.), western ragweed, and telegraph weed. Non-native species included ripgut grass, foxtail brome, shortpod mustard, yellow star-thistle, wild oat, and Russian-thistle.

5.2.6 Disturbed Freemont Cottonwood Woodland

Fremont Cottonwood Woodland can be found 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 (Sawyer et al. 2009). Fremont cottonwood is dominant or codominant in the tree layer with boxelder, desert baccharis (*Baccharis sergiloides*), Arizona ash (*Fraxinus velutina*), western sycamore, narrowleaf willow, Goodding's willow, and/or arroyo willow (*Salix lasiolepis*), among others. It forms an open, intermittent, or continuous canopy of trees that is typically less than 85 feet in height. The shrub layer is intermittent to open and the herbaceous layer is variable. The USACE *National Wetland Plant List – Arid West Region* (2022) recognizes Fremont cottonwood as a FACW plant. Because the community was also composed of more than 25 percent non-native species in the herbaceous understory, this community has been classified as Disturbed.

Disturbed Fremont Cottonwood Woodland vegetation covers approximately 0.16 acre of the Survey Area located in a small stand in the southern portion of Drainage 3 as well as in the area surrounding the culvert within Drainage 4. The small stand located in Drainage 3 contains patches of arroyo willow and giant reed with other non-native vegetation in the understory, and substantial amounts of trash and debris present. The area surrounding the culvert within Drainage 4 contains more mule fat in the understory and is heavily disturbed with an excessive amount of sediment and debris from flooding events. It is surrounded by developed areas and the surrounding vegetation appears to be regularly maintained. Native plant species found in the Survey Area typical of this vegetation community included Fremont cottonwood, mule fat, western ragweed, mugwort (*Artemisia douglasiana*), and rough cocklebur. Non-native species included giant reed, Russian-thistle, ripgut grass, foxtail brome, wild oat, shortpod mustard, and ribwort (*Plantago major*).

5.2.7 Disturbed Palmer's Goldenbush Scrub

Palmer's Goldenbush Scrub is dominated by Palmer's goldenbush (*Ericameria palmeri* var. *pachylepis*) in the shrub canopy with California buckwheat, California matchweed (*Gutierrizia californica*), and saw-toothed goldenbush (*Hazardia squarrosa*) also common. Stands of this vegetation type usually occur within a larger matrix of annual grasslands (Sawyer et al. 2009). Shrubs are typically less than 5 feet, the canopy is open, and the herbaceous layer is continuous (Sawyer et al. 2009). Because the community was also composed of more than 25 percent non-native species in the herbaceous understory, this community has been classified as Disturbed.

Disturbed Palmer's Goldenbush Scrub covers approximately 0.26 acre of the Survey Area and is present in small patches along the edges of Drainages 1 and 3, primarily surrounded by non-native vegetation. Native plant species found in the Survey Area typical of this vegetation community included Palmer's goldenbush, sand-aster, and one small patch of purple needlegrass (*Stipa pulchra*) in the center of Drainage 3. Non-native species found in the Survey Area typical of this vegetation community included foxtail brome, shortpod mustard, yellow star-thistle, tocalote, and ripgut grass.

5.2.8 Giant Reed Marsh

Giant Reed Marshes are found within riparian areas, along low-gradient streams and ditches, semi-permanently flooded and slightly brackish marshes, and impoundments (Sawyer et al. 2009). Giant reed is dominant in the herbaceous layer with common reed (*Phragmites australis*), western ragweed, yerba

mansa (*Anemopsis californica*), salt grass (*Distichlis spicata*), rush (*Juncus* spp.), perennial pepperweed (*Lepidium latifolium*), cattail (*Typha* spp.), or rough cocklebur. Emergent trees may be present at low cover, including Fremont cottonwood or willows. Emergent shrubs may be present, including salt marsh baccharis (*Baccharis douglasii*), mule fat, or button willow (*Cephalanthus occidentalis*). Giant reed is greater than 60 percent of the relative cover in the herbaceous and shrub layers (Evens and San 2005, Sproul et al. 2011, Buck-Diaz et al. 2012). Stands of giant reed choke riverbanks and stream channels, crowd out native plants, interfere with flood control, increase fire potential, and reduce wildlife habitat. The cover is typically continuous. The USACE *National Wetland Plant List – Arid West Region* (2022) recognizes giant reed as a FACW plant. This is a non-native community.

Giant Reed Marsh vegetation covers approximately 0.15 acre of the Survey Area and is present within the center of Drainage. Native plant species found on the Survey Area typical of this vegetation community included western ragweed and telegraph weed. Non-native species found in the Survey Area typical of this vegetation community included giant reed, ripgut grass, foxtail brome, and Russian-thistle.

5.2.9 Ruderal

Areas classified as Ruderal tend to be dominated by pioneering herbaceous species that readily colonize disturbed ground and that are typically found in temporary, often frequently disturbed habitats (Barbour et al. 1999). The soils in Ruderal areas are typically characterized as heavily compacted or frequently disturbed. The vegetation in these areas are adapted to living in compact soils where water does not readily penetrate the soil. Often, Ruderal areas are dominated by species of the *Centaurea*, *Brassica*, *Malva*, *Salsola*, *Eremocarpus*, *Amaranthus*, and *Atriplex* genera.

Areas with Ruderal vegetation cover approximately 14.59 acres of the Survey Area within recently mowed and disturbed areas throughout the eastern portion of the Survey Area, the vacant lot in the northern portion of the Survey Area, the disturbed areas surrounded the Union Pacific Railroad in the northern portion of the Survey Area, and on either side of the sidewalks located along Pennsylvania Avenue and East 1st Street. Ruderal vegetation was also present within outlet of a small culvert in the northern portion of the Survey Area. This area contained small and stunted regrowth of Goodding's willow, tall cyperus (*Cyperus eragrostis*), and cattail. Non-native plant species found on the Survey Area typical of this vegetation community included shortpod mustard, Russian-thistle, ripgut grass, Bermuda grass (*Cynodon dactylon*), occasional stands of tree of heaven (*Ailanthus altissima*), tocalote, foxtail barley (*Hordeum murinum*), London rocket, and yellow star-thistle. Native plant species found in the Survey Area typical of this vegetation community included sparse and scattered turkey-mullein, telegraph weed, and jimson weed.

5.2.10 Ornamental Landscaping

Ornamental Landscaping includes areas where the vegetation is dominated by non-native horticultural plants (Gray and Bramlet 1992). Typically, the species composition consists of introduced trees, shrubs, flowers, and turf grass.

Ornamental Landscaping covers approximately 0.24 acre of the Survey Area. These areas include the middle of East 1st Street and along a small portion of sidewalk in the southern portion of the Survey Area, as well as in the northern portion of the Survey Area along the south side of I-10. Plant species found within the Survey Area typical of this community include star jasmine (*Trachelospermum jasminoides*), Indian hawthorn (*Rhaphiolepis indica*), gum tree (*Eucalyptus* sp.), and ornamental pine (*Pinus* sp.).

5.2.11 Developed

Developed areas are areas that have been altered by humans and now display man-made structures such as houses, paved or gravel roads, buildings, parks, and other maintained areas.

Developed areas cover approximately 9.49 acres of the site and provide virtually no habitat for wildlife species. These areas include the paved roads and sidewalks along East 1st Street, Pennsylvania Avenue, and East 6th Street, the Union Pacific Railroad and surrounding gravel roads in the northern portion of the Survey Area, concrete culverts located throughout the Survey Area, and the newly constructed East 2nd Street and its associated culverts.

5.2.12 Bare Ground

Bare ground areas are generally devoid of vegetation but do not contain any form of pavement or developed structures. Bare ground is present in the vacant lot located in the northern portion of the Survey Area on the west side of Pennsylvania Avenue. Bare ground covers approximately 1.32 acres of the Survey Area.

Table 1 below summarizes the vegetation communities and other land cover types within the Survey Area and the acreage of each land type.

Table 1: Vegetation Communities within the Survey Area

ID	Vegetation Community	Acres
1	Annual Non-native Grassland	3.55
2	Upland Mustard and Star-thistle Field	2.08
3	Disturbed Goodding's Willow Woodland	0.10
4	Disturbed Perennial Buckwheat/Sand-aster Field	0.25
5	Disturbed California Buckwheat Scrub	1.00
6	Disturbed Fremont Cottonwood Woodland	0.16
7	Disturbed Palmer's Goldenbush Scrub	0.26
8	Giant Reed Marsh	0.15
9	Ruderal	14.59
10	Ornamental Landscaping	0.24
11	Developed	9.49
12	Bare Ground	1.32
Total		**33.18**

5.3 SPECIAL STATUS SPECIES

The following information is a list of abbreviations used to help determine the significance of biological special status resources potentially occurring within the Survey Area. With the exception of MSHCP Covered Species that have a CRPR of 3 or 4, plants with a CRPR of 3 or 4 were not included in the analysis as they are not afforded protections under CEQA.

California Rare Plant Rank (CRPR)

1A	=	Plants presumed extirpated in California and either rare or extinct elsewhere.
1B	=	Plants rare, threatened, or endangered in California and elsewhere.
2A	=	Plants presumed extirpated in California but common elsewhere.
2B	=	Plants rare, threatened, or endangered in California but more common elsewhere in their range.
3	=	Plants about which more information is needed.
4	=	Plants of limited distribution; a watch list.

CRPR Extensions

0.1	=	Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat).
0.2	=	Fairly endangered in California (20 to 80 percent occurrences threatened).
0.3	=	Not very endangered in California (less than 20 percent of occurrences threatened).

Federal

FE	=	Federally listed; Endangered
FT	=	Federally listed; Threatened

State

ST	=	State listed; Threatened
SE	=	State listed; Endangered
RARE	=	State-listed; Rare (Listed “Rare” animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
SSC	=	California Species of Special Concern
FP	=	Fully Protected
WL	=	Watchlist

County

CS	=	MSHCP Covered Species

The following information was used to determine the significance of biological resources potentially occurring within the Survey Area. The criteria used to evaluate the potential for special status species to occur in the Survey Area are outlined in Table 2.

Table 2: Criteria for Evaluating Special Status Species Potential for Occurrence (PFO)

PFO*	CRITERIA
Absent:	Species is restricted to habitats or environmental conditions that do not occur within the Survey Area.
Low:	Historical records for this species do not exist within the immediate vicinity (approximately 5 miles) of the Survey Area, and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either a historical record exists of the species within the immediate vicinity of the Survey Area (approximately 3 miles) and marginal habitat exists in the Survey Area, or the habitat requirements or environmental conditions associated with the species occur within the Survey Area, but no historical records exist within 5 miles of the Survey Area.
High:	Both a historical record exists of the species within the Survey Area or its immediate vicinity (approximately 1 mile), and the habitat requirements and environmental conditions associated with the species occur within the Survey Area.
Present:	Species was detected within the Survey Area at the time of the survey.

* PFO: Potential for Occurrence

5.3.1 Special Status Plants

Current database searches (CDFW 2025, CNPS 2025a, USFWS 2024) resulted in a list of 69 federal- and/or state-listed threatened and endangered or otherwise special status plant species documented to occur within the vicinity of the Survey Area. After the literature review and assessment of the various habitat types in the Survey Area and vicinity, it was determined that 64 species are absent from the Survey Area and 5 species have a low potential for occurrence within the Survey Area. Factors used to determine the potential for occurrence included the quality of habitat, elevation, soil type, and the results of the reconnaissance-level survey. In addition, the location of prior CNDDB records of occurrence was used as additional data, but because the CNDDB is a positive-sighting database, these data were used only in support of the analysis from the previously identified factors. Additional species not identified in the CNDDB and USFWS databases may require analysis for future studies.

The following 54 plant species are considered **absent** from the Survey Area due to lack of suitable habitat, the species are found outside of the elevational range within the Survey Area, and/or the species would have been conspicuous if it was present within the Survey Area:

- Cienega Seca oxytheca (*Acanthoscyphus parishii* var. *cienegensis*) – CRPR 1B.3
- white-margined everlasting (*Antennaria marginata*) – CRPR 2B.3
- Southern California galium broomrape (*Aphyllon epigalium* ssp. *notocalifornicum*) – CRPR 1B.3
- rock sandwort (*Arenaria lanuginosa* var. *saxosa*) – CRPR 2B.3
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*) – **FE**, CRPR 1B.1, CS
- Parish's brittlescale (*Atriplex parishii*) – CRPR 1B.1, CS
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) – CRPR 1B.2, CS
- Parish's rockcress (*Boechera parishii*) – CRPR 1B.2
- San Bernardino rockcress (*Boechera peirsonii*) – CRPR 1B.2

- scalloped moonwort (*Botrychium crenulatum*) – CRPR 2B.2
- Palmer's mariposa-lily (*Calochortus palmeri* var. *palmeri*) – CRPR 1.B2
- San Bernardino Mountains owl's-clover (*Castilleja lasiorhyncha*) – CRPR 1B.2
- Payson's jewelflower (*Caulanthus simulans*) – CRPR 4.2, CS
- peninsular spine flower (*Chorizanthe leptotheca*) – CRPR 4.2, CS
- white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) – CRPR 1B.2
- Cleveland's bush monkeyflower (*Diplacus clevelandii*) – CRPR 4.2, CS
- southern alpine buckwheat (*Eriogonum kennedyi* var. *alpigenum*) – CRPR 1B.3
- San Jacinto Mountains bedstraw (*Galium angustifolium* ssp. *jacinticum*) – CRPR 1.B3, CS
- Alvin meadow bedstraw (*Galium californicum* ssp. *primum*) – CRPR 1.B2, CS
- Fremont's gentian (*Gentiana fremontii*) – CRPR 2B.3
- San Bernardino gilia (*Gilia leptantha* ssp. *leptantha*) – CRPR 1B.3
- Parish's alumroot (*Heuchera parishii*) – CRPR 1B.3
- vernal barley (*Hordeum intercedens*) – CRPR 3.2, CS
- beautiful hulsea (*Hulsea vestita* ssp. *callicarpha*) – CRPR 4.2, CS
- pygmy hulsea (*Hulsea vestita* ssp. *pygmaea*) – CRPR 1B.3
- California satintail (*Imperata brevifolia*) – CRPR 2B.1
- California black oak (*Juglans californica* var. *californica*) – CRPR 4.2, CS
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) – CRPR 1B.1, CS
- ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*) – CRPR 4.2, CS
- lemon lily (*Lilium parryi*) – CRPR 1B.2, CS
- white bog adder's-mouth (*Malaxis monophyllos* var. *brachypoda*) – CRPR 2B.1
- Hall's monardella (*Monardella macrantha* ssp. *hallii*) – CRPR 1B.3, CS
- San Felipe monardella (*Monardella nana* ssp. *leptosiphon*) – CRPR 1B.2
- California muhly (*Muhlenbergia californica*) – CRPR 4.3, CS
- little mousetail (*Myosurus minimus* ssp. *apus*) – CRPR 3.1, CS
- mud nama (*Nama stenocarpa*) – CRPR 2B.2, CS
- spreading navarretia (*Navarretia fossalis*) – **FT**, CRPR 1B.1, CS
- woolly mountain-parsley (*Oreonana vestita*) – CRPR 1B.3
- rock-loving oxytrope (*Oxytropis oreophila* var. *oreophila*) – CRPR 2B.3
- San Bernardino grass-of-Parnassus (*Parnassia cirrata* var. *cirrata*) – CRPR 1B.3
- white rabbit-tobacco (*Pseudognaphalium leucocephalum*) – CRPR 2B.2
- Engelmann oak (*Quercus engelmannii*) – CRPR 4.2, CS
- Latimer's woodland-gilia (*Saltugilia latimeri*) – CRPR 1B.2
- Parish's checkerbloom (*Sidalcea hickmanii* ssp. *parishii*) – CRPR 1B.2
- Bear Valley checkerbloom (*Sidalcea malviflora* ssp. *dolosa*) – CRPR 1B.2
- salt spring checkerbloom (*Sidalcea neomexicana*) – CRPR 2B.2
- chickweed oxytheca (*Sidotheca* [*Oxytheca*] *caryophylloides*) – CRPR 4.3, CS
- Krantz's catchfly (*Silene krantzii*) – CRPR 1B.2
- fringed chocolate chip lichen (*Solorina spongiosa*) – CRPR 2B.2
- southern jewelflower (*Streptanthus campestris*) – CRPR 1B.3
- San Bernardino aster (*Symphyotrichum defoliatum*) – CRPR 1B.2
- California dandelion (*Taraxacum californicum*) – **FE**, CRPR 1B.1
- California screw-moss (*Tortula californica*) – CRPR 1B.2
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*) – CRPR 2B.1, CS

The following 10 plant species are considered **absent** from the survey area because although there have been recorded historical observations within 5 miles of the Survey Area, these records are greater than 100 years old and the populations are presumed to be extirpated, and/or there is no suitable habitat present within the Survey Area:

- chaparral sand-verbena (*Abronia villosa* var. *aurita*) – CRPR 1B.1
- Yucaipa onion (*Allium marvinii*) – CRPR 1B.2, CS
- Horn's milk-vetch (*Astragalus hornii* var. *hornii*) – CRPR 1B.1
- Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) – **FE**, CRPR 1B.2
- Plummer's mariposa-lily (*Calochortus plummerae*) – CRPR 4.2, CS
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) – CRPR 1B.1, CS
- Mojave tarplant (*Deinandra mohavensis*) – **SE**, CRPR 1B.3, CS
- Mesa horkelia (*Horkelia cuneata* var. *puberula*) – CRPR 1B.1
- spiny-hair blazing star (*Mentzelia tricuspis*) – CRPR 2B.1
- narrow-leaf sandpaper-plant (*Petalonyx linearis*) – CRPR 2B.3

The following five plant species have a **low** potential to occur in the Survey Area because there have recorded historical observations within 5 miles of the Survey Area and/or marginal habitat is present within the Survey Area, but all suitable habitat is heavily disturbed and of poor quality:

- Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegeri*) – CRPR 1B.1, CS
- thread-leaved brodiaea (*Brodiaea filifolia*) – **FT**, **SE**, CRPR 1B.1, CS
- smooth tarplant (*Centromadia pungens* ssp. *laevis*) – CRPR 1B.1, CS
- slender-horned spineflower (*Dodecahema leptoceras*) – **FE**, **SE**, CRPR 1B.1, CS
- Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*) – **FE**, **SE**, CRPR 1B.1, CS

Although small patches of suitable habitat that contain exposed sandy wash are present in Drainages 2 and 3, these areas were heavily disturbed and of poor quality. These areas are filled with sediment and debris from stormwater runoff and sheet flow from the surrounding urban and disturbed areas and have high non-native species cover (e.g., foxtail brome, shortpod mustard). Habitat surrounding the Survey Area consists of developed areas and non-native grassland and is unsuitable for any of these species.

