Appendix C. Biological Technical Report Update

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Biological Technical Report Update

Weld Boulevard Distribution Center Project

January 2021

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Acronyms and Abbreviations

2009 EIR	Forester Creek Industrial Park Project Environmental Impact Report
BTR	Biological Technical Report
CDFW	California Department of Fish and Wildlife
CE	California endangered
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CFP	California fully protected
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CT	California threatened
CWA	Clean Water Act
EIR	Environmental Impact Report
FC	federal candidate for listing
FE	federally endangered
FESA	federal Endangered Species Act
FT	federally threatened
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Program
NCCP	Natural Community Conservation Planning
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
PAMA	Pre-Approved Mitigation Area
PAR	Property Analysis Record
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
project	Weld Boulevard Distribution Center Project
ROWD	Report of Waste Discharge
RWQCB	Regional Water Quality Control Board
SSC	species of special concern
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WL	California Department of Fish and Wildlife watch list

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Section 1 Introduction

This Biological Technical Report (BTR) Update for the proposed Weld Boulevard Distribution Center project (project) is an update to the 2015 Gillespie Field Business Park Rare Plant Report (Atkins 2015) and the Forester Creek Industrial Park Project Environmental Impact Report (2009 EIR), including the following: the 2005 BTR (Helix 2005), 2008 Addendum to the BTR (Rare Plant Survey) (Helix 2008), 2009 Update to the BTR (PBS&J 2009b), and 2009 Jurisdictional Delineation (PBS&J 2009c).

The purpose of this BTR Update is to provide the City of El Cajon (the California Environmental Quality Act [CEQA] lead agency), the County of San Diego (County) (property owner), the regulatory/wildlife agencies, and the public with current biological data to satisfy review of the project under CEQA and other federal, state, and local regulations. The project site is not within the County Multiple Species Conservation Program (MSCP) boundary and the City of El Cajon does not have an approved MSCP Subarea Plan. The project is not required to comply with the County MSCP preservation goals or objectives, but the project was designed to limit disturbance of sensitive biological resources to the maximum extent feasible.

Biological conditions may change over time due to changed site conditions, weather, and other factors. This BTR Update describes the current vegetation communities, including aquatic resources and other sensitive biological resources observed or detected on the project site that could be potentially affected upon implementation of the project. In addition, this BTR Update includes qualitative and quantitative analyses of direct and indirect impacts to vegetation communities and sensitive resources. Mitigation measures are proposed to offset the project's potentially significant impacts to sensitive vegetation communities and sensitive plant and animal species.

1.1 Project Location and Description

Chesnut Properties (project applicant) is proposing the development of the proposed project on approximately 31.70 acres in the City of El Cajon, California (Figure 1, Regional Location, and Figure 2, Project Site). Specifically, the project site is north of Weld Boulevard, south of Prospect Avenue, and west of Cuyamaca Street. According to the U.S. Geological Survey, the site is in the 7.5-minute El Cajon quadrangle in Township 15 South Range 1 West (Figure 3, USGS Topographic Map). The project site is part of the Gillespie Field airport located directly east across from Cuyamaca Street and is owned by the County. The City of El Cajon/City of Santee jurisdictional boundary coincides with the northern and northwestern project site property lines. The project site is bounded by industrial and residential land uses in the City of Santee to the north and northwest, respectively. The remainder of the site is bounded by land uses in the City of El Cajon, including the County Operations Facility to the southwest, Weld Boulevard to the south, Cuyamaca Street to the east, Prospect Avenue to the north, and a concrete-lined section of the

Forester Creek channel to the northeast. The site is relatively flat, with mounds created by artificial fill, and was previously graded. Prior uses included a golf driving range and cement processing facility in the northern and southwestern portions of the site; however, the majority of the property was never developed. The project site currently consists of disturbed open space (Figure 2).

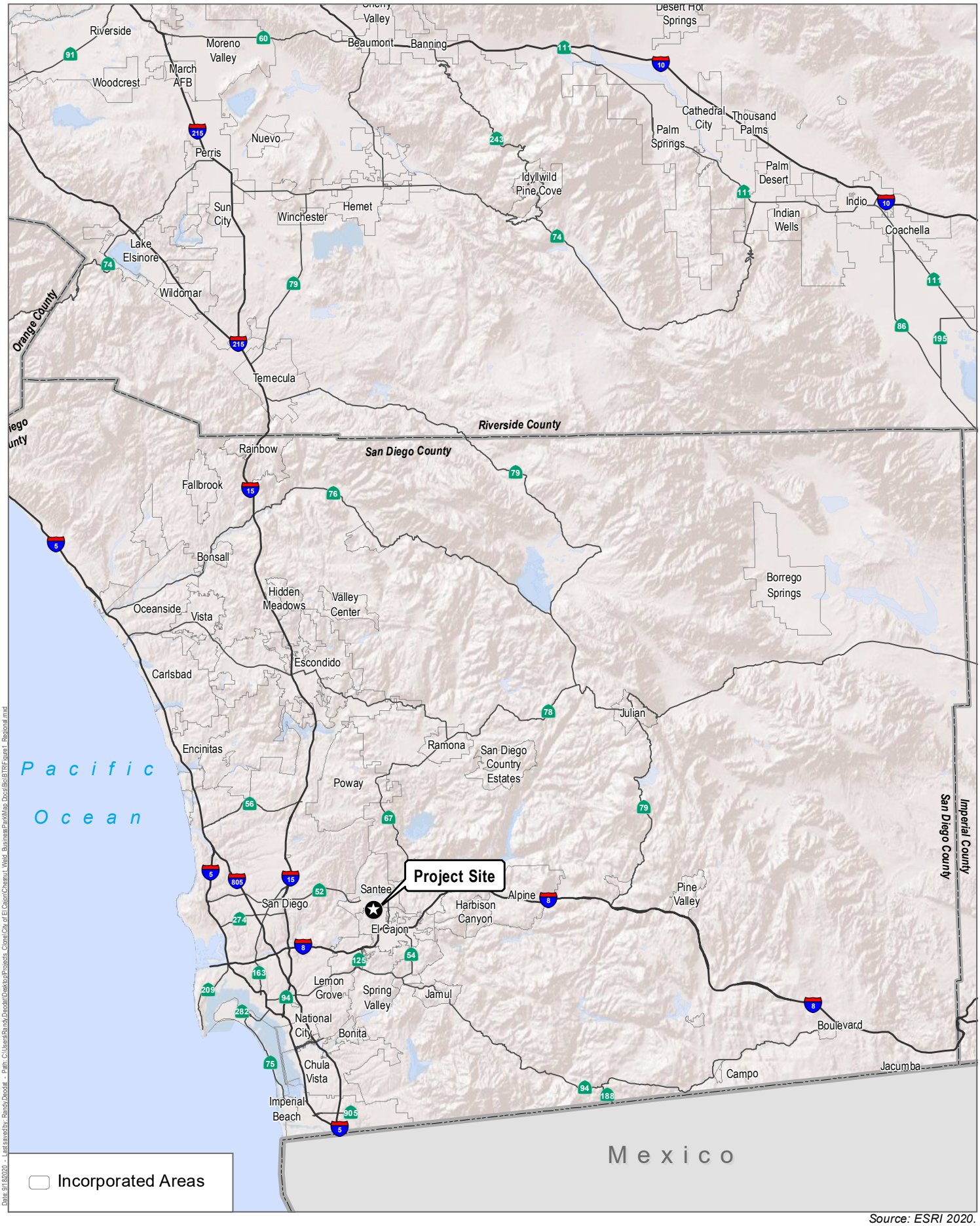
In compliance with CEQA, an Addendum to the 2009 EIR is being prepared for the project. The 2009 EIR evaluated an industrial park project with approximately 463,000 square feet of industrial development. The project has since changed, and the current project proposes development of an approximately 142,000-square-foot distribution warehouse, office space, parking, and designated product pick-up and drop-off areas. The warehouse square footage would include space for an approximately 17,000-square-foot office to be at the southern end of the warehouse building. The remainder of the project site would be developed with surface parking, which would contain approximately 967 total parking spaces, including designated spaces for associates, support staff, managers, personal vans, and warehouse delivery vans in the northern, eastern, and western outskirts of the project site. The project would also include a van loading area consisting of approximately 72 spaces directly west of the warehouse and van staging area for approximately 72 vans next to the van loading area. There would be 15 dock-high doors (above grade) and a trailer and box truck loading area for approximately 13 vehicles north of the proposed warehouse. Access to the site would be via three driveways on Weld Boulevard—one across from Gillespie Way and two between the intersections of Gillespie Way and Cuyamaca Street.

1.2 Physical Description and Land Use

The project site is primarily flat, with moderately sloping hills in the center and steeper slopes along the western edge. The on-site elevation ranges from approximately 340 feet to 436 above mean sea level. The topographical lines on Figure 3 represent the project slope. In 2009, portions of the project site included the Fletcher Hills Driving Range, a County equipment repair facility, a cement processing facility, and a culverted/cement portion of Forester Creek. The Fletcher Hills Driving Range and cement processing facility no longer exist on the project site.

The project site is underlain by Fallbrook-Vista sandy loams and Salinas clay loam (USDA 2020). The soil units on the project site are presented on Figure 4, Soils. Fallbrook-Vista sandy loams and Salinas clay loam are defined as well-drained (USDA 2020).

Surrounding land uses include light industrial and manufacturing facilities to the north; Weld Boulevard, light industrial and manufacturing facilities, and vacant land to the south; single-family homes and light industrial facilities to the west; and Cuyamaca Street, the Gillespie Field trolley station, and Gillespie Field airport to the east.



Source: ESRI 2020.

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Figure 1

Regional Location

Weld Boulevard Distribution Center Project

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Source: SanGIS Imagery 2017.

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Figure 2

Project Site

Weld Boulevard Distribution Center Project

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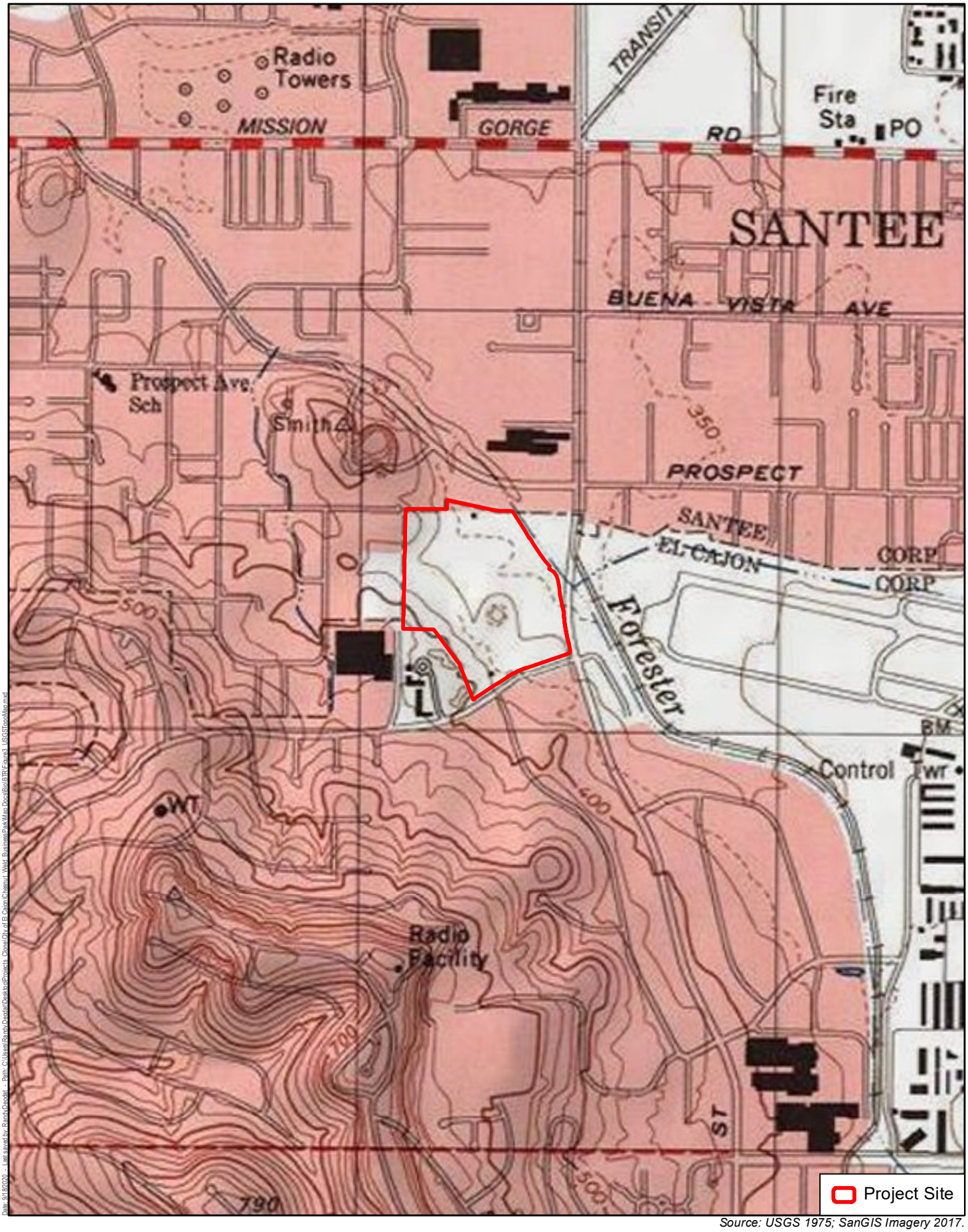

Source: USGS 1975; SanGIS Imagery 2017.

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Figure 3

USGS Topographic Map

Weld Boulevard Distribution Center Project

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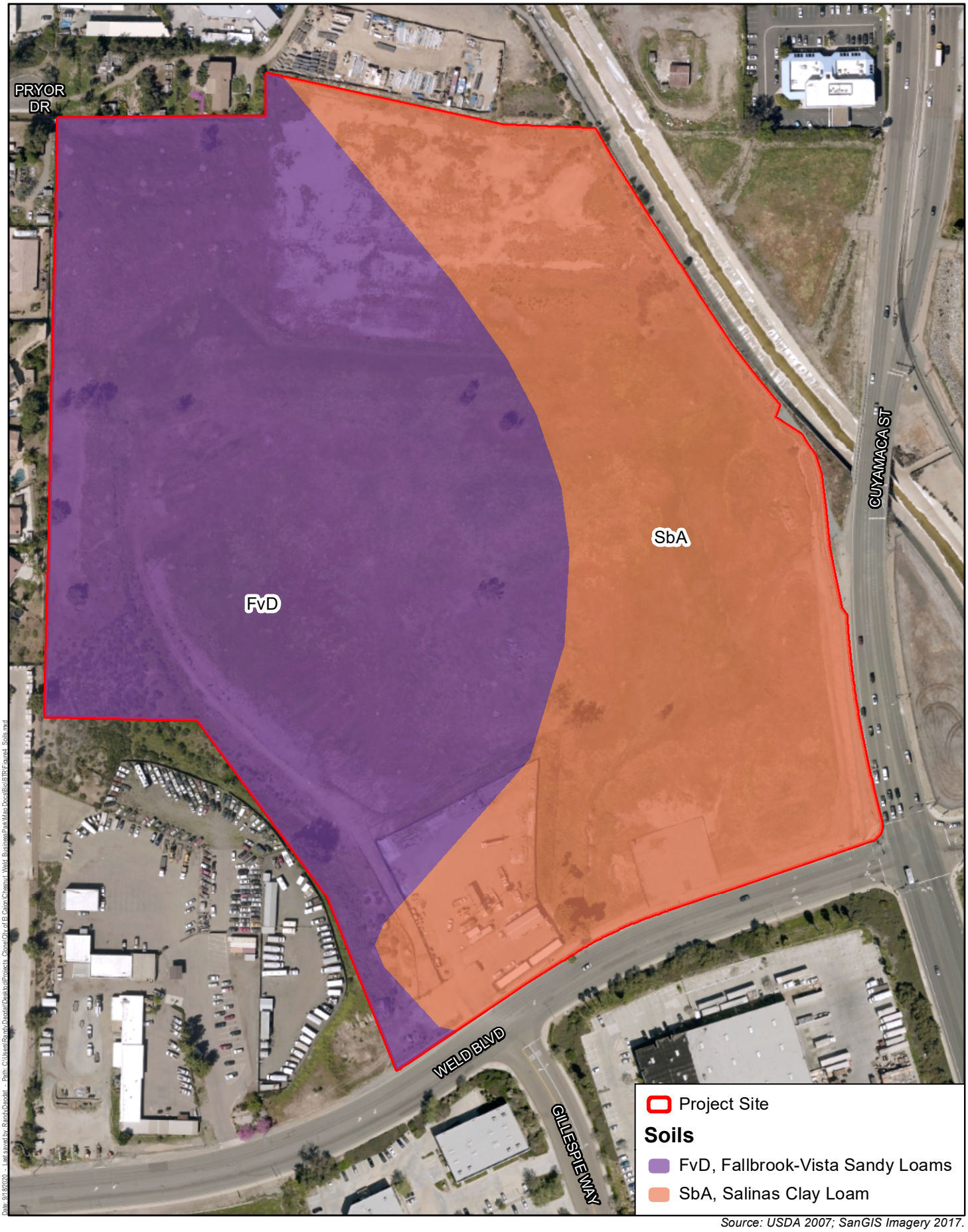

Source: USDA 2007; SanGIS Imagery 2017.

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Figure 4

Soils

Weld Boulevard Distribution Center Project

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Section 2 Survey Methods

The methods used to document biological and aquatic resources present on the project site included reviewing pertinent literature and online data and conducting biological resources surveys as described below.

2.1 Literature Review

A review of online databases including the California Department of Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2020a), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper (USFWS 2020a), USFWS Information for Planning and Consultation (USFWS 2020b), Calflora database (Calflora 2020), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2020) was conducted before the biological resources surveys were performed in 2020 and before the submittal of this BTR Update.

2.1.1 California Department of Fish and Wildlife California Native Diversity Database

CNDDB searches were conducted for the project site to identify previously mapped resources in the area (CDFW 2020a). The results of the CNDDB searches are presented in Section 3, Results.

2.1.2 U.S. Fish and Wildlife Service Information for Planning and Consultation Report

The USFWS Information for Planning and Consultation report was created by drawing a perimeter around the project site. The results of the location search are provided in Section 3.

2.1.3 U.S. Fish and Wildlife Service National Wetland Inventory

USFWS NWI maps were reviewed to identify any wetlands and waters that were mapped on the project site (USFWS 2020a). The USFWS NWI search was conducted by drawing a perimeter around the project site in the web map that identified the location of U.S. Army Corps of Engineers (USACE) jurisdictional wetlands and waters surrounding the project site. The results of the USFWS NWI search are provided in Section 3.

2.1.4 California Native Plant Society Inventory of Rare and Endangered Plants of California

The CNPS Inventory of Rare and Endangered Plants of California (online version) assists in determining the special-status plant species potentially present in a given area. CNPS status codes are defined by the CNPS California Rare Plant Rank (CRPR) system described as follows (CNPS 2020): CRPR 1A plants are presumed extirpated in California and either rare or extinct elsewhere; CRPR 1B plants are rare, threatened, or endangered in California and elsewhere; CRPR 2A plants are presumed extirpated in California but common elsewhere; CRPR 2B plants are rare, threatened,

or endangered in California but more common elsewhere; CRPR 3 plants lack the necessary information needed to assign them to one of the other ranks or to reject them; and CRPR 4 plants are of limited distribution or are infrequent throughout a broader area in California, and their status requires more regular monitoring.

The CNPS CRPR system also includes a threat rank at each level, which are defined as follows: 0.1, seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat); 0.2, moderately threatened in California (20–80 percent occurrences threatened/moderate degree and immediacy of threat); and 0.3, not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

2.1.5 Calflora Database

The Calflora database, a database of native and non-native plant species that occur in California, was reviewed. The Calflora database is a collection of names, locations, and natural history information of currently recognized vascular plants in California provided by public agencies, non-profits, and other scientists (Calflora 2020).

2.2 Biological Surveys

Based on the 2008, 2009, and 2015 data, Harris & Associates biologists and wetland specialists Melissa Tu and Katie Laybourn conducted the 2020 habitat assessment, rare plant survey, and aquatic resources delineation survey on August 6, 2020. On September 11, 2020, Ms. Tu, Ms. Laybourn, and Christina Schaefer (Schaefer Ecological Solutions) conducted an additional site reconnaissance survey to verify and remap the location and extent of the sensitive plant species San Diego ambrosia (*Ambrosia pumila*) population and aquatic resources on the project site. On September 15 and 24, and October 27, 2020, Ms. Tu and Ms. Laybourn conducted follow-up aquatic resources delineation surveys.

2.2.1 Aquatic Resources Delineation

The aquatic resources delineation was conducted using the routine on-site determination method described in the Corps of Engineers Wetlands Delineation Manual (USACE 1987), the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a), and A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b). Ms. Tu and Ms. Laybourn conducted the aquatic resources delineation fieldwork on September 15 and 24, and October 27, 2020, to identify aquatic resources on the project site. An Aquatic Resources Delineation Update that describes the aquatic resources observed on the project site is included in Appendix A.

2.2.2 Vegetation Mapping

Vegetation community and land use mapping was conducted by walking meandering transects throughout the project site. The vegetation community and land cover mapping follows the classification described by Holland (1986) and Oberbauer et al. (2008). Areas supporting less than 50 percent native cover were mapped as disturbed native vegetation communities (i.e., Diegan coastal sage scrub disturbed, southern willow scrub disturbed). Vegetation community acreages were mapped to the hundredth (0.01) of an acre. The vegetation communities observed on the project site are described in detail in Section 3.

2.2.3 Nomenclature

Nomenclature used in this BTR Update generally comes from Holland (1986) and Oberbauer et al. (2008) for vegetation; Baldwin et al. (2012), Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2014), and the Checklist of the Vascular Plants of San Diego County, Fifth Edition (Rebman and Simpson 2014), for plants; Collins and Taggart (2009), Crother (2017), and CaliforniaHerps.com (2020) for reptiles; American Ornithological Society (2019) and Cornell Lab of Ornithology (2020a) for birds; Checklist of Butterflies of San Diego County (San Diego Natural History Museum 2020a) for butterflies; San Diego Natural History Museum (2020b) for other insects; and Bradley et al. (2014) for mammals. Plant species statuses are from the CNPS (2020) and the CDFW (2020a). Animal species statuses are from the CDFW (2020b).

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Section 3 Results

The results presented below include data from the biological resources surveys conducted on the project site.

3.1 Vegetation Communities

Seven vegetation communities and land cover types were observed on the project site. These include non-vegetated channel, disturbed emergent wetland, non-native grassland, disturbed Diegan coastal sage scrub, eucalyptus woodland, disturbed habitat, and developed land (Baldwin et al. 2012; Oberbauer et al. 2008; Holland 1986) (Figure 5, Vegetation Communities) (Table 1). Disturbed Diegan coastal sage scrub and non-native grassland are considered sensitive vegetation communities by the City of El Cajon and the County.

Table 1. Vegetation Communities and Land Cover Types on the Project Site

Vegetation Community	2009 EIR	2020 Surveys
Non-Vegetated Channel (64200)[1]	0.0	0.03
Emergent Wetland (including disturbed) (52440)[1]	0.0	0.02
Non-Native Grassland (42200)[2]	15.6	23.70
Diegan Coastal Sage Scrub (including disturbed) (32500)[2]	0.2	1.25
Broom Baccharis Scrub (None)	1.4	0.00[3]
Eucalyptus Woodland (11100)	<0.1	0.07
Disturbed Habitat (11300)	9.2	4.83
Developed Land (12000)	5.0	1.80
Total	**31.5**	**31.70**

Notes: 2009 EIR = Forester Creek Industrial Park Project Environmental Impact Report

[1] Potentially sensitive resource

[2] Considered a sensitive vegetation community

[3] Included in disturbed Diegan coastal sage scrub

The broom baccharis scrub vegetation community identified in the 2009 EIR was not observed to be a separate vegetation community in the 2020 biological resources surveys. Instead, broom baccharis (*Baccharis sarothroides*) was identified as codominant, with stands of California buckwheat (*Eriogonum fasciculatum*) on the slopes throughout the disturbed Diegan coastal sage scrub.

The project site is not part of the County MSCP or within the Pre-Approved Mitigation Area of the County MSCP preserve system.

3.1.1 Non-Vegetated Channel (64200)

Non-vegetated channel consists of predominantly sandy, gravelly, or rocky channels lacking or with reduced vegetation. Variable water lines inhibit the growth of vegetation, although some

weedy species of grasses may grow along the outer edges of the channel. Vegetation may exist here but is usually less than 10 percent total cover (Oberbauer et al. 2008).

Three non-vegetated, earthen-bottom channels totaling 0.03 acre were observed on the project site—one in the eastern portion of the project site, one in the southern portion of the project site, and one in the western portion of the project site (Figure 5).

The non-vegetated channel observed in the eastern portion of the project site is a 612-foot-long drainage channel comprising approximately 0.03 acre on the project site. The channel begins at a City of El Cajon stormwater outlet on the northern side of Weld Boulevard and then flows along the length of the channel where it connects to another stormwater outlet and drains into Forester Creek north of the project site (Figure 5). The channel is an unnamed channel that conveys surface water through the industrial and residential areas of the City of El Cajon surrounding the project site.

The non-vegetated, earthen-bottom channel observed in the southern portion of the project site is less than 0.01 acre. This channel appears to have been formed as a result of occasional large-volume stormwater flows entering the project site from a culvert under Weld Boulevard that has formed a disturbed emergent wetland south in the channel (Figure 5). Due to the increase in topography directly north of the disturbed emergent wetland, the channel does not connect to the emergent wetland to the south. This channel does not connect to Forester Creek via defined jurisdictional indicators.

The non-vegetated, earthen-bottom channel observed in the western portion of the project site is less than 0.01 acre. The west channel appears to have formed from stormwater flows overflowing from the concrete dissipater west of the project site (Figure 5). Asphalt chunks were observed embedded in the north side of the west channel and may have influenced the erosion of the channel. The area surrounding the west channel is highly disturbed and the large volumes of grass and leaf litter filling the west non-vegetated channel indicate typical-year flows do not reach this area. This channel does not connect to Forester Creek via defined jurisdictional indicators.

3.1.2 Emergent Wetland (Including Disturbed) (52440)

Disturbed emergent wetlands are dominated by low-growing, perennial wetland species. Disturbed emergent wetlands can be found in channels, seeps and springs, floodplains, margins of lakes and rivers, and various basins, such as pools and ponds, palustrine lakes, montane meadows, and dune swales. In the County, these are often in previously disturbed areas where wetlands are emerging but have not yet established a full suite of species. However, disturbance is not a necessary element of this vegetation community.

One disturbed emergent wetland was observed in the southern portion of the project site (Figure 5). The disturbed emergent wetland is approximately 0.02 acre over 287 linear feet. The disturbed emergent wetland has formed from a stormwater outlet on the northern side of Weld Boulevard.

Due to the topography of the project site, the water from the stormwater outlet appears to sit in this area and spread across the ground or soak into the soils on the project site.

3.1.3 Non-Native Grassland (42200)

Non-native grassland is the most dominant vegetation community on the project site and occurs on approximately 23.70 acres (Figure 5). Non-native grassland on the project site consists of ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis*), Bermuda grass (*Cynodon dactylon*), smooth barley (*Hordeum murinum*), Perennial rye grass (*Festuca perennis*), and rattail fescue (*Festuca myuros*). A few scattered red gum (*Eucalyptus camaldulensis*) trees occur in the non-native grassland.

3.1.4 Diegan Coastal Sage Scrub (Including Disturbed) (32500)

Disturbed Diegan coastal sage scrub was observed in the western portion of the project site, comprising approximately 1.25 acres (Figure 5). The disturbed Diegan coastal sage scrub is dominated by stands of California buckwheat interspersed with weedy species, patches of bare and rocky ground, and human debris. Broom baccharis is also dominant along the base of the slope in the disturbed Diegan coastal sage scrub.

3.1.5 Eucalyptus Woodland (11100)

Approximately 0.07 acre of eucalyptus woodland occurs on the northwestern portion of the project site (Figure 5). A few individual red gum eucalyptus trees occur in the non-native grassland in the south-central portion of the project site. On the project site, eucalyptus woodland is dominated by red gum eucalyptus and non-native weeds and grass species in the understory.

3.1.6 Disturbed Habitat (11300)

Disturbed habitat comprises approximately 4.83 acres on the project site (Figure 5). Disturbed habitat on the project site is dominated by bare ground and non-native grasses. Some areas mapped as Disturbed in 2009 have filled in with native and non-native species and have been mapped as non-native grassland. On the project site, disturbed habitat consists of the previous Fletcher Hills Driving Range and cleared dirt areas. At the time of the 2020 biological resources surveys, the areas that were formerly the driving range and cement processing facility were gone.

3.1.7 Developed Land (12000)

Developed land on the project site comprises approximately 1.80 acres in the southern portion of the project site and consists of a maintenance storage yard (Figure 5). In 2009, developed land consisted of the Fletcher Hills Driving Range building and parking lot, County equipment repair facility, cement processing facility, and the culverted/cement portion of Forester Creek. At the time of the 2020 biological resources surveys, the driving range and cement facility were gone.

3.2 Aquatic Resources

In 2008, eight aquatic resources were mapped on site during the vegetation mapping and general biological resources survey. In 2009, a formal jurisdictional delineation was conducted, and in 2020, an aquatic resources delineation update survey was conducted. Appendix A, Aquatic Resources Delineation Update, includes the detailed results of the 2020 Aquatic Resources Delineation Update. A summary of the results follows this section.

3.2.1 Wetlands

Based on the Aquatic Resources Delineation Update (Appendix A), one disturbed emergent wetland covering approximately 0.02 acre of wetland waters was mapped on the project site (Figure 6, Aquatic Resources). This disturbed emergent wetland begins at a culvert under Weld Boulevard and runs linearly approximately 169 feet north where an increase in topography in the center of the project site causes flows to collect and sheet flow toward the center of the project site. Due to the rise in topography in the center of the project site, this disturbed emergent wetland does not connect to Forester Creek north of the project site. The disturbed emergent wetland is surrounded by non-native grassland, with several Mexican fan palms (*Washingtonia robusta*) at the Weld Boulevard culvert and red gum eucalyptus north of the wetland. In the disturbed emergent wetland, tamarisk (*Tamarix* sp.), tall flatsedge (*Cyprus eragrostis*), and Bermuda grass dominate. The disturbed emergent wetland is lower in elevation than the surrounding project site, and the soils are a mix of sandy and silty particles.

3.2.2 Non-Wetland Waters

Three non-wetland waters were observed on the project site.

One non-vegetated, earthen-bottom channel (eastern channel) covering approximately 0.03 acre of non-wetland waters and 0.10 acre of area within the top-of-bank was mapped in the eastern portion of the project site (Figure 6). The channel on the project site begins at a culvert under Weld Boulevard and runs north where it connects through a culvert to Forester Creek north of the project site. The channel is surrounded by non-native grassland interspersed with areas of bare ground. The channel is lower in elevation than the surrounding project site, and the soils are a mix of sandy particles and cobble and large pieces of asphalt throughout the channel. The channel conveys stormwater flows to Forester Creek, which is hydrologically connected to the San Diego River and the Pacific Ocean approximately 16 miles downstream to the west.

One non-vegetated, earthen-bottom channel (southern channel) mapped in the southern portion of the project site covers less than 0.01 acre of non-wetland waters and less than 0.01 acre of area within the top-of-bank (Figure 6). According to the oldest available historical aerial images, this channel has existed since 1957 and appears to have been formed during occasional large-volume stormwater flows across the site (Historic Aerials 2020). The channel currently enters the project site from a

culvert under Weld Boulevard and has formed a disturbed emergent wetland south of the channel that appears to be disconnected from the channel due to a topographic rise directly north of the disturbed emergent wetland. The general topographic rise in the center of the project site appears to restrict typical-year flows from reaching the southern non-vegetated channel and instead only allows occasional large-volume stormwater flows to reach this channel, which then sheet flow toward the center of the project site. This channel does not connect to Forester Creek via defined jurisdictional indicators. The channel is surrounded by non-native grassland and is slightly lower in elevation than the surrounding project site, and the soils are a mix of medium sandy particles and pebbles.

One non-vegetated, earthen-bottom channel (western channel) mapped in the western portion of the project site covers less than 0.01 acre of non-wetland waters and less than 0.01 acre of area within the top-of-bank (Figure 6). The west channel appears to have formed from stormwater flows overflowing from the concrete dissipater west of the project site. Asphalt chunks were observed embedded in the north side of the west channel and may have influenced the erosion of the channel. The area surrounding the west channel is highly disturbed and the large volumes of grass and leaf litter filling the west non-vegetated channel indicate typical-year flows do not reach this area. This channel does not connect to Forester Creek via defined jurisdictional indicators.

3.2.3 Areas in Top-of-Bank and Riparian Vegetation

Approximately 2,070 cubic feet within the limits of the top-of-bank of the eastern non-vegetated channel, approximately 114 cubic feet within the limits of the top-of-bank of the southern non-vegetated channel, and approximately 21 cubic feet within the limits of the top-of-bank of the western non-vegetated channel occur on the project site.

Approximately 3,570 cubic feet within the limits of the top-of-bank of the disturbed emergent wetland that occurs in the southern portion of the project site. No riparian vegetation associated with the disturbed emergent wetland occurs on the project site.

3.3 Plant Species

A total of 42 plant species were observed during the 2008 biological resources surveys. An additional 36 species were observed in 2020. Of the 78 total species observed on the project site, 30 (38 percent) were native and 48 (62 percent) were non-native. The list of plant species observed to date is included in Appendix B, Plant and Animal Species Observed on the Project Site. The sensitive plant species observed on the project site are discussed in Section 4.3, Sensitive Plant Species.

3.4 Animal Species

A total of 12 animal species were observed during the 2008 biological resources surveys. An additional 33 species were observed in 2020. The list of animal species observed to date is provided in Appendix B. The sensitive animal species observed on the project site are discussed in Section 4.4, Sensitive Animal Species. All animal species were identified by direct observation or vocalizations and the presence of scat and/or tracks or other signs. Black phoebe (*Sayornis nigricans*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), California towhee (*Melozone crissalis*), mourning dove (*Zenaida macroura*), and northern mockingbird (*Mimus polyglottos*) were abundant on the project site.

Source: SanGIS Imagery 2017.

Harris & Associates

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Figure 5

Vegetation Communities

Weld Boulevard Distribution Center Project

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Source: SanGIS Imagery 2017.

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Figure 6

Aquatic Resources

Weld Boulevard Distribution Center Project

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Section 4 Sensitive Resources

This section includes a discussion of the sensitive vegetation communities, aquatic resources, plant species, and animal species, including nesting birds that occur or potentially occur on the project site.

4.1 Sensitive Vegetation Communities

Two sensitive vegetation communities occur on site: disturbed Diegan coastal sage scrub and non-native grassland. In addition, three aquatic resources, two non-vegetated channels and one disturbed emergent wetland, occur on site in non-native grassland and disturbed habitat vegetation communities.

4.2 Sensitive Aquatic Resources

The aquatic resources on the project site include two non-vegetated channels and one disturbed emergent wetland. These aquatic resources are discussed in Section 3.2, Aquatic Resources, and the Aquatic Resources Delineation Update (Appendix A).

4.3 Sensitive Plant Species

Three sensitive plant species were observed on the project site during the 2008 rare plant surveys and include San Diego ambrosia, smooth tarplant (*Centromadia pungens* ssp. *laevis*), and graceful tarplant (*Holocarpha virgata* ssp. *elongata*). Two sensitive plant species, San Diego ambrosia and graceful tarplant, were observed in 2015 and 2020 (Figure 7, Sensitive Plant Species Observations). These two sensitive plant species are described in the following subsections. Smooth tarplant was surveyed for in 2015 and 2020 and was not observed.

4.3.1 San Diego ambrosia (*Ambrosia pumila*)

Listing: Federally endangered, County List A, County MSCP narrow endemic species, and CNPS CRPR 1B.1.

Distribution: Coastal San Diego and Western Riverside Counties; Baja California, Mexico. Known in California from fewer than 15 occurrences.

Habitat: This species is found in a variety of open habitats, including sage scrub, grasslands, wetlands, disturbed habitat, and sloped areas. This clonal species occurs along creek beds, seasonally dry drainages, and floodplains, and the Federal Register announcement for this species states that it is found in grasslands and valley bottoms. It is likely a function of soil and moisture rather than a specific habitat that determine the species' territory. The plant seems to favor sandy loams that hold water or persist in seasonally perched groundwater tables. The species reproduces mainly vegetatively (through rhizomes); wind pollination seems to be rare in this clonal species, and genetic structure among population seems to be limited (McGlaughlin and Friar 2007).

Although perennial, the plant expresses between later winter and late summer and senesces in the fall (and may not be observable).

Status on Project Site: Approximately 250 stems (species grows via rhizomes; therefore, the actual number of plants is indeterminate) were observed in the central portion of the site in 2008. The patch was confirmed in 2015 and 2020. Approximately 3,000 stems were observed in the eastern portion of the project site in 2015. The patch was confirmed and re-delineated in 2020 (Figure 7).

4.3.2 Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)

Listing: County List A and CNPS CRPR 4.2; California Endemic.

Distribution: San Diego, Orange, and Riverside Counties.

Habitat: Coastal mesas and foothills with grassland habitats.

Status on Project Site: Approximately 950 individuals, concentrated in two patches in the central and eastern portions of the project site, were observed in 2008 and 2009. In 2020, approximately 550 individuals were observed in 6 patches in the western, central, and eastern portions of the project site (Figure 7).

4.3.3 Sensitive Plant Species with Potential to Occur on Site

Table 2 presents the list of 18 sensitive plants species from the 2005 BTR and 2008 Addendum to the BTR. As shown in Table 2, 15 of the 18 sensitive plant species have low or no potential to occur on the project site, 2 species were observed and are described in Section 4.3, and 1 has a high potential to occur on the project site and is described below.

Table 2. Sensitive Plant Species with Potential to Occur on the Project Site

Species	Status Federal/State/County/ CNPS CRPR[1]	Potential to Occur
Federally and/or State-Listed Species		
San Diego thorn- mint (*Acanthomintha ilicifolia*)	FT/SE/List A/1B.1	Low. This species' soil associations do not occur on the project site.
Thread-leaved brodiaea (*Brodiaea filifolia)*	FT/None/List A/1B.1	None. The project site is south of its range.
Willowy monardella (*Monardella viminea*)	FE/SE/List A/1B.1	Low. No suitable habitat occurs on the project site.
San Diego ambrosia (*Ambrosia pumila*)	FE/None/List A, MSCP Narrow Endemic/1B.1	Present. Refer to Section 4.3.
Dehesa bear grass (*Nolina interrata*)	None/SE/List A/1B.1	None. No suitable habitat or soil occurs on the project site.

Table 2. Sensitive Plant Species with Potential to Occur on the Project Site

Species	Status Federal/State/County/ CNPS CRPR[1]	Potential to Occur
CNPS CRPR Species		
Dunn's mariposa lily (*Calochortus dunnii*)	None/None/List A/1B.1	Low. No suitable habitat occurs, and the project site is not within the known range of species.
Orcutt's brodiaea (*Brodiaea orcuttii*)	None/None/List A/1B.1	Low. No suitable habitat or soil occurs on the project site.
Lewis' sun cup (*Camissoniopsis lewisii*)	None/None/List C/3	Low. No suitable habitat or soil occurs on the project site.
Lakeside ceanothus (*Ceanothus cyaneus*)	None/None/List A/1B.2	None. The project site is below the elevation range of the species.
Smooth tarplant (*Centromadia pungens* ssp. *laevis*)	None/None/List A/1B.1	High. Documented in the central portion of the project site in 2008.This species was not observed during rare plant surveys in 2015 and 2020.
Orcutt's bird's- beak (*Dicranostegia [Cordylanthus] orcuttiana*)	None/None/List B/1B.1	Low. No suitable habitat or soil occurs on the project site.
Small flowering morning glory (*Convolvulus simulans*)	None/None/List D/4.2	Low. This species' soil associations do not occur on the project site.
Variegated dudleya (*Dudleya variegata*)	None/None/List A/1B.2	Low. No suitable habitat or soil occurs on the project site.
Palmer's ericameria *(Ericameria palmeri* ssp. *palmeri)*	None/None/List B/1B.1	Low. No suitable habitat or soil occurs on the project site.
San Diego barrel cactus (*Ferocactus viridescens*)	None/None/List B/2.1	Low. No suitable habitat or soil occurs on the project site.
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	None/None/List A/4.2	None. The project site is below the elevation range of the species.
San Diego goldenstar (*Bloomeria [Muilla] clevelandii*)	None/None/List A/1B.1	Low. This species' soil associations do not occur on the project site.
Parry's tetracoccus (*Tetracoccus dioicus*)	None/None/List A/1B.2	None. The project site is below the elevation range of the species.

Sources: Baldwin et al. 2012; Calflora 2020; CDFW 2020a; CNPS 2020; Helix 2005; Helix 2008; Jepson Flora Project 2014; San Diego Natural History Museum 2020a.

Notes:

[1] FE = Federally Endangered; FT = Federally Threatened, SE = State Endangered; 1B = Plants rare, threatened, or endangered in California and elsewhere; 2 = rare, threatened, or endangered in California but more common elsewhere; 3 = Plants in need of more information; 4 = Plants of limited distribution; .1 = Seriously endangered in California (>80 percent of occurrences threatened or high degree and immediacy of threat); .2 = Fairly endangered in California (20–80 percent of occurrences threatened)

4.3.4 Smooth Tarplant (*Centromadia pungens* ssp. *laevis*)

Listing: County List A and CNPS CRPR List 1B.1; California Endemic.

Distribution: San Diego, Orange, Riverside, Los Angeles, Kern, and San Bernardino Counties below approximately 1,500 feet in elevation.

Habitat: Grasslands, particularly near alkaline locales.

Status on Project Site: In 2009, four individuals were observed at the northeastern end of the project site. Smooth tarplant was not observed on the project site in 2015 and 2020.

4.4 Sensitive Animal Species

Three sensitive animal species were observed on the project site during the 2020 biological resources surveys—monarch butterfly (*Danaus plexippus*), red-shouldered hawk (*Buteo lineatus*), and turkey vulture (*Cathartes aura*). These three sensitive animal species are described in the following subsections.

4.4.1 Monarch Butterfly (*Danaus plexippus*)

The monarch butterfly is under review for protection under the federal Endangered Species Act (FESA) as of March 2020 (USFWS 2020c). Monarch butterflies in North America are divided into two main groups: the western monarchs, which breed west of the Rocky Mountains and overwinter in Southern California, and the eastern monarchs, which breed in the Great Plains and Canada and overwinter in Central Mexico. Female monarch butterflies lay each egg individually on a leaf of a milkweed plant (*Asclepias* sp.). Once monarch caterpillars are hatched, caterpillars feed exclusively on milkweed for approximately 2 weeks when they begin the metamorphosis stage.

Adult monarch butterflies were observed flying through the project site during the 2020 biological resources surveys. No milkweed patches occur on the project site that would be suitable for monarch butterfly caterpillars to occupy.

4.4.2 Red-Shouldered Hawk (*Buteo lineatus*)

The red-shouldered hawk is a County Group 1 species. Red-shouldered hawk is a medium-sized hawk with rounded wings and a medium-length, fan-shaped tail. Adults have a reddish barring on their breasts, white and dark checkered wings, and a thickly barred tail. It is found along the length of the coast and Central Valley in California. The red-shouldered hawk generally inhabits low-elevation woodlands with tall trees. It hunts by gliding below the canopy and feeds on a variety of prey, including small mammals, reptiles, amphibians, young or small birds, and large insects. Adults construct large stick nests about halfway up a large tree, next to main tree trunk or on top of old squirrel, hawk, or raven nests (Cornell Lab of Ornithology 2020b).

Red-shouldered hawk was observed flying over the project site during nearly all of the 2020 biological resources surveys. Several red-shouldered hawks were recorded during the majority of the biological surveys, although typically, no more than two were observed at any given point. Suitable foraging and nesting habitat for red-shouldered hawk occurs on the project site.

4.4.3 Turkey Vulture (*Cathartes aura*)

The turkey vulture is a County Group 1 species. The turkey vulture is a large raptor with a distinctive bald, red head. When soaring, its wings make a V-shape when viewed head-on (Kirk and Mossman 1998). It is found throughout most of California during the breeding season, with its range contracting to the central and southern coasts during winter. The turkey vulture feeds primarily on carrion and is often observed soaring many miles over open habitat. It nests in crevices in large rocky outcroppings or cliffs (Kirk and Mossman 1998). Full nests are not constructed, and it feeds by regurgitating to its young and rarely visits the nest. Therefore, it is difficult to detect turkey vulture nests, and its local breeding distribution is poorly understood.

Turkey vulture was observed flying over the project site during nearly all 2020 biological resources surveys. No suitable nesting habitat occurs on the project site.

4.4.4 Sensitive Animal Species with Potential to Occur

Table 3 presents the list of 28 sensitive animal species from the 2005 BTR and 2008 Addendum to the BTR and 2 additional sensitive animal species observed on the project site in 2020. As shown in Table 3, 21 of the 30 sensitive animal species have low or no potential to occur on the project site, 3 species were observed on the project site and are described in Section 4.4, and 6 have a moderate potential to occur on the project site.

Table 3. Sensitive Animal Species with Potential to Occur on the Project Site

Species	Status Federal/State/County	Potential to Occur
Invertebrates		
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE/None/Group 1	Low. Low-quality disturbed Diegan coastal sage scrub suitable habitat surrounded by development occurs on the project site.
Monarch butterfly (*Danaus plexippus*)	FC/None/Group 2	Present. Refer to Section 4.4.
Vertebrates		
Amphibians		
Arroyo toad (*Anaxyrus californicus*)	FE/SSC/Group 1	None. Suitable breeding and aestivation habitat does not occur on the project site.
California red-legged frog (*Rana draytonii*)	FT/SSC/Group 1	None. Extirpated from the County.
Reptiles		
Southwestern pond turtle (*Clemmys marmorata pallida*)	None/SSC/Group 1	None. The project site does not contain perennial ponds.
Coast horned lizard *(Phrynosoma blainvillii*)	None/SSC/Group 2	Low. The project site is surrounded by development and is isolated from other suitable habitat.
San Diego banded gecko *(Coleonyx variegatus abbotti*)	None/None/Group 1	Low. The project site is surrounded by development and is isolated from other suitable habitat.

Table 3. Sensitive Animal Species with Potential to Occur on the Project Site

Species	Status Federal/State/County	Potential to Occur
Western spadefoot (*Spea hammondii*)	None/SSC/Group 2	Low. The project site is surrounded by development and is isolated from other suitable habitat.
Birds		
Cooper's hawk (*Accipiter cooperii*)	None/WL/Group 1	Moderate. Low-quality suitable foraging and nesting habitat occurs on the project site, however, this habitat is surrounded by development.
Sharp-shinned hawk (*Accipiter striatus*)	None/WL/Group 1	Moderate. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Tricolored blackbird (*Agelaius tricolor*)	BCC/CE/Group 1	Low. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	None/WL/Group 1	Low. The patch of suitable Diegan coastal sage scrub habitat on the project site is disturbed, small, isolated.
Grasshopper sparrow (*Ammodramus savannarum*)	None/SSC/Group 1	Low. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Bell's sage sparrow (*Artemisiospiza belli belli*)	None/WL/Group 1	Low. The patch of suitable Diegan coastal sage scrub habitat on the project site is disturbed, small, and isolated.
Golden eagle (*Aquila chrysaetos*)	BGEPA/WL/Group 1	Low. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Red-shouldered hawk (*Buteo lineatus*)	None/None/Group 1	Present. Refer to Section 4.4.
Ferruginous hawk (*Buteo regalis*)	None/WL/Group 1	Low. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Swainson's hawk (*Buteo swainsoni*)	None/CT/Group 1	Low. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	BCC/SSC/Group 1	None. No large cactus thickets occur on the project site.
Turkey vulture (*Cathartes aura*)	None/SSC/Group 1	Present. Refer to Section 4.4.
White-tailed kite (*Elanus leucurus*)	None/CFP/Group 1	Low. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.

Table 3. Sensitive Animal Species with Potential to Occur on the Project Site

Species	Status Federal/State/County	Potential to Occur
California horned lark (*Eremophila alpestris actia*)	None/WL/Group 2	Moderate. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Loggerhead shrike (*Lanius ludovicianus*)	None/SSC/Group 1	Low. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/SSC/Group 1	Low. The patch of suitable Diegan coastal sage scrub habitat on the project site is disturbed, small, and isolated.
Western bluebird (*Sialia mexicana*)	None/None/Group 2	Moderate. Low-quality suitable foraging and nesting habitat occurs on the project site; however, this habitat is surrounded by development.
Burrowing owl (*Athene cunicularia*)	None/SSC/Group 1	Low. The project site is surrounded by development and is isolated from other suitable habitat.
Mammals		
Delzura pocket mouse (*Chaetodipus californicus femoralis*)	None/SSC/Group 2	Low. The project site is surrounded by development and is isolated from other suitable habitat.
Western mastiff bat (*Eumops perotis californicus*)	None/SSC/Group 2	Moderate. Low-quality suitable foraging and roosting habitat occurs on the project site; however, this habitat is surrounded by development.
Pallid bat (*Antrozous pallidus*)	None/SSC/Group 2	Moderate. Low-quality suitable foraging and roosting habitat occurs on the project site; however, this habitat is surrounded by development.
American Badger (*Taxidea taxus*)	None/SSC/Group 2	Low. The project site is surrounded by development and is isolated from other suitable habitat.

Sources: Helix 2005, 2008.
Notes: BCC = Bird of Conservation Concern; BGEPA = Bald and Golden Eagle Protection Act; CE = California endangered; CFP = California fully protected; CT = California threatened; FC = federal candidate; FE = federally endangered; FT = federally threatened; Group 1 = Group 1 species on County of San Diego Sensitive Animal List; Group 2 = Group 2 species on County of San Diego Sensitive Animal List; None = No status indicated for species; SSC = species of special concern, WL = watch list species

4.4.5 Nesting Birds

The project site provides nesting habitat for several bird species, including raptors, which are protected under the California Fish and Game Code and the Migratory Bird Treaty Act (MBTA). Although no active nests were observed during the 2020 biological resources surveys, the upland habitat on the project site and mature trees on and surrounding the project site provide nesting habitat for many avian species. At least three adult red-shouldered hawks and three red-tailed hawks (*Buteo jamaicensis*) were observed flying over the project site during the 2020 surveys and are potentially nesting in mature trees

surrounding the project site. The disturbed, rocky habitat in the central portion of the project site may provide suitable nesting habitat for ground-nesting species like killdeer (*Charadrius vociferous*) and others. In addition, the abundance of species and overall number of birds observed on the project site suggest the project site may be used as nesting habitat.

Source: SanGIS Imagery 2017.

Harris & Associates

N

0 100 200

Feet

Figure 7

Sensitive Plant Species Observations

Weld Boulevard Distribution Center Project

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Section 5 Regulatory Overview

Biological and aquatic resources on the project site are subject to regulatory review by the federal government, the State of California, and local jurisdictions (i.e., the County and the City of El Cajon). The federal government administers nonmarine plant and animal-related issues through the USFWS, while the USACE and the Regional Water Quality Control Board (RWQCB) administer waters of the United States issues. The CDFW administers California law relating to animal issues, and both the CDFW and the RWQCB administer laws relating to waters of the state. The City of El Cajon is the CEQA lead agency for the project and provides review and approvals in accordance with state law and the City of El Cajon's ordinances. The County, as the property owner, is a responsible agency under CEQA and provides review and recommendations.

5.1 Federal

5.1.1 Federal Endangered Species Act

FESA and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems on which they depend. In addition, FESA defines species as threatened or endangered and provides regulatory protection for listed species. FESA also provides a program for the conservation and recovery of threatened and endangered species and the conservation of designated critical habitat that the USFWS determines to be required for the survival and recovery of these listed species.

Section 7 of FESA requires federal agencies, in consultation with and with assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions the federal agencies authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service share responsibilities for administering FESA. Regulations governing interagency cooperation under Section 7 are found in California Code of Regulations, Title 50, Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing "take" (e.g., to harass, harm, pursue, hunt, wound, or kill) that may occur incidentally to an otherwise legal activity.

Section 9 lists those actions that are prohibited under FESA. Although take of a listed species is prohibited, it is allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish and animals without special exemption; however, federally listed plant species are exempt from the provisions of Section 9 in the absence of federal jurisdiction or state listing. The definition of "harm" includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. "Harass" is defined as actions that create the likelihood

of injury to listed species by significantly disrupting normal behavioral patterns related to breeding, feeding, and shelter.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit. Application procedures are found in the Code of Federal Regulations, Title 50, Parts 13 and 17, for species under the jurisdiction of the USFWS and Code of Federal Regulations, Title 50, Parts 217, 220, and 222, for species under the jurisdiction of the National Marine Fisheries Service.