5.3.2 Special Status Wildlife

Current database searches (CDFW 2025, USFWS 2024) resulted in a list of 32 federal- and/or state-listed endangered or threatened, California Species of Special Concern (SSC), or otherwise special status wildlife species that may potentially occur within the Survey Area. After a literature review and the assessment of the various habitat types, 18 special status wildlife species were determined to be absent, and 14 species were determined to have a low potential to occur within the Survey Area. Factors used to determine potential for occurrence included the quality of habitat and the proximity of CNDDB records of occurrence to the Survey Area.

The following 18 wildlife species are considered **absent** from the Survey Area due to lack of suitable habitat present within the site:

- American badger (*Taxidea taxus*) – SSC
- coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) – SSC, CS
- coastal California gnatcatcher (*Polioptila californica californica*) – **FT**, SSC, CS

- ferruginous hawk (*Buteo regalis*) – WL, CS
- golden eagle (*Aquila chrysaetos*) – FP, CS
- loggerhead shrike (*Lanius ludovicianus*) – SSC, CS
- pallid bat (*Antrozous pallidus*) – SSC
- red-diamond rattlesnake (*Crotalus ruber*) – SSC, CS
- Riverside fairy shrimp (*Streptocephalus woottoni*) – **FE**, CS
- San Diego desert woodrat (*Neotoma lepida intermedia*) – SSC, CS
- southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) – WL, CS
- southern grasshopper mouse (*Onychomys torridus ramona*) – SSC
- southern rubber boa (*Charina umbratica*) – **ST**, CS
- southwestern willow flycatcher (*Empidonax traillii extimus*) – **FE**, **SE**, CS
- Townsend's big-eared bat (*Corynorhinus townsendii*) – SSC
- tricolored blackbird (*Agelaius tricolor*) – **ST**, SSC, CS
- western spadefoot (*Spea hammondii*) – Proposed **FT**, SSC, CS
- western yellow bat (*Lasiurus xanthinus*) – SSC

The following 14 species were determined to have a **low** potential to occur within the Survey Area due to low-quality habitat present within the site and recent occurrences within 5 miles:

- burrowing owl (*Athene cunicularia*) – Candidate **SE**, SSC, CS
- California horned lark (*Eremophila alpestris actia*) – WL, CS
- coast horned lizard (*Phrynosoma blainvillii*) – SSC, CS
- coastal whiptail (*Aspidoscelis tigris stejnegeri*) – SSC, CS
- Cooper's hawk (*Astur cooperii*) – WL, CS
- Crotch's bumble bee (*Bombus crotchii*) – Candidate **SE**
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) – SSC, CS
- least Bell's vireo (*Vireo bellii pusillus*) – **FE**, **SE**, CS
- orange-throated whiptail (*Aspidoscelis hyperythra*) – WL, CS
- purple martin (*Progne subis*) – SSC, CS
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*) – **FE**, **SE**, SSC, CS
- Southern California legless lizard (*Anniella stebbinsi*) – SSC
- Stephens' kangaroo rat (*Dipodomys stephensi*) – **FT**, **ST**, CS
- yellow warbler (*Setophaga petechia*) – SSC, CS

5.4 GENERAL PLANTS

A total of 54 plant species were observed during the survey. Plant species observed or detected during the site survey were characteristic of the existing Survey Area conditions. No special status species were observed during the survey effort. A complete list of plant species observed is provided in Appendix C.

5.5 GENERAL WILDLIFE

A total of 15 wildlife species were observed during the survey. Wildlife species observed or detected during the survey were characteristic of the existing Survey Area conditions. No special status species and no sign were observed during the survey effort. A complete list of wildlife species observed is provided in Appendix D.

5.6 SOILS

After referencing the USDA NRCS Web Soil Survey (USDA 2025), it was determined that the Survey Area is located within the Western Riverside Area CA679 (Figure 4: USDA Soils). The results of the database search show four soil types mapped within the Survey Area:

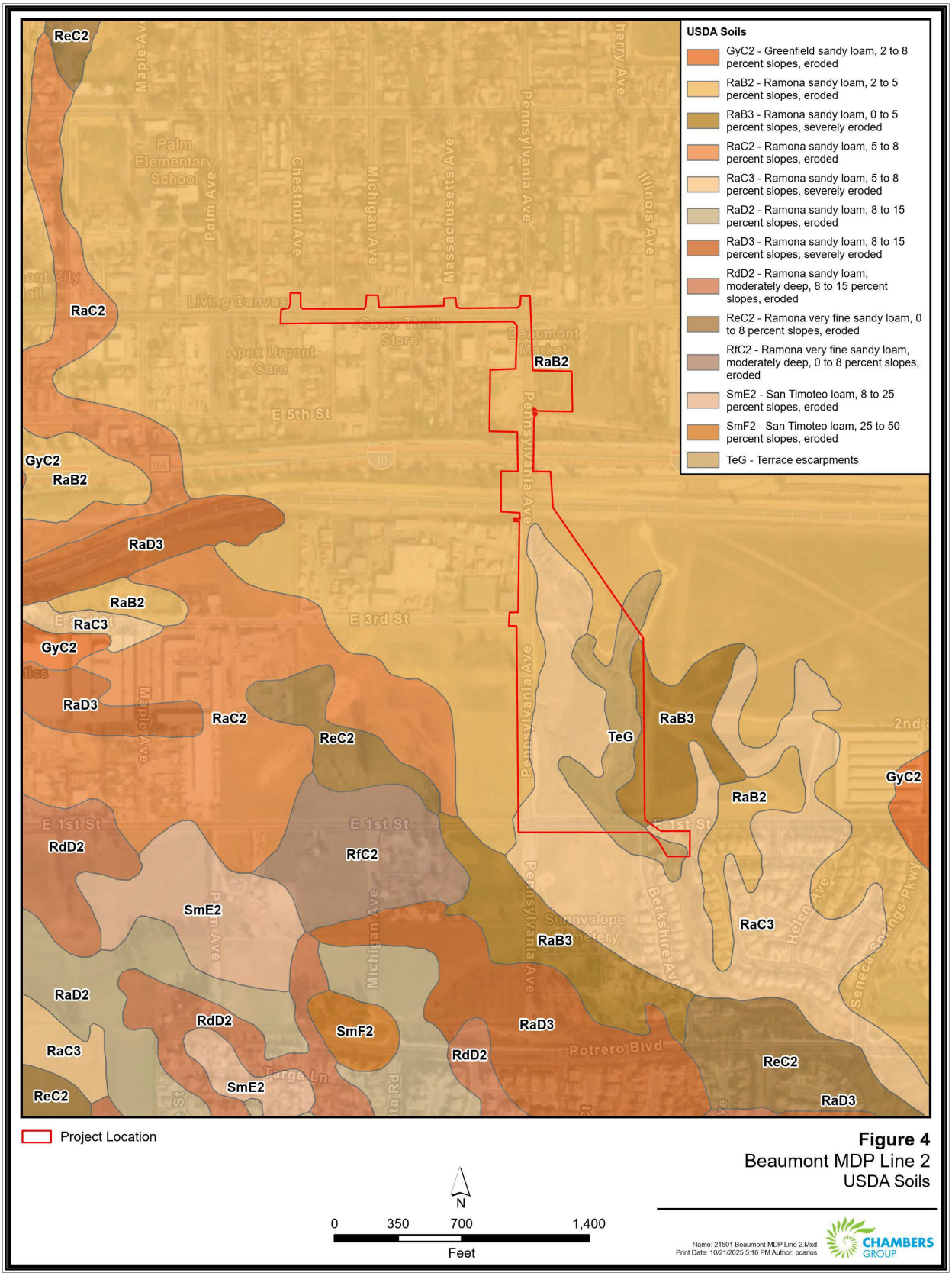
- **Ramona sandy loam (RaB2)**, 2 to 5 percent slopes, occurs throughout the northern portion of the Survey Area. They are well drained soils typically found in linear positions at elevations from 250 to 3,500 feet amsl. The soil profiles are composed of sandy loam, fine sandy loam, sandy clay loam, and gravelly sandy loam derived from granite. These soils are not classified as hydric and typically have moderately high permeability. They produce very low runoff due to the linear shape. The soil is more than 80 inches to bedrock (USDA 2025).

- **Ramona sandy loam (RaB3)**, 0 to 5 percent slopes, occurs along the eastern border of the Survey Area. They are well drained soils typically found in linear positions at elevations from 250 to 3,500 feet amsl. The soil profiles are composed of sandy loam, fine sandy loam, sandy clay loam, gravelly sandy loam, derived from granite. These soils are not classified as hydric and typically have a moderately high permeability and medium runoff. The soil is more than 80 inches to bedrock (USDA 2025).

- **Ramona sandy loam (RaC3)**, 5 to 8 percent slopes, occurs throughout the center of the Survey Area. They are well drained soils typically found in linear positions at elevations from 250 to 3,500 feet amsl. The soil profiles are composed of sandy loam, fine sandy loam, sandy clay loam, gravelly sandy loam derived from granite. These soils are not classified as hydric and typically have a moderately high permeability; however, the percent slope results in a high runoff class. The soil is more than 80 inches to bedrock (USDA 2025).

- **Terrace escarpments (TeG)**, occurs within the drainage features that cut through the open space on the north and south of East 1st street. They are steep, step-like slopes or cliffs created through a process of erosion on a river terrace. These soils are typically found in concave positions and their parent material is alluvium derived from mixed sources. These soils are not classified as hydric (USDA 2025).

Figure 4: USDA Soils



5.7 JURISDICTIONAL WETLANDS AND WATERWAYS

The Survey Area is located within the Potrero Creek Watershed and contains primarily disturbed upland and disturbed riparian vegetation. Although there was no flowing water at the time of the survey and soils are not hydric, the drainages that run through the open space on both the north and south side of East 1st Street may be subject to USACE, RWQCB, and CDFW jurisdiction. A jurisdictional delineation was conducted and potential WoUS and waters of the State are described below.

5.7.1 Hydrology and Connectivity

As identified during the literature search, a feature mapped in the NWI as an intermittent riverine drainage (USFWS 2025a) originates at the southern end of the Survey Area as shown in Figure 5: Waters Databases. Three other NHD mapped ephemeral drainages run through the center of the site and feed into the riverine feature (USGS 2025). The Survey Area is located within the Potrero Creek Watershed (HUC 12- 180702020201) of the Upper Santa Ana Valley groundwater basin (USDA 2025) in Riverside County, California (Figure 6: Watersheds). The Potrero Creek Watershed in Beaumont is bordered to the north by the San Bernardino Mountains to the south by the San Jacinto Mountains, to the west by the San Gabriel and Santa Ana Mountains, and to the east by the Little San Bernardino Mountains. Potrero Creek flows south-southwest for 5 miles until it joins the San Jacinto River near California State Route 79, which ultimately drains into Lake Elsinore. The headwaters of the San Jacinto River are in the San Bernardino Mountains. The riverine feature within the Survey Area flows into Potrero Creek.

The groundwater basin containing the Survey Area (i.e., Upper Santa Ana Valley) is shown in Figure 7: Groundwater Basins. Flood zones identified by the Federal Emergency Management Agency (FEMA) are shown in Figure 8: FEMA Flood Hazard Zones. A Special Flood Hazard Area (SFHA) runs through the Survey Area. The SFHA is designated as Zone AO (areas that have a 1 percent annual chance of flooding or 100-year flood) and Zone X (areas having a 0.2 percent annual chance of flooding or 500-year flood).