5.1.2 Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator to obtain a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The RWQCB administers the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the USACE that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The USACE implementing regulations are found in the Code of Federal Regulations, Title 33, Parts 320 and 330. Guidelines for implementation are referred to as the "Section 404(b)(1) Guidelines," which were developed by the U.S. Environmental Protection Agency in conjunction with the USACE (40 CFR 230). These guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

On April 21, 2020, the U.S. Department of Defense, U.S. Department of the Army, USACE, and U.S. Environmental Protection Agency published the Navigable Waters Protection Rule: Definition of "Waters of the United States" in the Federal Register (33 CFR Part 328), which changed the previous rule to exclude all ephemeral and isolated waters from the jurisdiction of Section 404 of the CWA. This new rule went into effect on June 22, 2020. Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by field investigation, must be present for a site to be classified as a wetland by the USACE (USACE 1987). In addition, a direct hydrological surface connection to traditional navigable waters must be present, and surface water flows must be perennial or intermittent in a typical year.

5.1.3 Migratory Bird Treaty Act

The MBTA of 1918 (16 USC 703–711) is an international treaty for the conservation and management of bird species that may migrate through more than one country. It is enforced in the United States by the USFWS and makes it unlawful to take, possess, buy, sell, purchase, or barter

any migratory bird listed in Code of Federal Regulations, Title 50, Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered a "take" and is potentially punishable by fines and/or imprisonment. The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In 1972, the MBTA was amended to include protection for migratory birds of prey (raptors). The USFWS places restrictions on disturbances allowed near active raptor nests.

5.1.4 Wetlands and Other Waters of the United States

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies. The USACE exerts jurisdiction over navigable waters of the United States classified as perennial or intermittent, including waters that are subject to the ebb and flow of the tide; wetlands and other waters such as lakes, rivers, streams, certain lakes and ponds, and wetlands adjacent to jurisdictional waters; and perennial or intermittent tributaries connected to the previously mentioned features. The extent of waters of the United States is generally defined as the portion that falls within the limits of the OHWM. Typically, the OHWM corresponds to the 5- to 7-year flood event.

5.2 State

5.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that would affect a listed species under both CESA and FESA, compliance with FESA would satisfy CESA if the CDFW determines that the federal incidental take authorization is consistent with CESA under California Fish and Game (CFG) Code, Section 2080.1. For projects that would result in take of a species only listed under CESA, the project operator would need to apply for a take permit under Section 2081(b).

5.2.2 California Environmental Quality Act Guidelines, Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines, Section 15380(b), provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and

Sections 2050 through 2059.26 of the CFG Code dealing with rare or endangered plants or animals. This section was included in CEQA primarily to manage situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either the USFWS or the CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not currently have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed as sensitive by the CNDDB are considered by the CDFW to be significant resources and fall under the CEQA Guidelines to address impacts. Local planning documents, such as General Plans, often identify these resources as well.

5.2.3 California Fish and Game Code, Section 1602

Under this section of the CFG Code, the project operator is required to notify the CDFW before the start of any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the code, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel that has banks and supports fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and animals are subject to CDFW jurisdiction. The CDFW also has jurisdiction over dry washes that carry water during storm events.

Preliminary notification and project review generally occur during the environmental process. When an existing fish or animal resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement, which becomes part of the plans, specifications, and bid documents for the project.

5.2.4 California Fish and Game Code, Sections 2080 and 2081

Section 2080 of the CFG Code states that "no person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [California Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act." Pursuant to Section 2081 of the code, the CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of

Understanding if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by the CDFW. The CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

5.2.5 California Fish and Game Code, Sections 3503, 3503.5, 3513, and 3800

Section 3503 of the CFG Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptor (i.e., species in the orders Falconiformes and Strigiformes), including nests or eggs. Typical violations of this code include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit.

Section 3513 of the CFG Code upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA.

Section 3800 of the CFG Code affords protection to nongame birds, which are birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds.

5.2.6 California Fish and Game Code, Sections 3511, 4700, 5050, and 5515

California fully protected species are described in Sections 3511, 4700, 5050, and 5515 of the CFG Code. These statutes prohibit take or possession of fully protected species. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by these species.

5.2.7 California Wetland Definition

Unlike the federal government, California has adopted the Cowardin et al. (1992) definition of "wetlands." For this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and saturated with water or covered by shallow water at some time during the growing season of each year.

Under normal circumstances, the federal definition of wetlands requires all three wetland identification parameters to be met, whereas the Cowardin et al. (1992) definition requires the presence of at least one of these parameters. For this reason, identification of wetlands by state

agencies consists of the union of all areas that are periodically inundated or saturated or in which at least seasonal dominance by hydrophytes may be documented or in which hydric soils are present.

5.2.8 Native Plant Protection Act (California Fish and Game Code, Sections 1900 through 1913)

California's Native Plant Protection Act requires state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the act prohibit the take of listed plants from the wild and require notification to the CDFW at least 10 days in advance of any change in land use. This allows the CDFW to salvage listed plant species that would otherwise be destroyed. The project operator is required to conduct botanical inventories and consult with the CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

5.2.9 Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the state's NCCP Act of 1991, legislation that is broader in its orientation and objectives than CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The act and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (CDFG and California Resources Agency 1993a), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (CDFG 1993b), and NCCP General Process Guidelines (CDFG 1998) have been superseded by the NCCP Act of 2003, which was subsequently amended in 2003, 2011, 2012, and 2016.

The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of animal and vegetation communities and including key interests in the process.

This voluntary program allows the state to enter into planning agreements with landowners, local governments, and other stakeholders to prepare plans that identify the most important areas for a threatened or endangered species, and the areas that may be less important. These NCCP plans may become the basis for a state permit to take threatened and endangered species in exchange for conserving their habitat. The CDFW and USFWS worked to combine the NCCP program with the federal Habitat Conservation Plan process to provide take permits for state and federally listed species. Under the NCCP Act, local governments, such as the City of El Cajon, lead the development of these NCCP plans and become the recipients of state and federal take permits.

5.2.10 Porter-Cologne Water Quality Control Act

The State Water Resources Control Board works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to

water quality for its region and may approve, with or without conditions, or deny projects that could affect all surface waters of the state. Their authority comes from the CWA and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act broadly defines "waters of the state" as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). Because the Porter-Cologne Act applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the United States. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the state include headwaters, wetlands, and riparian areas. Moreover, in practice, the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, which may be the case in headwaters, jurisdiction is taken to the top-of-bank. Pursuant to the Year 2020 changes to the Section 404 contained in the Navigable Waters Protection Rule (EPA June 1, 2020), all parties proposing to discharge waste that could affect waters of the state but do not affect federal waters (which requires a CWA Section 404 permit and CWA Section 401 Certification) must now file an Report of Waste Discharge with the appropriate RWQCB. In anticipation of the revised rule, in April 2020 the State Water Resources Control Board published new Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State.

Under the Porter-Cologne Act, the State Water Resources Control Board and the nine RWQCBs also have the responsibility of granting CWA National Pollutant Discharge Elimination System permits and waste discharge requirements for certain point-source and nonpoint-source discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

5.3 Local

5.3.1 Natural Community Conservation Planning Guidelines

The NCCP program of the CDFW is a cooperative effort by the state and numerous private and public participants that takes a broad-based ecosystem approach to planning for the protection of biological resources and diversity. The program, which began in 1991 under the state's NCCP Act, is broader in its orientation and objectives than CESA or FESA. These laws are designed to identify and protect individual species that have already declined in number significantly. The primary objective of the NCCP program is to conserve natural communities while accommodating compatible land use.

The Southern California coastal sage scrub region is organized into 11 NCCP planning "subregions." For planning purposes, some of the subregions are organized into "subareas" that correspond to the geographic boundaries of participating jurisdictions or landowners. In each subregion and subarea, a

local lead agency coordinates the collaborative planning process. The CDFW and the USFWS provide the necessary support, direction, and guidance to NCCP participants.

The coastal sage scrub habitat on the project site would need to be evaluated and ranked for interim protection since the project is not within the County MSCP. Habitat is ranked using the NCCP Guidelines flowchart, which is based on patch size and density, location, and biologic components as either high, intermediate, or low potential value for long-term conservation.

5.3.2 Multiple Species Conservation Program

The project site is not within the County MSCP and the City of El Cajon does not have an approved MSCP Subarea Plan.

Without coverage under the County MSCP, take of coastal sage scrub (which is the habitat of the federally listed threatened coastal California gnatcatcher [*Polioptila californica californica*]) would require that a FESA Section 4(d) permit be processed through the City of El Cajon pursuant to City Council Policy C-12 in consultation with the USFWS and the CDFW. Section 4(d) of FESA authorizes incidental take of coastal California gnatcatcher habitat before adoption of a Regional Conservation Plan through the issuance of an interim habitat loss permit. If the City of El Cajon does not have any remaining take allowance under the FESA Section 4(d) rule when the impacts to coastal sage scrub occur, then a request must be made for use of the County's 5 percent coastal sage scrub take allowance, or a FESA Section 7 or 10(a) permit must be processed to allow take of coastal sage scrub.

Section 6 Impacts

As discussed in the 2005 BTR and 2009 EIR, impacts addressed in this section are considered direct or indirect. A direct impact occurs when the primary effects of the project replace existing habitat with graded or developed areas. An indirect impact consists of secondary effects of a project, such as noise, decreased water quality (e.g., through sedimentation, urban contaminants, or fuel release), fugitive dust, colonization of non-native plant species, edge effects, human activity, animal behavioral changes, night lighting, and roadkill. The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes longer to become apparent.

6.1 Criteria for Determining Significance

Direct impacts occur when biological resources are altered or destroyed during the course of or as a result of project implementation. Examples of such impacts include removing or grading vegetation, filling wetland habitats, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may include elevated levels of noise or lighting, changes in surface water hydrology within a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. Permanent impacts may result in irreversible damage to biological resources. Temporary impacts are interim changes in the local environment due to construction and would not extend beyond project-associated construction, including revegetation of temporarily disturbed areas adjacent to native habitats.

Appendix G of the CEQA Guidelines defines "significant effect on the environment" as a "substantial, or potentially substantial adverse change in the environment." Appendix G of the CEQA Guidelines further indicates that there may be a significant effect on biological resources if the project would (CEQA Guidelines, Section 15000 et seq.):

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game[1] or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

[1] As of January 1, 2012, the California Department of Fish and Game became the California Department of Fish and Wildlife.

- Interfere substantially with the movement of any native resident or migratory fish or animal species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan.

6.2 Direct Impacts

6.2.1 Sensitive Vegetation Community

Implementation of the project would directly impact approximately 1.25 acres of disturbed Diegan coastal sage scrub and 23.70 acres of non-native grassland (Figure 8, Biological Resources Impacts) (Table 4). Impacts to these sensitive vegetation communities would be considered significant.

Eucalyptus woodland, disturbed habitat, and developed land are not considered sensitive vegetation communities; therefore, impacts to these vegetation communities would not be considered significant and do not require mitigation.

Table 4. Impacts to Sensitive Vegetation Communities on the Project Site

Vegetation Community	Acreage		Mitigation Ratio	Required Mitigation Acreage
	Existing	Impacts		
Non-Vegetated Channel (64200)[1]	0.03	<0.01	1:1[3]	<0.01[3]
Emergent Wetland (including disturbed) (52440)[1]	0.02	0.02	1:1[3]	0.02[3]
Non-Native Grassland (42200)[2]	23.70	23.70	0.5:1	11.85
Diegan Coastal Sage Scrub (including disturbed) (32500)[2]	1.25	1.25	1:1	1.25
Total	**24.98**	**24.97**	**—**	**13.12**

Notes:

[1] Potentially sensitive resource

[2] Considered a sensitive vegetation community

[3] Minimum of 1:1 ratio, potential to increase during consultation with the water resource agencies (i.e., USACE, RWQCB, and CDFW)

6.2.2 Aquatic Resources

Implementation of the project would directly impact approximately 0.02 acre of disturbed emergent wetland and less than 0.01 acre of non-vegetated channel in the southern and western portions of the project site (Figure 8; Table 4). Impacts to these aquatic resources would be considered significant.

The project would avoid impacts to the approximately 0.02-acre eastern non-vegetated channel, and no impacts would occur.

6.2.3 Sensitive Plant Species

The project would impact the following two sensitive plant species observed on site: San Diego ambrosia and graceful tarplant.

6.2.3.1 San Diego Ambrosia

A patch of San Diego ambrosia of approximately 250 stems was reported from the central portion of the site in 2008 (Helix 2008). In 2009, the south-central portion of the project site containing San Diego ambrosia had been cleared (mowed) by the County Department of Public Works as part of routine fire fuel management activities on the airport property; the species was not observed during the biological resources surveys conducted in December 2009 (Helix 2009) (the species naturally senesces and is not likely observable in the winter). The plants were observed again during a site survey conducted in 2015, which confirmed the 250-stem population in the center of the project site and an approximately 3,000-stem patch in the southeastern portion of the project site (Atkins 2015). In 2020, biological resources surveys were conducted in August when the plants began to senesce; however, both patches were confirmed and remapped. The central patch, containing approximately 250 stems, and the larger southeastern patch, containing approximately 3,000 stems, would be directly impacted by implementation of the project. Direct impacts to San Diego ambrosia would be significant due to the rarity of the species (only 12 populations are known to remain) and the federally endangered status of the species (SDMMP 2020).

6.2.3.2 Graceful Tarplant

Although a large number (approximately 550 individuals) of graceful tarplant would be impacted by the project, the impact to this species is considered to be less than significant due to the low resource sensitivity of the species (CRPR 4).

6.2.4 Sensitive Animal Species

County Group 1-listed red-shouldered hawk and turkey vulture were observed flying above the project site. The project would directly impact raptor foraging habitat (e.g., non-native grassland) and raptor nesting habitat (e.g., eucalyptus woodland). Raptors are protected under the MBTA. Therefore, impacts to these habitats would result in a significant impact to sensitive animal species.

Adult monarch butterflies were observed flying through the project site; however, no milkweed that would support monarch butterfly caterpillars occurs on the project site. Therefore, impacts to monarch butterfly would be less than significant.

6.2.4.1 Nesting Birds

Project implementation has the potential to impact bird species protected under the MBTA and CFG Code, Section 3504. If construction is conducted during the bird and raptor breeding season (January 15 through August 31), temporary direct impacts from disturbance and displacement of nesting birds during vegetation removal could result in significant direct impacts to bird species protected under the MBTA.

6.2.5 Native Resident or Migratory Fish or Animal Species or Native Resident or Migratory Wildlife Corridors

The project site is surrounded on all sides by residential, commercial, and transportation development and is unlikely to function as a wildlife corridor or habitat linkage. Although the upland and eucalyptus woodland habitat on the project site provide live-in habitat for several common animal species, the project site does not support regional wildlife corridors or habitat linkages. Therefore, implementation of the project would not result in significant impacts to wildlife corridors or habitat linkages.

6.2.6 Local Policies and Ordinances

The project would comply with the local policies or ordinances protecting biological resources identified in the El Cajon General Plan. Therefore, no impacts would occur to local policies or ordinances from implementation of the project.

6.2.7 Regional Conservation Planning

The project is not within the County MSCP. The City of El Cajon does not have an approved MSCP Subarea Plan under the County MSCP and is, therefore, not required to comply with the conservation policies included in the program. However, the County MSCP was taken into account during the preparation of the biological resources analysis for the project due to its applicability to the surrounding region. Where appropriate, the project analysis of biological impacts reflects many of the standards established by the County MSCP, including species and vegetation community sensitivities and mitigation where applicable. Therefore, no impacts to local conservation plans would occur from implementation of the project.

6.3 Indirect Impacts

Potential indirect impacts from project construction could include noise, decreased water quality (e.g., through sedimentation, urban contaminants, or fuel release), fugitive dust, colonization of non-native plant species, human activity/edge effects, animal behavioral changes, and night lighting.

6.3.1 Construction Noise

Construction noise from such sources as clearing and grading would be a temporary impact to local animal species. Noise-related impacts would be considered significant if sensitive species, such as raptors, were displaced from their nests and failed to breed. Birds and other species may be temporarily displaced from the vicinity of the construction area but would be expected to return following grading. Raptors nesting within any area impacted by construction noise exceeding 60 dBA Leq (time weighted average of the level of sound in decibels) may be significantly impacted. Therefore, impacts to sensitive animal species from construction noise would be considered significant.

6.3.2 Water Quality

Water quality could be adversely affected by potential surface runoff and sedimentation. The use of petroleum products (i.e., fuels, oils, and lubricants) could potentially contaminate surface water and affect biological resources. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial animals that depend on these resources. The project would follow the City of El Cajon's stormwater regulations. Therefore, impacts to water quality would be less than significant.

6.3.3 Fugitive Dust

Fugitive dust produced by construction has the potential to disperse on the project site, which may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This, in turn, could affect animals dependent on these plants (e.g., seed-eating rodents). Fugitive dust may make plants unsuitable as habitat for insects and birds. As part of the project description, active construction areas and unpaved surfaces would be watered pursuant to the City of El Cajon grading permit requirements to minimize dust generation; therefore, the indirect impacts of dust generation on biological resources would be less than significant.

6.3.4 Non-Native Plant Species

Non-native plants could colonize areas disturbed by construction and could potentially spread into adjacent native habitats. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native animal species that are dependent on the native plant species (i.e., mustard [*Brassica* spp.]). Because the project is surrounded by developed land and proposes development of the majority (approximately 31.67 acres) of the 31.70-acre site, further colonization by non-native plant species in the 0.03-acre non-impact area is considered less than significant.

6.3.5 Human Activities and Edge Effects

Urbanization and increases in human activity can result in degradation to sensitive vegetation by fragmenting the land and forming edges between developed areas and habitat. These edges make it easier for non-native plant species to invade native habitats and for native and non-native predators to access prey that may have otherwise been protected in large, contiguous blocks of habitat. In addition, secondary extinctions through disruption of predator-prey, parasite-host, and plant-pollinator relations can also occur (Soule 1986). However, indirect impacts caused by increased human activity and edge effects are expected to be less than significant since portions of the project site are currently being used, and the area surrounding the site is primarily urbanized.

6.3.6 Night Lighting

Night lighting exposes animal species to an unnatural light regime and may alter their behavior patterns, which could result in a loss of species diversity. Night lighting on native habitats can also provide nocturnal predators with an unnatural advantage over their prey, which could cause an increased loss in native animal. On site, night lighting is not expected to result in a significant impact because the area is primarily developed with infrastructure and associated lighting.

6.4 Cumulative Impacts

Implementation of the project would contribute to the cumulative loss of biological resources in the City of El Cajon and the County. Cumulative impacts from implementation of the project to disturbed Diegan coastal sage scrub, non-native grassland, nesting birds and raptors, aquatic resources, and San Diego ambrosia would contribute to a cumulatively significant impact when combined with nearby projects.

Source: SanGIS Imagery 2017.

Harris & Associates

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Figure 8

Biological Resources Impacts

Weld Boulevard Distribution Center Project

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Section 7 Mitigation Measures

Mitigation would be required to compensate for any permanent, temporary, direct, indirect, and cumulative impacts to sensitive biological and aquatic resources that would be considered significant under CEQA and federal and state law. Implementation of mitigation would reduce these impacts to a level below significance. Impacts to disturbed Diegan coastal sage scrub and non-native grassland habitat would be mitigated to a less than significant level with implementation of Mitigation Measures BIO-1 and BIO-2, respectively. Impacts to foraging and nesting habitat for birds and raptors would be mitigated to a less than significant level with implementation of Mitigation Measure BIO-3. Potentially significant impacts to birds and raptors from construction noise would be mitigated to below a level of significance with Mitigation Measure BIO-4. Mitigation Measures BIO-5 and BIO-6 would mitigate impacts to aquatic resources to below a level of significance. Mitigation Measure BIO-7 would mitigate impacts to San Diego ambrosia to below a level of significance.

BIO-1: Impacts to 1.25 acres of disturbed Diegan coastal sage scrub shall be mitigated at a 1:1 ratio for a total of 1.25 acres of required mitigation. Mitigation shall consist of acquisition of 1.25 acres of Diegan coastal sage scrub at a City of El Cajon-approved mitigation bank within or adjacent to the project's ecoregion. The wildlife agencies and the City of El Cajon shall approve the location and habitat quality of the off-site mitigation site.

BIO-2: Impacts to 23.70 acres of non-native grassland shall be mitigated at a 0.5:1 ratio for a total of 11.85 acres of required mitigation. Mitigation shall consist of the off-site acquisition of 11.85 acres of non-native grassland. The wildlife agencies and the City of El Cajon shall approve the location and habitat quality of the off-site mitigation site.

It is desirable to mitigate impacts by purchasing mitigation credits at banks within the impacts' ecoregion. Although the City of El Cajon is located within the "South County" jurisdiction, no non-native grassland credits are available for purchase within this ecoregion. Therefore, credits shall be purchased in the adjacent (North County) ecoregion. If no non-native grassland credits are available for purchase in either ecoregion, then the equivalent amount of chaparral credits shall be purchased instead of non-native grassland credits.[2]

[2] The City of El Cajon does not currently have specific parameters or guidelines outlining the required purchase location in regard to ecoregion location or non-allowance for replacement habitat purchase. Because no non-native grassland credits have not been in South County for some time, it is common for non-native grassland credits to be purchased from mitigation banks in North County. It is also common for allowances to be made for substituting higher tier chaparral credits for non-native grassland credits when non-native grassland credits are not available in a specific ecoregion.

BIO-3: Mitigation for impacts to migratory bird and raptor nesting habitat shall consist of the following: no clearing of eucalyptus woodland shall take place during the nesting migratory bird and raptor breeding season (January 15 through August 31). If clearing is proposed to take place during the breeding season, a preconstruction survey shall be conducted by a qualified biologist to determine if migratory bird and raptor nests (or nest building or other breeding or nesting behavior) occur in the eucalyptus woodland. If no birds or raptors are nesting (which includes nest building or other breeding or nesting behavior) in this area, clearing shall be allowed to proceed. If birds or raptors are observed nesting (or displaying breeding or nesting behavior), construction shall be postponed until a qualified biologist determines that all nesting (or breeding or nesting behavior) has ceased or until after August 31.

BIO-4: No grading or clearing within 500 feet of a bird or raptor nest during the migratory bird and raptor breeding season (January 15 through August 31) shall occur. All grading permits, improvement plans, and final maps shall state the same. If clearing or grading shall occur during the migratory bird and raptor breeding season (January 15 through August 31), a preconstruction survey shall be conducted by a qualified biologist to determine if migratory birds and raptors occur in the areas impacted by noise. If no birds or raptors are nesting (which includes nest building or other breeding or nesting behavior) in this area, development shall be allowed to proceed. However, if migratory birds or raptors are observed nesting (or displaying breeding or nesting behavior) within 500 feet of construction activities, construction shall (1) be postponed until a qualified biologist determines that all nesting (or breeding or nesting behavior) has ceased or until after August 31, or (2) a temporary noise barrier or berm shall be constructed at the edge of the development footprint to ensure that noise levels are reduced to below 60 dBA Leq (time weighted average of the level of sound in decibels). Alternatively, the use of construction equipment could be scheduled to keep noise levels below 60 dBA Leq in lieu of or in concert with a wall or other noise barrier.

BIO-5: The Project Proponent shall consult with the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife to determine jurisdictional authority over the onsite aquatic resources. Due to the changes to the Navigable Waters Protection Rule in 2020, the U.S. Army Corps of Engineers is unlikely to take jurisdiction of the onsite aquatic resources as they would be determined ephemeral, and therefore not be subject to Section 404 of the Clean Water Act. If required, permits shall be issued prior to impacts to jurisdictional aquatic resources by the California Department of Fish and Wildlife, and potentially by the Regional Water Quality Control Board. Before construction

in any areas containing jurisdictional wetland features, the project proponent shall obtain a Water Quality Certification for the project (independent of Section 404 of the Clean Water Act, which does not apply to the project).

Compensatory mitigation shall be implemented to mitigate impacts to aquatic resources. This mitigation shall be in the form of credit purchases at an approved wetlands mitigation bank, in-lieu fee mitigation, or permittee responsible mitigation (including restoration and enhancement of the on-site eastern channel). Should the project select to mitigate on site, a Habitat Restoration Plan shall be prepared for the restoration and enhancement of the eastern channel; the Habitat Restoration Plan shall include a 5-year post-restoration monitoring and maintenance program. The Habitat Restoration Plan and monitoring and maintenance program shall be approved by the Regional Water Quality Control Board. The eastern channel mitigation site shall be conserved in perpetuity through an agency-approved conservation easement that names a regulatory agency (either the Regional Water Quality Control Board or the California Department of Fish and Wildlife) as a third-party beneficiary. An endowment shall be invested that would generate enough annual interest to provide adequate funding for management and monitoring of the restoration site in perpetuity; the endowment shall be calculated using a tool compatible with the Center of Natural Lands Management Property Analysis Record.

Report of waste discharge pursuant to California Water Code, Section 13050, shall be required for the waters of the state determined to be non-jurisdictional under Sections 404 and 401 of the Clean Water Act. Any measures required as part of the issuance of the Report of Waste Discharge shall be implemented.

BIO-6: Authorization for the alteration of streambeds and banks in the state shall be required under Section 1602 of the California Fish and Game Code, and a Streambed Alteration Agreement application shall be required prior to work occurring in California Department of Fish and Wildlife jurisdictional areas. Mitigation requirements determined through the process of obtaining the necessary permits shall be implemented (see Mitigation Measure BIO-5).

BIO-7: Before the issuance of a site grading permit, impacts to San Diego ambrosia (*Ambrosia pumila*) shall be mitigated. Because there is no federal action or federal jurisdiction on the project and the plant is not state-listed, Sections 7 or 10(a) of the federal Endangered Species Act do not apply. However, the following mitigation shall be required to mitigate the direct impact to the 250-stem and 3,000-stem stands of San Diego ambrosia to a level below significance.

The project applicant shall prepare a Translocation Plan for San Diego ambrosia (Appendix C, San Diego Ambrosia Conceptual Mitigation and Translocation Plan). The Translocation Plan shall be prepared by a qualified biologist familiar with the species. An appropriate receiver site shall be selected that contains suitable landscape position (e.g., upper terrace within the floodplain of streams or wetlands or in depressions with seasonally perched groundwater), soils, hydrology, and native vegetation communities for the survival of the species. Receiver site selection shall consider the genetic properties and structure of the translocated population. The receiver site shall be conserved and the translocated population managed in perpetuity.

Translocation shall occur at the appropriate season when the plant expresses itself early in the season (late winter/early spring) and shall provide enough recovery time for the species at the receiver site throughout the growing season. Both the donor and receiver sites shall be surveyed by a qualified biologist familiar with the species and growing conditions before translocation. The donor and receiver site may require pre-translocation preparation in the form of dethatching and site preparation. Translocation shall be overseen by a restoration ecologist familiar with the species and implemented by a qualified habitat restoration contractor.