Figure 5: Waters Databases

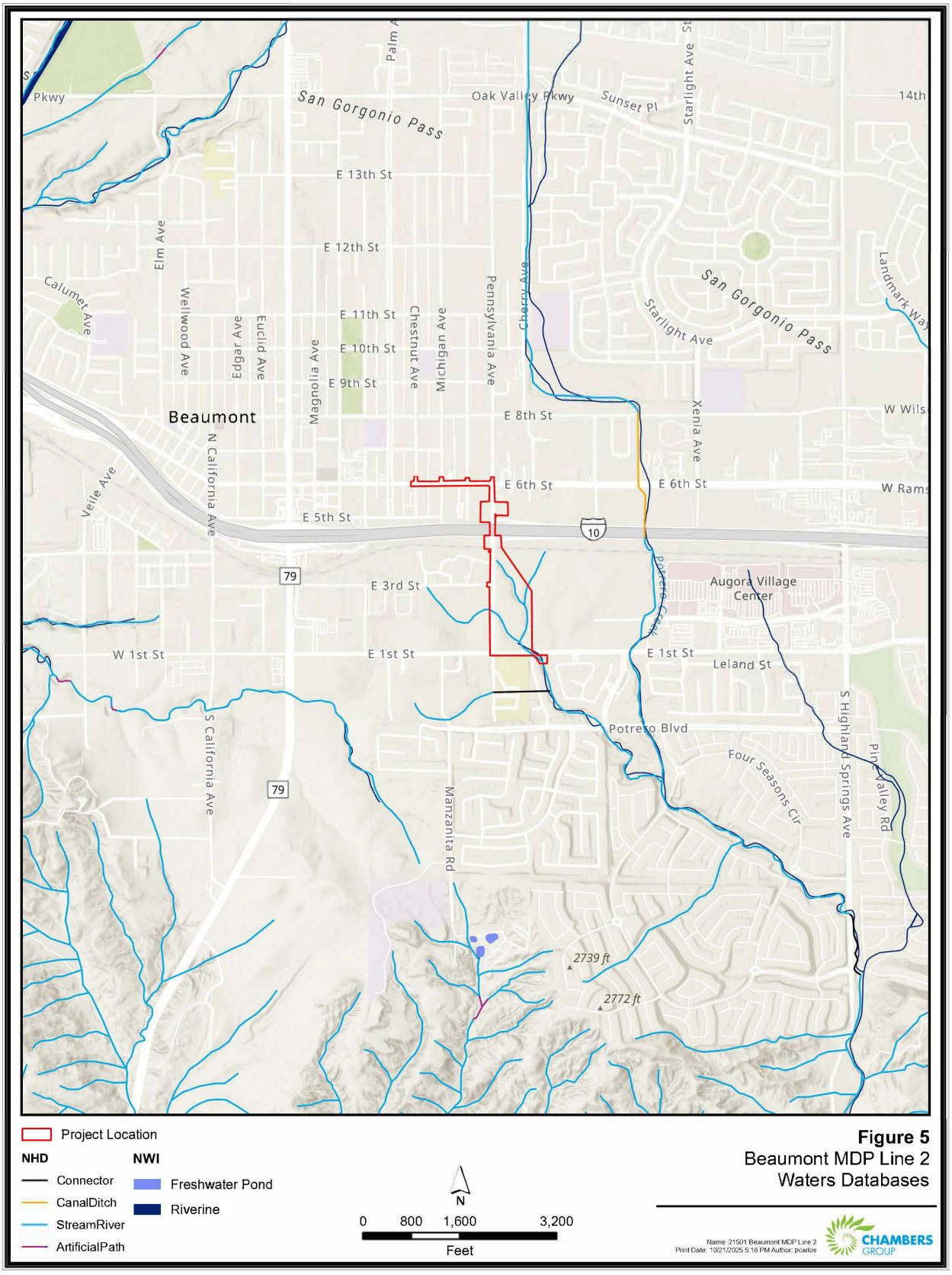


Figure 6: Watersheds

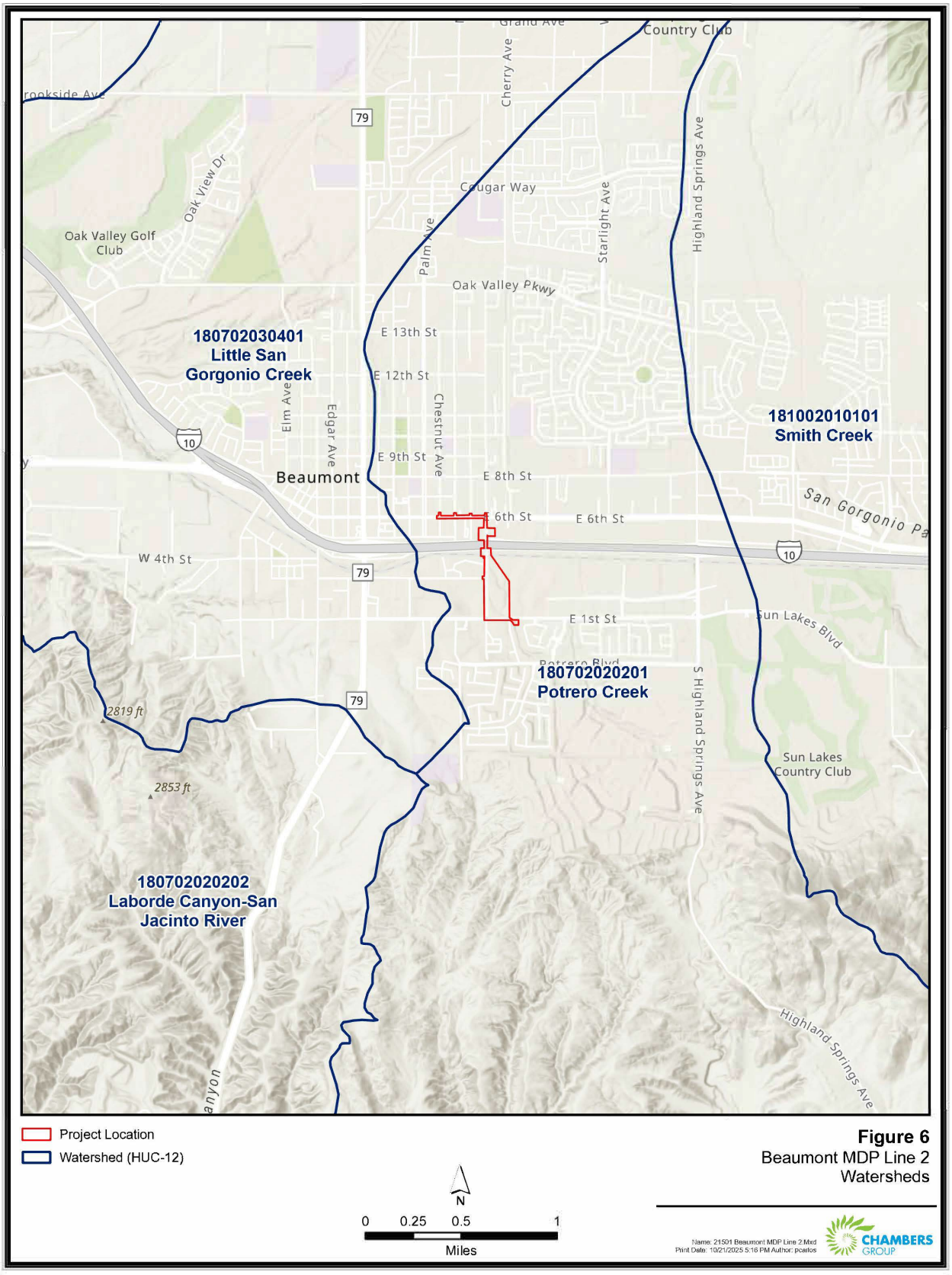


Figure 7: Groundwater Basins

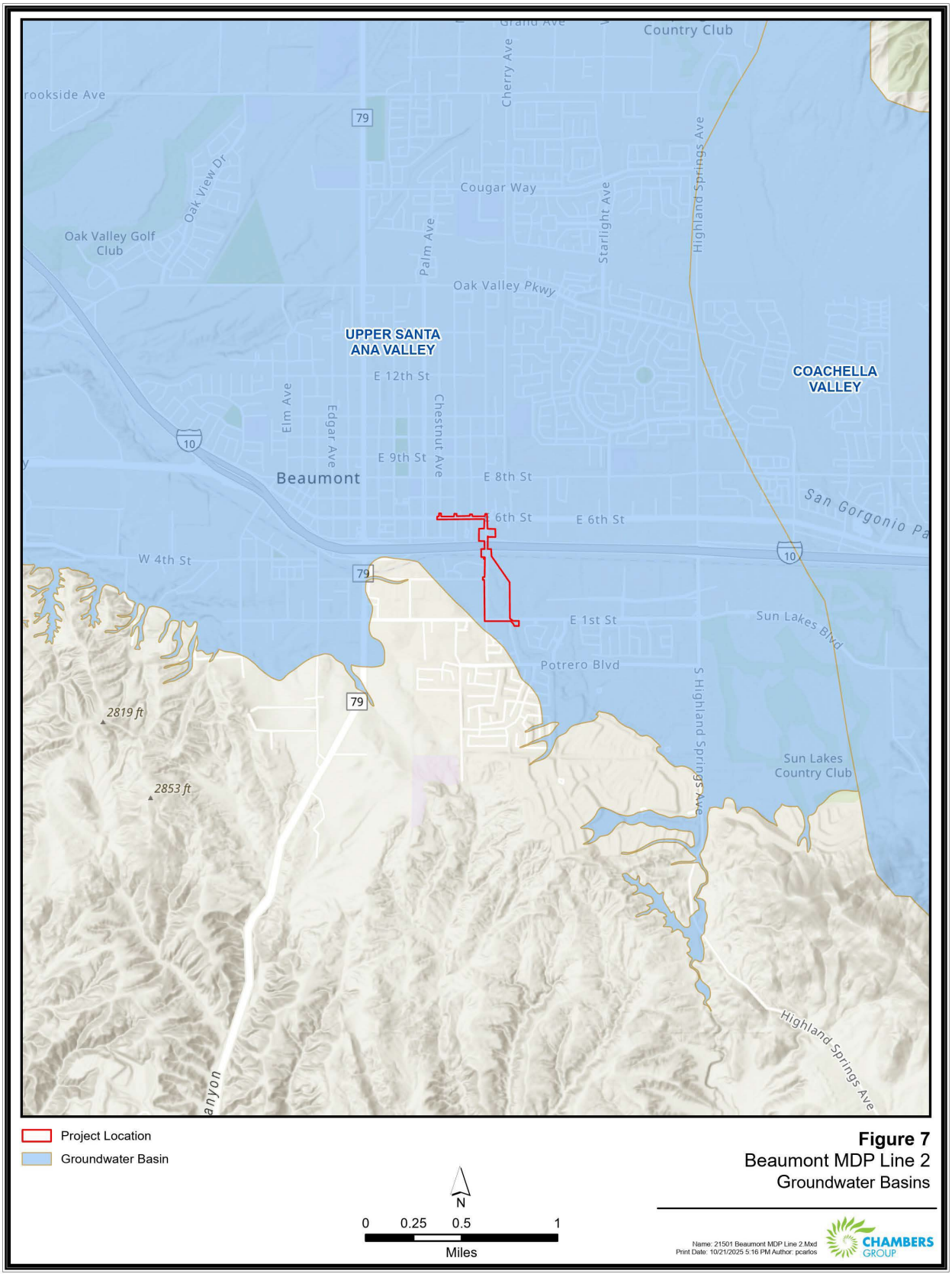
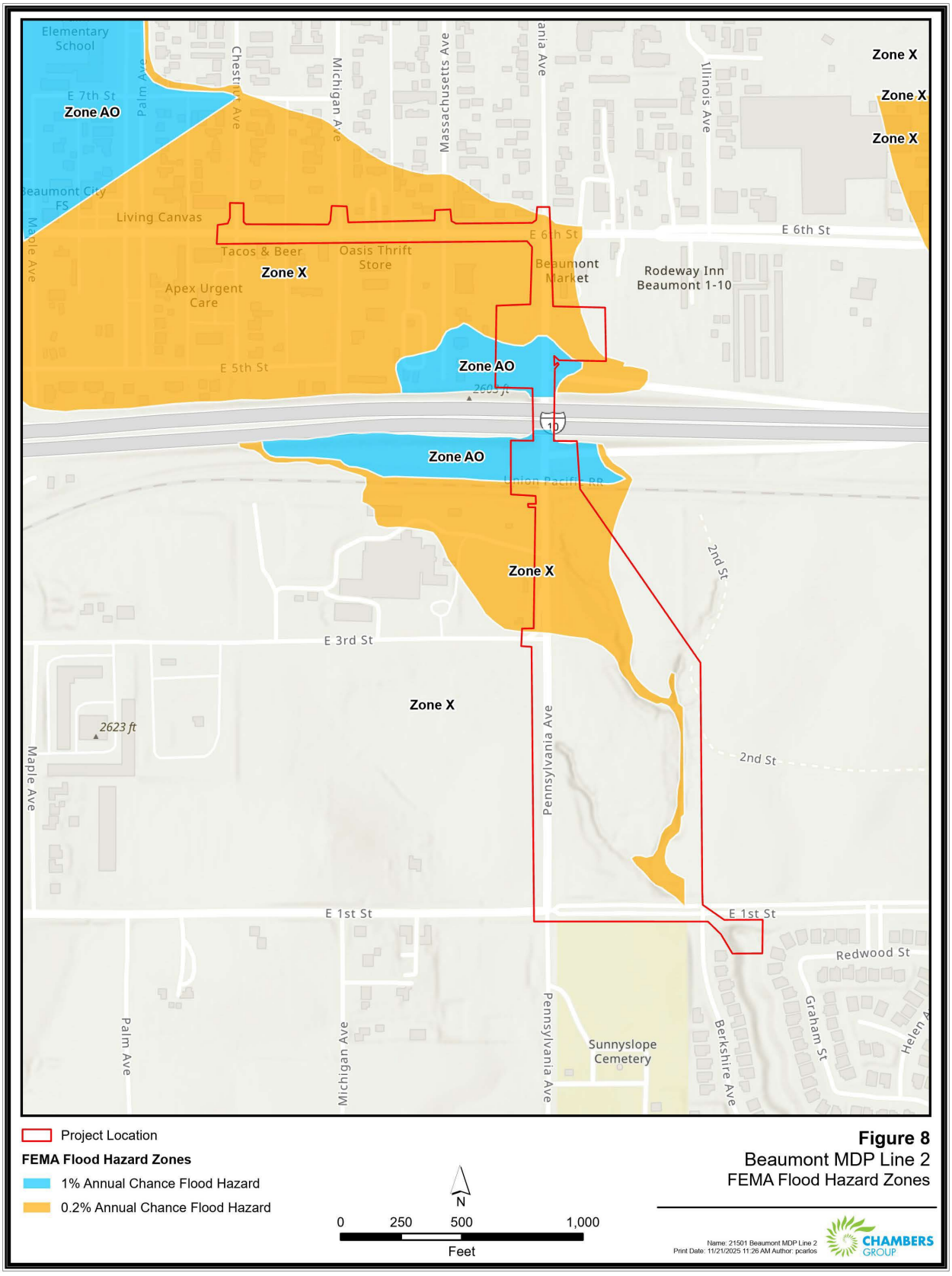


Figure 8: FEMA Flood Hazard Zones



5.7.2 Delineated Waters

Based on the NWI and NHD database search, a mapped blue-line riverine feature (NWI) originates in the southern end of the Survey Area and three other ephemeral drainage features (NHD) run through the Survey Area (Figure 5: Waters Databases). The field delineation confirmed the presence of these drainages. The location of these features delineated within the Survey Area following the field investigations are shown in Figure 9: Jurisdictional Delineation Results. A total of 3,739 linear feet of ephemeral drainages and 133 linear feet of a riverine feature were mapped within the Survey Area. Surface hydrology from stormwater runoff and nuisance water enters the Survey Area in four locations surrounding the open lot east of Pennsylvania Avenue and south of I-10. Three drainages located east of Pennsylvania Avenue merge into the mapped riverine feature that begins on the south side of East 1st Street. The riverine feature crosses under East 1st Street through an 8-foot-wide, concrete-lined, culvert and continues above ground for approximately 105 feet until it exits the Survey Area. The feature continues to flow for approximately 0.65 mile until emptying into Potrero Creek, where it then continues flowing south-southwest eventually terminating in the San Jacinto River, a TNW. A detention basin located south of East 1st Street, east of the mapped riverine feature, was also observed during the survey. The drainages and detention basin within the Survey Area may be subject to USACE, CDFW, and RWQCB jurisdiction. The drainages and detention basin are described below and data recorded for these features within the Survey Area are presented in Table 3. Completed OHWM and wetland delineation forms representative of the water features identified are provided in Appendix E. Reference photographs were taken during this survey and are included in Appendix B.

Drainage 1 is a deeply incised gully and conveys surface flow primarily from stormwater runoff entering through a culvert on the west and east side of Pennsylvania Avenue (Appendix B – Photos 22 through 25). The open lot on the west side of Pennsylvania Avenue is flat ground with ruderal vegetation. The culvert on the west side receives stormwater runoff and sheet flow during rain events. The NHD mapped ephemeral drainage no longer has connectivity to East 3rd Street; however, stormwater runoff and nuisance water from East 3rd Street seems to enter the site through an underground culvert that empties into Drainage 2 and is described in greater detail below. Drainage 1 begins on the east side of Pennsylvania Avenue and flows, above ground, for approximately 122 feet before passing through a culvert beneath the newly constructed East 2nd Street. Downstream of this crossing, the drainage continues for approximately 510 feet before joining Drainage 2. Although there was no water present during the field survey, indicators of hydrology were present at the time of the field delineation. Hydrological characteristics within the drainage included a break in the bank slope, wracking, and mud cracks. The limits of the OHWM were delineated visually by a change in break in slope and change of vegetation within the drainage. The Drainage 1 OHWM measured approximately 6.4 feet wide, and the B2B measured approximately 18.9 feet wide, both narrowing as they approached the riverine feature downstream. The depth of the feature, from the bed of the channel to the top of the bank, is approximately 20 feet. Hydrophytic vegetation was absent and soils throughout the drainage primarily consisted of coarse sandy loams, consistent with the soils found in all drainages within the Survey Area.

Drainage 2 is a deeply incised gully and conveys surface hydrology primarily from stormwater runoff and nuisance water originating from the Union Pacific Railroad and the residential area north of I-10. Flows are conveyed through multiple culverts surrounding the railroad and continue above ground in a southeast direction for approximately 1,795 feet before joining the NWI mapped riverine feature on the south side of East 1st Street (Appendix B – Photos 26 through 45). Stormwater runoff and nuisance water also seems to enter the drainage from a large, 3.5-foot, concrete culvert that runs underground from East 3rd Street. This feature also runs under the newly constructed, East 2nd Street, similar to Drainage 1.

Hydrological characteristics within the drainage included a break in the bank slope, wracking, and mud cracks. The limits of the OHWM were delineated visually by a change in break in slope and change of vegetation within the drainage. The OHWM measured approximately 9.7 feet wide, and the B2B measured approximately 19.9 feet wide, both narrowing as they approached the riverine feature downstream. The depth of the feature, from the bed of the channel to the top of the bank, is approximately 28 feet. A couple patches of riparian vegetation were present within Drainage 2; however, the composition and density did not meet the threshold for hydrophytic vegetation to be considered a wetland. Soils within the drainage consisted of 7.5 YR 6/4, 7.5 YR 5/6, and 7.5 YR 4/6 fine to coarse sandy loams which the USDA considers non-hydric soils.

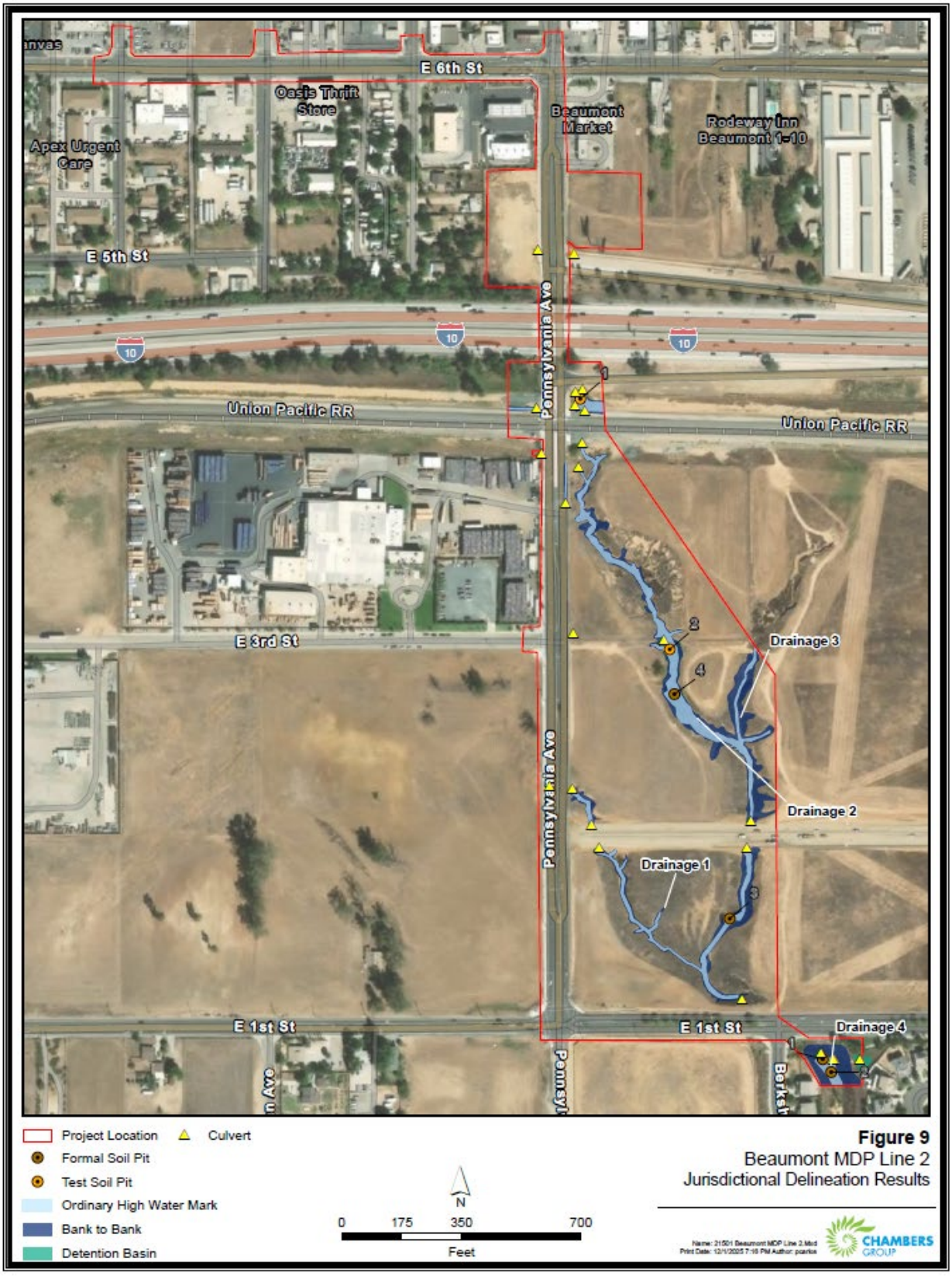
Drainage 3 is a deeply incised gully and conveys surface hydrology primarily from stormwater runoff and sheet flow originating from the Union Pacific Railroad and open space area in the north and northeast portions of the Survey Area (Appendix B – Photos 46 and 47). These flows channelize outside of the Survey Area and flow south until it enters the northeastern portion of the site. This feature flows approximately 302 feet through the Survey Area before joining Drainage 2. Hydrological characteristics within the drainage included a break in the bank slope, wracking, and mud cracks. The limits of the OHWM were delineated visually by a change in break in slope and change of vegetation within the drainage. The OHWM measured approximately 5.3 feet wide and the B2B measured approximately 35.8 feet wide. The depth of the feature, from the bed of the channel to the top of the bank, is approximately 23 feet. Hydrophytic vegetation was absent and soils throughout the drainage primarily consisted of coarse sandy loams, consistent with the soils in all drainages within the Survey Area.

Drainage 4 represents the combined downstream flow of Drainages 1 through 3. This feature conveys surface hydrology resulting from stormwater runoff and nuisance water from the surrounding residential neighborhood. The feature flows underneath East 1st Street through a concrete culvert and continues above ground for approximately 105 feet before exiting the Survey Area (Appendix B – Photos 11 through 21). Hydrological characteristics within the drainage included a break in the bank slope, mud cracks, exposed roots, and vegetation matted down or bent. The limits of the OHWM were delineated visually by change in break in slope and change of vegetation within the drainage. The OHWM measured approximately 21 feet wide and the B2B measured approximately 106 feet wide, both narrowing as they approached and exited the Project boundary downstream. Hydrophytic vegetation was present within and downstream of the Survey Area; however, soils consisted of 7.5 YR 6/4, 7.5 YR 5/4, and 7.5 YR 4/6 fine to coarse sandy loams which the USDA considers non-hydric soils.

The detention basin is partially located within the Survey Area, south of East 1st Street and collects stormwater runoff and nuisance water from the surrounding residential neighborhood (Appendix B – Photo 12). The detention basin conveys water through a 3-foot outlet tower as well as an open, concrete-lined overflow drain during extreme flood conditions. The basin does not contain clear hydrological characteristics, nor does it contain the hydrophytic vegetation or hydric soils required to be considered a wetland.

A raised concrete-lined sewer manhole collecting runoff from the off-ramp at Pennsylvania Avenue off westbound I-10 is not located within the project impact boundary, but is within the survey area. The structure is entirely developed and is part of the established sewer system (Appendix B – Photos 4-5). Directly across Pennsylvania Avenue, there is an additional sewer grate collecting runoff from the opposite side of the street (Appendix B – Photo 6). These structures are not jurisdictional to the regulatory agencies; however, they may carry stormwater runoff and nuisance flows that contribute to Drainage 2.

Figure 9: Jurisdictional Delineation Results



5.7.3 CDFW/MSHCP Riparian Habitat

No NWI-mapped wetlands were identified within the Survey Area. However, Disturbed Fremont Cottonwood Woodland, Disturbed Goodding's Willow Woodland, and Giant Reed Marsh vegetation communities occur within small portions of the Survey Area along Drainages 2 and 3, located north of East 1st Street. A small stand of Disturbed Fremont Cottonwood Woodland is also present south and downstream of East 1st Street, just outside of the culvert. These areas are heavily disturbed with a buildup of sediment and debris. The vegetation in the area consists of native Fremont cottonwood, Goodding's willow, mule fat, and arroyo willow, and exotic species including giant reed. Several soil pits were dug during the surveys. No hydric soils were observed within the Project boundary. Soils identified within the Survey Area include Ramona Sandy Loams which do not have hydric characteristics (USDA 2025). Evidence of hydrology was observed throughout the Survey Area, and hydrophytic vegetation was present south of East 1st Street. The presence of hydrologic indicators and hydrophytic vegetation without the presence of hydric soils confirms that inundation or saturation has occurred but is not frequent enough to support a wetland community; only two of the three wetland parameters were met (USACE 2008).

Because Riparian vegetation occurs within the channels, the drainages meet the MSHCP definition of Riparian/Riverine. While the drainages do connect to Potrero Creek and eventually to the San Jacinto River with portions of Potrero Creek passing through MSHCP Criterial Cells, the Survey Area is approximately 1.8 miles from the MSHCP Potrero Covered Lands to the south, and several miles north of San Jacinto River. The drainages that fall within the Survey Area and the vegetation within the Project boundary are of low quality. Therefore, while flows from the drainages may contribute to the support of downstream habitat, the Riparian/Riverine habitat within the site likely does not contribute to the overall biological functions and values of downstream habitat for Covered Species within the MSHCP Conservation Area. In addition, the riparian vegetation that occurs within the drainage onsite lacks the mature trees and dense vegetation required by the species listed in Section 6.1.2 of the MSHCP. Least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) were not observed during the survey and they are not expected to occur within the Survey Area.

Because the Survey Area contains evidence of hydrology and riparian vegetation, this area would be considered under CDFW jurisdiction and an MSHCP Riparian/Riverine area.

5.7.4 Summary of Jurisdictional Findings

The Survey Area contains three ephemeral drainages and one riverine feature that contains mostly disturbed upland vegetation and a few patches of disturbed riparian vegetation; however, the Project has been designed to leave most of the RCP and physical surface features in place to avoid and minimize impacts by Project activities; these features will not be filled in. If these areas are affected by Project activities, they may be subject to USACE, RWQCB, and CDFW jurisdiction. The results of this jurisdictional delineation document the investigation, best professional judgement, and conclusions of Chambers Group. However, this delineation would need to be verified and determined by the regulatory agencies. Table 3 provides a summary of acreages of Jurisdictional Waters and the potential impacts to waters that occur within the Survey Area if they were to be affected.

Table 3: Summary of Acreages of Potential Jurisdictional Waters that Occur Within the Impact Areas of the Project Site

	USACE		RWQCB		CDFW		MSHCP Riparian	
Feature	**Area (acres)**	**Linear Feet**	**Area (acres)**	**Linear Feet**	**Area (acres)**	**Linear Feet**	**Area (acres)**	**Linear Feet**
Drainage 1	-	-	0.09	808	0.19	808	-	-
Drainage 2	-	-	0.68	2516	1.41	2516	0.26	380
Drainage 3	-	-	0.04	415	0.26	415	-	-
Drainage 4	0.07	133	0.07	133	0.3	133	0.11	100
Total	**0.07**	**133**	**0.88**	**3872**	**2.16**	**3872**	**0.37**	**480**

5.7.5 Potential USACE Jurisdiction

The USACE asserts jurisdiction over the San Jacinto River as a TNW. Therefore, USACE will likely take jurisdiction over Drainage 4, which is located in the southern portion of the Project and exits the Survey Area. The feature lacks one of the three wetland parameters (i.e., no hydric soils). Therefore, the site does not support a wetland under the jurisdiction of the USACE. For potential temporary impacts, refer to Table 3. USACE jurisdictional acreage for the Project, as defined by the OHWMs, totals 0.07 acre. Up to 0.07 acre of temporary impacts may occur during the removal of the existing RCP should removal of the RCP or other structural work around the East 1st Street culvert be required. As such, a CWA Section 404 Permit may be required for this Project. The exact work areas and acreage of these temporary impacts are currently undetermined. Potential impacts will be thoroughly analyzed and documented during the permit application process required for this project.

5.7.6 Potential RWQCB Jurisdiction

RWQCB jurisdiction includes all USACE jurisdictional areas, OHWMs, and any other features that influence surface or subsurface water quality within the State. The RWQCB would have jurisdiction over surface waters, which may be identified as ephemeral waters, including those indicated by a change in the average sediment texture, a change in vegetation cover, and/or a break in bank slope. The Survey Area contains three ephemeral drainages and one riverine feature. The limits of RWQCB jurisdiction, as defined by the OHWM and indicator features within the Survey Area, total 0.88 acre. The Project does not propose to fill in any physical water features. Therefore, a total of 0.81 acre of temporary impacts to current surface water features and up to 0.07 acre of temporary impacts to waters of the State matching WoUS under the potential jurisdiction of the RWQCB occur in the Survey Area. As such, a 401 Water Quality Certification may be required from the RWQCB for this Project. The exact work areas and acreage of temporary impacts to Drainage 4 are currently undetermined. Potential impacts will be thoroughly analyzed and documented during the permit application process required for this project.

5.7.7 Potential CDFW Jurisdiction

There are 2.16 acres of disturbed upland and disturbed riparian vegetation within the B2B of the Survey Area that are potentially regulated by CDFW's Lake and Streambed Alteration Agreement program. CDFW's jurisdiction extends from the top of bank to top of bank and any adjacent wetlands or riparian canopies. The drainages provide surface waters when water is present and would be considered State

waters. Hydrophytic vegetation and indicators of hydrology were observed within the Survey Area; however, soils within the drainages did not exhibit hydric characteristics. Due to the absence of hydric soils and the disturbed condition of the drainages, the majority of the water features do not meet the classification of a wetland by CDFW. Permanent and temporary impacts to 1.86 acres within Drainages 1 through 3 will occur due to Project activities by directing the majority of stormwater runoff and nuisance water away from the mapped drainages and through the new RCP that empties into the riverine feature (Drainage 4). However, the physical surface features will be abandoned and not filled in. Runoff from rain and runoff from other directions to the Project area would still be able to enter the existing drainages. Up to 0.3 acre of temporary impacts to Drainage 4 may result from Project activities surrounding the existing culvert and should not occur outside of the Project boundary. Therefore, a Lake and Streambed Alteration Agreement (LSAA) may be required from CDFW for this Project. The exact work areas and acreage of temporary impacts to Drainage 4 are currently undetermined. Potential impacts will be thoroughly analyzed and documented during the permit application process required for this project.

5.7.8 Potential MSHCP Jurisdiction

A total of 0.37 acre of vegetated streambed was mapped within the Survey Area. Of the 0.37 acre of vegetated streambed mapped, 0.26 acre may be permanently or temporarily impacted within Drainage 2 and up to 0.11 acre may be temporarily impacted within Drainage 4; however, the exact work areas and acreage of temporary impacts to Drainage 4 are currently undetermined and potential impacts will be thoroughly analyzed and documented during the permit application process required for this project. The riparian vegetation mapped is heavily disturbed, lacking the mature forest and canopy required by the riparian species listed in Section 6.1.2 of the MSHCP. Therefore, while flows from the drainages may contribute to the support of downstream habitat, the Riparian/Riverine habitat within the site likely does not contribute to the overall biological functions and values of downstream habitat for Covered Species within the MSHCP Conservation Area. Although the species listed in Section 6.1.2 of the MSHCP are not present and are not expected to occur within the Survey Area, the City, as a Permittee to the MSHCP, has determined that a Determination of Biological Equivalent or Superior Preservation (DBESP) is warranted for this Project. The DBESP is being prepared under separate cover.

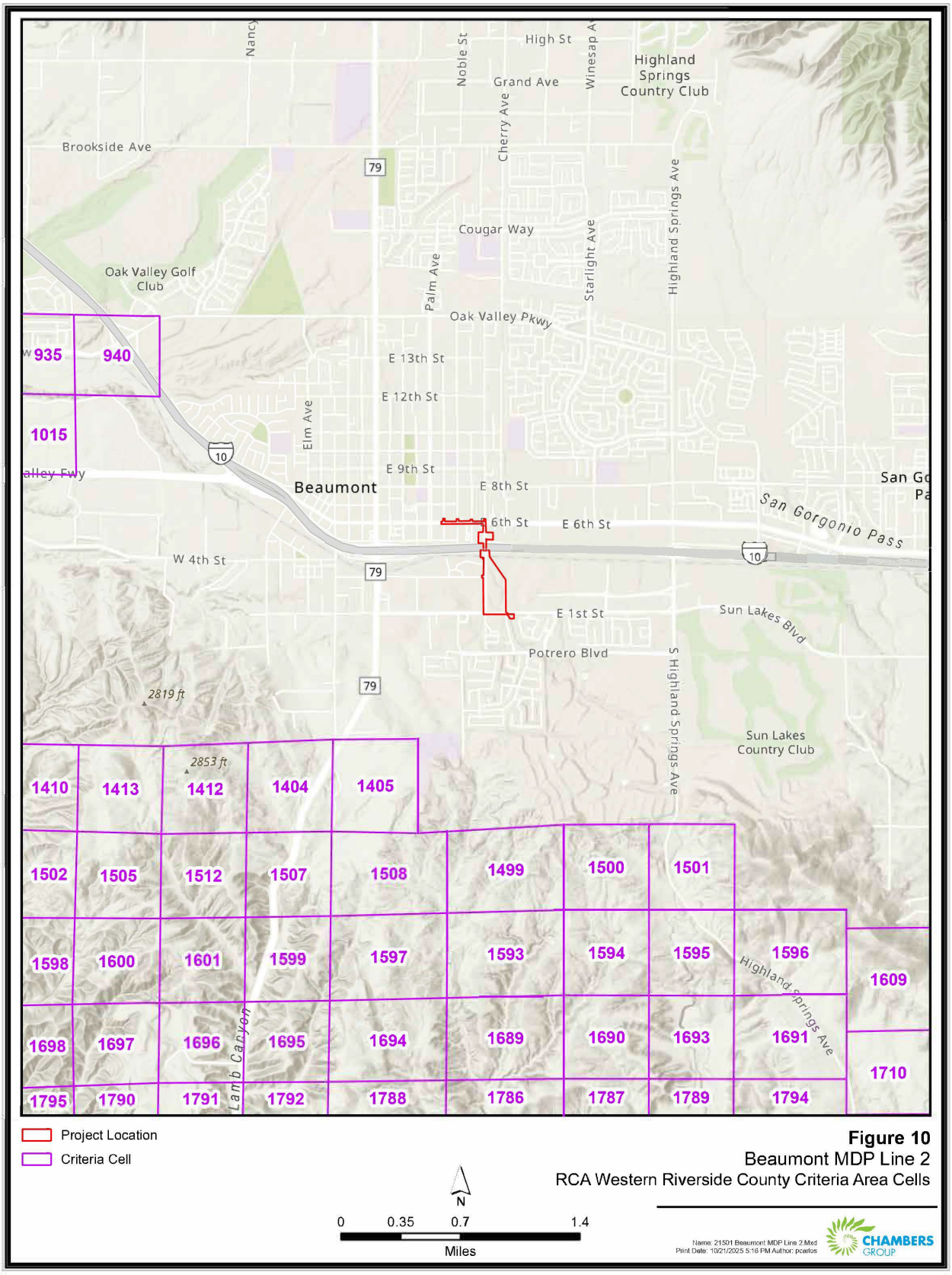
5.8 MSHCP CONSISTENCY ANALYSIS

The Survey Area is located within the San Timoteo and Badlands Unit, of the Pass Area Plan, and is not within a Criteria Cell (Figure 10: RCA Western Riverside County Criteria Area Cells). Because the site does not occur within a Criteria Cell, a Joint Project Review (JPR) is not required.

5.8.1 Covered Roads

Three Covered Roads fall within the Project ROW, which may be subject to temporary impacts such as lane closures, detours, or short-term construction activities, which could affect habitat connectivity and species movement. These roads include East 6th Street (major road), East 1st Street (secondary road), and Pennsylvania Avenue (secondary road). The Project will not permanently alter the Covered Roads within the ROW, and the affected ROW will be restored to previous condition after installation of the RCP.

Figure 10: RCA Western Riverside County Criteria Area Cells



5.8.2 Covered Public Access Activities

The covered public access uses within the MSHCP Conservation Area are composed of trails, facilities, and passive recreational activities. No MSHCP Trails, MSHCP Trailheads and Facilities, or Conserved Lands fall within the Project Area.

5.8.3 Reserve Assembly Analysis

The Reserve Assembly Analysis determines whether the Survey Area is located within the MSHCP Criteria Area and assesses its potential to affect the assembly of the reserve system envisioned under Section 6.1.1 of the MSHCP. The review includes consideration of Criteria Cells, Public/Quasi-Public (PQP) Lands, Additional Reserve Lands (ARL), and habitat linkages to ensure that a project does not inhibit future reserve assembly.

The Survey Area is located within the Badlands Habitat Management Unit of the MSHCP Area. The Project will not require Reserve Assembly Analysis or RCA review in the form of Joint Project Review as the Survey Area is not located within a Criteria Cell or mapped habitat linkage area.

Public Quasi-Public Lands

The Project will not directly, nor is it anticipated to indirectly impact PQP Lands. The nearest PQP Lands are located approximately 1.9 miles southeast of the Survey Area (BLM land).

5.8.4 Vegetation Mapping and Species Compendia

A project-level vegetation map is required for projects that (1) need to demonstrate consistency with criteria, (2) are subject to the protection of species associated with Riparian/Riverine and Vernal Pools policies included in Section 6.1.2 of the MSHCP, (3) are subject to the Narrow Endemic Plant Species policies included in Section 6.1.3 of the MSHCP, (4) are subject to the additional survey needs and procedures described in Section 6.3.2 of the MSHCP, (5) are seeking criteria refinements as described in Section 6.5 of the MSHCP, and/or (6) need to demonstrate support of Reserve Assembly.

Vegetation mapping was conducted for the Project during the biological reconnaissance-level survey, and the mapping results are detailed in Section 5.2. A vegetation map for the project is included as Figure 3, and comprehensive list of plant species observed during the surveys is included as Appendix C.

5.8.5 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

Riparian/Riverine

Riparian vegetation occurs in several locations within the Survey Area. Disturbed Fremont Cottonwood Woodland vegetation was observed within two small stands in the southern portion of the Survey Area, one stand within the main drainage north of East 1st Street and the other stand south of East 1st Street where waters exit the site through a concrete culvert. Disturbed Goodding's Willow Woodland vegetation was observed in a small stand within the main drainage in the center of the Survey Area. Giant Reed Marsh vegetation was also observed within the main drainage in the center of the Survey Area. These areas were heavily disturbed by a buildup of sediment and debris. The rest of these drainages contained Disturbed

upland or Ruderal vegetation. According to the MSHCP, both vegetated and unvegetated drainages may be considered MSHCP resources, and therefore these drainage features may qualify as sensitive resources regardless of their current vegetative condition. Stormwater runoff is the primary source of water in these areas. In addition, the stand of Disturbed Fremont Cottonwood Woodland also receives nuisance water from the surrounding residential neighborhood. These disturbed riparian areas are primarily vegetated with native Fremont cottonwood, Goodding's willow, mule fat, arroyo willow, and exotic species including giant reed. Although disturbed, these areas contain riparian vegetation and are therefore considered Riparian/Riverine habitat under the MSHCP.

Vernal Pools

There are no Vernal Pools located within or adjacent to the Survey Area, nor did historic aerial imagery show any evidence for the persistence of wetness/ponding that could indicate that Vernal Pools may be present in the Survey Area.

Fairy Shrimp

MSHCP covered fairy shrimp species include Riverside (*Streptocephalus woottoni*), Santa Rosa Plateau (*Linderiella santarosae*), and vernal pool (*Branchinecta lynchi*) fairy shrimp. If vernal pools or other suitable fairy shrimp habitats are located within the Survey Area, then fairy shrimp surveys must be conducted pursuant to the USFWS survey guidelines. Fairy shrimp can be found in non-vernal pool features such as stock ponds, ephemeral pools, road ruts, human-made depressions, or other depressions that may pond water. As such, these features are not exempt from evaluation as fairy shrimp habitat, and the possible need for focused surveys is still applicable. No aforementioned features that could potentially support fairy shrimp are present in the Survey Areas and thus, no focused surveys are required.

Riparian Birds

Several riparian bird species are covered under the MSHCP due to their reliance on high-quality riparian woodland and shrubland habitats for breeding and foraging. Key species Covered Species include the least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo, all of which require dense riparian vegetation dominated by willows, cottonwoods, and other moisture-dependent species. Because of their sensitivity to habitat disturbance and their specialized nesting requirements, the presence of suitable riparian habitat within the site requires evaluation to ensure these species are not adversely impacted. Additional details on these species are provided below.

<u>Least Bell's Vireo</u>

The least Bell's vireo (nesting and/or foraging) is a federal- and state-listed endangered subspecies of the Bell's vireo and an MSHCP Covered Species. The least Bell's vireo typically nests in willows (*Salix* sp.) and other riparian trees or shrubs and typically nests 3 to 6 feet above the ground. This species requires densely vegetated riparian habitat along streams and rivers during the spring and summer months to breed, and foraging habitat adjacent to its nesting territory, which is typically riparian or chaparral habitat. The Survey Area lacks the dense riparian habitat and surface water required by this species for nesting and foraging; therefore, this species is not anticipated to occur within the site or be impacted by Project activities.

Southwestern Willow Flycatcher

The southwestern willow flycatcher (nesting and/or foraging) is a federally endangered subspecies of willow flycatcher and an MSHCP Covered Species whose summer breeding range includes southern California (from the Santa Ynez River south), Arizona, New Mexico, extreme southern portions of Nevada and Utah, extreme southwest Colorado, and western Texas (USGS 2007). This species is known to breed in a variety of riparian habitats with multi-tiered canopies and surface water and/or saturated soils, whether along streams in broad valleys, in canyon bottoms, around mountain-side seepages, or at the margins of ponds and lakes. Where willow species dominate, high foliage-volume willow cover is preferred but with willow clumps separated by openings. Habitat types may include a variety of willow, cottonwood (*Populus* sp.), coast live oak (*Quercus agrifolia*), alder (*Alnus* sp.), and tamarisk (*Tamarix* sp.) woodlands. The Survey Area lacks multi-tiered canopies and surface water required by this species for nesting and foraging; therefore, the southwestern willow flycatcher is not anticipated to occur within the site or be impacted by Project activities.