To maintain the inter-population genetic structure of the species, as many plants and rhizomes within a population or patch shall be harvested and translocated to the extent that the entire patch is salvaged as feasible. Aspect and cardinal directions shall be marked for each salvaged patch at the donor site and retained at the receiver site. Translocation may occur directly from the donor site to the receiver site; alternately, donor plants may be stored at a qualified native plant nursery before outplanting at the receiver site. The translocated plants shall be monitored and maintained for 5 years post-translocation and managed in perpetuity.

Section 8 Level of Significance after Mitigation

Project implementation would result in potentially significant direct and indirect impacts to sensitive vegetation communities, sensitive plant species, nesting birds and raptors, and aquatic resources.

With implementation of Mitigation Measures BIO-1 and BIO-2, impacts to the sensitive vegetation communities of disturbed Diegan coastal sage scrub and non-native grassland from implementation of the project would be reduced to less than significant.

With implementation of Mitigation Measures BIO-3 and BIO-4, impacts to nesting migratory birds and raptors from implementation of the project would be reduced to less than significant.

With implementation of Mitigation Measures BIO-5 and BIO-6, impacts to aquatic resources from implementation of the project would be reduced to less than significant.

With implementation of Mitigation Measure BIO-7, impacts to federally endangered San Diego ambrosia from implementation of the project would be reduced to less than significant.

With implementation of Mitigation Measures BIO-1 through BIO-7, potential impacts to non-native grassland, disturbed Diegan coastal sage scrub, nesting birds and raptors, aquatic resources, and San Diego ambrosia that may contribute to a cumulatively significant impact when combined with nearby projects would be less than significant and not cumulatively considerable.

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Appendix A. Aquatic Resources Delineation Update

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DRAFT Aquatic Resources Delineation Update

Weld Boulevard Distribution Center Project

January 2021

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Attachments

Acronyms and Abbreviations

°F	degrees Fahrenheit
2009 EIR	Forester Creek Industrial Park Project EIR
cfs	cubic feet per second
County	County of San Diego
EIR	Environmental Impact Report
NRCS	National Resources Conservation Service
NWI	National Wetland Inventory
OHWM	ordinary high water mark
project	Weld Boulevard Distribution Center Project
project applicant	Chesnut Properties
USACE	U.S. Army Corps of Engineers

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Section A Site Description, Landscape Setting

A.1 Project Location

Chesnut Properties (project applicant) is proposing the development of the proposed Weld Boulevard Distribution Center Project (project) on approximately 31.7 acres in the City of El Cajon, California (Attachment A, Figures; Figure 1, Regional Location, and Figure 2, Project Site). The project site is located north of Weld Boulevard, south of Prospect Avenue, and west of Cuyamaca Street, and depicted on the U.S. Geological Survey, the site is in the 7.5-minute El Cajon quadrangle in Township 15 South Range 1 West (Figure 3, USGS Topographic Map). The site is part of the Gillespie Field airport located directly east, and is owned by the County of San Diego (County). The City of El Cajon and City of Santee jurisdictional boundaries coincide with the northern and northwestern property lines. The site is bounded by industrial and residential land uses in the City of Santee to the north and northwest, respectively. The remainder of the site is bounded by land uses within the City of El Cajon, including the County Operations Facility to the southwest, Weld Boulevard to the south, Cuyamaca Street to the east, Prospect Avenue to the north, and a concrete-lined section of the Forester Creek channel to the northeast. The site is relatively flat with slight undulations (artificial mounds), was previously graded and prior uses of portions of the project site included a golf driving range and cement processing facility. The project site currently consists of disturbed open space (Figure 2).

A.2 Project Description

In compliance with the California Environmental Quality Act, an Addendum to the Forester Creek Industrial Park Project Environmental Impact Report (2009 EIR) is being prepared for the project. The 2009 EIR evaluated an industrial park project with approximately 463,000 square feet of industrial development. The project has since changed, and the current project proposes development of an approximately 142,000-square-foot distribution warehouse, office space, parking, and designated product pick-up and drop-off areas. The warehouse square footage would include space for an approximately 17,000-square-foot office to be located at the south end of the warehouse building. The remainder of the project site would be developed with surface parking, including approximately 967 total parking spaces, which includes designated spaces for associates, support, managers, personal vans, and warehouse delivery vans located to the north, east, and west outskirts of the site. The project would also include a van loading area consisting of approximately 72 spaces directly west of the warehouse building and van staging for approximately 72 vans immediately next to the loading area. There would be 15 dock-high doors (above grade) and trailer and box truck loading for approximately 13 vehicles to be located immediately north of the proposed warehouse. Access to the site would be through three driveways on Weld Boulevard,

one across from Gillespie Way and two between the intersections of Gillespie Way and Cuyamaca Street.

A.3 Landscape Setting

The project site is in an urban area in the City of El Cajon, primarily surrounded by industrial, commercial, and residential land uses (Figure 2). The project site consists of sensitive and non-sensitive upland vegetation communities, an unnamed stormwater channel, a disturbed emergent wetland, and a developed area (maintenance equipment storage). The majority of the project site is undeveloped, but portions of the property have historically been altered.

The project site is primarily flat, with moderately sloping hills in the center and steeper slopes along the western edge. The on-site elevation ranges from approximately 340 feet to 436 above mean sea level. The topographical lines presented on Figure 3, represent the project slope.

The following subsections describe the site conditions in more detail.

A.4 Project Site Access

The property owner, the County, granted U.S. Army Corps of Engineers (USACE) personnel access to the project site, as documented in Attachment B, Statement of Access.

Section B Site Alterations, Current and Past Land Use

The project site is relatively flat with mounds created by artificial fill and was previously graded. Drainages have historically been present across the site, but the development of the surrounding area, including the construction of Cuyamaca Street and surrounding developments, altered the flows across the site. This included the relocation and channelization of Forester Creek.

Prior uses included a golf driving range and cement processing facility in the northern and southwestern portion of the site. The northern portion of the project site was previously used as a temporary storage area with associated buildings. However, the majority of the property was never developed. The project site currently consists of disturbed open space and has been significantly disturbed by vegetation mowing associated with Gillespie Field airport operations.

B.1 Soils

The project site is underlain by Fallbrook-Vista sandy loam and Salinas clay loam (USDA 2020). The soil units on the project site are presented on Figure 4, Soils. Fallbrook-Vista sandy loam occurs in the western half of the project site and Salinas clay loam occurs in the eastern half of the project site. Both soil units are associated with upland vegetation communities and defined as well-drained (USDA 2020).

B.2 Hydrology

The project site is in the San Diego River Watershed, specifically the Lower San Diego Hydrologic Area (Hydrologic Unit 907.1) (Project Clean Water 2020). The San Diego River Watershed encompasses a land area 434 square miles, making it the second largest watershed management area located in San Diego County. It lies in the central portion of the County and neighbors Los Peñasquitos and San Dieguito River watersheds to the north and Sweetwater and Pueblo San Diego Watersheds to the south. The National Wetlands Inventory (NWI) does not show any aquatic resources on the project site (Figure 5, National Wetlands Inventory Results).

Drainage patterns on and adjacent to the project site have been significantly altered with on-site mechanical disturbances and the construction of the surrounding urban development. The natural drainage pattern on the project site has been disturbed with historical grading, erosion, and vegetation mowing.

B.3 Vegetation

Seven vegetation communities and land use types were observed on the project site. These include non-vegetated channel, disturbed emergent wetland, non-native grassland, disturbed Diegan coastal sage scrub, eucalyptus woodland, disturbed habitat, and urban/developed land (Baldwin et. al 2012; Oberbauer et al. 2008; Holland 1986). Figure 6, Biological Resources, presents the

vegetation community boundaries. The vegetation communities observed on the project site are described in the following subsections.

B.3.1 Non-Vegetated Channel

Non-vegetated channel consists of predominantly sandy, gravelly, or rocky channels lacking or with reduced vegetation. Variable water lines inhibit the growth of vegetation, although some weedy species of grasses may grow along the outer edges of the channel. Vegetation may exist here but is usually less than 10 percent total cover (Oberbauer et al. 2008).

Three non-vegetated earthen bottom channels occur on the project site, one in the eastern portion of the project site, one in the southern portion of the project site, and one in the western portion of the project site (Figure 6).

B.3.2 Emergent Wetland (Including Disturbed)

Disturbed emergent wetlands are dominated by low-growing, perennial wetland species. Disturbed emergent wetlands can be found in channels, seeps and springs, floodplains, margins of lakes and rivers, and various basins, such as pools and ponds, palustrine lakes, montane meadows, and dune swales. In San Diego County, these are often in previously disturbed areas where wetlands are emerging but have not yet established a full suite of species. However, disturbance is not a necessary element of this vegetation community.

One disturbed emergent wetland was observed in the southern portion of the project site (Figure 6).

B.3.3 Non-Native Grassland

Non-native grassland consists of a dense to sparse cover of flowering annual grasses measuring approximately 3 feet high. It may occur where disturbance by maintenance (e.g., mowing, scraping, disking, spraying), grazing, repetitive fire, agriculture, or other mechanical disruption has altered soils and removed native seed sources from areas formerly supporting native vegetation. Non-native grassland typically occurs adjacent to roads or other developed areas where there has been some historical disturbance. Native wildflowers are often associated with this community, especially in years of favorable rainfall. Common plant species observed within non-native grasslands within the County include smooth barley (*Hordeum murinum*), ripgut grass (*Bromus diandrus*), slender wild oat (*Avena barbata*), and foxtail chess (*Bromus madritensis*).

Non-native grassland is the most dominant vegetation community on the project site and occurs on approximately 22.26 acres (Figure 6). Non-native grassland in the survey area consists of ripgut grass, soft chess (*Bromus hordeaceus*), foxtail chess, Bermuda grass (*Cynodon dactylon*), smooth barley, Perennial rye grass (*Festuca perennis)*, and rattail fescue (*Festuca myuros*). A few scattered red gum (*Eucalyptus camaldulensis*) trees occur in the non-native grassland. Federally endangered San Diego ambrosia (*Ambrosia pumila*) and California Native Plant Society Rank 4.2 graceful

tarplant (*Holocarpha virgata* ssp. *elongata*) occur in the non-native grassland vegetation community in the central and eastern portions of the project site (Figure 6). One small patch of graceful tarplant occurs in the non-native grassland in the western portion of the project site.

B.3.4 Disturbed Diegan Coastal Sage Scrub

Diegan coastal sage scrub consists of low soft-woody shrubs, typically measuring 1.5 to 6.5 feet tall (Holland 1986). Species composition generally consists of California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and laurel sumac (*Malosma laurina*). Diegan coastal sage scrub is present in coastal Southern California from Los Angeles to Baja California, Mexico. It supports a rich diversity of sensitive plants and wildlife. It is estimated that Diegan coastal sage scrub has been reduced by 75 to 80 percent of its historical coverage throughout Southern California. Because of this, it is the focus of the current California Natural Communities Conservation Program.

Disturbed Diegan coastal sage scrub was observed in the western portion of the project site, comprising approximately 2.09 acres (Figure 6). The disturbed Diegan coastal sage scrub is dominated by stands of California buckwheat interspersed with weedy species, patches of bare and rocky ground, and human debris. Broom baccharis (*Baccharis sarothroides)* is also dominant along the base of the slope in the disturbed Diegan coastal sage scrub. One small patch of California Native Plant Society Rank 4.2 graceful tarplant occurs in the disturbed vegetation in the southwestern portion of the project site.

B.3.5 Eucalyptus Woodland

Eucalyptus woodland habitat ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. Eucalyptus woodland often forms a dense stand with a closed canopy. *Eucalyptus* species produce a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. Overstory composition is typically limited to one species of the genus or mixed stands composed of several *Eucalyptus* species; few native overstory species are present in eucalyptus-planted areas except in small cleared pockets. Eucalyptus woodland in the County typically has a naturalized understory (not maintained or otherwise landscaped or developed) or occurs in association with native vegetation communities.

Approximately 0.07 acre of eucalyptus woodland occurs on the northwestern portion of the project site (Figure 6). A few individual red gum eucalyptus occur in the non-native grassland in the south central portion of the project site. On the project site, eucalyptus woodland is dominated by red gum eucalyptus and non-native weeds and grass species in the understory.

B.3.6 Disturbed Habitat

Disturbed habitat consists of previously disturbed areas that either are devoid of vegetation (dirt roads/trails) or support scattered non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance such as black mustard (*Brassica nigra*), sweet fennel (*Foeniculum vulgare*), and Russian thistle (*Salsola tragus*). These species are non-native and are typically found in disturbed habitats, particularly in areas that have been graded, repeatedly cleared for fuel management purposes, and/or experienced repeated use that prevents natural revegetation (Oberbauer et al. 2008).

Disturbed habitat comprises approximately 4.84 acres on the project site (Figure 6). Disturbed habitat on the project site is dominated by bare ground and non-native grasses. Some of the areas that were mapped as disturbed in 2009 have filled in with native and non-native species and have been mapped as non-native grassland. On the project site, disturbed habitat consists of the previous driving range and cleared dirt areas. At the time of the 2020 surveys, the areas that were formerly the driving range and cement facility were gone.

B.3.7 Urban/Developed Land

Urban/developed represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported (Oberbauer et al. 2008). This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping.

Urban/developed land on the project site comprises approximately 1.80 acres in the southern portion of the project site and consists of a maintenance storage yard (Figure 6). In 2009, developed land consisted of the driving range building and parking lot, the County equipment repair facility, cement processing facility, and the culverted/cement portion of Forester Creek. At the time of the 2020 surveys, the driving range and cement facility were gone.

Section C Precipitation Data and Analysis

C.1 Climate and Growing Season

On a regional level, San Diego County has a Mediterranean climate, which is characterized by wet winters and dry summers. This is largely due to a semi-permanent high pressure zone that sits over the Pacific Ocean during much of the year and forms a fog belt (marine layer). The survey area is generally located within the Peninsular Range of Southern California. Generalized climate in the region is regarded as dry, subhumid mesothermal, with warm dry summers and cold moist winters, which pushes the growing season to the wet months of the year (late winter to early spring). Vegetation often goes dormant during the later summer months until the first rains start in the fall. The rainy season typically lasts from October through March.

The closest weather station to the project site is at Gillespie Field airport approximately 0.5 mile east of the project site (NOAA 2020). Between 2019 and 2020, the average maximum temperature was 88 degrees Fahrenheit (°F), and the minimum temperature was 48°F. The annual precipitation between 2019 and 2020 was approximately 30 inches. In 2019, the total rainfall was 20.79 inches, approximately 11.19 inches greater than the previous year (NRCS 2020).

C.2 Antecedent Precipitation Tool and NRCS WETS Table Results Summary

A typical rainfall year in San Diego has historically been expressed by 11 inches of annual precipitation. In order to calculate whether the aquatic resources delineation fell into a wet, dry and typical rainfall year, the Harris & Associates wetland specialists used the Antecedent Precipitation Tool Version 1.0 (USACE 2020). The Antecedent Precipitation Tool results determined the aquatic resources delineation was conducted within normal conditions for precipitation in the dry season (see Attachment C, Antecedent Precipitation Tool and NRCS WETS Table Results).

The National Resources Conservation Service (NRCS) Wetland Climate Table for 1979–2020 at El Cajon, California is in Attachment C. The average annual precipitation in the area surrounding the project site over the past 20 years was 11.45 inches.

C.3 Wetland Hydrology and Analysis

The Harris & Associates wetland specialists reviewed historical and current aerial imagery, topographic maps, and NWI maps. The NWI maps do not show aquatic resources on the project site. Historical and current aerial imagery depict drainages that historically crossed the site, including Forester Creek, which was rerouted to make room for Cuyamaca Street. The U.S. Geological Survey topographic map of the project site is on Figure 3. The NWI results are presented on Figure 5.

A hydrology study was prepared to determine the flow rates and flow duration of the aquatic resources on the project site (Attachment D, Hydrology Report). The hydrology study examined flow rates of all hydrological features on the project site using the known return rates at the culverts through which the features enter the project site. In addition, the U.S. Environmental Protection Agency's Stormwater Management Model was used to estimate runoff durations from existing storm drain lines discharging onto the project site during an average year. Hydrological calculations coupled with the National Atmospheric and Oceanographic Administration's Atlas 14 rainfall depths and evapotranspiration for the site were used in the analysis, as well as 36 years of rainfall data from the Santee gauge from the Project Clean Water website. The hydrology study results are presented in the following subsections.

East Channel

The easterly channel conveys flow from existing commercial development to the south, as well as two inlets on Weld Boulevard and Cuyamaca Street (Figure 7, Watershed Hydrology). The channel experiences little infiltration (therefore, the infiltration rate was set to zero). The flow rates for the eastern channel during the 2-, 5-, 10-, 25-, and 100-year flow events are identified in Table 1. There seems to be no upstream source for the flows other than the commercial development south of the project site. The eastern channel connects to Forester Creek through a culvert (Figure 7). The 10-year flow of Forester Creek in this location is 6,000 to 6,800 cubic feet per second (cfs).

Table 1. Eastern Channel Flow Rates

Return Period (year)	Approximate Flow (cfs)
2	14
5	18
10	22
25	26
100	33

Notes: cfs = cubic feet per second

South and West Channels

The southern channel conveys flow from the same commercial area, and also receives flows from hills and open space to the west. Flows are funneled through a 42-inch storm drain under Weld Boulevard. Due to a topographic rise in the central portion of the project site, the flows in the channel continue as sheet flow across the project site. During an average year, run-on from the southerly storm drain is sustained for approximately 53 hours (2.2. days). During a more extreme 10-year storm event, run-on from the southerly storm drain is sustained for approximately 93 hours (3.9 days). Flow rates are illustrated in Table 2.

The development to the west of the project site manages stormwater through a system of water conveyance features, and constructed a dissipater that send peak flows to the project site at a relatively low flow rate. The run-on from the dissipater onto the project site is sustained for

approximately 50 hours (2.1 days) in a typical year. During a more extreme 10-year storm event, run-on from the western dissipater is sustained for approximately 93 hours (3.9 days). The flow rates are illustrated in Table 2.

Table 2. Southern and Western Channel Flow Rates

Return Period (year)	Western Channel Flow (cfs)	Southern Channel Flow (cfs)
2	6	38
5	7	49
10	8	58

Notes: cfs = cubic feet per second

The hydrological study indicates that during a typical year, the stormwater flows entering the site from the southerly storm drain and westerly dissipater do not occur for more than 2.2 days. Further, during a 10-year storm event, flows are not sustained on the project site for more than 3.9 days.

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Section D Methods

D.1 Pre-Field Review

Prior to conducting fieldwork, Harris & Associates wetland specialists referenced the following materials:

- Topographic maps
- Aerial imagery (Google Earth from 1994 to 2019; historical aerial imagery from 1953 through 2016 (historicaerials.com)
- U.S. Fish and Wildlife Service NWI Online Wetland Mapper (USFWS 2020)
- U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey for the project site, which lists hydric soils found in the County (USDA 2020)
- Final EIR for the Forester Creek Industrial Park Project (PBS&J 2009)
- Update to the Biological Technical Report for the Forester Creek Industrial Park Project (Helix Environmental Planning 2009)

D.2 On-Site Verification

The aquatic resources delineation was conducted using the routine on-site determination method described in the USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (USACE 2008a). Melissa Tu and Katie Laybourn, Harris & Associates wetland specialists, conducted the delineation fieldwork on September 15 and 24, and October 27, 2020, to identify aquatic resources on the project site. The wetland specialists completed arid west region wetland determination data sheets for each unique aquatic resources feature (Attachment E, Arid West Wetland Determination and Ordinary High Water Mark Datasheets).

Sampling points were excavated in each of the unique aquatic resources features, including areas with wetlands vegetation along channels and in the center of the project site to investigate the presence of wetland vegetation and evidence of surface soil cracking observed there. Figure 8, Aquatic Resources Ordinary High Water Mark for the Weld Boulevard Distribution Center Project, shows the sampling points associated with the on-site aquatic resources. Figure 8 was created in adherence with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program and can be referenced in Attachment A (USACE 2016). Representative photographs of the aquatic resources on the project site is provided in Attachment F, Photographic Log. The delineation methods conducted at each of the sampling points are described in detail below.

At each sampling point, a USACE three-parameter wetland determination data form, Arid West Region, (wetland determination data form) was completed. The three-parameters included hydrophytic vegetation, hydric soil, and hydrology. In order to meet the USACE definition of a

wetland, the sampling area needs to have hydrophytic vegetation, hydric soils, and wetland hydrology as defined in the 1987 USACE Wetland Delineation Manual and the 2008 Arid West Regional Supplement. The Regional Water Quality Control Board uses the same wetlands parameters as the USACE. However, unlike the USACE, the Regional Water Quality Control Board also includes in their wetland definition any area of hydric indicators void of hydrophytic vegetation (SWRCB 2020).

Sampling point 1 was taken in the center of the southern channel directly north of standing water to determine the extent of the wetland feature (Figure 8; Attachment F, Photograph 12). Because surface water and soil saturation was observed directly south of the sampling point, hydric soils were assumed and no soil pit was dug (Attachment F, Photograph 14). The delineation results for sampling point 1 are presented in Section E, Descriptions of All Wetlands and Other Non-Wetland Waters.

Sampling point 2 was taken in the center of the southern channel directly south of a topographic rise in order to determine the northern extent of the wetland feature (Figure 8). At this point, the main channel becomes undefined and covered in upland grass species. Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 2 are presented in Section E.

Sampling point 3 was taken in the center of the eastern channel approximately 70 feet north of the culvert in the southeastern corner of the project site (Figure 8; Attachment F, Photograph 2). Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 3 are presented in Section E.

Sampling point 4 was taken in the center of the eastern channel approximately 60 feet south of the culvert in the northeastern corner of the project site that connects to Forester Creek (Figure 8; Attachment F, Photograph 8). Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 4 are presented in Section E.

Sampling point 5 was taken where the southern channel reestablishes and becomes defined approximately 30 feet north of where the main southern channel ends due to a topographic rise (Figure 8; Attachment F, Photograph 15) Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 5 are presented in Section E.

Sampling point 6 was taken directly south of a topographic rise that causes the southern channel to become undefined in order to determine the northern extent of the non-wetland feature (Figure 8; Attachment F, Photograph 16). Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 6 are presented in Section E.

Sampling point 7 was taken northwest of the end of the defined non-vegetated channel (between sampling points 5 and 6) (Figure 8; Attachment F, Photograph 17). The delineation results for sampling point 7 are presented in Section E.

Sampling point 8 was taken directly east of a concrete stormwater dissipater on the western edge of the project site (Figure 8; Attachment F, Photograph 19). Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 8 are presented in Section E.

Sampling point 9 was taken east of the concrete stormwater dissipater (Figure 8; Attachment F, Photograph 20). The delineation results for sampling point 9 are presented in Section E.

Sampling point 10 was taken where a well-defined channel forms approximately 20 feet east of sampling point 9 (Figure 8; Attachment F, Photographs 21 and 22). Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 10 are presented in Section E.

Sampling point 11 was taken where the well-defined channel starting at sampling point 10 ends (Figure 8; Attachment F, Photographs 21 and 23). Surface water was not observed; therefore, a soil pit was dug in the center of the channel to analyze the soil indicators. The delineation results for sampling point 11 are presented in Section E.

Sampling point 12 was taken east of the end of the defined non-vegetated channel (shown between sampling points 10 and 11) (Figure 8; Attachment F, Photograph 24). The delineation results for sampling point 12 are presented in Section E.

Sampling points 13 through 16 were taken in the central portion of the project site where changes in vegetation cover and surface soil cracks were observed. Surface water was not observed; therefore, soil pits were dug where surface soil cracks were observed to analyze the soil indicators at the four sampling points. The delineation results for sampling points 13 through 16 are presented in Section E.

D.3 On-Site Ordinary High Water Mark Investigation

The aquatic resources delineation was conducted using the routine on-site determination method described in A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b). As described in the previous subsection, the majority of the project site consists of disturbed habitat and developed land in an urban area.

Following the guidance in A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b),

the wetland specialists collected and recorded data on vegetation, soil, and hydrologic characteristics used as the basis for OHWM determinations. The wetland specialists completed an arid west region OHWM data sheet for each of the non-vegetated channels on the project site (Attachment E). The wetland specialists identified the OHWM at the east, south, and west non-vegetated channels (sampling points 3 through 6, 10, and 11) based on field observations of presence of OHWM or defined non-wetland water indicators, including changes in sediment texture, vegetation species or cover, break in bank slope, and floodplain contours in each of the non-vegetated aquatic resources features (USACE 2008b). Results of the OHWM identifications conducted for sampling points 3 through 6, 10, and 11 are presented in Section E.

D.4 On-Site Top-of-Bank Investigation

Evidence of the top-of-bank at sampling points 1 through 6 was identified, mapped, and documented pursuant to the California Department of Fish and Wildlife Lake and Streambed Alteration Program guidance under the California Fish and Game Code, Section 1602, and A Review of Stream Processes and Forms in Dryland Watersheds (CDFG 2010). Results of the top-of-bank identifications conducted for sampling points 1 through 6 are presented in Section E.

Electronic spatial data of the aquatic resources documented on the project site is included in Attachment G, Geographic Information Systems Data.

Section E Description of All Wetlands and Other Non-Wetland Waters

E.1 Wetlands

One disturbed emergent wetland covering approximately 0.02 acre was mapped on the project site (Table 3 and Figure 8). The wetland is associated with the southern channel. Figure 8 shows sampling points 1 and 2 taken in the disturbed emergent wetland during the aquatic resources delineation. Attachment F, Photographs 9 through 14, provides representative views of the disturbed emergent wetland.

Table 3. Wetlands on the Project Site

Feature	Linear Feet	Wetlands (acres)
Disturbed emergent wetland	169	0.02

The data collected at sampling point 1 determined hydrophytic vegetation, hydric soils, and wetland hydrology were present (Figure 8; Attachment F, Photograph 12). Observations of surface water and soil saturation in combination with wetland plant species indicated an emergent wetland had formed due to stormwater from the outlet at the edge of the project site sitting in the channel for prolonged periods of time.

The data collected at sampling point 2 determined hydric soils were present while hydrophytic vegetation and wetland hydrologic indicators were not present. Although wetland hydrologic indicators were not observed, the hydrology study, described in Section C.3, Wetland Hydrology and Analysis, indicates surface flows occur at sampling point 2. Therefore, sampling point 2 indicated the northern extent of the disturbed emergent wetland because hydrophytic vegetation was no longer present as compared to the three-parameters observed at sampling point 1.

The disturbed emergent wetland begins at a culvert under Weld Boulevard and runs approximately 169 feet north where a topographic rise in the center of the project site causes flows to collect and sheet flow toward the center of the project site. The wetland was identified as disturbed because of the dominance of non-native and invasive species, including tamarisk (*Tamarix* sp.) and tall flatsedge (*Cyperus eragrostis*). The disturbed emergent wetland is surrounded by non-native grassland, with several Mexican fan palms (*Washingtonia robusta*) at the Weld Boulevard culvert, and red gum eucalyptus north of the wetland. The disturbed emergent wetland is lower in elevation than the surrounding project site and the soils are a mix of sandy and silty particles. Due to the rise in topography in the center of the project site, this disturbed emergent wetland does not connect to Forester Creek northeast of the project site. Representative photographs of the disturbed emergent wetland are provided in Attachment F.

The completed wetland determination data forms for the disturbed emergent wetland (sampling points 1 and 2) are in Attachment E.

E.2 Non-Wetland Waters

The non-wetland waters observed on the project site are described in the following subsections.

E.2.1 Emergent Wetland Vegetation (West Side) – One Parameter

Approximately 0.0001 acre of emergent wetland vegetation was observed in the western portion of the project site abutting a concrete stormwater dissipater west of the project boundary (Figure 8). The dissipater directs overflows from a stormwater conveyance system at the neighboring development (within the jurisdiction of the City of Santee) to the project site during peak flow events. Figure 8 shows where sampling point 8 was taken in the emergent wetland vegetation during the aquatic resources delineation (Attachment F, Photograph 19). The data collected at sampling point 8 did not show wetland hydrology or hydric soils. No surface water or other primary hydrologic indicators were observed, and large volumes of leaf and grass litter were observed throughout the area, indicating typical-year flows do not reach the area east of the hydrophytic vegetation directly abutting the stormwater dissipater. A soil pit was dug in the center of the vegetated area at sampling point 8. A hard, rocky restrictive layer was encountered approximately 7 inches below the surface and no hydric soil indicators were identified. The emergent wetland vegetation appears to be associated with occasional overflows from the stormwater dissipater, as described, and does not receive flows frequently enough to form wetland hydrology or hydric soils.

E.2.2 East Channel

One non-vegetated earthen bottom channel (east channel) covering approximately 0.03 acre of non-wetland waters and 0.10 acre of area within the top-of-bank was mapped in the eastern portion of the project site (Table 4 and Figure 8). Figure 8 shows the results at sampling points 3 and 4 taken in the east channel during the aquatic resources delineation. Attachment F, Photographs 1 through 8, provides representative views of the east non-vegetated channel.

Table 4. Non-Wetland Waters on the Project Site

Feature	Linear Feet	Non-Wetland Waters (acres)	Top-of-Bank Area (acres)
Non-vegetated channel – East	612	0.030	0.100
Non-vegetated channel – South	37	0.001	0.001
Non-vegetated channel – West	13	0.001	0.001
Total	**662**	**0.032**	**0.102**

OHWM indicators were observed at sampling point 3. The OHWM is approximately 2 feet wide and 8 inches in depth. Other OHWM indicators observed at sampling point 3 include a break in bank slope, presence of a defined bed and bank and presence of litter and debris.

In addition to non-wetland water observations, a soil pit was dug in the center of the channel at sampling point 3 to determine if non-vegetated wetlands of the state were present. A hard, rocky restrictive layer was encountered approximately 2 inches below the surface and no hydric soil indicators were identified. No surface water or other primary hydrologic indicators were observed, but two secondary indicators, water marks (riverine) and drainage patterns, were observed on the edge of the channel. Consistent with the non-wetland water indicators observed, the wetlands data collected at sampling point 3 determined wetland hydrology was present while hydrophytic vegetation and hydric soils were not present.

The data collected at sampling point 4 resulted in the same determination as at sampling point 3, with wetland hydrology present while hydrophytic vegetation and hydric soils were not present. The OHWM documented at sampling point 4 is approximately 3 feet wide and 28 inches in depth. Other OHWM indicators observed at sampling point 4 include a break in bank slope, presence of a defined bed and bank and presence of litter and debris.

The east channel begins at a culvert under Weld Boulevard and runs north where it connects through a culvert to Forester Creek northeast of the project site. The non-vegetated channel conveys stormwater flows from a development south of the project site to Forester Creek. Forester Creek is hydrologically connected to the San Diego River and the Pacific Ocean (Traditional Navigable Water) approximately 16 miles downstream to the west (Figure 7).

This non-vegetated channel is surrounded by non-native grassland interspersed with areas of bare ground. Approximately 155 feet of the central portion of the eastern channel is contains asphalt fill. An approximately 1 inch depth OHWM was documented on the eastern edge of the asphalt portion of the eastern channel. The eastern channel is lower in elevation than the surrounding project site and the soils are a mix of sandy particles and cobble and large pieces of asphalt throughout the channel.

E.2.3 South Channel

One non-vegetated earthen bottom channel (south channel) mapped in the southern portion of the project site covers approximately 0.001 acre of non-wetland waters and 0.001 acre of area within the top-of-bank (Table 4 and Figure 8). The channel is a return of the channel with emergent wetlands described in Section E.2.1, Emergent Wetland Vegetation (West Side) – One Parameter. Figure 8 shows the results at sampling points 5 and 6 taken in the south channel during the aquatic resources delineation. Attachment F, Photographs 15 through 18, provides representative views of the south non-vegetated channel and upland area north of the channel.

OHWM indicators were observed at sampling points 5 and 6. The OHWM documented at sampling points 5 and 6 are approximately 18 inches wide and 1 foot depth. The other OHWM indicators observed at sampling points 5 and 6 include a change in average sediment texture, change in vegetation cover, a break in bank slope, and the presence of a defined bed and bank. Large volumes of grass and leaf litter filling the southern non-vegetated channel indicate typical-year flows do not reach this area. The non-vegetated channel is surrounded by non-native grassland. The channel is slightly lower in elevation than the surrounding project site and the soils are a mix of medium sandy particles and pebbles.

In addition to non-wetland water observations, soil pits were dug in the center of the channel at sampling points 5 and 6 to determine if non-vegetated wetlands of the state were present. A hard, rocky restrictive layer was encountered approximately 12 inches below the surface and no hydric soil indicators were identified. No surface water or other primary hydrologic indicators were observed, but one secondary indicator, drainage patterns, was observed on the edges of the channel. Consistent with the non-wetland water indicators observed, the wetlands, the wetlands data collected at sampling points 5 and 6 determined no hydrophytic vegetation, no hydric soils, and no wetland hydrology were present.

This channel existed historically and appears to have been formed during occasional large-volume stormwater flows across the project site. The channel is a continuation of the channel that enters the project site from a culvert under Weld Boulevard. It appears to be disconnected from the southern portion of the channel due to the topographic rise directly north of the disturbed emergent wetland. The general topographic rise in the center of the project site appears to restrict typical-year flows from reaching the southern non-vegetated channel and instead only allows occasional large-volume stormwater flows to reach this channel, which then sheet flow toward the center of the project site. This channel does not connect to Forester Creek via defined jurisdictional indicators (Figure 7).

E.2.4 West Channel

One non-vegetated earthen bottom channel (west channel) mapped in the western portion of the project site covers approximately 0.001 acre of non-wetland waters and 0.001 acre of area within the top-of-bank (Table 4 and Figure 8). Figure 8 shows the results at sampling points 10 and 11 taken in the west channel during the aquatic resources delineation. Attachment F, Photographs 19 through 24, provides representative views of the west non-vegetated channel and upland areas west and east of the channel.

OHWM indicators were observed at sampling point 10. The OHWM documented at sampling point 10 is approximately 1.5 feet wide and 8 inches in depth. Other OHWM indicators observed at sampling point 10 include a break in bank slope, presence of a defined bed and bank and presence of litter and debris.

In addition to non-wetland water observations, a soil pit was dug in the center of the channel at sampling point 10 to determine if non-vegetated wetlands of the state were present. A hard, rocky restrictive layer was encountered approximately 2 inches below the surface and no hydric soil indicators were identified. The data collected at sampling points 10 and 11 determined no wetland hydrology, no hydrophytic vegetation, and no hydric soils were present. Consistent with the non-wetland water indicators observed, the wetlands data collected at sampling points 10 and 11 determined no surface water or other primary hydrologic indicators were present, but one secondary indicator, water marks (riverine) was observed on the sides of the channel walls (Attachment F, Photograph 22).

The west channel appears to have formed from stormwater flows overflowing from the concrete dissipater west of the project site. Asphalt chunks were observed embedded in the north side of the west channel and may have influenced the erosion of the channel. The area surrounding the west channel is highly disturbed and the large volumes of grass and leaf litter filling the west non-vegetated channel indicate typical-year flows do not reach this area. Sampling point 11 designates the eastern extent of the west channel where the channel widens and transitions to upland characterized by an area that is vegetated with Bermuda grass (Attachment F, Photographs 21 and 23). This channel does not connect to Forester Creek via defined jurisdictional indicators (Figure 7).

The completed wetland determination data sheets and OHWM data sheets for the east, south, and west non-vegetated channels (sampling points 3 through 6, 10 and 11) are in Attachment E. Representative photographs of the east, south, and west non-vegetated channels are provided in Attachment F. Electronic spatial data of the east, south, and west non-vegetated channels is included in Attachment G. The USACE Aquatic Resources Table for all aquatic resources observed on the project site is provided in Attachment H, Aquatic Resources Table.

E.3 Upland Sampling Points

As described in Section D, Methods, sampling point 7 was taken northwest of the end of the defined southern non-vegetated channel (between sampling points 5 and 6) to investigate the presence of OHWM indicators (Figure 8; Attachment F, Photograph 17). While the point is located in an undulating landscape, no OHWM or defined non-wetland water indicators occur at sampling point 7 and the area is completely vegetated with non-native grass species. The area surrounding sampling point 7 was determined to be upland.

As described in Section D, sampling point 9 was taken east of the concrete stormwater dissipater in the western portion of the project site to investigate the presence of OHWM indicators (Figure 8; Attachment F, Photograph 20). Large chunks of asphalt were observed surrounding a stand of eucalyptus trees directly north of sampling point 9, likely placed there by previous development on the project site. No OHWM or defined non-wetland water indicators occur and the area is

completely vegetated with non-native grass species. The area surrounding sampling point 9 was determined to be upland.

As described in Section D, sampling point 12 was taken east of the end of the west non-vegetated channel to investigate the presence of OHWM indicators (Figure 8; Attachment F, Photographs 23 and 24). No OHWM or defined non-wetland water indicators occur and the area is completely vegetated with non-native grass species. The area surrounding sampling point 12 was determined to be upland.

Aquatic resources delineations were conducted at sampling points 13 through 16 in the central portion of the project site (Figure 8). At sampling points 13, 15, and 16, along with sparsely-distributed hydrophytic vegetation, surface soil cracks were observed along the southern edges of the vegetated areas. Soil pits were dug at sampling points 13 through 16 where surface soil cracks were observed. At sampling points 13 and 16, a hard, rocky restrictive layer was encountered approximately 4 inches below the surface and no hydric soil indicators were identified. Similarly at sampling points 14 and 15, hard, rocky restrictive layers were encountered at approximately 1 inch and 7 inches below the surface respectively and no hydric soil indicators were identified. The sparse hydrophytic vegetation appears to be associated with occasional high-volume stormwater events that cause flows to reach the center of the project site from the stormwater culverts on the southern and western edges of the project site. Further, the area surrounding and directly north of sampling points 13 through 16 was highly disturbed from previous development and these depressions could have formed from surface runoff originating from the previously developed area. The soil cracks observed at sampling points 13 through 16 likely formed when the occasional short duration surface flows are absorbed by the clay loam soils that occurs there. The absence of hydric soils at sampling points 13 through 16 indicates water does not pool in this area for the length of time required to develop wetland soils. As evidenced in the southern disturbed emergent wetland (described in Section E.1, Wetlands), the clay loam soils on the project site are such that hydric soil indicators would form in a wetland when inundated for a long enough to create anaerobic conditions. Therefore, these areas were determined not to be wetlands due to the lack of the third indicator, hydric soils, and are not considered aquatic resources on the project site. The areas surrounding sampling points 13 through 16 were determined to be upland.

E.4 Areas in Top-of-Bank

Approximately 2,070 cubic feet within the limits of the top-of-bank of the eastern non-vegetated channel, approximately 114 cubic feet within the limits of the top-of-bank of the southern non-vegetated channel, and approximately 21 cubic feet within the limits of the top-of-bank of the western non-vegetated channel occur on the project site (Figure 9, Aquatic Resources Top-of Bank for Weld Boulevard Distribution Center Project). Approximately 3,570 cubic feet within the limits of the top-of-bank of the disturbed emergent wetland that occurs in the southern portion of the project site.

Section F Deviation from Local Wetlands Inventory or National Wetlands Inventory

The non-vegetated channels and disturbed emergent wetland observed on the project site were not identified on the NWI map.

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Section G Mapping Method

The wetland specialists digitally mapped the limits of non-wetland, non-tidal waters at the OHWM using an ISXBlue II sub-meter Global Positioning System unit. Electronic spatial data collected in the field are in Attachment G.

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Section H Additional Information

Additional information can be provided upon request.

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Section I Conclusions

Based on the presence of wetland or waters of the U.S./State indicators, the following four aquatic resource areas occur on the project site; one wetland and three non-wetland waters.

1. One three-parameter, disturbed emergent wetland was observed in the southern portion the project site. This wetland accounts for approximately 0.02 acre (680 square feet) over 169 linear feet as well as approximately 3,570 cubic feet within the top-of-bank.
2. One non-wetland water was observed in the eastern portion of the project site. This non-vegetated channel (east channel) accounts for approximately 0.03 acre (1,035 square feet) over 612 linear feet, as well as approximately 2,070 cubic feet within the top-of-bank. This channel connects to Forester Creek, which flows into the San Diego River and ultimately to a Traditional Navigable Water (Pacific Ocean) (Figure 7).
3. One non-wetland water was observed in the southern portion of the project site. This non-vegetated channel accounts for approximately 0.001 acre (76 square feet) over 37 linear feet, as well as approximately 114 cubic feet within the top-of-bank and is potentially a continuation of the above-described disturbed emergent wetland. This channel is not connected to Forester Creek through defined jurisdictional features.
4. One non-wetland water was observed in the western portion of the project site associated with the off-site dissipater. This non-vegetated channel accounts for approximately 0.001 acre (32 square feet) over 13 linear feet, as well as approximately 21 cubic feet within the top-of-bank. This channel is not connected to Forester Creek through defined jurisdictional features.

The following areas did not meet the definitions of wetlands or waters of the U.S./State. Although they contained one wetland parameter (hydrophytic vegetation), they are isolated and not connected to aquatic resource areas through defined jurisdictional features.

1. The emergent wetland vegetation at the dissipater at the western project site is not considered an aquatic resource due to the lack of hydric soils and hydrological indicators.
2. The central areas where sparsely-distributed hydrophytic vegetation and surface soil cracks were observed was determined not to be wetlands due to the lack of hydric soil indicators and are not considered aquatic resources on the project site.

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Section J Disclaimer Statement

This aquatic resources delineation is subject to verification by the USACE, Regional Water Quality Control Board, and California Department of Fish and Wildlife. Harris & Associates advises all parties to treat the information in this Aquatic Resources Delineation Report as preliminary until the agencies provide written verification of their jurisdictional boundaries.

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Attachment A. Figures

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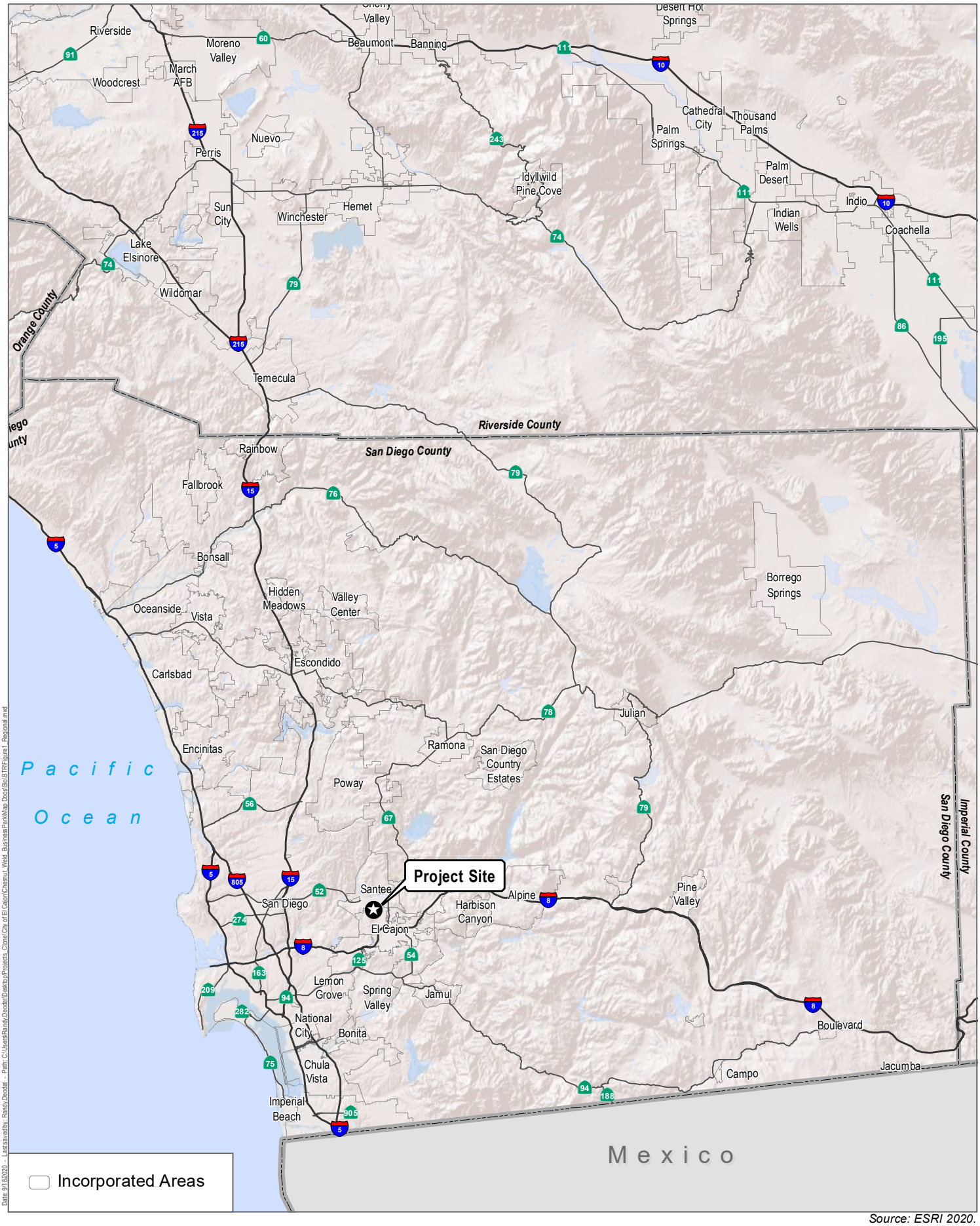


Source: ESRI 2020.

Harris & Associates

N

0 5 10

Miles

Figure 1

Regional Location

Weld Boulevard Distribution Center Project

Source: SanGIS Imagery 2017.

Harris & Associates

N

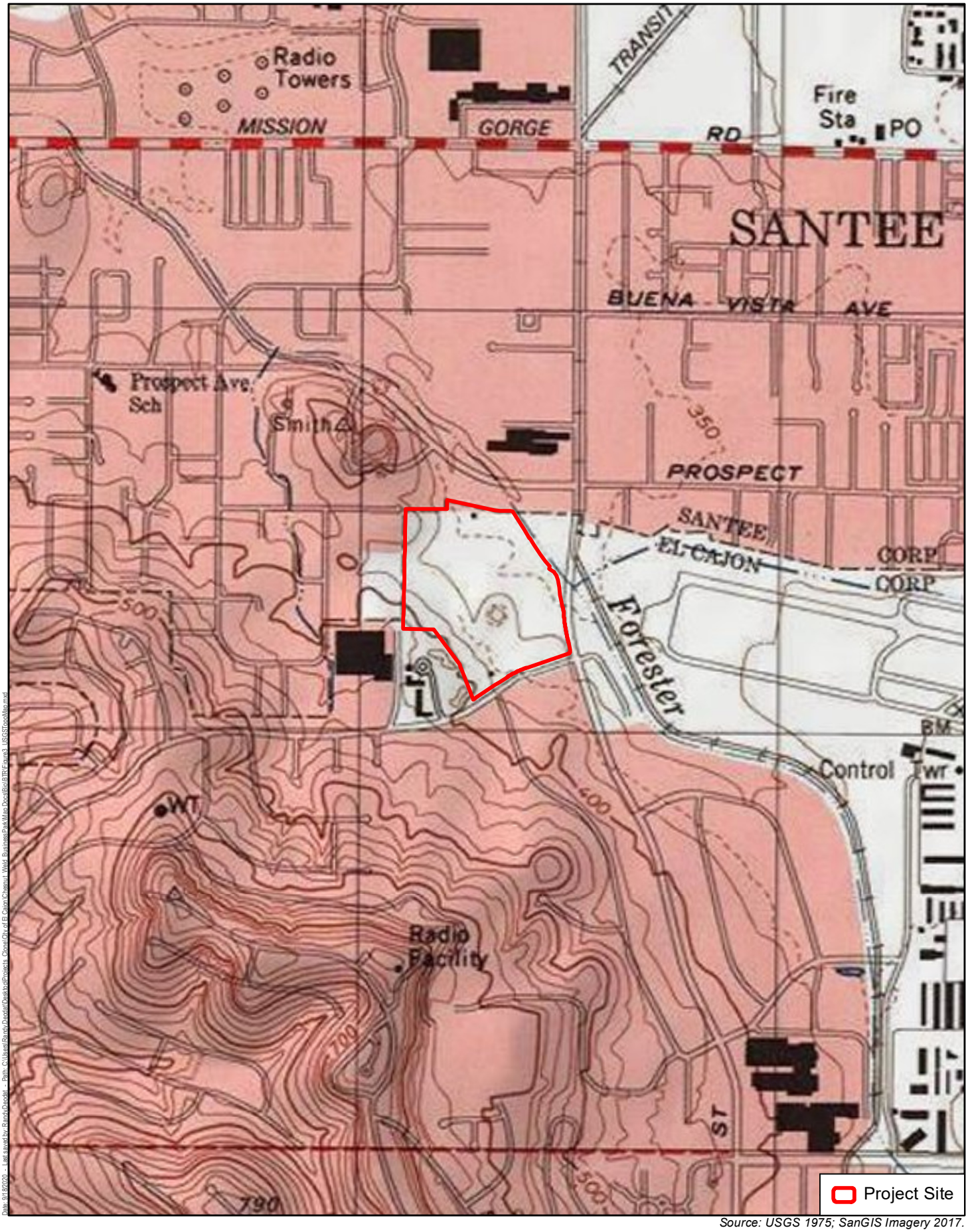
0 200 400

Feet

Figure 2

Project Site

Weld Boulevard Distribution Center Project



Source: USGS 1975; SanGIS Imagery 2017.

Harris & Associates

N

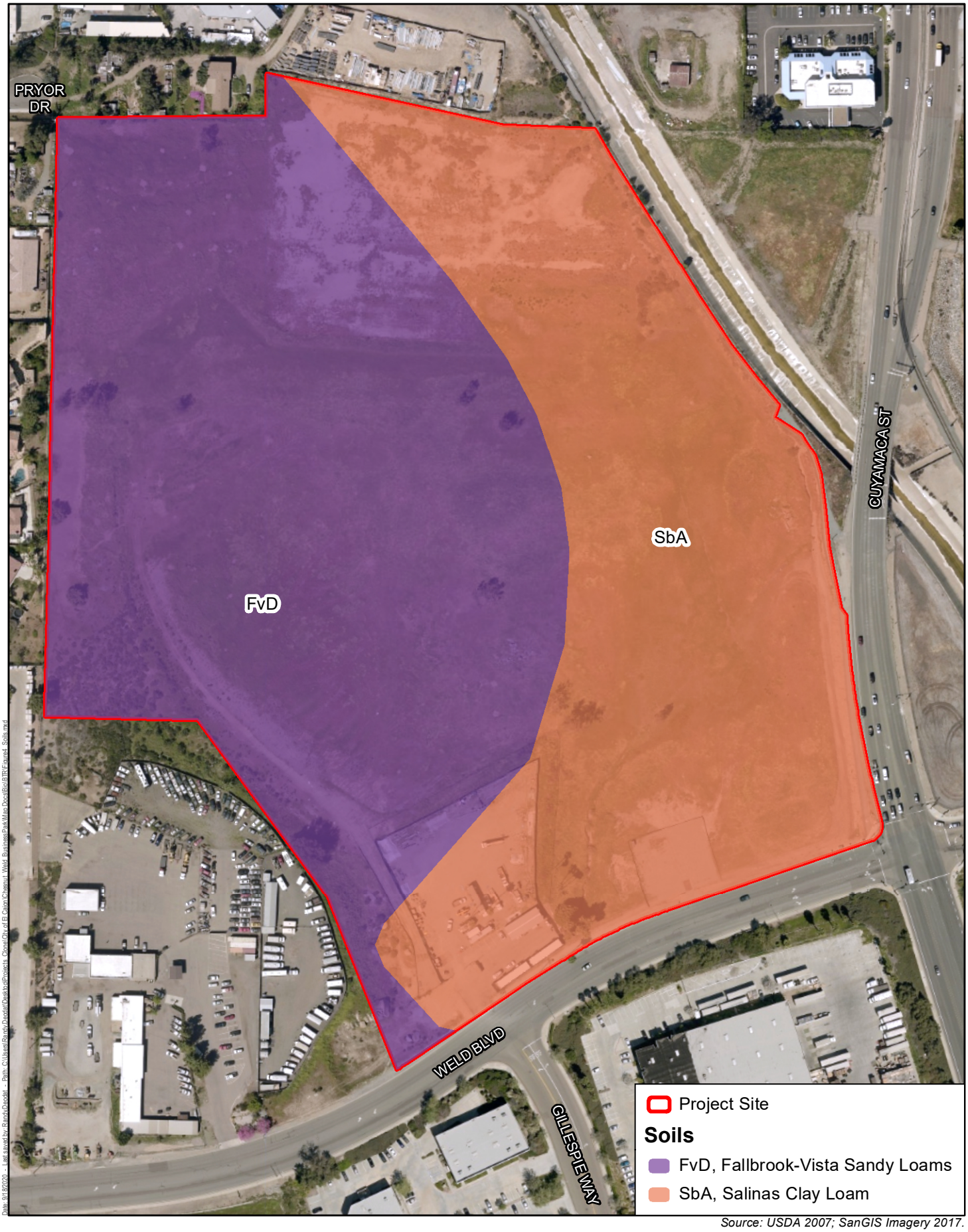
0 500 1,000

Feet

Figure 3

USGS Topographic Map

Weld Boulevard Distribution Center Project



Source: USDA 2007; SanGIS Imagery 2017.