Western Yellow-Billed Cuckoo

The western yellow-billed cuckoo (nesting and/or foraging) is a state-listed endangered species. The yellow-billed cuckoo is found primarily in the Eastern United States, but this subspecies is an extremely rare and localized summer resident of the southwestern U.S. Historically, it was found commonly throughout the Central Valley and California coastline until the early twentieth century. This species primarily inhabits mature, open riparian woodlands along the broad, lower flood-bottoms of larger river systems. Habitat features usually include some relatively open patches and intermixed low, dense, scrubby vegetation typical of these watercourses. In the southwestern U.S., the western yellow-billed cuckoo also occupies desert riparian woodlands composed of willows, cottonwoods, and dense mesquite (*Prosopis* sp.). It typically nests in willows and forages among the cottonwoods more than other trees. The Survey Area lacks the mature and dense riparian habitat required by this species; therefore, this species is not anticipated to occur within the site or be impacted by Project activities.

5.8.6 Other MSHCP Section 6.1.2 Species

Section 6.1.2 of the MSHCP establishes a framework for protecting the biological functions and values of riparian/riverine areas and vernal pools, ensuring that these resources continue to support all plant and wildlife species dependent on them—not just fairy shrimp and riparian birds. Species with a potential to occur with the Survey Area are analyzed in Section 5.3 Special Status Species. However, existing habitat within the Survey Area does not support any of these species, and therefore, no impacts are anticipated, and no additional mitigation is recommended at this time. Although these species are not expected to occur, a preconstruction survey should be conducted prior to ground-disturbing activities to ensure no individuals are present. If any of these species are detected, measures to avoid or minimize impacts must be developed and submitted to the appropriate resource agencies for approval before construction begins.

5.9 PROTECTION OF NARROW ENDEMIC PLANT SPECIES

Section 6.1.3 of the MSHCP addresses the protection of Narrow Endemic Plant Species and outlines the requirements for evaluating and conserving these species during project review. The MSHCP requires that all Narrow Endemic Plant Species be assessed for their potential to occur within a project area through a habitat-based evaluation that considers soil characteristics, vegetation communities, hydrology, and known regional occurrences.

The Project site falls within an MSHCP Narrow Endemic Plant Survey Area for Yucaipa onion (*Allium marvinii*), and many-stemmed dudleya (*Dudleya multicaulis*; RCA 2025a). Yucaipa onion occurs in openings of chaparral vegetation and requires clay soils (CNPS 2025b) which do not occur within the Survey Area. Many-stemmed dudleya occurs in chaparral, coastal scrub, and valley and foothill vegetation, often in heavy, often clay soils, and sandstone outcrops (CNPS 2025b, McCabe 2024). While the Annual Non-native Grassland vegetation community could be considered valley and foothill grassland, clay soils do not occur within the Survey Area and the vegetation is highly disturbed with dense non-native grass cover, and it is therefore not considered suitable habitat for this species; therefore, no impacts are anticipated, and no species-specific mitigation is recommended at this time.

Special status plants with potential to occur within the Survey Area are discussed in Section 5.3.1 Special Status Plants.

5.10 ADDITIONAL SURVEY NEEDS AND PROCEDURES

The following sections discuss Additional Survey Needs and Procedures as outlined in Section 6.3.2 of the MSHCP.

5.10.1 Criteria Area Plant Species

The Project does not fall within a mapped survey area for any of the Criteria Area plant species listed in Section 6.3.2 of the MSHCP. As such, no focused surveys for Criteria Area plant species are required.

5.10.2 Amphibians

The Project does not fall within any MSHCP Amphibian Survey Areas, and no suitable aquatic or semi-aquatic habitat occurs within or adjacent to the Survey Area. Therefore, MSHCP covered amphibians requiring surveys are considered absent from the Survey Area, and no focused amphibian surveys or species-specific mitigation measures are required.

5.10.3 Burrowing Owl

The following APNs within the Project are within a Burrowing Owl Survey Area: 418-160-007, 418-240-011, 418-250-009, 418-360-003, 419-630-030, 419-630-012, 419-630-011, 419-770-007, and 419-772-001. Burrowing owl is a state candidate species for listing as endangered, an SSC, and is one of the 146 species covered by the MSHCP. Nesting in underground burrows typically abandoned by other animals such as ground squirrels, the burrowing owl prefers open, flat, grassland habitat, a factor that has led to declining numbers in the last 20 years as development has progressed. Under federal laws protecting migratory birds, both the owls and their burrows are protected. Areas within and outside the Survey Area, within 500 feet of the site, contain flat and open space consisting of disturbed tilled soils and Ruderal vegetation. These areas have a low potential to support burrowing owls; however, because the Project falls within a Burrowing Owl Survey Area and marginally suitable habitat exists on the site, focused surveys and a burrowing owl preconstruction survey will be required prior to the start of construction in accordance with the MSHCP's 2006 Burrowing Owl Survey Instructions (RCA 2006).

5.10.4 Mammals

The site does not fall within any MSHCP Mammal Survey Areas, and existing site conditions do not provide specialized habitat features associated with these species. Therefore, MSHCP-covered mammals requiring surveys are considered absent from the Survey Area and no focused mammal surveys or species-specific mitigation measures are required.

5.11 INFORMATION ON OTHER SPECIES

5.11.1 Delhi Sands Flower-loving Fly

Prior to conducting the biological reconnaissance-level survey for the Project, the MSHCP Information Map was queried for the Project APNs. In addition, the USDA NRCS Web Soil Survey was reviewed for soil types found within the Survey Area.

Results of the query indicated that the Survey Area is not located within a Delhi Sands Flower-loving Fly Survey Area. In addition, none of the soil types mapped within the Survey Area are Delhi sands soils. Therefore, this species is not anticipated to occur within the site or be impacted by Project activities. Details on soil types mapped within the Survey Area can be found in Section 5.6.

5.11.2 Coastal California gnatcatcher

Although protocol-level surveys for coastal California gnatcatcher are not required per the MSHCP, Permittees are required (per the USFWS Special Terms and Conditions for RCA's Permit TE-088609-0) to avoid clearing coastal California gnatcatcher–occupied habitat in the Criteria Area and in PQP lands between March 1 and August 15. The Project does not fall within nor is it adjacent to any Criteria Cells or PQP lands, and as such, this measure is not applicable to the Project. Further, the Survey Area does not support coastal California gnatcatcher, and no suitable habitat (Riversidian sage scrub or disturbed sage scrub) is present within the Survey Area. Habitat within the Survey Area consists primarily of disturbed upland and Ruderal vegetation with sparse native shrub cover. As a result, this species is considered absent from the Survey Area, and no species-specific mitigation measures are required.

5.11.3 Species not Adequately Conserved

According to Table 9-3 of the MSHCP, conservation criteria have not been met for 10 special status plant species and 9 wildlife species (RCA 2022). One of the nine wildlife species, grasshopper sparrow (*Ammodramus savannarum*), is considered partially conserved as the reproduction portion of the objective has not been met. Therefore, these species require an analysis for their potential to occur within the Survey Area. These species, their status, their general habitat requirements, and their potential to occur within the Survey Area, and the rationale is outlined in Table 4.

Table 4: MSHCP Covered Species not Adequately Conserved

Common Name	Status	General Habitat Description	Potential to Occur	Rationale
California bedstraw *Galium californicum* ssp. *primum*	CRPR 1B.2	Occurs granitic and sandy soils within chaparral and lower montane coniferous forest at elevations between 4,430 and 5,580 feet amsl, in Riverside and San Bernardino counties.	Absent	Habitat, including the elevation range, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area (CDFW 2025).
California muhly *Muhlenbergia californica*	CRPR 4.3	Occurs in mesic soils along seeps and streams within chaparral, coastal scrub, lower montane coniferous forest, and meadows and seeps at elevations between 330 and 6,560 feet amsl in Los Angeles, Riverside, and San Bernardino Counties	Absent	Habitat, including soils, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area (CDFW 2025).

Common Name	Status	General Habitat Description	Potential to Occur	Rationale
California spotted owl *Strix occidentalis occidentalis*	SSC	Occurs across the Transverse and Peninsular Ranges in southern California within montane hardwood and montane hard wood-conifer forests—especially those with Canyon Live Oak (*Quercus chrysolepis*) and Bigcone Douglas-fir (*Pseudotsuga macrocarpa)*—at mid- to high elevations and at low elevations, it uses coastal oak woodland and valley foothill riparian habitats.	Absent	The Survey Area does not contain dense coastal oak woodlands or a dense riparian habitat. In addition, there are no known occurrences within 5 miles of the Survey Area (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.
chickweed oxytheca *Sidotheca* [*Oxytheca*] *caryophylloides*	CRPR 4.3	Occurs in lower montane coniferous forest (sandy) at elevations between 3,655 and 8,530 feet amsl in Los Angeles, Riverside, San Bernardino, and Ventura Counties.	Absent	Habitat, including the elevation range, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area (CDFW 2025).
Cleveland's bush Monkeyflower Diplacus [*Mimulus*] *clevelandii*	CRPR 4.2	Occurs in disturbed areas (often) in openings with gabbrioic and rocky soils within chaparral, cismontane woodland, and lower montane coniferous forest at elevations between 1,475 and 6,560 feet amsl in Orange, Riverside, and San Diego counties.	Absent	Habitat, including soils, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area (CDFW 2025).
cliff cinquefoil *Potentilla rimicola*	CRPR 2B.3	Occurs in granitic and rocky soils in subalpine coniferous forest and upper montane coniferous forest at elevations between 7,875 and 9,185 feet amsl in Riverside County.	Absent	Habitat, including soils and the elevation range, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area (CDFW 2025).

Common Name	Status	General Habitat Description	Potential to Occur	Rationale
grasshopper sparrow *Ammodramus savannarum*	SSC	Occurs from Oregon south along the California coast and the east side of the Sierras in the lowlands into Baja California within grassland habitats.	Low	The Survey Area contains fragmented Annual Non-native Grasslands; however, these areas are surrounded by disturbed, tilled soils. There are also no known occurrences within 5 miles of the Survey Area (CDFW 2025, USFWS 2024). Therefore, there is a low potential for this species to occur within Survey Area.
lemon lily *Lilium parryi*	CRPR 1B.2	Occurs in mesic soils within lower montane coniferous forest, meadows and seeps, riparian forest, and upper montane coniferous forest at elevations between 4,005 and 9,005 feet amsl in Los Angeles, Riverside, San Bernardino, and San Diego counties.	Absent	Habitat, including soils and the elevation range, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area (CDFW 2025).
Lincoln's sparrow *Melospiza lincolnii*		Breeds in wet meadows filled with willows, alders, sedges, and patches of cottonwoods, and shrubby areas near streams. During migration they use brushy fields, forest edges, and thickets. In the winter they use tropical forests, pine-oak forests, tropical scrub, weedy pastures, and shrubby fields.	Absent	The Survey Area does not contain wet meadows or streams required by this species for nesting. In addition, the site contains low quality habitat for migration. There are also no known occurrences within 5 miles of the Survey Area (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.
Mojave tarplant *Deinandra mohavensis*	**SE**, CRPR 1B.3	Occurs in mesic soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub at elevations between 2,100 and 5,250 feet amsl in Inyo, Kern, Riverside, San Bernardino, San Diego, and Tulare counties.	Absent	Habitat, including soils, is not present in the Survey Area. One known occurrence of this species is documented approximately 3.87 miles away from the Survey Area. However, that observation was in a dirt roadside berm in chapparal habitat.

Common Name	Status	General Habitat Description	Potential to Occur	Rationale
ocellated Humboldt lily *Lilium humboldtii* ssp. *ocellatum*	CRR 4.2	Occurs in opening of chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest (sandy), and riparian woodland at elevations between 10 and 5,905 feet amsl in Los Angeles, Kern, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, and Ventura counties.	Absent	Habitat, including soils, is not present on the Project Site. In addition, there are no known occurrences within 5 miles of the Project Site.
San Bernardino flying squirrel *Glaucomys sabrinus californicus*	SSC	Occurs In the San Jacinto and San Bernardino Mountains in various woodlands, including coniferous, mixed coniferous-deciduous, and broad-leaf-deciduous forests.	Absent	Habitat is not present within the Survey Area. In addition, there are no known occurrences within 5 miles of the site (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.
San Bernardino Mountain kingsnake *Lampropeltis zonata parvirubra*		Occurs in coniferous forest, oak-pine woodlands, riparian woodland, chaparral, manzanita, coastal sage scrub, and wooded areas near a stream with rock outcrops.	Absent	The Survey Area does not contain dense woodland or riparian habitat, nor does it contain a stream with rock outcrops. In addition, there are no known occurrences within 5 miles of the site (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.
San Diego Mountain kingsnake *Lampropeltis zonata pulchra*		Occurs in forests, woodlands, chaparral, grasslands, marshes, farmland, ranches, deserts, and brushy suburban areas.	Absent	Habitat within the Survey Area lacks a stream and abundant cover like rocks, logs, and burrows that this species requires. In addition, there are no known occurrences within 5 miles of the site (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.

Common Name	Status	General Habitat Description	Potential to Occur	Rationale
shaggy-haired alumroot *Heuchera hirsutissima*	CRPR 1B.3	Occurs in granitic and rocky soils in subalpine coniferous forest and upper montane coniferous forest at elevations between 4,985 and 11,485 feet amsl in Riverside County.	Absent	Habitat, including soils and the elevation range, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area.
southern rubber boa *Charina bottae umbratica*	**ST**	Occurs montane forest with relatively high humidity, well-developed soil, granitic rock formations, and woody canopy openings.	Absent	The Survey Area does not contain moist forested or damp riparian habitats. There are only two known occurrences approximately 4.80 miles from the site, but they were documented in 1970s and 1995 (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.
southern sagebrush lizard *Sceloporus graciosus vandenburgianus*		Occurs in shrublands such as chaparral, manzanita and ceanothus, as well as open pine and Douglas fir forests, mainly in the mountains.	Absent	The Survey Area is not located in dense forested areas of the mountains. In addition, there are no known occurrences within 5 miles of the site (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.
sticky-leaved dudleya *Dudleya viscida*	CRPR 1B.2	Occurs In rocky areas within coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub at elevations between 35 and 1,805 feet amsl in Orange, Riverside, and San Diego counties.	Absent	Habitat, including soils, is not present in the Survey Area. In addition, there are no known occurrences within 5 miles of the Survey Area.
Williamson's sapsucker *Sphyrapicus thyroideus*		Occurs in open coniferous and mixed coniferous-deciduous forests.	Absent	The Survey Area is not located in the forested areas that this species requires. In addition, there are no known occurrences within 5 miles of the site (CDFW 2025, USFWS 2024). Therefore, this species is not anticipated to occur within the Survey Area.

5.12 URBAN/WILDLANDS INTERFACE

Section 6.1.4 of the MSHCP addresses the management of the urban/wildlands interface to minimize conflicts between development and adjacent natural habitats. While the Survey Area is primarily disturbed and contains Ruderal and upland vegetation, it connects downstream to wildlife corridors. Although the site itself does not provide substantial natural habitat, its hydrologic connection could allow for wildlife movement through downstream corridors. Therefore, potential impacts related to the urban/wildlands interface are low, but standard construction best management practices should be implemented to minimize temporary disturbances in order to remain consistent with Section 6.1.4 of the MSHCP.

5.13 CONSTRUCTION GUIDELINES

Section 7.5.3 Construction Guidelines are applicable to covered facilities within the Criteria Area and PQP Lands. The Project does not fall within a Criteria Area or PQP Lands, and therefore, this section is not applicable to the Project.

5.14 BEST MANAGEMENT PRACTICES

The practices identified in MSHCP Volume I, Appendix C are applicable to all projects. This Project will implement the Appendix C Best Management Practices as applicable to the Project. Of particular note, a qualified biological monitor is required for the duration of the project (i.e., to monitor any activity that could directly or indirectly impact MSHCP resources). This should be included in the list of Conditions of Approval for the proposed Project.

SECTION 6.0 – PROJECT IMPACTS AND RECOMMENDED MITIGATION

The Project will be in compliance with federal, state, and county ordinances protecting special status resources. The following sections provide a summary of the biological surveys, potential impacts based on current design, and recommended protection measures to avoid and minimize potential negative impacts to special status resources.

6.1 VEGETATION COMMUNITIES

Ten vegetation communities were observed within the Survey Area: Annual Non-native Grassland, Upland Mustard and Star-thistle Field, Disturbed Goodding's Willow Woodland, Disturbed Perennial Buckwheat / Sand-aster Field, Disturbed California Buckwheat Scrub, Disturbed Fremont Cottonwood Woodland, Disturbed Palmer's Goldenbush Scrub, Giant Reed Marsh, Ruderal, and Ornamental Landscaping. In addition, two other land cover types were present in the Survey Area: Bare Ground and Developed. All vegetation communities may be permanently impacted. The total acres of each vegetation community that may be impacted within the Survey Area are found in Table 1.

6.2 SPECIAL STATUS PLANTS

After the literature review, the assessment of the various habitat types in the Survey Area, and the reconnaissance-level survey was conducted, it was determined that 64 of the 69 special status plant species with a potential to occur are considered absent from the Survey Area and 5 species are considered to have a low potential to occur at the Survey Area due to low quality and disturbed suitable habitat. Although small patches of suitable habitat containing exposed sandy wash are present in Drainages 2 and 3, these areas were heavily disturbed and of poor quality. These areas are filled with sediment and debris from stormwater runoff and sheet flow from the surrounding urban and disturbed areas as well as high non-native species cover (e.g., foxtail brome, shortpod mustard). Habitat surrounding the Survey Area consists of developed areas and non-native grassland and is unsuitable for any of these species. Due to the poor quality of suitable habitat for these species, these species are not expected to occur in the Survey Area.

Furthermore, all five of the special status species with low potential to occur in the Survey Area (Jaeger's milk-vetch, thread-leaved brodiaea, smooth tarplant, slender-horned spineflower, and Santa Ana River woollystar) are MSHCP Covered Species, and thus, no additional surveys are required to be conducted for these species as they are considered adequately conserved through reserve assembly and management actions.

6.3 SPECIAL STATUS WILDLIFE

Of the 32 special status wildlife species identified in the literature review, it was determined that 18 special status wildlife species were considered absent from the Survey Area and 14 had a low potential to occur within the Survey Area. Least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo are not anticipated to occur within the Survey Area. Therefore, no impacts are anticipated to occur to these species, and no additional mitigation is recommended. While not anticipated to occur, in order to minimize potential impacts to these species, a preconstruction survey should be conducted prior to the start of construction activities. If any of the above species are identified, measures to avoid or minimize impacts to these species should be submitted to resource agencies for approval prior to construction.