Harris & Associates

N

0 100 200

Feet

Figure 4

Soils

Weld Boulevard Distribution Center Project

Source: USFWS 2020; SanGIS Imagery 2017.

Harris & Associates

N

0 500 1,000

Feet

Figure 5

National Wetlands Inventory Results

Weld Boulevard Distribution Center Project

Source: SanGIS Imagery 2017.

Harris & Associates

N

0 100 200

Feet

Figure 6

Biological Resources

Weld Boulevard Distribution Center Project

Date: 12/18/2020 – Last saved by: Randy Diedat – Path: C:\Users\Randy Diedat\Desktop\Projects_Clone\City of El Cajon\Chaparral_Weld_Business Park\Map Docs\Bio\Permitting_ARD\Figure7_WatershedHydrology.mxd

Source: USFWS 2020; SanGIS Imagery 2017.

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Figure 7

Watershed Hydrology

Weld Boulevard Distribution Center Project

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Figure 8

Aquatic Resources Ordinary High Water Mark for the Weld Boulevard Distribution Center Project

Legend

- Project Site
- Reference Points
- Culverts
- Wetland Sampling Points
- Non-Wetland Sampling Point
- Upland Sampling Points
- Asphalt Channel
- Surface Sheet Flow - No Indicators

Wetlands

- Disturbed Emergent Wetland (0.016 acre)

Other Waters

- Earthen Channel (0.026 acre)
- Asphalt Channel (0.007 acre)

N

0 100 200

Feet

Coordinate System: NAD 1983 California State Plane Zone 6
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: No Coordinate System
1 inch = 250 feet

Created on September 30th, 2020
Revised on November 3rd, 2020

Made in accordance with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program, as amended on February 10, 2016, by: Jason Deters, Project Manager Enforcement and Special Projects Unit U.S. Army Corps of Engineers South Pacific Division Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922

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Figure 8a

Aquatic Resources Ordinary High Water Mark for the Weld Boulevard Distribution Center Project

Legend

- Project Site
- Culverts
- Wetland Sampling Point
- Non-Wetland Sampling Points
- Upland Sampling Points
- Surface Sheet Flow - No Indicators

Wetlands

- Disturbed Emergent Wetland (0.016 acre)

Other Waters

- Earthen Channel (0.001 acre)

N

0 20 40

Feet

Coordinate System: NAD 1983 California State Plane Zone 6
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: No Coordinate System
1 inch = 40 feet

Created on September 30th, 2020
Revised on November 3rd, 2020

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Figure 8b

Aquatic Resources Ordinary High Water Mark for the Weld Boulevard Distribution Center Project

Legend

- Project Site
- Non-Wetland Sampling Point
- Upland Sampling Points
- Surface Sheet Flow - No Indicators

Other Waters

- Earthen Channel (0.001 acre)

N

0 10 20

Feet

Coordinate System: NAD 1983 California State Plane Zone 6
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: No Coordinate System
1 inch = 40 feet

Created on September 30th, 2020
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Figure 9

Aquatic Resources
Top-of Bank for Weld Boulevard Distribution Center Project

Legend

- Project Site
- Reference Points
- Culverts
- Upland Sampling Point
- Wetland Sampling Point

Other Waters

- Earthen Channel
- Asphalt Channel
- Asphalt Channel
- Surface Sheet Flow - No Indicators

N

0 100 200
Feet

Coordinate System: NAD 1983 California State Plane Zone 6
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: No Coordinate System
1 inch = 250 feet

Created on September 30th, 2020
Revised on October 30th, 2020

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Sacramento, California 95814-2922

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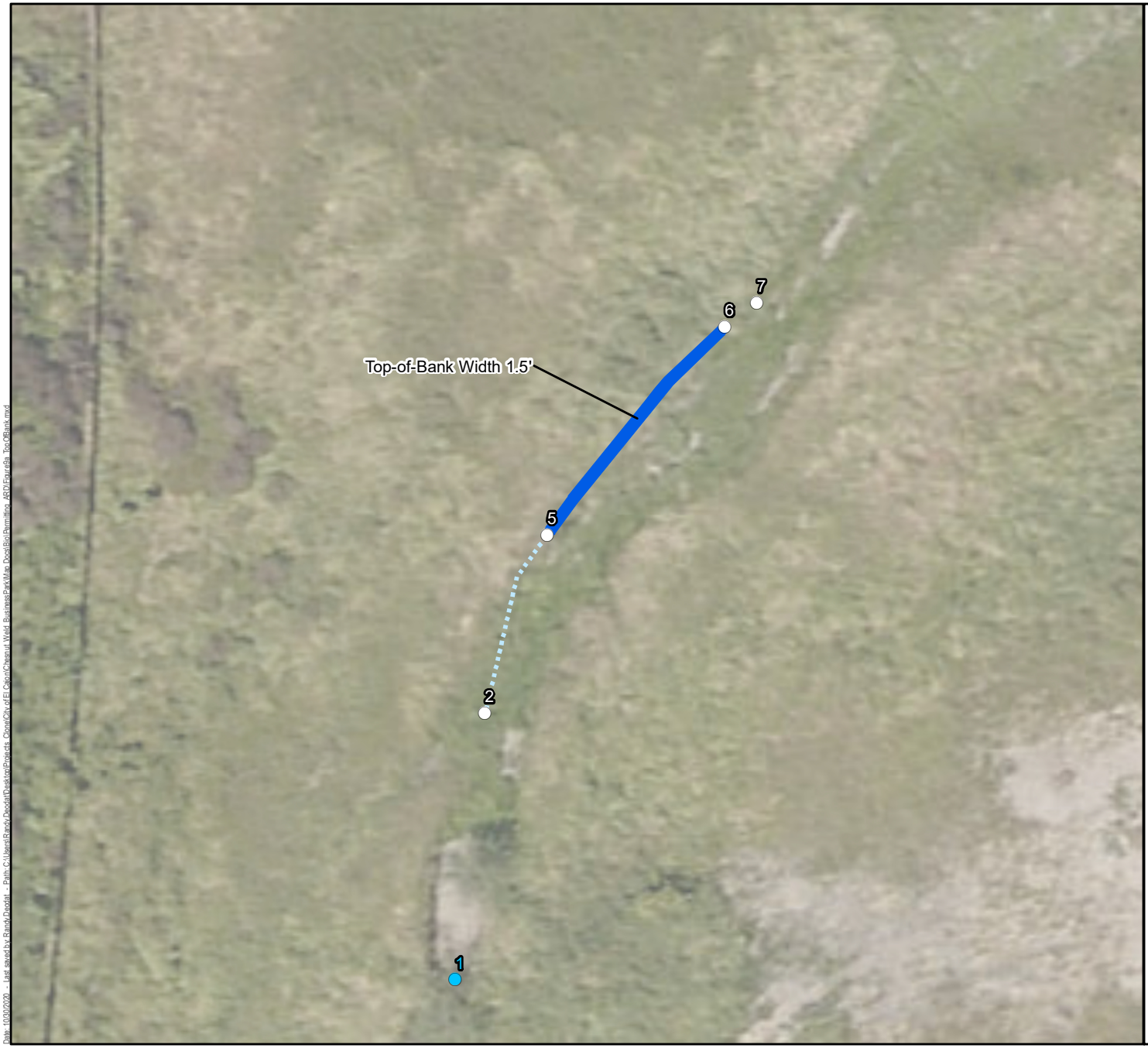

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Figure 9a

Aquatic Resources
Top-of Bank for Weld Boulevard
Distribution Center Project

Legend

- Project Site
- Upland Sampling Point
- Wetland Sampling Point

Other Waters

- Earthen Channel
- Surface Sheet Flow - No Indicators

N

0 10 20
Feet

Coordinate System: NAD 1983 California State Plane Zone 6
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: No Coordinate System
1 inch = 20 feet

Created on September 30th, 2020
Revised on October 30th, 2020

Made in accordance with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program, as amended on February 10, 2016, by: Jason Deters, Project Manager Enforcement and Special Projects Unit U.S. Army Corps of Engineers South Pacific Division Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922

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Figure 9b

Aquatic Resources
Top-of Bank for Weld Boulevard
Distribution Center Project

Legend

- Project Site
- Upland Sampling Point

Other Waters

- Earthen Channel
- Surface Sheet Flow - No Indicators

N

0 10 20
Feet

Coordinate System: NAD 1983 California State Plane Zone 6
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: No Coordinate System
1 inch = 20 feet

Created on September 30th, 2020
Revised on October 30th, 2020

Made in accordance with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program, as amended on February 10, 2016, by: Jason Deters, Project Manager Enforcement and Special Projects Unit U.S. Army Corps of Engineers South Pacific Division Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922

Date: 10/30/2020 - Last saved by: RandyDeodat - Path: C:\Users\RandyDeodat\Desktop\Projects_Cons\City of El Cajon\Chestnut Weld_BusinessPark\Mxd_Docs\Bio\Permitting_AEDFigure9b_TopOfBank.mxd

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Attachment B. Statement of Access

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Statement of Access

The County of San Diego (property owner), allows U.S. Army Corps of Engineers (USACE) personnel to access the project site. The project site is accessible from Interstate 8 by taking Exit 14A to merge onto State Route 125 North. Travel 4.2 miles north on State Route 125 and take Exit 22 onto State Route 52 East. Travel 1.2 miles on State Route 52 and take Exit 17 for Cuyamaca Street. Turn right onto Cuyamaca Street and travel south for 0.2 mile, then turn right onto Weld Boulevard. The project location is on the right side (northern side) of Weld Boulevard. The project site is located north of Weld Boulevard, south of Prospect Avenue, and west of Cuyamaca Street (see Attachment A, Figures; Figure 1, Regional Location, and Figure 2, Project Location).

Anne Baldwin

Anne Baldwin, Project Manager, Real Estate
County of San Diego
Department of Public Works, Airports

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Attachment C. Antecedent Precipitation Tool and NRCS WETS Table Results

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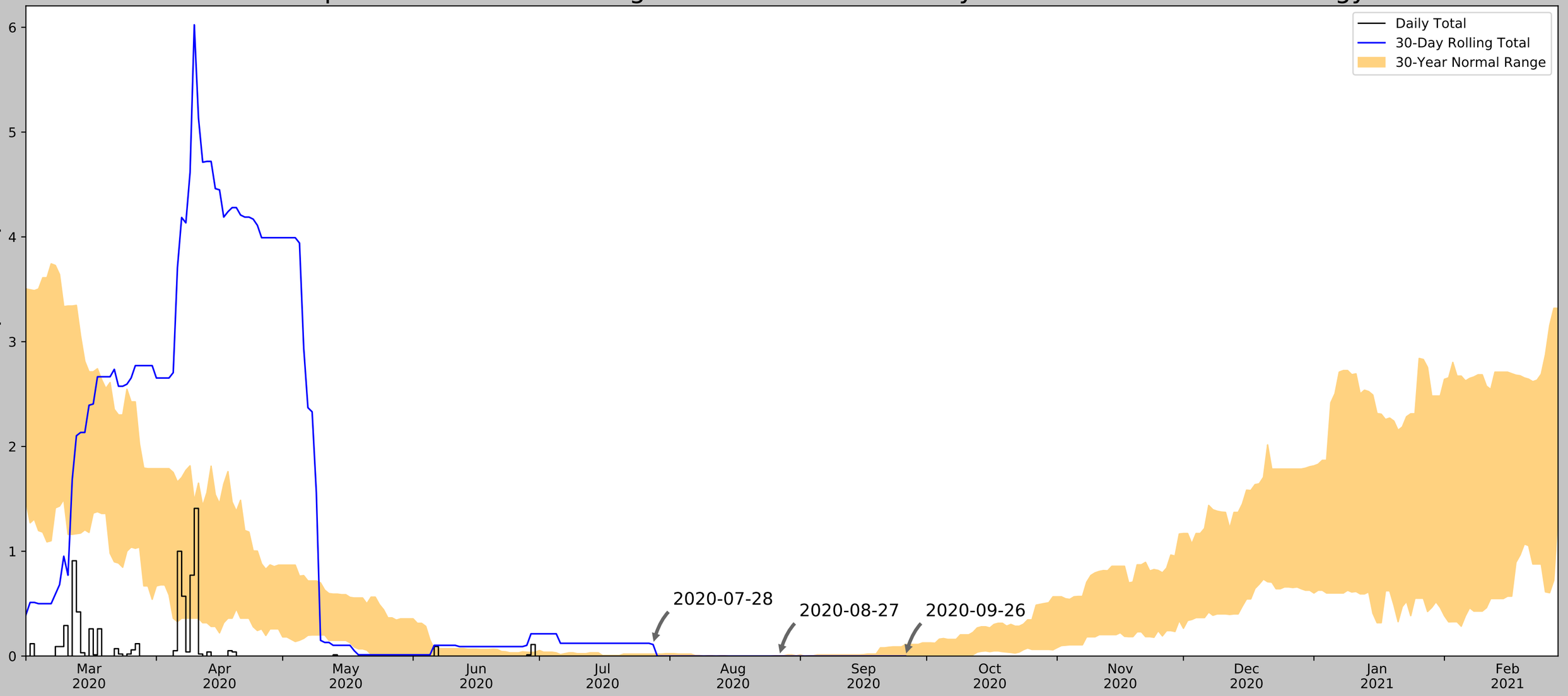
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.829, -116.986
Observation Date	2020-09-26
Elevation (ft)	361.94
Drought Index (PDSI)	Mild wetness (2020-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-26	0.0	0.111417	0.0	Normal	2	3	6
2020-08-27	0.0	0.003543	0.0	Normal	2	2	4
2020-07-28	0.0	0.019685	0.110236	Wet	3	1	3
Result							Normal Conditions - 13

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
SAN DIEGO MONTGOMERY FLD	32.8158, -117.1394	416.995	8.953	55.055	4.522	7843	89
SANTEE 0.7 W	32.8549, -116.9941	425.853	1.85	63.913	0.951	1	0
SANTEE 1.8NW	32.8562, -116.9961	470.144	1.969	108.204	1.099	6	0
EL CAJON 1.5WSW	32.7907, -116.987	727.034	2.647	365.094	2.157	0	1
EL CAJON	32.8006, -116.9281	495.079	3.893	133.139	2.27	3177	0
LA MESA	32.7675, -117.0233	529.856	4.77	167.916	2.947	290	0
LAKESIDE 2 E	32.8536, -116.8947	689.961	5.566	328.021	4.33	35	0

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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

WETS Table

WETS Station: EL CAJON, CA								
Requested years: 1980 - 2019								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	70.0	42.4	56.2	2.39	0.73	2.69	4	0.0
Feb	70.3	44.3	57.3	2.59	1.25	3.08	4	0.0
Mar	72.1	47.7	59.9	2.00	0.69	2.24	4	0.0
Apr	75.4	50.8	63.1	0.69	0.35	0.80	2	0.0
May	76.9	55.6	66.3	0.27	0.00	0.22	1	0.0
Jun	81.7	59.1	70.4	0.06	0.00	0.00	0	0.0
Jul	87.4	63.3	75.3	0.12	0.00	0.05	0	0.0
Aug	89.0	64.6	76.8	0.02	0.00	0.00	0	0.0
Sep	87.6	61.9	74.7	0.14	0.00	0.13	0	0.0
Oct	81.6	55.4	68.5	0.58	0.12	0.49	1	0.0
Nov	75.2	46.8	61.0	1.28	0.54	1.42	2	0.0
Dec	69.2	41.7	55.5	1.88	0.69	2.27	4	0.0
Annual:					7.34	13.23		
Average	78.0	52.8	65.4	-	-	-	-	-
Total	-	-	-	12.04			23	0.0

GROWING SEASON DATES			
Years with missing data:	24 deg = 20	28 deg = 25	32 deg = 21
Years with no occurrence:	24 deg = 20	28 deg = 14	32 deg = 4
Data years used:	24 deg = 20	28 deg = 15	32 deg = 19
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	Insufficient data	Insufficient data
70 percent *	No occurrence	Insufficient data	Insufficient data
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)

Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1979											0.30	0.08	0.38
1980	8.39	7.36	4.01	1.03	0.46	T	0.00	0.00	0.00	0.47	0.00	0.43	22.15
1981	3.27	M1.69	M3.34	0.62	0.15		T	0.00	0.00	0.38	1.57	0.71	11.73
1982	3.31	1.68	6.15	0.89	M0.15	0.00	0.00	0.00	0.60	0.15	5.43		18.36
1983	2.28	M4.67	9.66	1.72	0.13	0.00	0.00	0.09	0.19	M0.18	2.39	1.84	23.15
1984	0.24	0.14	0.00	0.62	0.00	0.00	0.00	T	0.00	0.00	M0.99	5.32	7.31
1985	0.91	0.81	0.38	0.22	M0.10	T	0.00	0.00	0.21	0.11	7.21	1.74	11.69
1986	0.70		3.03	1.06	0.00	0.00	T	0.13	0.86	1.92	1.21	2.39	11.30
1987	1.77	2.04	1.37	0.63	0.06	0.00	T	0.00	0.68	1.60		M2.00	10.15
1988	2.12	1.77	0.14	2.42	T	0.00	0.00	0.00	0.00	0.00	0.46	1.29	8.20

1989	0.13	0.00	0.41	0.00	0.06	0.00	0.00	0.00	0.20	0.41	0.12	0.18	1.51
1990	2.38	1.06	0.56	0.58	0.36	0.91	M0.03	T	0.00	0.21	0.67	0.86	7.62
1991	0.73	1.68	8.53	0.21	0.00	T	0.68	0.01		0.84	0.18	1.94	14.80
1992	1.47	3.81	3.68		0.01		0.07	0.10	0.00		0.00	1.89	11.03
1993	11.43	4.11	M1.69	0.00	0.00	0.58	0.00	0.00	T	0.24	1.72	0.63	20.40
1994	0.98	3.22		0.86	0.02		0.06	0.02		0.08	0.68	0.37	6.29
1995	7.35	2.79	7.46	1.41	0.64	0.18	0.02	0.00	0.00	T	0.19	0.76	20.80
1996		3.21	2.37	0.50	0.02	0.00	0.05	0.00	0.00	M0.90	1.86	1.37	10.28
1997	3.47	0.55	0.00	0.33	T	0.00	0.02	0.00		0.03	1.65		6.05
1998	2.54	10.35	3.63		1.21	0.13					0.82		18.68
1999	1.85	0.62	M0.64	1.27	0.00	0.11	0.00	0.03	0.02	0.00	0.00	0.20	4.74
2000	0.00	M3.65	T	0.00	0.02	0.00	0.00	T	0.00	1.28	0.00	0.01	4.96
2001	4.03	3.47	1.13	1.33	0.00	0.00	0.38	0.00	0.00	0.00	0.50	M0.32	11.16
2002	0.40	T	0.31	0.52	0.00	0.00	0.00	0.00	M0.74	T	2.84	M2.28	7.09
2003	0.00	2.04	M0.36	1.37	0.16	0.07	0.78	0.01	0.00	0.00	2.04	0.59	7.42
2004	0.01	3.47	0.34	M0.12	0.00	0.00	0.00	0.00	0.00	5.22	0.40	3.28	12.84
2005	4.11	M4.10	2.10	M0.79	0.06	0.00	0.28	M0.00	MT	M1.36	M0.15	0.35	13.30
2006	0.62	M1.80	M2.68	1.90	0.72	0.00	1.90	0.10	0.00	M0.01	0.00	M0.95	10.68
2007	0.88	2.14	0.12	0.50	M0.00	0.00	M0.00	M0.35	MT	MT	0.80	1.91	6.70
2008	4.41	M2.20	M0.25	0.00	M0.41	0.00	0.00	0.00	0.00	0.00	2.00	5.38	14.65
2009	0.02	3.54	0.24	0.10	0.00	0.12	0.00	0.00	0.00	0.01	0.70	3.01	7.74
2010	4.59	M1.87	0.90	M1.04	0.10	0.00	0.00	0.00	0.28	2.54	1.27	7.85	20.44
2011	0.74	3.80	2.07	M0.49	0.43	0.05	0.00	0.00	0.10	0.44	M3.36	0.98	12.46
2012	0.58	1.56	2.14	1.54	0.08	0.00	0.00	0.01	0.00	0.43	0.42	2.61	9.37
2013	1.69	1.10	1.35	0.07	0.68	0.00	0.00	0.00	0.00	0.77	0.51	0.66	6.83
2014	0.14	1.07	0.79	0.60	0.00	0.00	0.00	0.29	0.00	0.01	0.50	2.84	6.24
2015	0.62	0.42	1.05	0.15	1.13	0.20	0.57	0.01	0.42	0.75	0.98	1.45	7.75
2016	4.81	0.12	0.96	0.69	0.67	0.00	0.00	0.00	0.49	0.15	1.03	3.76	12.68
2017	4.80	4.60	0.16	0.00	1.37	0.00	0.00	0.00	0.03	0.00	0.00	0.05	11.01
2018	2.22	0.79	1.31	0.08	0.30	0.00	0.00	0.00	0.00	0.54	1.16	3.20	9.60
2019	3.23	7.00	1.06	0.13	1.07	0.00	0.00	0.00	0.06	0.00	3.94	4.30	20.79
2020	0.40	0.62	3.61	4.30	0.03	0.25	0.00	0.00	0.00	M0.00			9.21

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

Data missing for all days

in a month or year is blank.
Creation date: 2016-07-22

Attachment D. Hydrology Report

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TORY R. WALKER ENGINEERING
RELIABLE SOLUTIONS IN WATER RESOURCES

TECHNICAL MEMORANDUM

TO: Christina Schaefer
815 Madison Ave
San Diego, CA 92116

FROM: Tory Walker, PE, CFM, LEED GA

DATE: October 30, 2020

RE: Hydrologic Analyses for Weld Distribution Center

INTRODUCTION

This Technical Memorandum summarizes the results of two hydrologic analyses for the property located northwest of the intersection of Weld Boulevard and Cuyamaca Street, in El Cajon, CA.

We used the Environmental Protection Agency (EPA) Storm Water Management Model (SWMM) to estimate runoff durations from existing storm drain lines discharging onto the property. The goal of the analysis is to determine whether the duration of runon flow during an average year, is significant enough to sustain a potential wetland area.

We also used preliminary rational method hydrology calculations, coupled with NOAA Atlas 14 rainfall depths, to determine approximate runon rates from existing storm drain lines discharging onto the property.

SWMM MODEL DEVELOPMENT

The input data required to develop SWMM analyses include rainfall and watershed characteristics. The Santee gauge from the Project Clean Water website is used for this study, since it is the most representative of the site precipitation due to elevation and proximity to the project site.

Evaporation for the site is modeled using average monthly values from the County of San Diego BMP Design Manual. The tributary areas were modeled with Type C hydrologic soil, as determined from the Engineer of Work's hydrologic analysis. The selection of other model parameters is based on the BMPDM and the HMP Review and Analysis, adopted by the San Diego County Copermittees.

HYDROLOGY CALCULATION DEVELOPMENT

The information required to calculate the 2 -year, 5-year and 10-year return period runon rates includes the preliminary offsite hydrology results, and the statistical rainfall depth for these events. The results of this calculation are inherently conservative, as the methodology is typically used for design purposes only.

ANALYSIS SUMMARY

Duration Analysis

The mark for the duration analysis is set by the California State Water Resources Control Board's (Water Board) Technical Advisory Team (TAT) for California Wetland and Riparian Area Protection Policy. In the TAT's Technical Memorandum No. 4, dated September 1, 2012, the TAT recommends the Water Board adopt the US Army Corps of Engineers' 14-day inundation standard, as a duration threshold in delineating wetland areas. By utilizing 36 years of rainfall data in our longer-term hydrological study, the USEPA's criteria for determining conditions for a typical year, is also satisfied.

Based on the modeling results, during the average year, runon from the southerly 42-inch storm drain is sustained for approximately 53 hours (2.2 days) and runon from the westerly 18-inch storm drain is sustained for approximately and 50 hours (2.1 days). Neither of these values indicate the duration necessary to meet the definition of a wetland area.

At the request of California State Water Resources Control Board staff, we also provide modeling results for the more extreme 10-year return period runon event. This "once in ten years" runon event will flow for approximately 93 hours (3.9 days). This duration is also below the thresholds that are set by USEPA, and accepted by the SWRCB.

Hydrology Analysis

Based on the conservative methodology discussed in the Introduction, the runon rates to the property are summarized below in Table 1.

Table 1

Return Period	Easterly Drainage (cfs)	Westerly Drainage (cfs)	Central Drainage (cfs)
2	14	6	38
5	18	7	49
10	22	8	58

Tory R Walker, PE, CFM, LEED GA — 10/30/2020 Date

Attachment E. Arid West Wetland Determination and Ordinary High Water Mark Datasheets

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South Wetland and Channel

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Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Weld Distribution Center
Project Number:
Stream: unnamed drainage
Investigator(s): Melissa Tu, Katie Laybourn

Date: 10/27/2020 **Time:** 8:30 am
Town: El Cajon **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details: Sampling Point 7 (south)

Projection: **Datum:** NAD83
Coordinates: 32.83N 116.89W

Potential anthropogenic influences on the channel system:

Stormwater flows from culvert under Weld Boulevard, trash/debris, significant site disturbance (past grading, mowing, mechanical alteration)

Brief site description:

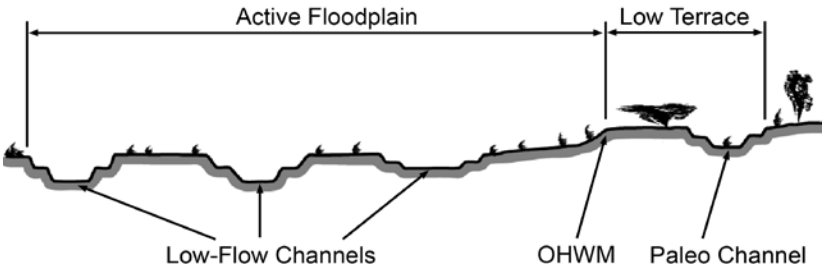
Disturbed area surrounded by non-native grassland

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies

- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

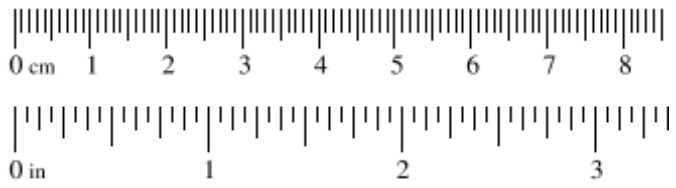


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

Wentworth Size Classes

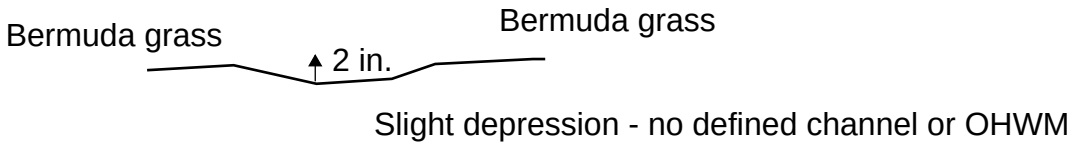
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Sampling Point 7

Project ID: Weld **Cross section ID:** (south) **Date:** 10/27/2020 **Time:** 8:30 am

Cross section drawing:



OHWM

GPS point: South Upland 1

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: None
- ☐ Other: _____

Comments:

Bermuda grass growing across entire area - no defined channel, OHWM, or bed and bank; shallow erosional features present but no evidence of channel or OHWM

Floodplain unit:

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace None

GPS point: South Upland 1

Characteristics of the floodplain unit:

Average sediment texture: medium sandy with small pebbles

Total veg cover: 95 % Tree: _____% Shrub: _____% Herb: 95 % bermuda grass

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: None
- ☐ Other: _____
- ☐ Other: _____

Comments:

See OHWM comments

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Weld Distribution Center
Project Number:
Stream: unnamed drainage
Investigator(s): Melissa Tu, Katie Laybourn

Date: 9/24/2020 **Time:** 11:00 am
Town: El Cajon **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details: Sampling Points 5 & 6 (south channel)

Projection: **Datum:** NAD83
Coordinates: 32.83N 116.89W

Potential anthropogenic influences on the channel system:

Stormwater flows from culvert under Weld Boulevard, trash/debris in channel

Brief site description:

Disturbed area surrounded by non-native grassland

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
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  Gage number:
  Period of record:
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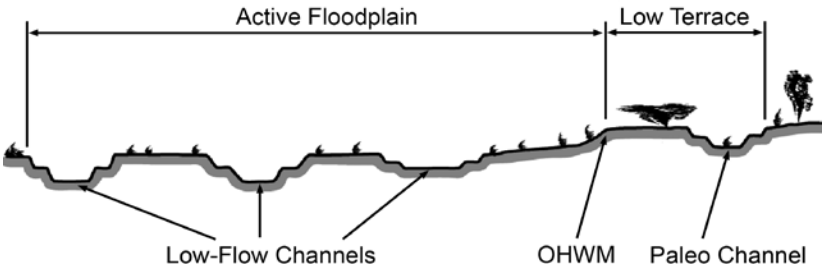
Hydrogeomorphic Floodplain Units



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Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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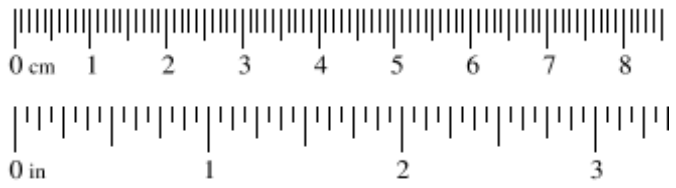
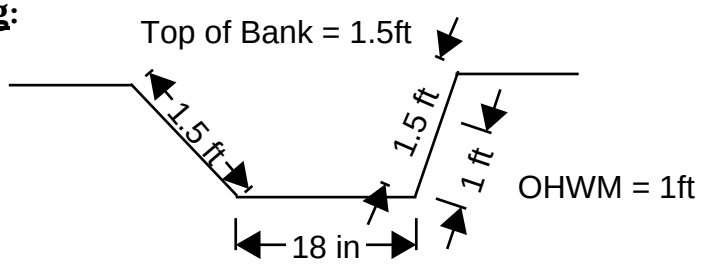
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Sampling Points 5 & 6

Project ID: Weld **Cross section ID:** (south channel) **Date:** 9/24/2020 **Time:** 11:00 am

Cross section drawing:



OHWM

GPS point: South Channel 1

Indicators:

- [X] Change in average sediment texture
- [ ] Change in vegetation species
- [X] Change in vegetation cover
- [X] Break in bank slope
- [X] Other: Sediment color change (light) at OHWM
- [ ] Other: _____

Comments:

Non-vegetated channel; Top of Bank with non-native grassland; Dallas grass and Bermuda grass dominant

Floodplain unit:

[X] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: South Channel 1

Characteristics of the floodplain unit:

Average sediment texture: medium sandy

Total veg cover: 0 % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- [X] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [X] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Bermuda grass on top of bank growing over non-veg channel

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/15/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 1 (south)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

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

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Salinas clay loam NWI classification: None

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

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

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

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

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

Remarks: This data point represents the southern end of the wetland. The wetland is fed from a culvert under Weld Blvd.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 1 m)			
1. Tamarisk (*Tamarix* sp.)	100	Yes	FAC
2.			
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. Bermudagrass (*Cynodon dactylon*)	15	Yes	UPL
2. Tall flatsedge (Cyperus eragrostis)	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks: The majority of the vegetation in the wetland channel is dominated by tall flatsedge and tamarisk. Non-native fan-palms occur at southend of the wetland near the culvert outlet.

SOIL

Sampling Point: 1 (south)

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
								Surface water - no pit dug

[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** X **No** _____

Remarks:

Surface water and algae on surface of soils

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 0

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

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

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

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

Remarks:

Surface water was present at this location and within other portions of the wetland. Rock occurs under the channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/15/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 2 (south)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

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

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Salinas clay loam NWI classification: None

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. Tall flatsedge (Cyperus eragrostis)	20	Yes	FACW
2. Bermudagrass (*Cynodon dactylon*)	50	Yes	UPL
3. Dallisgrass (*Paspalum dilatatum*)	15		UPL
4.			
5.			
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 20	x 2 = 40
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species 65	x 5 = 325
Column Totals: 85 (A)	365 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 2 (south)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 3/2	97	5 YR 5/8	3	RM	M	Sandy loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- X 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: rock/hard substrate

Depth (inches): 10

Hydric Soil Present? Yes X No ___

Remarks:

Uniform with iron oxide redox matrix

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Non-vegetated channel - grasses growing on sides and top of channel

East Channel

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Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Weld Distribution Center
Project Number:
Stream: unnamed drainage
Investigator(s): Melissa Tu, Katie Laybourn

Date: 9/15/2020
Town: El Cajon
Photo begin file#:

Time: 11:15am
State: CA
Photo end file#:

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details: Sampling Points 3 & 4

Projection: **Datum:** NAD83
Coordinates: 32.83 N 116.89 W

Potential anthropogenic influences on the channel system:

Highly-disturbed site, consistently mowed vegetation, trash, and transient activity
Central portion of the non-vegetated channel lined with concrete, now eroded and degraded

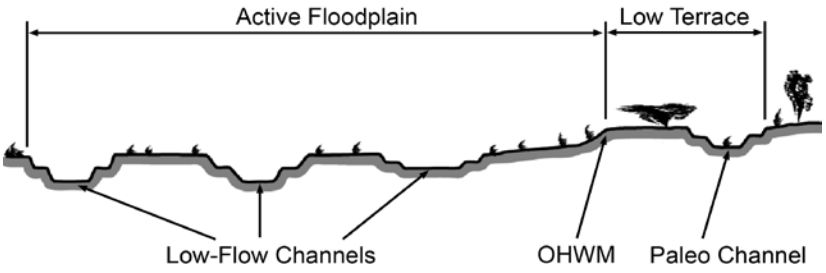
Brief site description:

Highly-disturbed site, consistently mowed vegetation, trash, and transient activity

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [X] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

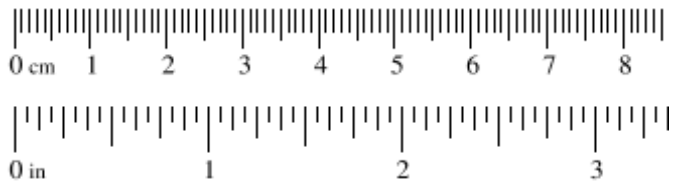


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

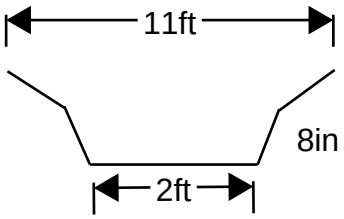
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: Weld **Cross section ID:** Sampling Point 3 **Date:** 9/15/2020 **Time:** 11:15am

Cross section drawing:



Top of Bank = 11ft
OHWM = 2ft

OHWM

GPS point: Sampling Point 3

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Non-vegetated channel

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: Sampling Point 3

Characteristics of the floodplain unit:

Average sediment texture: sandy with large cobble
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: 10 %
Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

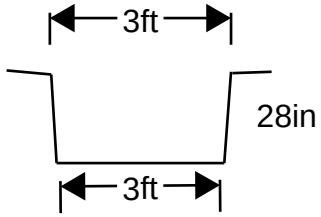
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

The small area of vegetation in the channel is dominated by a non-native annual, spotted spurge (*Euphorbia maculata*).

Project ID: Weld **Cross section ID:** Sampling Point 4 **Date:** 9/15/2020 **Time:** 11:30am

Cross section drawing:



Top of Bank = 3ft
OHWM = 3ft

OHWM

GPS point: Sampling Point 4

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Non-vegetated channel

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: Sampling Point 4

Characteristics of the floodplain unit:

Average sediment texture: sandy with large rocks
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: 10 %
Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Vegetation is dominated by non-native annual - spotted spurge (*Euphorbia maculata*).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/15/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 3 (east)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

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

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Salinas clay loam NWI classification: None

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

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

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

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

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

Remarks:

Non-vegetated channel, connects to Forester Creek through a culvert on north end of channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. Spanish lotus (*Acmispon americanus* var. *americanus*)	40	Yes	UPL
2. Horseweed (Erigeron *canadensis*)	5		UPL
3. Wild oats (*Avena* sp.)	5		UPL
4.			
5.			
6.			
7.			
8.			
	50 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species 50	x 5 =	250
Column Totals: 50 (A)		250 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 3 (east)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5 YR 5/2	100					Sand	multi-colored sand

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock/hard substrate

Depth (inches): 2

Hydric Soil Present? Yes _____ No X

Remarks:

Sandy soils with medium and large cobble

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)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Defined bed and bank, erosion, see OHWM data form

West Channel and Upland

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Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Weld Distribution Center
Project Number:
Stream: unnamed drainage
Investigator(s): Melissa Tu, Katie Laybourn

Date: 10/27/2020 **Time:** 9:15 am
Town: El Cajon **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details: Sampling Point 7

Projection: **Datum:** NAD83
Coordinates: 32.83N 116.89W

Potential anthropogenic influences on the channel system:

Stormwater flows from box culvert on slope west of project site, trash/debris, significant site disturbance (past grading, asphalt, mechanical alteration)

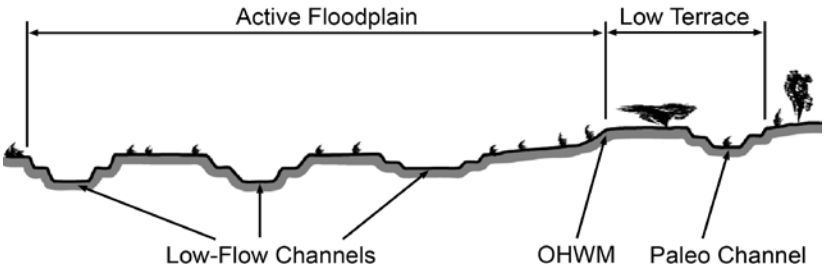
Brief site description:

Disturbed area surrounded by non-native grassland and eucalyptus woodland

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

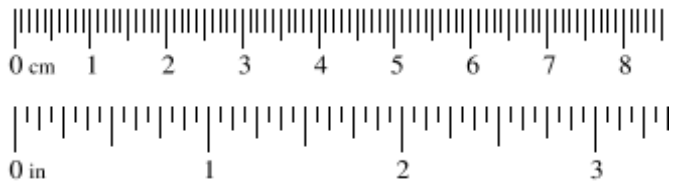


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

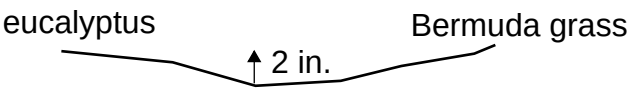
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: Weld **Cross section ID:** Sampling Point 7 **Date:** 10/27/2020 **Time:** 9:15 am

Cross section drawing:



Slight depression - no defined channel or OHWM

OHWM

GPS point: Sampling Point 7

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: None
- ☐ Other: _____

Comments:

No defined channel, OHWM, or bed and bank; shallow erosional features present but no evidence of channel or OHWM; Bermuda grass growing across entire area; large amounts of grass and leaf debris covering surface; highly disturbed

Floodplain unit:

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace None

GPS point: Sampling Point 7

Characteristics of the floodplain unit:

Average sediment texture: medium sandy with small pebbles

Total veg cover: 95 % Tree: _____% Shrub: _____% Herb: 95 % bermuda grass

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: None
- ☐ Other: _____
- ☐ Other: _____

Comments:

See OHWM comments

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Weld Distribution Center
Project Number:
Stream: unnamed drainage
Investigator(s): Melissa Tu, Katie Laybourn

Date: 10/27/2020 **Time:** 9:15 am
Town: El Cajon **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details: Sampling Point 9

Projection: **Datum:** NAD83
Coordinates: 32.83N 116.89W

Potential anthropogenic influences on the channel system:

Stormwater flows from box culvert on slope west of project site, trash/debris, significant site disturbance (past grading, asphalt, mechanical alteration)

Brief site description:

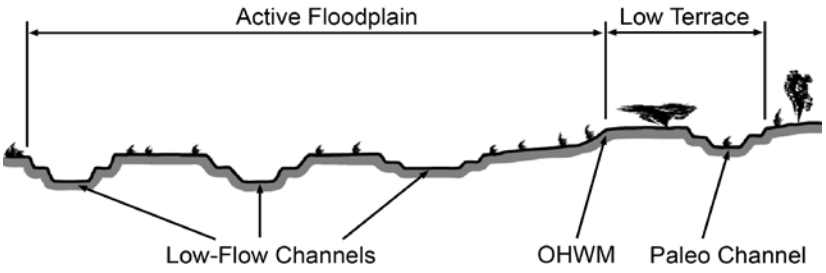
Disturbed area surrounded by non-native grassland and eucalyptus woodland

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies

- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

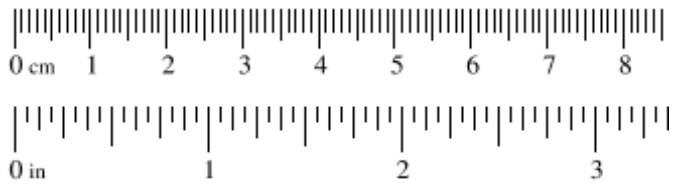


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

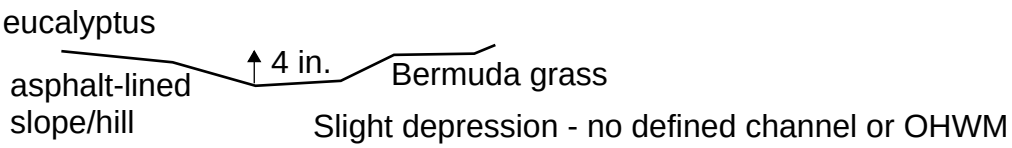
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: Weld **Cross section ID:** Sampling Point 9 **Date:** 10/27/2020 **Time:** 9:15 am

Cross section drawing:



OHWM

GPS point: Sampling Point 9

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover — Bermuda grass on sides of slope
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

No defined channel, OHWM, or bed and bank; shallow erosional feature present but no evidence of channel or OHWM; asphalt on north side of slope and Bermuda grass growing on south side of slope; large amounts of grass and leaf debris covering surface; highly disturbed

Floodplain unit:

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace None

GPS point: Sampling Point 9

Characteristics of the floodplain unit:

Average sediment texture: medium sandy with small pebbles

Total veg cover: 20 % Tree: _____% Shrub: _____% Herb: 20 % bermuda grass

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: None
- ☐ Other: _____
- ☐ Other: _____

Comments:

See OHWM comments

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Weld Distribution Center
Project Number:
Stream: unnamed drainage
Investigator(s): Melissa Tu, Katie Laybourn

Date: 10/27/2020 **Time:** 9:45 am
Town: El Cajon **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details: Sampling Points 10 & 11 (west)

Projection: **Datum:** NAD83
Coordinates: 32.83N 116.89W

Potential anthropogenic influences on the channel system:

Stormwater flows from box culvert on slope west of project site, asphalt and rock chunks, trash/debris, significant site disturbance (past grading, asphalt, mechanical alteration)

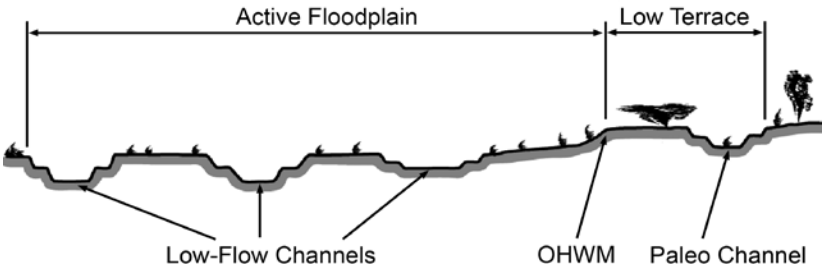
Brief site description:

Disturbed area surrounded by non-native grassland and eucalyptus woodland

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

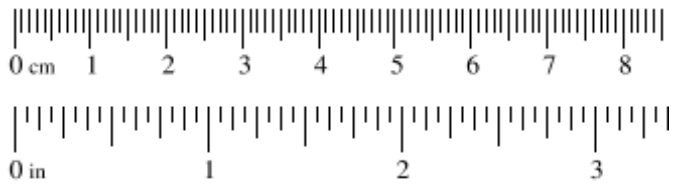


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

Wentworth Size Classes

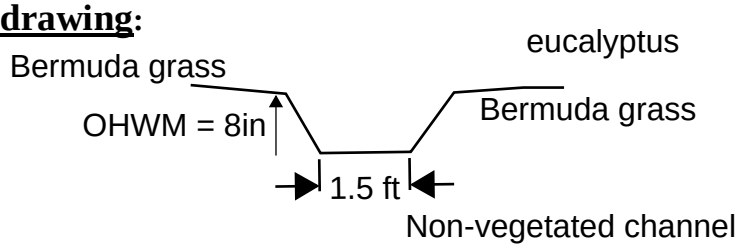
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Sampling Points

Project ID: Weld **Cross section ID:** 10 & 11 (west) **Date:** 10/27/2020 **Time:** 9:45 am

Cross section drawing:



OHWM

GPS point: Sampling Points 10 & 11 (west)

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Defined channel and OHWM (8 inch depth), asphalt and rock chunks on north bank of channel; Bermuda grass growing at top of banks; large amounts of grass and leaf debris in channel; highly disturbed

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: Sampling Points 10 & 11 (west)

Characteristics of the floodplain unit:

Average sediment texture: medium sandy with small pebbles

Total veg cover: 5 % Tree: _____% Shrub: _____% Herb: 5 % bermuda grass

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

See OHWM comments

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/24/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 8 (West)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Nuisance flow Local relief (concave, convex, none): convex Slope (%): 10%

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Fallbrook-Vista sandy loam NWI classification: None

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

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

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

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

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

Remarks:

overflow area for concrete stormwater dissipater in residential development to the west; small area of wetland vegetation from periodic overflow of the dissipater; large volume of leaf and grass litter throughout the area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. Umbrella plant (*Cyperus involucratus*)	35	Yes	FACW
2. Tall flatsedge (*Cyperus eragrostis*)	25	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	55 = Total Cover		
Woody Vine Stratum (Plot size: 1 m)			
1. Himalayan blackberry (*Rubus armeniacus*)	5	Yes	FAC
2.			
	100 = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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 _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Umbrella plant (non-native), Himalayan blackberry (non-native)

SOIL

Sampling Point: 8 (West)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10 YR 2/1	100	N/A				Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock/hard substrate

Depth (inches): 7

Hydric Soil Present? Yes _____ No X

Remarks:

uniform soils

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Directly east of concrete dissipater - in overflow area during large storm events

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 10/27/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 10 (west)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): 5%

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Fallbrook-Vista sandy loam NWI classification: None

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

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

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

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

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

Remarks:

erosional channel due to stormwater flows from concrete stormwater dissipater in residential development to the west; large volume of leaf and grass litter throughout the area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Red gum (*Eucalyptus camaldulensis*)	10	Yes	UPL
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 1 m)			
1. Bermuda grass (*Cynodon dactylon*)	25	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species 35	x 5 =	175
Column Totals: 35 (A)		175 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

asphalt and rock chunks on north bank of channel; Bermuda grass growing at top of banks; large amounts of grass and leaf debris in channel; highly disturbed

SOIL

Sampling Point: 10 (west)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10 YR 2/1	100	N/A				Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock/hard substrate

Depth (inches): 2

Hydric Soil Present? Yes ____ No X

Remarks:

uniform soils

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)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

East of concrete dissipater - flows from large storm events created erosional features; asphalt on north side of channel may influence erosion

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Central Areas

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/24/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 13 (central)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

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

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Salinas clay loam NWI classification: None

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. *Prostrate knotweed (Polygonum aviculare)*	30	X	FAC
2. Toad rush (*Juncus bufonius*)	40	X	FACW
3. Alkali heath (*Frankenia salina*)	15		FACW
4. Stinkwort (*Dittrichia graveolens*)	10		NI - UPL
5. Soft brome (*Bromus hordeaceus*)	5		FACU
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	115 = Total Cover		

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 13 (central)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5 YR 3/2	100	N/A				Loam	small pebbles

[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: rock/hard substrate

Depth (inches): 4

Hydric Soil Present? Yes ____ No X

Remarks:

uniform soils

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Surface soil cracks around south edge of basin

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/24/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: Central 1-2

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

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

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Salinas clay loam NWI classification: None

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

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

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

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

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

Remarks:

highly disturbed, thin soils

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. Rabbit's foot grass (*Polypogon monspeliensis*)	60	X	FACW
2. *Prostrate knotweed (Polygonum aviculare)*	15	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	100 = Total Cover		

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

rocky/pebbles in soils

SOIL

Sampling Point: _____

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	10 YR 3/2	100	N/A				Loam	small pebbles

[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: rock/hard substrate

Depth (inches): 1

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

Remarks:

uniform soils; highly disturbed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

No surface soil cracks higher elevation in center of basin than at edges

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/24/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 15 (central)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

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

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Salinas clay loam NWI classification: None

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

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

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

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

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

Remarks:

highly disturbed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. *Polygonum aviculare*	45	X	FACW
2. Rabbit's foot grass (*Polypogon monspeliensis*)	35	X	FAC
3. *Frankenia salina*	20		FACW
4. *Festuca perennis*	5		UPL
5. *Bromus hordeaceus*	10		FACU
6.			
7.			
8.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	120 = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

rocky/pebbles in soils

SOIL

Sampling Point: 15 (central)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5 YR 3/2	100	N/A				Clay loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock/hard substrate

Depth (inches): 7

Hydric Soil Present? Yes ____ No X

Remarks:

uniform soils; highly disturbed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Weld Distribution Center City/County: El Cajon, County of SD Sampling Date: 9/24/2020

Applicant/Owner: Chesnut Properties State: CA Sampling Point: 16 (central)

Investigator(s): Melissa Tu, Katie Laybourn Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C - Mediterranean California Lat: 32.83 N Long: 116.89 W Datum: NAD83

Soil Map Unit Name: Salinas clay loam NWI classification: None

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

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

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

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

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

Remarks:

highly disturbed

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1 m)			
1. Rabbit's foot grass (*Polypogon monspeliensis*)	40	X	FAC
2. Toad rush (*Juncus bufonius*)	20	X	FACW
3. *Polygonum aviculare*	10		FACW
4.			
5.			
6.			
7.			
8.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	100 = Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 16 (central)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5 YR 3/3	100	N/A				Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock/hard substrate

Depth (inches): 4

Hydric Soil Present? Yes ____ No X

Remarks:

uniform soils; highly disturbed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Attachment F. Photographic Log

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Source: SanGIS Imagery 2017.

Harris & Associates

N

0 100 200

Feet

Attachment F

Photographic Log Locations

Weld Boulevard Distribution Center Project

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Source: SanGIS Imagery 2017.

Harris & Associates

N

0 10 20

Feet

Attachment F1

Photographic Log Locations

Weld Boulevard Distribution Center Project

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Non-Vegetated Channel (East)

Photograph 1: (32.827777, 116.984444) South-facing view of the southern portion of the 2-foot wide non-vegetated earthen bottom channel and 2-foot wide stormwater culvert under Weld Boulevard.

Photograph 2: (32.827777, 116.984444) Southeast-facing view of the 2-foot wide non-vegetated earthen bottom channel with Cuyamaca Street to the east. This photo shows where sampling point 3 was taken to determine the presence of OHWM and defined non-wetland water indicators (Figure 8, Aquatic Resources Ordinary High Water Mark for the Weld Boulevard Distribution Center Project).

Photograph 3: (32.827777, 116.984444) Southeast-facing view of the 2-foot wide non-vegetated earthen bottom channel.

Photograph 4: (32.827777, 116.984444) South-facing view of the asphalt impoundment in the central portion of the non-vegetated channel.

Photograph 5: (32.827777, 116.984444) South-facing view of the degraded and eroded asphalt impoundment in the central portion of the non-vegetated channel.

Photograph 6: (32.827777, 116.984444) South-facing view of the degraded and eroded asphalt impoundment in the central portion of the non-vegetated channel.

Photograph 7: (32.827777, 116.984444) South-facing view of the northern portion of the non-vegetated channel where it transitions from the asphalt impoundment portion back to earthen-bottom channel.

Photograph 8: (32.827777, 116.984444) North-facing view of the northern portion of the non-vegetated earthen-bottom channel and 4-foot wide culvert that connects to Forester Creek to the northeast of the project site. This photo shows where sampling point 4 was taken to determine the presence of OHWM and defined non-wetland water indicators (Figure 8).

Disturbed Emergent Wetland

Photograph 9: (32.827777, 116.984444) Southwest-facing view of the disturbed emergent wetland with tamarisk (*Tamarix* sp.) and tall flatsedge (*Cyperus eragrostis*) within the wetland. The stormwater culvert under Weld Boulevard, where the wetland begins, is on the north side of Weld Boulevard surrounded by date palms (*Phoenix dactylifera*) and Mexican fan palms (*Washingtonia robusta*).

Photograph 10: (32.827777, 116.984444) Southwest-facing view of the disturbed emergent wetland with tamarisk and broom baccharis (*Baccharis sarothroides*) within the wetland.

Photograph 11: (32.827777, 116.984444) Southeast-facing view of the disturbed emergent wetland with tamarisk and tall flatsedge within the wetland.

Photograph 12: (32.827777, 116.984444) East-facing view of the disturbed emergent wetland with tamarisk and tall flatsedge within the wetland**.** This photo shows where sampling point 1 was taken to determine the presence of wetland indicators (Figure 8).