6.3.1 Burrowing Owl

After conducting the biological reconnaissance-level survey, it was determined that the potential for burrowing owl to occur within the Survey Area is low. However, the Project does occur in an MSHCP Burrowing Owl Survey Area and as marginally suitable habitat is present in the Survey Area, additional burrowing owl surveys will be required to comply with Section 6.3.2 of the MSHCP. All surveys must be conducted in accordance with the MSHCP Burrowing Owl Survey Instructions (RCA 2006) as follows:

- Habitat assessment - Burrowing owl can occur in many areas; therefore, most sites will support suitable habitat (e.g., ground squirrel burrows, boulder piles, concrete, pipes, catch basins, etc.) If a habitat assessment yields suitable habitat for burrowing owl, then a focused burrow survey is required within the suitable habitat and 150 meters around the suitable habitat.
- Burrow survey - If suitable burrows are found during the focused burrow survey within the suitable habitat, including the 150-meter buffer, then four breeding season focused burrowing owl surveys will be required.
- Focused surveys - All four focused burrowing owl survey visits should be conducted during the breeding season (survey window is March 1–August 31), and no less than two weeks apart, when suitable habitat is present.

If owls are not found during the focused surveys a burrowing owl preconstruction survey shall be conducted within 30 days prior to ground disturbance to ensure that no owls have colonized suitable habitat areas in the days or weeks preceding the ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, grading, etc.) and to avoid direct take of burrowing owl (MSHCP Species Specific Objective 6). If burrowing owls are identified on site, avoidance measures will be developed in compliance with the MSHCP and in coordination with CDFW and RCA. These measures may include the following as well as any others developed in coordination with CDFW and/or RCA:

- The Project proponent will coordinate with RCA and CDFW to see if the preparation of a Burrowing Owl Protection and Relocation Plan may be required.

- If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure burrowing owls have not colonized the site since it was last disturbed.

- A biologist with knowledge of burrowing owl and its habitat will be retained to function as a biological monitor.

- The biological monitor will develop and implement a contractor education program with regard to the burrowing owl to be provided to all personnel (including temporary contractors and subcontractors) before beginning work on the Project.

- The biological monitor will be present during vegetation clearing, grading, and construction, to monitor occupied burrowing owl burrows and any construction-related impacts.

- Prior to any ground disturbance, all limits of Project construction will be delineated and marked to be clearly visible to personnel on foot and in heavy equipment. All construction-related activities (e.g., vegetation removal, grading, equipment lay-down and storage, and contractor

parking) will occur inside the limits of construction and designated staging areas. Construction staging and equipment storage will be located outside any occupied burrowing owl burrow locations.

- All movement of contractors, subcontractors, or their agents and equipment will be restricted to the limits of construction and staging areas.

- No relocation (passive or active) is acceptable without first coordinating with RCA and CDFW. Eviction/passive relocation may be acceptable if suitable conserved habitat and natural or artificial burrows are within 75–100 meters, but only if done in coordination with and approval from RCA and CDFW. A qualified biologist would conduct any required passive or active relocation to avoid Project impacts to burrowing owls.

- If burrowing owl must be moved away from the proposed work area, passive relocation techniques would be used rather than actual avian trapping. At least one or more weeks would be necessary to accomplish this to allow the birds to acclimate to alternate burrows.

- The Project would provide funding for long-term management and monitoring of the protected lands acquired for burrowing owl impacts. This monitoring would include an annual report submittal to the CDFW.

The agencies will make the final determination on any avoidance, minimization, and mitigation measures.

6.3.2 Migratory Bird Treaty Act, as Amended (16 USC 703-711)

In compliance with the Migratory Bird Treaty Act (MBTA), any vegetation clearing should take place outside the general bird breeding season (February 1 to August 30), to the maximum extent practicable. If this is not possible, a qualified biologist should conduct a nesting bird and raptor survey prior to ground-disturbing activities. The survey should occur no more than one week prior to initiation of Project activities, and any occupied passerine and/or raptor nests occurring within or adjacent to the Survey Area should be delineated. Additional follow-up surveys may be required by the resource agencies. To the maximum extent practicable, a minimum buffer zone around occupied nests should be maintained during physical ground-disturbing activities. The buffer zone should be sufficient in size to prevent impacts to the nest. Once nesting has ceased, and the young are no longer using the nest, the buffer may be removed.

6.4 JURISDICTIONAL WATERS

Three ephemeral drainage features and one NWI mapped riverine feature occurs within and adjacent to the Survey Area. Up to 2.16 acres within the Survey Area may be subject to USACE, RWQCB, and CDFW jurisdiction if affected by Project activities. The drainages exhibit channelization and eventually connect to Potrero Creek which terminates at the San Jacinto River, a TNW.

To minimize impacts to the drainages, the following measures are recommended:

- A biological monitor in coordination with the contractor shall demark Project limit of disturbance boundaries prior to initiation of ground disturbing activities. Flagging and/or staking will be used to clearly define the work area boundaries and avoid impacts to adjacent drainage features.

- Erosion protection and sediment control BMPs shall be implemented in compliance with the Construction Stormwater General Permit.

6.4.1 Federal Permits

Drainages 1 through 3 delineated on the north side of East 1st Street within the Survey Area are considered ephemeral and only flow in direct response to precipitation events. Ephemeral drainages are not considered jurisdictional WoUS. The riverine feature on the south side of East 1st Street within the Survey Area (Drainage 4) is considered intermittent and eventually connects to the San Jacinto River (a TNW); therefore, based on the definition of WoUS, this drainage should be considered under USACE jurisdiction. However, if the Project design avoids the riverine feature and temporary impacts can be avoided through the use of BMPs, no impacts to WoUS would be anticipated to occur as a result of Project activities, and a Section 404 permit should not be required.

The agencies will review and verify the jurisdictional delineation and determine if permit and mitigation requirements are required for the Project.

6.4.2 State Permits

The three ephemeral drainages (Drainages 1 through 3) and intermittent riverine feature (Drainage 4) exhibit channelization and bank to bank geomorphology within the Survey Area; therefore, the drainages should be considered under CDFW jurisdiction. Permanent impacts to the ephemeral drainages will likely occur due to Project activities directing stormwater runoff and nuisance water away from the mapped drainages and through the new RCP that empties into the riverine feature. Impacts to the riverine feature are limited to Project activities surrounding the existing culvert and should not occur outside of the Project boundary. If the Project design avoids the riverine feature that occurs within the site and temporary impacts are avoided through the use of BMPs, no impacts to the riverine feature would be anticipated to occur as a result of Project activities. Although the Project plans to avoid associated banks and vegetation within the limits of the banks during Project activities, permanent impacts to the ephemeral drainages are anticipated to occur and temporary impacts to the riverine feature may occur, thus, an LSAA may be required from CDFW for this Project.

Based on this delineation, all the drainages mapped within the Survey Area are considered under RWQCB jurisdiction. Although the Project design plans to avoid these water features, permanent impacts to the ephemeral drainages are anticipated to occur and temporary impacts to the riverine feature may occur. Impacts may be avoided through the use of BMPs; however, impacts to waters are anticipated to occur as a result of Project activities and a 401 Certification may be required.

The agencies will review and verify the jurisdictional delineation and determine if permit and mitigation requirements are required for the Project.

6.5 MSHCP CONSISTENCY

6.5.1 Riparian/Riverine

A total of 0.37 acre of riparian vegetated streambed was mapped within the Survey Area. However, the riparian vegetation is lacking the mature forest and canopy required by the riparian bird species listed in Section 6.1.2 of the MSHCP. The site does not support vernal pools or other seasonal wetland habitats. In

addition, the site lacks basalt soils and other suitable habitat required by Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, or vernal pool fairy shrimp. Therefore, the Project is not anticipated to result in impacts to these species.

Per the MSHCP, if riparian/riverine resources are proposed for avoidance, the Project should commit to placing a conservation easement or deed restriction over the riparian/riverine areas in order to demonstrate that these areas will be protected in perpetuity. If the proposed project cannot demonstrate avoidance of riparian/riverine habitat in perpetuity (permanently and temporarily), a DBESP report would be required in which to propose mitigation that demonstrates equivalent or superior function and value. Indirect impacts, including any impacts to supporting hydrology, must also be addressed. If there are indirect impacts only, this may not necessarily result in the need to prepare a DBESP, but if no DBESP is required, these indirect impacts must be addressed in California Environmental Quality Act (CEQA) documentation.

6.5.2 Protection of Narrow Endemic Plant Species

The Project site is located within the Narrow Endemic Plant Species Survey Area for Yucaipa onion and many-stemmed dudleya. However, a review of site conditions indicates that suitable habitat for these species is not present. Specifically, the soils within the survey area do not match the soil types required for these narrow endemic species. Because appropriate soils and associated habitat conditions are absent, focused surveys for these species are not required pursuant to Section 6.1.3 of the MSHCP.

6.5.3 Burrowing Owl

No burrowing owls or sign (such as burrows, feathers, pellets, or whitewash) were observed during the biological reconnaissance-level survey. However, the Project site is located within a Burrowing Owl Survey Area, and low-quality habitat (e.g., flat, open ground with sparse Ruderal vegetation and potential small mammal burrows) is present. In accordance with the MSHCP survey requirements, focused burrowing owl surveys will be required prior to ground-disturbing activities. In addition, a pre-construction survey is required to be conducted within 30 days prior to the start of construction to ensure compliance with the MSHCP and applicable wildlife protection regulations. Thes additional survey requirements are outlined in Section 6.3.1 of this report.

6.5.4 Best Management Practices

The BMPs identified in MSHCP Volume I, Appendix C are applicable to all projects. The MSHCP encourages BMPs to minimize impacts to biological resources during construction, including silt fences, sediment basins, dust control, and proper equipment staging. A qualified biological monitor is required for the duration of the project (i.e., to monitor any activity that could directly or indirectly impact MSHCP resources). This should be included in the list of Conditions of Approval for the proposed Project. BMP implementation helps protect habitat, water quality, and sensitive species, ensuring consistency with MSHCP conservation objectives.

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APPENDIX A – REGULATORY FRAMEWORK

APPENDIX B – PHOTO STATION MAP AND SITE PHOTOGRAPHS

APPENDIX C – PLANT SPECIES LIST

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APPENDIX E – OHWM AND WETLAND DETERMINATION FORMS

APPENDIX A – REGULATORY FRAMEWORK

1.1 FEDERAL JURISDICTION

1.1.1 United States Army Corps of Engineers

Pursuant to Section 404 of the CWA, the United States Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined by 33 Code of Federal Regulations (CFR) Part 328 and currently includes: (1) all navigable waters (including all waters subject to the ebb and flow of the tide), (2) all interstate waters and wetlands, (3) all other waters (e.g., lakes, rivers, intermittent streams) that could affect interstate or foreign commerce, (4) all impoundments of waters mentioned above, (5) all tributaries to waters mentioned above, (6) the territorial seas, and (7) all wetlands adjacent to waters mentioned above. Waters of the United States do not include (1) waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act (CWA), and (2) prior converted cropland. Waters of the United States typically are separated into two types: (1) wetlands and (2) "other waters" (non-wetlands) of the United States.

Wetlands are defined by 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." In 1987, USACE published a manual (1987 Wetland Manual) to guide its field personnel in determining jurisdictional wetland boundaries. This manual was amended in 2008 to the USACE 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (2008 Arid West Supplement). Currently, the 1987 Wetland Manual and the 2008 Arid West Supplement provide the legally accepted methodology for identification and delineation of USACE-jurisdictional wetlands in southern California.

In the absence of wetlands, the limits of USACE jurisdiction in nontidal waters, including intermittent Relatively Permanent Water (RPW) streams, extend to the Ordinary High Water Mark (OHWM), which is defined by 33 CFR 328.3(e) 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.*

On January 9, 2001, the U.S. Supreme Court ruled (in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*) (SWANCC) that USACE jurisdiction does not extend to previously regulated isolated waters, including but not limited to isolated ponds, reservoirs, and wetlands. Examples of isolated waters that are affected by this ruling include vernal pools, stock ponds, lakes (without outlets), playa lakes, and desert washes that are not tributary to navigable or interstate waters or to other jurisdictional waters. A joint legal memorandum by the United States Environmental Protection Agency (EPA) and USACE was signed on January 15, 2003.

In May 2007, USACE and EPA jointly published and authorized the use of the *Jurisdictional Determination Form Instructional Guidebook* (USACE 2007). The form and guidebook define how to determine if an area is USACE jurisdictional and if a significant nexus exists per the Rapanos decision. A nexus must have more than insubstantial and speculative effects on the downstream TNW to be considered a significant nexus. This guidebook is updated by the 2008 Arid West Supplement, the 2010 *Updated Datasheet for the*

Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, and the 2011 *Ordinary High Flows and the Stage-Discharge Relationship in the Arid West Region*.

A joint guidance by EPA and USACE was issued on June 5, 2007, and revised on December 2, 2008, is consistent with the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208 [2006]) (*Rapanos*), which addresses the jurisdiction over waters of the United States under the CWA (33 U.S.C. §1251 et seq.). A draft guidance was circulated in April 2011 to supercede both the 2003 SWANCC guidance and 2008 *Rapanos* decision; however, this guidance is not finalized and lacks the force of law.

USACE will continue to assert jurisdiction over Traditionally Navigable Waters (TNWs), wetlands adjacent to TNW, non-navigable tributaries of TNW that are RPW where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months), and wetlands that directly abut such tributaries.

USACE generally will not assert jurisdiction over swales or erosional features (e.g., gullies or small washes characterized by low volume, infrequent, or short duration flow) or nontidal drainage ditches (including roadside ditches) that are (1) excavated wholly in and draining only uplands and (2) that do not carry a relatively permanent flow of water. USACE defines a drainage ditch as:

> *A linear excavation or depression constructed for the purpose of conveying surface runoff or groundwater from one area to another. An "upland drainage ditch" is a drainage ditch constructed entirely in uplands* (*i.e., not in waters of the United States*) *and is not a water of the United States, unless it becomes tidal or otherwise extends the ordinary high water line of existing waters of the United States.*

Furthermore, USACE generally does not consider "[a]rtificially irrigated areas which would revert to upland if the irrigation ceased" to be subject to their jurisdiction. Such irrigation ditches are linear excavations constructed for the purpose of conveying agricultural water from the adjacent fields. Therefore, such agricultural ditches are not considered to be subject to USACE jurisdiction.

USACE will use fact-specific analysis to determine whether waters have a significant nexus with (1) TNW for nonnavigable tributaries that are not relatively permanent (non-RPW); (2) wetlands adjacent to nonnavigable tributaries that are not relatively permanent; and (3) wetlands adjacent to, but that do not directly abut, a relatively permanent nonnavigable tributary. According to USACE, *"a significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters,"* including consideration of hydrologic and ecologic factors. A primary component of this determination lies in establishing the connectivity or lack of connectivity of the subject drainages to a TNW.

1.2 STATE JURISDICTION

The State of California (State) regulates discharge of material into waters of the State pursuant to Section 401 of the CWA as well as the California Porter-Cologne Water Quality Control Act (Porter-Cologne; California Water Code, Division 7, §13000 et seq.). Waters of the State are defined by Porter-Cologne as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water

Code Section 13050(e)). Waters of the State broadly includes all waters within the State's boundaries (public or private), including waters in both natural and artificial channels.

1.2.1 Regional Water Quality Control Board

Under Porter-Cologne, the State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Boards (RWQCB) regulate the discharge of waste into waters of the State. Discharges of waste include "fill, any material resulting from human activity, or any other 'discharge' that may directly or indirectly impact 'waters of the state.'" Porter-Cologne reserves the right for the State to regulate activities that could affect the quantity and/or quality of surface and/or groundwaters, including isolated wetlands, within the State. Wetlands were defined as waters of the State if they demonstrated both wetland hydrology and hydric soils. Waters of the State determined to be jurisdictional for these purposes require, if impacted, waste discharge requirements (WDRs).

When an activity results in fill or discharge directly below the OHWM of jurisdictional waters of the United States (federal jurisdiction), including wetlands, a CWA Section 401 Water Quality Certification is required. If a proposed project is not subject to CWA Section 401 certification but involves activities that may result in a discharge to waters of the State, the project may still be regulated under Porter-Cologne and may be subject to waste discharge requirements. In cases where waters apply to both CWA and Porter-Cologne, RWQCB may consolidate permitting requirements to one permit.

1.2.2 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, the California Department of Fish and Wildlife (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.

CDFW defines a "stream" (including creeks and rivers) as "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 surface or subsurface flow that supports or has supported riparian vegetation" (California Code of Regulations, Title 14, Section 1.72). The jurisdiction of CDFW may include areas in or near intermittent streams, ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams that are indicated on USGS maps, watercourses that may contain subsurface flows, or within the flood plain of a water body. CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW limits of jurisdiction typically include the maximum extents of the uppermost bank-to-bank distance and/or the outermost extent of riparian vegetation dripline, whichever measurement is greater.

In a CDFW guidance of stream processes and forms in dryland watersheds (Vyverberg 2010[1]), streams are identified as having one or more channels that may all be active or receive water only during some high flow event. Subordinate features, such as low flow channels, active channels, banks associated with secondary channels, floodplains, and stream-associated vegetation, may occur within the bounds of a single, larger channel. The water course is defined by the topography or elevations of land that confine a stream to a definite course when its waters rise to their highest level. A watercourse is defined as a stream with boundaries defined by the maximal extent or expression on the landscape even though flow may otherwise be intermittent or ephemeral.

Artificial waterways such as ditches (including roadside ditches), canals, aqueducts, irrigation ditches, and other artificially created water conveyance systems also may be under the jurisdiction of CDFW. CDFW may claim jurisdiction over these features based on the presence of habitat characteristics suitable to support aquatic life, riparian vegetation, and/or stream-dependent terrestrial wildlife. As with natural waterways, the limit of CDFW jurisdiction of artificial waterways includes the uppermost bank-to-bank distance and/or the outermost extent of riparian vegetation dripline, whichever measurement is greater.

CDFW does not have jurisdiction over wetlands, but has jurisdiction to protect against a net loss of wetlands. CDFW supports the wetland criteria recognized by the United States Fish and Wildlife Service (USFWS); one or more indicators of wetland conditions must exist for wetlands conditions to be considered present. The following is the USFWS-accepted definition of a wetland:

> Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the lands supports hydrophytes, (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardin et al. 1979[2]).

In *A Clarification of the U.S. Fish and Wildlife Service's Wetland Definition* (Tiner 1989[3]), the USFWS definition was further clarified "that in order for any area to be classified as wetland by the Service, the area must be periodically saturated or covered by shallow water, whether wetland vegetation and/or hydric soils are present or not; this hydrologic requirement is addressed in the first sentence of the definition." When considering whether an action would result in a net loss of wetlands, CDFW will extend jurisdiction to USFWS-defined wetland conditions where such conditions exist within the riparian vegetation that is associated with a stream or lake and does not depend on whether those features meet the three-parameter USACE methodology of wetland determination. If impacts to wetlands under the jurisdiction of CDFW are unavoidable, a mitigation plan will be implemented in coordination with CDFW to support the CDFW policy of "no net loss" of wetland habitat.

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[1] Kris Vyverberg, *A Review of Stream Processes and Forms in Dryland Watersheds* (Sacramento: California Department of Fish and Game, 2010), https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=25779.

[2] Lewis M. Cowardin, Virginia Carter, Francis C. Golet, and Edward T. LaRoe, *Classification of Wetlands and Deepwater Habitats of the United States* (Washington, DC: U.S. Fish and Wildlife Service, 1979), https://www.epa.gov/sites/default/files/2017-05/documents/cowardin_1979.pdf

[3] Ralph W. Tiner, "A Clarification of the U.S. Fish and Wildlife Service's Wetland Definition," *National Wetlands Newsletter* 11, no. 3 (1989): 6, https://www.eli.org/national-wetlands-newsletter/clarification-us-fish-and-wildlife-services-wetland-definition.

APPENDIX B – PHOTO STATION MAP AND SITE PHOTOGRAPHS



Appendix B
Beaumont MDP Line 2
Photo Station Map and Site Photographs

Name: 21501 Beaumont MDP Line 2
Print Date: 5/14/2026 11:12 AM Author: pcarlos

CHAMBERS GROUP

APPENDIX B – SITE PHOTOGRAPHS



Photo 1.

Overview photo of East 6th Street. This area is fully developed with sidewalks on both sides of the highway. Photo is facing east.



Photo 2.

Overview photo of the vacant lot located on the west side of Pennsylvania Avenue. This area is primarily bare ground. Photo is facing southwest.



Photo 3.

Overview photo of the vacant lot located on the east side of Pennsylvania Avenue. This lot looks recently mowed/graded and is dominated by Ruderal vegetation. Photo is facing southeast.



Photo 4.

Concrete-lined raised manhole at the off-ramp of westbound I-10 on the east side of Pennsylvania Avenue. A concrete drainage follows parallel to the off-ramp. Photo is facing northeast.



Photo 5.

Concrete-lined raised manhole at the off-ramp of westbound I-10 on the east side of Pennsylvania Avenue. An asphalt drainage contributes runoff from the off-ramp. Photo is facing southwest toward I-10.



Photo 6.

Concrete-lined sewer grate on the opposite side of the off-ramp of westbound I-10; located on the west side of Pennsylvania Avenue. Photo is facing west.



Photo 7.

Overview photo of Pennsylvania Avenue south of I-10. This area is developed with Ruderal vegetation growing along the east side of the road. Photo is facing north.



Photo 8.

Overview photo of the open space on the corner of Pennsylvania Avenue and East 1st Street. The open space is dominated by Ruderal vegetation and the soil looked to be recently tilled. Photo is facing northeast.



Photo 9.

Overview photo of the newly constructed East 2nd Street that cuts through the open space and adjoins Pennsylvania Avenue. Photo is facing west.



Photo 10.

Overview photo along East 1st Street. The north side of the road is dominated by Ruderal vegetation. The ephemeral drainage continues southeast and crosses underground through a concrete-lined culvert. Photo is facing west.



Photo 11.

Overview photo of the south side of East 1st Street. The NWI riverine feature collects nuisance water and flood water from rain events from the three ephemeral drainages on the north side of East 1st Street. Photo is facing south.



Photo 12.

Overview photo of detention basin located south of East 1st Street that drains into the NWI riverine feature. This basin conveys stormwater runoff and nuisance water from the surrounding residential neighborhood. Photo is facing northwest.



Photo 13.

Overview photo of the NWI mapped riverine feature as it leaves the Survey Area. Riparian habitat is located within the channel. Photo is facing south.



Photo 14.

Close up photo of the culvert located on the south side of East 1st Street. The culvert facilitates the nuisance water and flood water during rain events from three ephemeral drainages upstream. An excess amount of sediment and debris has built up from flooding events. Photo is facing west.



Photo 15.

Overview of the culvert located on the south side of East 1st Street. An excess amount of sediment and debris has built up from flooding events. A small patch of giant reed is present within the area. Photo is facing northwest.



Photo 16.

Overview photo of Soil Pit 1 located within the NWI riverine feature south of East 1st Street. Native vegetation includes Fremont cottonwood, mule fat, and California buckwheat. Non-native vegetation includes giant reed and other invasive weed species. Photo is facing southwest.



Photo 17.

Soils pulled from Soil Pit 1 are sandy loam and not classified as hydric.



Photo 18.

Overview photo of Soil Pit 2 located within the NWI riverine feature south of East 1st Street. Native vegetation includes Fremont cottonwood, mule fat, and California buckwheat. Non-native vegetation includes giant reed and other invasive weed species. Photo is facing south.



Photo 19.

Soils pulled from Soil Pit 2 are sandy loam and not classified as hydric.



Photo 20.

Overview photo of the hillside surrounding the culvert south of East 1st Street. The hillside has eroded and contributes to the excess soil and debris built up near the culvert within the Survey Area. Vegetation on the hillside is dominated with Disturbed California Buckwheat Scrub. Photo is facing northwest.



Photo 21.

Overview photo of the culvert located on the north side of East 1st Street where all three ephemeral drainages join and connect to the NWI riverine feature. Vegetation is dominated by Disturbed California Buckwheat Scrub and patches of ragweed and cocklebur. Photo is facing west.



Photo 22.

Overview of the culvert located on the west side of Pennsylvania Avenue. There are no hydrological features present in the area and vegetation is Ruderal and disturbed from soil tilling. The culvert receives stormwater flow and connects to Drainage 1 on the east side of Pennsylvania Avenue. Photo is facing east.



Photo 23.

Overview of the culvert that crosses under Pennsylvania Avenue. The culvert receives stormwater flow that contributes to Drainage 1 on the east side of Pennsylvania Avenue. Photo is facing west.



Photo 24.

Overview of Drainage 1 prior to entering the culvert under the newly constructed East 2nd Street. Drainage 1 contains a break in slope, wracking, and soil cracks. Photo is facing southeast.



Photo 25.

Overview of Drainage 1 prior to joining with Drainage 2. Disturbed California Buckwheat Scrub is located within the channel. Photo is facing southeast.



Photo 26.

Overview of the Disturbed Fremont Cottonwood and Arroyo Willow Thicket observed within Drainage 2. Photo is facing northeast.



Photo 27.

Overview photo of Soil Pit 3 located within Drainage 2. Disturbed Fremont Cottonwood and Disturbed Arroyo Willow Thicket vegetation communities present within the channel as well as other invasive weed species. Photo is facing south.



Photo 28.

Soils pulled from Soil Pit 3 are sandy loam and not classified as hydric.

	**Photo 29.** Overview of Drainage 2 downstream of the newly constructed East 2nd Street. Photo is facing south.
	**Photo 30.** Overview of Drainage 2 upstream of the newly constructed East 2nd Street. Photo is facing north.



Photo 31.

Overview of Drainage 3 (right) joining Drainage 2 (left). The area is primarily dominated by Annual Brome Grassland. Photo is facing northwest.



Photo 32.

Overview of the willow patch observed in Drainage 2. Photo is facing south.



Photo 33.

Overview of the giant reed patch observed within Drainage 2. Photo is facing northwest.



Photo 34.

Overview photo of Soil Pit 4 located within Drainage 2. Disturbed Goodding's Willow Woodland and Giant Reed Marsh vegetation communities are present within the channel as well as other invasive weed species. Photo is facing north.



Photo 35.

Soils pulled from Soil Pit 4 are sandy loam and not classified as hydric.



Photo 36.

Overview of an old stormwater drainage located within Drainage 2. The culvert located east of Pennsylvania Avenue looks to be capped and the concrete drainage no longer looks to facilitate flows. Photo is facing west.



Photo 37.

Overview of the Disturbed California Buckwheat Scrub surrounding Drainage 2. Photo is facing southeast.



Photo 38.

Overview of Drainage 2 upstream. The area is primarily dominated by Ruderal vegetation. Photo is facing north.



Photo 39.

Overview of one of the culverts that drains nuisance water and stormwater runoff from Pennsylvania Avenue into Drainage 2. Photo is facing southeast.



Photo 40.

Stormwater runoff from the Union Pacific Railroad flows into Drainage 2. The area is primarily dominated by tree of heaven as well as other invasive weed species. Photo is facing west.



Photo 41.

Stormwater runoff from the Union Pacific Railroad flows through a culvert on the south side of the railroad into Drainage 2. Photo is facing south.



Photo 42.

Stormwater runoff from the Union Pacific Railroad flows through a culvert on the north side of the railroad into Drainage 2. Photo is facing east.



Photo 43.

Nuisance water and stormwater runoff from the residential area north of I-10 flows through these two culverts that then drain under the railroad culvert and into Drainage 2. Photo is facing north.



Photo 44.

Stormwater runoff from the Union Pacific Railroad flows through a culvert under Pennsylvania Avenue on the north side of the railroad and eventually drains into Drainage 2. Photo is facing northwest.



Photo 45.

Stormwater runoff from the Union Pacific Railroad flows through a culvert under Pennsylvania Avenue on the south side of the railroad and eventually drains into Drainage 2. Photo is facing west.



Photo 46.

Drainage 3 consists of primarily Upland Mustard and Star-thistle Fields as well as Disturbed Perennial Buckwheat and Sand-aster Field vegetation communities. Photo is facing south.



Photo 47.

Drainage 3 starts to channelize outside of the Survey Area originating from stormwater runoff and sheet flow from the railroad and open lot to the north and northeast. Photo is facing northeast.

APPENDIX C – PLANT SPECIES LIST

APPENDIX C – PLANT SPECIES OBSERVED

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
ADOXACEAE	**MUSKROOT FAMILY**
Sambucus nigra subsp. *caerulea*	blue elderberry
APOCYNACEAE	**DOGBANE FAMILY**
*Trachelospermum jasminoides**	star jasmine
ASTERACEAE	**SUNFLOWER FAMILY**
Ambrosia psilostachya	western ragweed
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Baccharis pilularis	coyote brush
Baccharis salicifolia	mule fat
*Centaurea melitensis**	tocalote
*Centaurea solstitialis**	yellow star-thistle
Corethrogyne filaginifolia	sand-aster
Ericameria palmeri var. *pachylepis*	Palmer's goldenbush
Erigeron canadensis	Canada horseweed
Helianthus annuus	common sunflower
Heterotheca grandiflora	telegraph weed
Isocoma menziesii	coast goldenbush
Pseudognaphalium beneolens	fragrant everlasting
Pseudognaphalium sp.	cudweed
Stephanomeria pauciflora	wire lettuce
Xanthium strumarium	rough cocklebur
BORAGINACEAE	**BORAGE FAMILY**
Eriodictyon crassifolium	thick-leaved yerba santa
BRASSICACEAE	**MUSTARD FAMILY**
*Brassica nigra**	black mustard
*Brassica rapa**	field mustard
*Hirschfeldia incana**	shortpod mustard
*Raphanus sativus**	wild radish
*Sisymbrium irio**	London rocket
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
*Salsola australis**	Russian-thistle
EUPHORBIACEAE	**SPURGE FAMILY**
Croton setiger	turkey-mullein
FABACEAE	**LEGUME FAMILY**
Acmispon glaber	deerweed
Lupinus bicolor	miniature lupine
GERANIACEAE	**GERANIUM FAMILY**

Erodium sp.	erodium
LAMIACEAE	**MINT FAMILY**
Salvia apiana	white sage
Salvia mellifera	black sage
Trichostema lanceolatum	vinegar weed
MYRTACEAE	**MYRTLE FAMILY**
Eucalyptus sp.*	gum tree
PLANTAGINACEAE	**PLANTAIN FAMILY**
*Plantago major**	ribwort
PLATANACEAE	**SYCAMORE FAMILY**
Platanus racemosa	western sycamore
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum elongatum	longstem buckwheat
Eriogonum fasciculatum	California buckwheat
Eriogonum gracile	slender woolly buckwheat
ROSACEAE	**ROSE FAMILY**
*Rhaphiolepis indica**	Indian hawthorn
SALICACEAE	**WILLOW FAMILY**
Populus fremontii	Fremont cottonwood
Salix gooddingii	Goodding's willow
Salix lasiolepis	arroyo willow
SIMAROUBACEAE	**QUASSIA FAMILY**
*Ailanthus altissima**	tree of heaven
SOLANACEAE	**NIGHTSHADE FAMILY**
Datura wrightii	jimson weed
ANGIOSPERMS (MONOCOTS)	
CYPERACEAE	**SEDGE FAMILY**
Cyperus eragrostis	tall cyperus
POACEAE	**GRASS FAMILY**
*Arundo donax**	giant reed
*Avena fatua**	wild oat
*Bromus diandrus**	ripgut grass
Bromus madritensis	foxtail brome
*Cynodon dactylon**	Bermuda grass
*Hordeum murinum**	foxtail barley
Stipa pulchra	purple needlegrass
GYMNOSPERMS	
PINACEAE	**PINE FAMILY**
Pinus sp.	pine

*Non-Native Species

APPENDIX D –WILDLIFE SPECIES LIST

APPENDIX D – WILDLIFE SPECIES OBSERVED OR DETECTED

Scientific Name	Common Name
CLASS AVES	**BIRDS**
ACCIPITRIDAE	**HAWKS, KITES, EAGLES**
Buteo jamaicensis	red-tailed hawk
CATHARTIDAE	**NEW WORLD VULTURES**
Cathartes aura	turkey vulture
COLUMBIDAE	**PIGEONS & DOVES**
Columba livia	rock pigeon
Zenaida macroura	mourning dove
CORVIDAE	**JAYS & CROWS**
Corvus corax	common raven
FRINGILLIDAE	**FINCHES**
Carpodacus mexicanus	house finch
ICTERIDAE	**BLACKBIRDS**
Sturnella neglecta	western meadowlark
PASSERELLIDAE	**NEW WORLD SPARROWS**
Melospiza melodia	song sparrow
Passerculus sandwichensis	savannah sparrow
Zonotrichia leucophrys	white-crowned sparrow
PASSERIDAE	**OLD WORLD SPARROWS**
Passer domesticus	house sparrow
TYRANNIDAE	**TYRANT FLYCATCHERS**
Sayornis saya	Say's phoebe
CLASS MAMMALIA	**MAMMALS**
LEPORIDAE	**HARES & RABBITS**
Sylvilagus audubonii	desert cottontail
CLASS REPTILIA	**REPTILES**
PHRYNOSOMATIDAE	**ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS**
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard

APPENDIX E – OHWM AND WETLAND DETERMINATION FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont MDP Line 2 City/County: Beaumont/Riverside County Sampling Date: 1/14/25

Applicant/Owner: City State: CA Sampling Point: 1

Investigator(s): Heather Madera and Austin Burke Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.921449N Long: 116.963482 Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

Heavy flooding has made this area problematic. See below.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fremont Cottonwood	10	X	FACW
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 30)			
1. Mule Fat	35	X	FAC
2. Giant reed	15	X	FACW
3. California buckwheat	5		
4.			
5.			
	60 = Total Cover		
Herb Stratum (Plot size: 30)			
1. Ripgut	5		
2. shortpod mustard	1		
3. Russian thistle	10		
4.			
5.			
6.			
7.			
8.			
	16 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (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 25	x 2 =	50
FAC species 35	x 3 =	105
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: 60 (A)		155 (B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

✔ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

This area is problematic. This portion of the Survey Area is heavily disturbed. There is an excess amount of sediment and debris that has built up around the culvert within the Survey Area. Although wetland vegetation species are present and clear channelization of the drainage occurs, hydric soils were not found within the excess of sediment.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5 YR 6/4	100					Sandy Loa	Excess sediment built up outside

[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:

There is a build up of sediment and debris within the Survey Area right outside of the culvert which makes this area problematic but the area should still be considered a MSHCP Riparian Habitat. MSHCP Riparian Habitat is also located further downstream of the Project site as it connects to Potrero Creek.

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U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

From Approved -
OMB No. 0710-OHWM
Expires: xx-xx-xxxx

AGENCY DISCLOSURE NOTICE

The public reporting burden for this collection of information, 0710-OHWM, is estimated to average 30 **minutes** per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: 21501	Site Name: Beaumont MDP Line 2	Date and Time: 1/14/2025, 1030AM
Location (lat/long): 33.921353N 116.963417W	Investigator(s): Heather Madera and Austin Burke	

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [x] geologic maps
- [ ] climatic data
- [x] satellite imagery
- [ ] land use maps
- [ ] aerial photos
- [x] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources. Were there any recent extreme events (floods or drought)?
Survey Area receives water through flooding events that exit the culvert in the southern portion of the site.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.
The area around the southern culvert is heavily disturbed. The hillside shows some signs of erosion. There is an excess amount of sediment and debris directly outside of the culvert. OHWM is clear as it exits the Project boundary.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- [x] **Break in slope:** x
  - [ ] *on the bank:*
  - [ ] *undercut bank:*
  - [x] *valley bottom:* b
  - [ ] Other: _____
- [ ] **Shelving:**
  - [ ] *shelf at top of bank:*
  - [ ] *natural levee:*
  - [ ] *man-made berms or levees:*
  - [ ] *other berms:* _____
- [x] **Channel bar:** b
  - [ ] *shelving (berms) on bar:*
  - [x] *unvegetated:* b
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar:*
- [x] **Instream bedforms and other bedload transport evidence:** b
  - [x] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)* b
  - [ ] *bedforms (e.g., poofs, riffles, steps, etc.):*
- [x] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)* a
- [ ] **Secondary channels:**

Sediment indicators

- [x] **Soil development:** b
- [ ] **Changes in character of soil:**
- [x] **Mudcracks:** b
- [ ] **Changes in particle-sized distribution:**
  - [ ] *transition from* _____ to _____
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits:*

Vegetation Indicators

- [x] **Change in vegetation type and/or density:** x
  Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***
  - [ ] *vegetation absent to:*
  - [ ] *moss to:*
  - [ ] *forbs to:*
  - [ ] *graminoids to:*
  - [ ] *woody shrubs to:*
  - [ ] *deciduous trees to:*
  - [ ] *coniferous trees to:*
- [x] **Vegetation matted down and/or bent:** b
- [x] **Exposed roots below intact soil layer:** x

Ancillary indicators

- [x] **Wracking/presence of organic litter:** x
- [ ] **Presence of large wood:**
- [ ] **Leaf litter disturbed or washed away:**
- [ ] **Water staining:**
- [ ] **Weathered clasts or bedrock:**

Other observed indicators? Describe:
Area is disturbed and gets a an excess amount of sediment and debris that flows through the culvert.

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Project ID #: 21501

Step 4 Is additional information needed to support this determination? ☐ Yes ☒ No If yes, describe and attach information to datasheet:

Step 5 Describe rationale for location of OHWM

There is a distinct cut in bank as waters are directed southeast through the culvert. The inundation is visible through aerial imagery. Most of the area below the OHWM is bare ground and leaf litter. There is a large amount of sediment and debris in the bed of the channel. OHWM is approximately 21 feet wide and the B2B is approximately 106 feet wide.

Additional observations or notes

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☐ Yes ☐ No If no, explain why not: _____

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description

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OHWM Field Identification Datasheet Instructions and Field Procedure

Step 1 **Site overview from remote and online resources** **Complete Step 1 prior to site visit.**

Online Resources: Identify what information is available for the site. Check boxes on datasheet next to the resources used to assess this site.

a. gage data
b. aerial photos
c. satellite imagery
d. LiDAR
e. topographic maps
f. geologic maps
g. land use maps
h. climatic data (precipitation and temperature)

Landscape context: Use the online resources to put the site in the context of the surrounding landscape.

a. **Note on the datasheet under Step 1:**
   i. Overall land use and change if known
   ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires)
b. Consider the following to inform weighting of evidence observed during field visit.
   i. What physical characteristics are likely to be observed in specific environments?
   ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators?
   iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been over the last year, decade, century?

Step 2 **Site conditions during the field assessment (assemble evidence)**

a. Identify the assessment area.
b. Walk up and down the assessment area noting all the potential OHWM indicators.
c. Note broad trends in channel shape, vegetation, and sediment characteristics.
   i. Is this a single thread or multi-thread system? Is this a stream-wetland complex?
   ii. Are there any secondary and/or floodplain channels?
   iii. Are there obvious man-made alterations to the system?
   iv. Are there man-made (e.g., bridges, dams, culverts) or natural structures (e.g., bedrock outcrops, Large Wood jams) that will influence or control flow?
d. Look for signs of recurring fluvial action.
   i. Where does the flow converge on the landscape?
   ii. Are there signs of fluvial action (sediment sorting, bedforms, etc.) at the convergence zone?
e. Look for indicators on both banks. If the opposite bank is not accessible, then look across the channel at the bank.
f. **In Step 2 of the datasheet** describe any adjacent land use or flow conditions that may influence interpretation of each line of evidence.
   i. What land use and flow conditions may be affecting your ability to observe indicators at the site?
   ii. What recent extreme events may have caused changes to the site and affected your ability to observe indicators?

Step 3a **List evidence**

Assemble evidence by checking the boxes next to each line of evidence:

a. If needed, use a separate scratch datasheet to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
b. If using fillable form, then follow the instructions for filling in the fillable form.

Context is important when assembling evidence. For instance, pool development may be an indicator of interest on the bed of a dry stream, but may not be a useful indicator to take note of in a flowing stream. On the other hand, if the pool is found in a secondary channel adjacent to the main channel, it could provide a line of evidence for a minimum elevation of high flows. Therefore, consider the site context when deciding which indicators provide evidence for identifying the OHWM. Explain reasoning in Step 5.

Questions to consider while making observations and listing evidence at a site:

Geomorphic indicators	**Sediment and soil indicators**	**Vegetation Indicators**	**Ancillary indicators**
Where are the breaks in slope?	Where does evidence of soil formation appear?	Where are the significant transitions in vegetation species, density, and age?	Is there organic litter present?
Are there identifiable banks?		Is there vegetation growing on the channel bed?	
Is there an easily identifiable top of bank?	Are there mudcracks present?	If no, how long does it take for the non-tolerant vegetation to establish relative to how often flows occur in the channel?	Is there any leaf litter disturbed or washed away?
Are the banks actively eroding?			
Are the banks undercut?	Is there evidence of sediment sorting by grain size?	Where are the significant transitions in vegetation?	Is there large wood deposition?
Are the banks armored?			
Is the channel confined by the surrounding hillslopes?		Is the vegetation tolerant of flowing water?	Is there evidence of water staining?
Are there natural or man-made berms and levees?		Has any vegetation been flattened by flowing water?	
Are there fluvial terraces?			
Are there channel bars?			

Are the following features of fluvial transport present?
Evidence of erosion: obstacle marks, scour, armoring
Bedforms; riffles, pools, steps, knickpoints/headcuts
Evidence of deposition: imbricated clasts, gravel sheets, etc.

In some cases, it may be helpful to explain why an indicator was NOT at the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance, note if the site has no clear vegetation zonation.

OHWM Field Identification Datasheet Instructions and Field Procedure

Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon:

a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

***Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.**

***Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining relevance, strength, and reliability.**

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.
2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.
3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

i. Is this indicator persistent across the landscape?

1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?

1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of land use or other natural disturbances.
2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.

ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).

iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.

e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos.

i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.

b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.

c. Attach any remote data and data analysis to the datasheet.

Step 5 Describe rationale for location of OHWM:

a. Why do the combination of indicators represent the OHWM?

b. If there are multiple possibilites for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.

c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

From Approved -
OMB No. 0710-OHWM
Expires: xx-xx-xxxx

AGENCY DISCLOSURE NOTICE

The public reporting burden for this collection of information, 0710-OHWM, is estimated to average 30 **minutes** per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: 21501	Site Name: Beaumont MDP Line 2	Date and Time: 1/14/2025, 1030AM
Location (lat/long): 33.921353N 116.963417W	Investigator(s): Heather Madera and Austin Burke	

Step 1 Site overview from remote and online resources

Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] climatic data
- [ ] aerial photos
- [ ] LiDAR
- [x] satellite imagery
- [x] topographic maps
- [x] geologic maps
- [ ] land use maps
- [ ] Other: _____

Describe land use and flow conditions from online resources. Were there any recent extreme events (floods or drought)?

Survey Area receives water through flooding events that exit the culvert in the southern portion of the site.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

The area around the southern culvert is heavily disturbed. The hillside shows some signs of erosion. There is an excess amount of sediment and debris directly outside of the culvert. OHWM is clear as it exits the Project boundary.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.

OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM.

OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- [x] **Break in slope:** x
  - [ ] *on the bank:*
  - [ ] *undercut bank:*
  - [x] *valley bottom* b
  - [ ] Other: _____
- [ ] **Shelving:**
  - [ ] *shelf at top of bank:*
  - [ ] *natural levee:*
  - [ ] *man-made berms or levees:*
  - [ ] *other berms:* _____
- [x] **Channel bar:** b
  - [ ] *shelving (berms) on bar:*
  - [x] *unvegetated* b
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar:*
- [x] **Instream bedforms and other bedload transport evidence:** b
  - [x] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)* b
  - [ ] *bedforms (e.g., poofs, riffles, steps, etc.):*
- [x] *erosional bedload indicators (e.g., obstacle marks, scour, a smoothing, etc.)*
- [ ] **Secondary channels:**

Sediment indicators

- [x] **Soil development:** b
- [ ] **Changes in character of soil:**
- [x] **Mudcracks:** b
- [ ] **Changes in particle-sized distribution:**
  - [ ] *transition from* _____ *to* _____
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits:*

Vegetation Indicators

- [x] **Change in vegetation type and/or density:** x

  Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***
  - [ ] *vegetation absent to:*
  - [ ] *moss to:*
  - [ ] *forbs to:*
  - [ ] *graminoids to:*
  - [ ] *woody shrubs to:*
  - [ ] *deciduous trees to:*
  - [ ] *coniferous trees to:*
- [x] **Vegetation matted down and/or bent:** b
- [x] **Exposed roots below intact soil layer:** x

Ancillary indicators

- [x] **Wracking/presence of organic litter:** x
- [ ] **Presence of large wood:**
- [ ] **Leaf litter disturbed or washed away:**
- [ ] **Water staining:**
- [ ] **Weathered clasts or bedrock:**

Other observed indicators? Describe:

Area is disturbed and gets a an excess amount of sediment and debris that flows through the culvert.

Project ID #: 21501

Step 4 Is additional information needed to support this determination? ☐ Yes ☒ No If yes, describe and attach information to datasheet:

Step 5 Describe rationale for location of OHWM

There is a distinct cut in bank as waters are directed southeast through the culvert. The inundation is visible through aerial imagery. Most of the area below the OHWM is bare ground and leaf litter. There is a large amount of sediment and debris in the bed of the channel. OHWM is approximately 21 feet wide and the B2B is approximately 106 feet wide.

Additional observations or notes

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☐ Yes ☐ No If no, explain why not: _____

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description

OHWM Field Identification Datasheet Instructions and Field Procedure

Step 1 **Site overview from remote and online resources** **Complete Step 1 prior to site visit.**

Online Resources: Identify what information is available for the site. Check boxes on datasheet next to the resources used to assess this site.

a. gage data
b. aerial photos
c. satellite imagery
d. LiDAR
e. topographic maps
f. geologic maps
g. land use maps
h. climatic data (precipitation and temperature)

Landscape context: Use the online resources to put the site in the context of the surrounding landscape.

a. **Note on the datasheet under Step 1:**
   i. Overall land use and change if known
   ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires)
b. Consider the following to inform weighting of evidence observed during field visit.
   i. What physical characteristics are likely to be observed in specific environments?
   ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators?
   iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been over the last year, decade, century?

Step 2 **Site conditions during the field assessment (assemble evidence)**

a. Identify the assessment area.
b. Walk up and down the assessment area noting all the potential OHWM indicators.
c. Note broad trends in channel shape, vegetation, and sediment characteristics.
   i. Is this a single thread or multi-thread system? Is this a stream-wetland complex?
   ii. Are there any secondary and/or floodplain channels?
   iii. Are there obvious man-made alterations to the system?
   iv. Are there man-made (e.g., bridges, dams, culverts) or natural structures (e.g., bedrock outcrops, Large Wood jams) that will influence or control flow?
d. Look for signs of recurring fluvial action.
   i. Where does the flow converge on the landscape?
   ii. Are there signs of fluvial action (sediment sorting, bedforms, etc.) at the convergence zone?
e. Look for indicators on both banks. If the opposite bank is not accessible, then look across the channel at the bank.
f. **In Step 2 of the datasheet** describe any adjacent land use or flow conditions that may influence interpretation of each line of evidence.
   i. What land use and flow conditions may be affecting your ability to observe indicators at the site?
   ii. What recent extreme events may have caused changes to the site and affected your ability to observe indicators?

Step 3a **List evidence**

Assemble evidence by checking the boxes next to each line of evidence:

a. If needed, use a separate scratch datasheet to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
b. If using fillable form, then follow the instructions for filling in the fillable form.

Context is important when assembling evidence. For instance, pool development may be an indicator of interest on the bed of a dry stream, but may not be a useful indicator to take note of in a flowing stream. On the other hand, if the pool is found in a secondary channel adjacent to the main channel, it could provide a line of evidence for a minimum elevation of high flows. Therefore, consider the site context when deciding which indicators provide evidence for identifying the OHWM. Explain reasoning in Step 5.

Questions to consider while making observations and listing evidence at a site:

Geomorphic indicators
Where are the breaks in slope?
Are there identifiable banks?
Is there an easily identifiable top of bank?
Are the banks actively eroding?
Are the banks undercut?
Are the banks armored?
Is the channel confined by the surrounding hillslopes?
Are there natural or man-made berms and levees?
Are there fluvial terraces?
Are there channel bars?

Sediment and soil indicators
Where does evidence of soil formation appear?

Are there mudcracks present?

Is there evidence of sediment sorting by grain size?

Vegetation Indicators
Where are the significant transitions in vegetation species, density, and age?

Is there vegetation growing on the channel bed?

If no, how long does it take for the non-tolerant vegetation to establish relative to how often flows occur in the channel?

Where are the significant transitions in vegetation?

Is the vegetation tolerant of flowing water?

Has any vegetation been flattened by flowing water?

Ancillary indicators
Is there organic litter present?

Is there any leaf litter disturbed or washed away?

Is there large wood deposition?

Is there evidence of water staining?

Are the following features of fluvial transport present?
Evidence of erosion: obstacle marks, scour, armoring
Bedforms, riffles, pools, steps, knickpoints/headcuts
Evidence of deposition: imbricated clasts, gravel sheets, etc.

In some cases, it may be helpful to explain why an indicator was NOT at the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance, note if the site has no clear vegetation zonation.

Step 3b **Weight each line of evidence and weigh body of evidence**

Weight each indicator by considering its importance based upon:

a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed

What is the current flow level based on season or nearby gages?

Consider the elevation of the indicator relative to the current flow.

If the stream is currently at baseflow and indicator is adjacent to that, then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

***Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.**

***Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining relevance, strength, and reliability.**

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.
2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.
3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

i. Is this indicator persistent across the landscape?

1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?

1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of land use or other natural disturbances.
2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.

ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).

iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.

e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos.

i. Annotate photos with descriptions of indicators.

Step 4 **Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?**

a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.

b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.

c. Attach any remote data and data analysis to the datasheet.

Step 5 **Describe rationale for location of OHWM:**

a. Why do the combination of indicators represent the OHWM?

b. If there are multiple possibilites for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.

c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont MDP Line 2 City/County: Beaumont/Riverside County Sampling Date: 10/03/25

Applicant/Owner: City State: CA Sampling Point: 2

Investigator(s): Austin Burke and Alisa Muniz Section, Township, Range:

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

Subregion (LRR): Lat: 33.921344N Long: 116.963400W Datum:

Soil Map Unit Name: Terrace escarpments NWI classification: Riverine

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

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

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

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

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

Remarks:

Heavy flooding has made this area problematic. See below.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fremont Cottonwood (Populus fremontii)	10	X	FACW
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 30)			
1. Mule Fat (Baccharis salicifolia)	15	X	FAC
2. White Sage (Artemisia apiana)	5		
3. California buckwheat (Eriogonum fasciculatum)	30	X	
4. Giant reed (Arundo donax)	3		FACW
5.			
	53 = Total Cover		
Herb Stratum (Plot size: 30)			
1. Western ragweed (Ambrosia psilostachya)	10		FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 13	x 2 =	26
FAC species 15	x 3 =	45
FACU species 10	x 4 =	40
UPL species	x 5 =	
Column Totals: 38 (A)		111 (B)

Prevalence Index = B/A = 2.92

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

Remarks:

This area is problematic. This portion of the Survey Area is heavily disturbed. There is an excess amount of sediment and debris that has built up around the culvert within the Survey Area. Although wetland vegetation species are present and clear channelization of the drainage occurs, hydric soils were not found within the excess of sediment.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	7.5 YR 6/4	100					fine sand	Excess sediment built up
1-14	7.5 YR 5/4	100					coarse san	Small amount of moisture in soil
14-18	7.5 YR 4/6	100					sandy clay	More moisture in soil

[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): 1-18

Wetland Hydrology Present? Yes ✔ No _____

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

Remarks:

There is a build up of sediment and debris within the Survey Area right outside of the culvert which makes this area problematic but the area should still be considered a MSHCP Riparian Habitat. MSHCP Riparian Habitat is also located further downstream of the Project site as it connects to Potrero Creek.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont MDP Line 2 City/County: Beaumont/Riverside County Sampling Date: 10/03/25

Applicant/Owner: City State: CA Sampling Point: 3

Investigator(s): Austin Burke and Alisa Muniz Section, Township, Range:

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

Subregion (LRR): Lat: 33.922574N Long: 116.964379W Datum:

Soil Map Unit Name: Terrace escarpments NWI classification: NHD Stream

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

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

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

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

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

Remarks:

Heavy flooding has made this area problematic. See below.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fremont Cottonwood (Populus fremontii)	5		FACW
2. Arroyo Willow (Salix lasiolepis)	20	X	FACW
3.			
4.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30)			
1. Giant reed (Arundo donax)	8		FACW
2.			
3.			
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 30)			
1. Western ragweed (Ambrosia psilostachya)	3		FACU
2. Star thistle (Centaurea solstitialis)	2		
3. Ripgut (Bromus diandrus)	25	X	
4. Brome (Bromus madritensis)	20	X	UPL
5.			
6.			
7.			
8.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust 0

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: 33.4 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 33	x 2 =	66
FAC species	x 3 =	
FACU species 3	x 4 =	12
UPL species 20	x 5 =	100
Column Totals: 56 (A)		178 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

✔ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

This area is problematic. This portion of the Survey Area is heavily disturbed. There is an excess amount of sediment and debris that has built up throughout the channel. The area is dominated mostly by weedy vegetation with a patch of willow and reed but not enough to be considered hydrophytic vegetation. Although some riparian vegetation species are present and clear channelization of the drainage occurs, hydric soils were not found within the excess of sediment.

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	7.5 YR 6/4	100					fine sand	Excess sediment built up
1-4	7.5 YR 5/6	100					coarse san	Small amount of moisture in soil
4-18	7.5 YR 4/6	100					sandy clay	More moisture in soil

[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): 1-18

Wetland Hydrology Present? Yes ✔ No _____

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

Remarks:

There is a build up of sediment and debris within the Survey Area which makes this area problematic. There are mature riparian plants present but not enough to be considered hydrophytic vegetation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont MDP Line 2 City/County: Beaumont/Riverside County Sampling Date: 10/03/25

Applicant/Owner: City State: CA Sampling Point: 4

Investigator(s): Austin Burke and Alisa Muniz Section, Township, Range:

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

Subregion (LRR): Lat: 33.924383N Long: 116.964911W Datum:

Soil Map Unit Name: Terrace escarpments NWI classification: NHD Stream

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

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

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

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

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

Remarks:

Heavy flooding has made this area problematic. See below.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Goodding's willow (Salix gooddingii)	40	X	FACW
2.			
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30)			
1. Giant reed (Arundo donax)	15		FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 30)			
1. Western ragweed (Ambrosia psilostachya)	15		FACU
2. Star thistle (Centaurea solstitialis)	5		
3. Ripgut (Bromus diandrus)	30	X	
4. Brome (Bromus madritensis)	25	X	UPL
5. shortpod mustard (Hirschfeldia incana)	5		
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 55	x 2 =	110
FAC species	x 3 =	
FACU species 15	x 4 =	60
UPL species 25	x 5 =	125
Column Totals: 95 (A)		295 (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

✔ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

This area is problematic. This portion of the Survey Area is heavily disturbed. There is an excess amount of sediment and debris that has built up throughout the channel. The area is dominated mostly by weedy vegetation with a patch of willow and reed but not enough to be considered hydrophytic vegetation. Although some riparian vegetation species are present and clear channelization of the drainage occurs, hydric soils were not found within the excess of sediment.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	7.5 YR 6/4	100					fine sand	Excess sediment built up
1-18	7.5 YR 5/6	100					coarse san	Small amount of moisture in soil

[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): 1-18

Wetland Hydrology Present? Yes ✔ No _____

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

Remarks:

There is a build up of sediment and debris within the Survey Area which makes this area problematic. There are mature riparian plants present but not enough to be considered hydrophytic vegetation and there are no hydric soils.