Photograph 13: (32.827777, 116.984444) Southwest-facing view of the disturbed emergent wetland with tamarisk and tall flatsedge within the wetland.

Photograph 14: (32.827777, 116.984444) South-facing view of the disturbed emergent wetland with standing water, algae, tamarisk and tall flatsedge within the wetland.

Non-Vegetated Channel (South)

Photograph 15: (32.827777, 116.984444) North-facing view of the non-vegetated channel in the southern portion of the project site. The channel is difficult to see underneath overgrown non-native grasses. This photo shows where sampling point 5 was taken to determine the presence of OHWM or defined non-wetland water indicators (Figure 8).

Photograph 16: (32.827777, 116.984444) Northeast-facing view of the non-vegetated channel in the southern portion of the project site. The channel is difficult to see underneath overgrown non-native grasses. The channel ends to the left (west) of the date palm in the upper portion of the photograph. This photo shows where sampling point 6 was taken to determine the presence of OHWM or defined non-wetland water indicators (Figure 8).

Upland North of Non-Vegetated Channel (South)

Photograph 17: (32.827777, 116.984444) Northeast-facing view of the upland non-native grassland area north of the southern non-vegetated channel. This photo shows where sampling point 7 was taken to determine the presence of OHWM or defined non-wetland water indicators (Figure 8). No OHWM or defined non-wetland water indicators were observed and the area is completely vegetated with non-native grass species.

Photograph 18: (32.827777, 116.984444) Southwest-facing view of the upland non-native grassland area north of the southern non-vegetated channel. The south non-vegetated channel ends south of the date palm shown in the upper third of the photo. No OHWM or defined non-wetland water indicators were observed and the area is completely vegetated with non-native grass species.

Emergent Wetland Vegetation and Upland (West)

Photograph 19: (32.827777, 116.984444) West-facing view of the emergent wetland vegetation formed around the concrete stormwater dissipater west of the project site. This photo shows where sampling point 8 was taken to determine the presence of wetland indicators (Figure 8).

Photograph 20: (32.827777, 116.984444) East-facing view of the upland area approximately 5 feet east of the concrete stormwater dissipater and emergent wetland vegetation and approximately 20 feet west of the western non-vegetated channel. This photo shows where sampling point 9 was taken to determine the presence of OHWM or defined non-wetland water indicators (Figure 8). Large chunks of asphalt were observed surrounding a stand of eucalyptus trees directly north of sampling point 9 (in the center of the photo), likely placed there by previous development on the project site.

Non-Vegetated Channel (West)

Photograph 21: (32.827777, 116.984444) West-facing view of the western non-vegetated channel. This photo shows where sampling points 10 and 11 were taken to determine the extent of the channel using the presence of OHWM and defined non-wetland water indicators (Figure 8). Chunks of asphalt and rocks were observed in the bottom and imbedded in the sides of the channel.

Photograph 22: (32.827777, 116.984444) South-facing view of the visible OHWM on the south bank wall of the western non-vegetated channel (Figure 8, sampling point 10). Chunks of asphalt and rocks imbedded in the sides of the channel are pictured in the center of the photo.

Upland East of Non-Vegetated Channel (West)

Photograph 23: (32.827777, 116.984444) East-facing view of the end of the western non-vegetated channel where it transitions to the upland area east of the channel (Figure 8, sampling point 11). No OHWM or defined non-wetland water indicators were observed and the area is completely vegetated with non-native grass species.

Photograph 24: (32.827777, 116.984444) East-facing view of the upland area east of the western non-vegetated channel. This photo shows where sampling point 12 was taken to determine the presence of OHWM or defined non-wetland water indicators (Figure 8). No OHWM or defined non-wetland water indicators were observed and the area is completely vegetated with non-native grass species.

Attachment G. Geographic Information Systems Data

Can be provided upon request.

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Attachment H. Aquatic Resources Table

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Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway	Similarity_Situated	Sim_Situated_Aggregated_SPOE	Adjcent_Waters_Sbjct_33USC1344	OHWM_Chg_In_Plant_Community	OHWM_Bed_And_Banks	OHWM_Break_In_Slope	OHWM_Chg_In_Character_Of_Soil	OHWM_Chg_In_Veg_Density_Maturity	OHWM_Chg_In_Sediment_Texture	OHWM_Line_Impressed_On_Bank	OHWM_Destr_Of_Terrestrial_Veg	OHWM_Leaf_Litter_Disturbed	OHWM_Multiple_Flow_Events	OHWM_Scour	OHWM_Sediment_Deposition	OHWM_Sediment_Sorting	OHWM_Shelving	OHWM_Litter_and_Debris_Present	OHWM_Wrack_Line_Present	OHWM_Veg_Matted_Bent_Or_Absent	OHWM_Water_Staining	OHWM_Other	OHWM_Other_Text	Func_I_Sediment_Trapping	Func_II_Nutrient_Recycling	Func_III_Pollutant_Management	Func_IV_Retntn_Attenu_Fld_Wtrs	Func_V_Runoff_Storage	Func_VI_Contribution_of_Flow	Func_VII_Export_Organic_Matter	Func_VIII_Export_Fish	Func_IX
non-vegetated channel (east)	CALIFORNIA	R2	RIVERINE	Linear	612	FOOT	A5	32.82777800	116.98444400	Tributary to Forester Creek	NO	no	no	yes	yes	yes	no	no	NO	no	yes	no	no	NO	no	NO	no	yes	no	yes	no	no		no	no	no	no	no	yes	no	no	no
non-vegetated channel (south)	CALIFORNIA	R4SB	RIVERINE	Linear	37	FOOT	A6BOHWM	32.82777800	116.98444400	None	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO
non-vegetated channel (west)	CALIFORNIA	R4SB	RIVERINE	Linear	13	FOOT	A6BOHWM	32.82777800	116.98444400	None	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO
disturbed emergent wetland	CALIFORNIA	PEM	RIVERINE	Area	0.02	ACRE	A6BWB	32.82777800	116.98444400	None	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	YES	NO		NO	NO	NO	NO	NO	NO	NO	NO	NO

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Appendix B. Plant and Animal Species Observed on the Project Site

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Plant Species Observed on the Project Site

Scientific Name	Common Name
Gymnosperms	
Pinaceae	**Pine Family**
Pinus sp.[1]	Ornamental pine
Angiosperms	
Dicots	
Amaranthaceae	**Amaranth Family**
Amaranthus albus	White tumbleweed
Anacardiaceae	**Cashew or Sumac Family**
Schinus molle[1]	Peruvian peppertree
Apiaceae	**Carrot, Celery, or Parsley Family**
Foeniculum vulgare[1]	Sweet fennel
Asteraceae	**Sunflower Family**
Ambrosia psilostachya	Western ragweed
Ambrosia pumila[2]	San Diego ambrosia
Artemisia californica	California sagebrush
Baccharis sarothroides	Broom baccharis
Centaurea melitensis[1]	Tocalote
Deinandra fasciculata	Clustered tarweed
Dittrichia graveolens[1]	Stinkwort
Encelia farinosa	Brittlebush
Erigeron canadensis	Canada horseweed
Gutierrezia californica	California matchweed
Hedypnois cretica[1]	Crete weed
Helminthotheca echioides[1]	Bristly ox-tongue
Heterotheca grandiflora	Telegraph weed
Holocarpha virgata ssp. *elongata*[3]	Graceful tarplant
Isocoma menziesii	Menzies' goldenbush
Lactuca serriola[1]	Prickly lettuce
Pseudognaphalium californicum	Ladies' tobacco
Sonchus asper[1]	Spiny sow thistle
Stephanomeria diegensis	San Diego wreathplant
Xanthium strumarium	Rough cocklebur
Boraginaceae	**Forget-Me-Not Family**
Heliotropium curassavicum	Salt heliotrope
Brassicaceae	**Mustard Family**
Brassica nigra[1]	Black mustard
Hirschfeldia incana[1]	Shortpod mustard
Raphanus sativus[1]	Jointed charlock
Chenopodiacaceae	**Chenopod Family**
Atriplex semibaccata[1]	Australian saltbush

Plant Species Observed on the Project Site

Scientific Name	Common Name
Salsola tragus[1]	Prickly Russian thistle
Convolvulaceae	**Morning Glory Family**
Cressa truxillensis	Alkali weed
Euphorbiaceae	**Spurge Family**
Croton setiger	Doveweed
Euphorbia maculata[1]	Spotted spurge
Ricinus communis[1]	Castor bean
Fabaceae	**Legume Family**
Acmispon americanus var. *americanus*	Spanish lotus
Acmispon glaber	Deerweed
Frankeniaceae	**Sea Heath Family**
Frankenia salina	Alkali heath
Geraniaceae	**Geranium Family**
Erodium botrys[1]	Big heron's bill
Erodium cicutarium[1]	Coastal heron's bill
Lamiaceae	**Mint Family**
Marrubium vulgare[1]	Horehound
Trichostema lanceolatum	Vinegarweed
Malvaceae	**Mallow Family**
Malvella leprosa	Alkali mallow
Myrsinaceae	**Myrsine Family**
Anagallis arvensis[1]	Scarlet pimpernel
Myrtaceae	**Myrtle Family**
Eucalyptus camaldulensis[1]	Red gum
Oleaceae	**Olive Family**
Fraxinus uhdei[1]	Shamel ash
Olea europaea[1]	Olive
Onagraceae	**Evening-Primrose Family**
Oenothera speciosa[1]	Mexican evening-primrose
Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
Eriogonum gracile	Slender buckwheat
Polygonum aviculare[1]	Prostrate knotweed
Rumex crispus[1]	Curly dock
Plantaginaceae	**Plantain Family**
Plantago erecta	Dotseed plantain
Plumbaginaceae	**Leadwort Family**
Limonium duriusculum[1]	European sea lavender

Plant Species Observed on the Project Site

Scientific Name	Common Name
Rosaceae	**Rose Family**
Rubus armeniacus[1]	Himalayan blackberry
Solanaceae	**Nightshade Family**
Datura wrightii	Jimsonweed
Nicotiana glauca[1]	Tree tobacco
Solanum elaeagnifolium[1]	Horse nettle
Tamaricaceae	**Tamarisk Family**
Tamarix sp.[1]	Salt cedar
Monocots	
Amaryllidaceae	**Amaryllis Family**
Amaryllis belladonna[1]	Belladonna lily
Arecaceae	**Palm Family**
Washingtonia robusta[1]	Mexican fan palm
Cyperaceae	**Sedge Family**
Cyperus eragrostis	Tall flatsedge
Cyperus involucratus[1]	Umbrella plant
Juncaceae	**Rush Family**
Juncus bufonius	Toad rush
Poaceae	**Grass Family**
Arundo donax[1]	Giant reed
Avena sp.[1]	Wild oat
Brachypodium distachyon[1]	Purple false brome
Bromus diandrus[1]	Ripgut grass
Bromus hordeaceus[1]	Soft chess
Bromus madritensis[1]	Foxtail chess
Cortaderia selloana[1]	Selloana pampas grass
Cynodon dactylon[1]	Bermuda grass
Festuca myuros[1]	Rattail fescue
Festuca perennis[1]	Perennial rye grass
Hordeum murinum[1]	Smooth barley
Paspalum dialatium[1]	Dallis grass
Poa sp.[1]	Grass species
Polypogon monspeliensis[1]	Annual beard grass
Stipa sp.	Purple needlegrass

Sources: Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. The Jepson Manual: Vascular Plants of California. 2nd ed. Berkeley, California: University of California Press. January.

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Notes:

[1] Non-native

[2] Federally endangered, County List A, County MSCP Narrow Endemic Species, California Rare Plant Rank 1B.1

[3] California Rare Plant Rank 4

Animal Species Observed on the Project Site

Family	Common Name	Scientific Name
Birds		
Accipitriformes (Hawks, Kites, Eagles, and Allies)		
Accipitridae Hawk, Eagle, Kite, and Allies	Red-shouldered hawk[1]	*Buteo lineatus*
	Red-tailed hawk	*Buteo jamaicensis*
Cathartidae New World Vultures	Turkey vulture[1]	*Cathartes aura*
Caprimulgiformes (Nightjars)		
Trochilidae Hummingbirds	Anna's hummingbird	*Calypte anna*
Falconiformes (Falcons)		
Falconidae Falcons	American kestrel	*Falco sparverius*
Passeriformes (Perching Birds)		
Aegithalidae Bushtits	Bushtit	*Psaltriparus minimus*
Charadriidae Plovers and Lapwings	Killdeer	*Charadrius vociferus*
Columbiformidae Doves	Mourning dove	*Zenaida macroura*
	Eurasian collared dove[2]	*Streptopelia decaocto*
Corvidae Jays, Magpies, and Crows	American crow	*Corvus brachyrhynchos*
Fringillidae Finches	House finch	*Haemorhous mexicanus*
	Lesser goldfinch	*Spinus psaltria*
Hirundinidae Songbirds	Northern rough-winged swallow	*Stelgidopteryx serripennis*
Icteridae Orioles	Hooded oriole	*Icterus cucullatus*
Mimidae Mockingbirds	Northern mockingbird	*Mimus polyglottos*
Passerellidae Passerines	California towhee	*Melozone crissalis*
Parulidae Wood Warblers	Yellow-rumped warbler	*Setophaga coronata*
Tyrannidae Tyrant Flycatchers	Black phoebe	*Sayornis nigricans*
	Say's phoebe	*Sayornis saya*
	Western kingbird	*Tyrannus verticalis*

Animal Species Observed on the Project Site

Family	Common Name	Scientific Name
Invertebrates		
Dictyoptera (Mantises, Termites, Cockroaches)		
Mantodea Mantises	Praying mantis	*Mantis religiosa*
Gastropoda (Snails and Slugs)		
Helicidae Typical Snails	Italian white snail[2]	*Theba pisana*
Hymenoptera (Ants, Bees, Wasps, and Sawflies)		
Apidae Bees	Bumblebee	*Bombus* sp.
	Honey bee[2]	*Apis* sp.
Formicidae Ants	Red harvester ant	*Pogonomyrmex barbatus*
	Western harvester ant	*Pogonomyrmex occidentalis*
Sphecidae Wasps	Great black wasp	*Sphex pensylvanicus*
Lepidoptera (Butterflies)		
Lycaenidae Gossamer-Wing Butterflies	Acmon blue	*Plebejus acmon*
	Gray hairstreak	*Strymon melinus*
Nymphalidae Brush-Footed Butterflies	Common buckeye	*Junonia coenia*
	Monarch butterfly[3]	*Danaus plexippus*
	Mourning cloak	*Nymphalis antiopa*
	Painted lady	*Vanessa cardui*
Papilionidae Parnassians and Swallowtails	Western tiger swallowtail	*Papilio rutulus*
Pieridae True Butterflies	Cabbage white	*Pieris rapae*
	Checkered white	*Pontia protodice*
	Cloudless sulphur	*Phoebis sennae*
Odonata (Dragonflies)		
Libellulidae Dragonflies	Flame skimmer	*Libellula saturata*
Zygoptera Damselflies	Common blue damselfly	*Enallagma cyathigerum*
Mammals		
Rodentia (Rodents)		
Geomyidae Gophers	Botta's pocket gopher	*Thomomys bottae*
Sciuridae Squirrels, Chipmunks, and Marmots	California ground squirrel	*Spermophilus beecheyi*
Lagomorpha (Rabbits)		
Leporidae Rabbits	Desert cottontail rabbit	*Sylvilagus audubonii*

Animal Species Observed on the Project Site

Family	Common Name	Scientific Name
Carnivora (Carnivores)		
Canidae Coyotes, Dogs, and Wolves	Coyote	*Canis latrans*
Reptiles		
Squamata (Lizards and Snakes)		
Iguanidae American Arboreal Lizards, Chuckwallas, and Iguanas	Western fence lizard	*Sceloporus occidentalis*
Phrynosomatidae North American Spiny Lizards	Western side-blotched lizard	*Uta stansburiana elegans*

Notes:

[1] Group 2 species in the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources – Sensitive Animal List

[2] Non-native

[3] Under review for protection under the federal Endangered Species Act

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Appendix C. San Diego Ambrosia Conceptual Mitigation and Translocation Plan

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DRAFT

San Diego Ambrosia
Conceptual Mitigation and Translocation Plan
for the
Weld Boulevard Distribution Center
El Cajon, CA

Prepared for
Chesnut Properties
1155 Camino Del Mar #525
Del Mar, CA 92014

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January 2021

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1.0 Introduction

This Mitigation and Translocation Plan (Plan) for the federally endangered San Diego ambrosia (ambrosia, *Ambrosia pumila*) describes the translocation of two ambrosia patches (most likely from one population) from the Weld Boulevard (Blvd.) Distribution Center Project (Project) impact site to a mitigation (receiver) site. The Plan's purpose is to provide detail on the mitigation and translocation for the impacted ambrosia. It is intended as a guidance tool for the planning, implementation, and maintenance of the mitigation effort for the translocation and conservation of the impacted ambrosia population.

The Project will directly impact one patch of approximately 250 stems of the smaller ambrosia patch, and indirectly affect one patch of over 3,000 stems; both impacts are considered significant under the California Environmental Quality Act (CEQA) and require mitigation by translocating the patches and conserving/managing them in perpetuity.

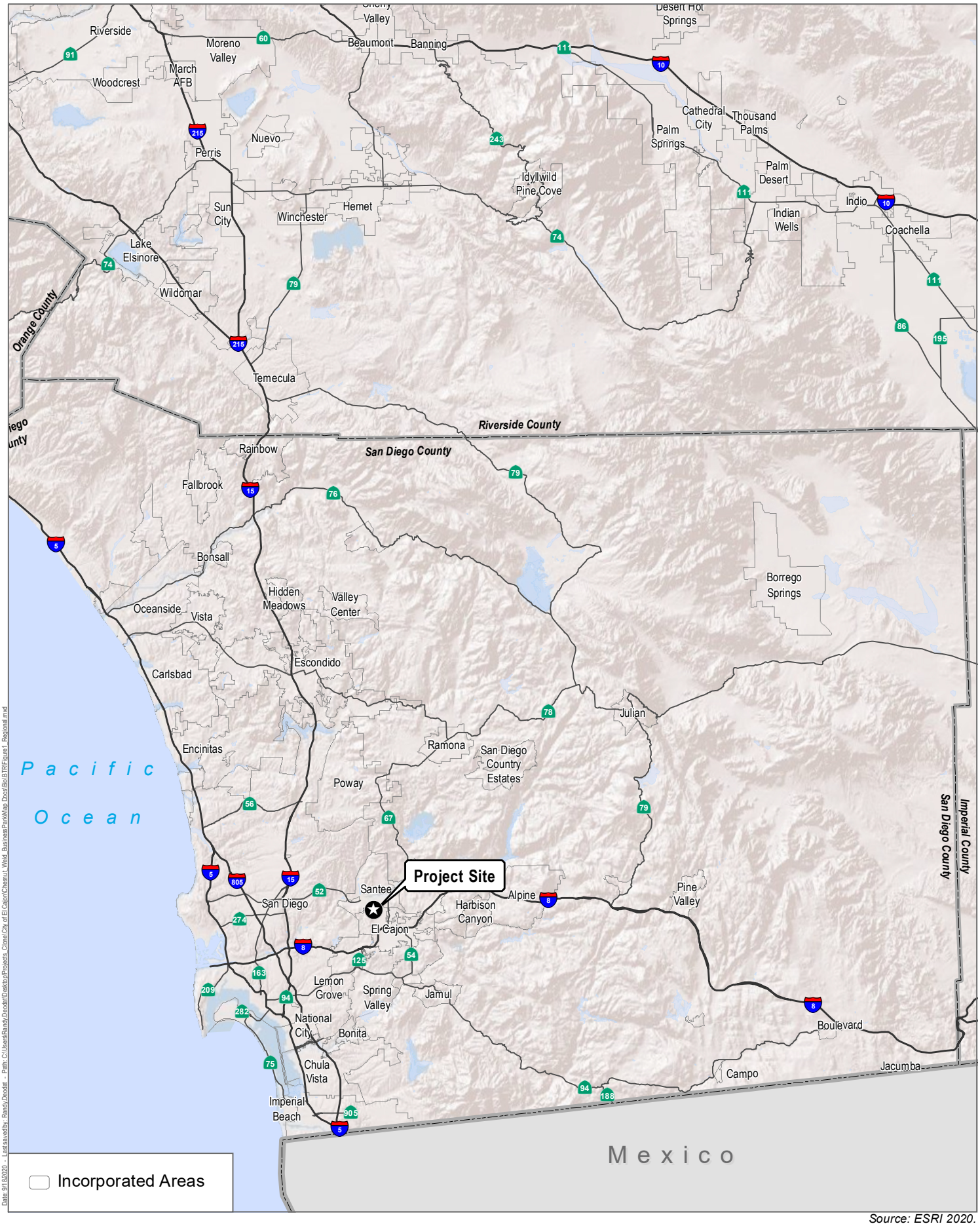
Although the species is federally listed as endangered, consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 or 10(a) of the Federal Endangered Species Act (FESA) is not required because of an exemption for federally listed plants in Section 9 of FESA. Section 9 (2)(B) clarifies that FESA only applies to areas under federal jurisdiction, and states that

> *with respect to any endangered species of plants listed pursuant to section 4 of this Act, it is unlawful for any person subject to the jurisdiction of the United States, to remove and reduce to possession any such species from areas under Federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove cut, dig up, or damage or destroy any such species on any other area in knowing violation of any law or regulation of any state or in the course of any violation of a state criminal trespass law.*

The Weld Blvd. Distribution Center Project would occur on property owned by the County of San Diego under a private land lease, and would, therefore, not occur within any federal jurisdiction or evoke any federal action. Nevertheless, consultation with the USFWS and the County of San Diego occurred for this project, and both entities agreed that the ambrosia population shall be moved to a suitable location where it can be conserved and managed in perpetuity for the continued survival of the species.

1.1 Project Location

The proposed Project is located in the City of El Cajon (City), California (Figure 1), on a property owned by the County of San Diego west of the Gillespie Field Airport. The 31.70-acre site sits north of Weld Boulevard, south of Prospect Avenue, and west of Cuyamaca Street (Figure 2). The project site is part of the Gillespie Field airport located directly east across from Cuyamaca Street and is owned by the County. The City of El Cajon/City of Santee jurisdictional boundary coincides with the northern and northwestern project site property lines. The site is relatively flat, with mounds created by artificial fill, and was previously graded. Prior uses included a golf driving range and cement processing facility in the northern and southwestern portions of the site; however, the majority of the property was never developed. The project site currently consists of disturbed open space (Figure 2).



Source: ESRI 2020.

Harris & Associates

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Figure 1

Regional Location

Weld Boulevard Distribution Center Project

Source: SanGIS Imagery 2017.

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Figure 2

Project Site

Weld Boulevard Distribution Center Project

1.2 Project Description

In compliance with CEQA, an Addendum to the 2009 EIR is being prepared for the project. The 2009 EIR evaluated an industrial park project with approximately 463,000 square feet of industrial development. The project has since changed, and the current project proposes development of an approximately 142,000-square-foot distribution warehouse, office space, parking, and designated product pick-up and drop-off areas. The warehouse square footage would include space for an approximately 17,000-square-foot office to be at the southern end of the warehouse building. The remainder of the project site would be developed with surface parking, which would contain approximately 967 total parking spaces, including designated spaces for associates, support staff, managers, personal vans, and warehouse delivery vans in the northern, eastern, and western outskirts of the project site. The project would also include a van loading area consisting of approximately 72 spaces directly west of the warehouse and van staging area for approximately 72 vans next to the van loading area. There would be 15 dock-high doors (above grade) and a trailer and box truck loading area for approximately 13 vehicles north of the proposed warehouse. Access to the site would be via three driveways on Weld Boulevard—one across from Gillespie Way and two between the intersections of Gillespie Way and Cuyamaca Street.

1.3 Background

Although the project site is not within the County Multiple Species Conservation Program (MSCP) boundary, it is within the Draft MSCP Subarea Plan for the City of El Cajon. The San Diego ambrosia is a covered species under the MSCP. However, the City does not have an approved MSCP Subarea Plan. Therefore, the project is not required to comply with the Draft MSCP Subarea Plan preservation goals or objectives, but the project was designed to limit disturbance of sensitive biological resources to the maximum extent feasible. According to the City of El Cajon's Draft MSCP Subarea Plan currently being prepared, the site is mapped as Disturbed Habitat and is not part of the Pre-Approved Mitigation Area of the County MSCP preserve system (City of El Cajon 2020). Current onsite vegetation communities mapping is shown in Figure 3.

The property contains two patches (presumably of the same population) of San Diego ambrosia (Figure 3). Although the species is listed as federally endangered, the USFWS does not have jurisdiction of this plant because the project is not subject to any federal action, and the California Department of Fish and Wildlife (CDFW) has not listed the plant as endangered or threatened (see Section 1.). Therefore, impacts to the plant were assessed under CEQA and mitigation for direct and indirect impacts to the plant is required by translocation of both patches to an offsite receiver site.

A patch of San Diego ambrosia of approximately 250 stems was reported from the central portion of the project site in 2008 (Helix 2008); this population is identified as Account 62 in the California Natural Diversity Data Base (CNDDB 2012). The plants were observed again during a site survey conducted in 2015, which confirmed the 250-stem population in the center of the project site and an approximately 3,000-stem patch in the southeastern portion of the project site (Atkins 2015). Vince Scheidt (pers. comm. 2020) mapped the larger population in 2018 (unpublished data). In 2020, biological resources surveys were conducted in August when the plants had begun to senesce and a stem count was not possible; however, both patches were confirmed and remapped.

Source: SanGIS Imagery 2017.

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Figure 3

Biological Resources

Weld Boulevard Distribution Center Project

The central patch containing approximately 250 stems would be directly impacted by implementation of the project (Figure 4). Direct impacts to San Diego ambrosia would be significant due to the rarity of the species (only 12 populations are known to remain) and the federally endangered status of the species. Mitigation of these impacts would be conducted by translocating the impacted 250-stem and 3,000-stem patches to a suitable offsite receiver site and conserved and managed in perpetuity. . The following mitigation requirements were described in the EIR for the project:

- An appropriate receiver site shall be selected that contains suitable landscape position (e.g., upper terrace within the floodplain of streams or wetlands or in depressions with seasonally perched groundwater), soils, hydrology, and native vegetation communities for the survival of the species. Receiver site selection shall consider the genetic properties and structure of the translocated population. The receiver site shall be conserved and the translocated population managed in perpetuity.
- Translocation shall occur at the appropriate season when the plant expresses itself early in the season (late winter/early spring) and shall provide enough recovery time for the species at the receiver site throughout the growing season.
- Both the donor and receiver sites shall be surveyed by a qualified biologist familiar with the species and growing conditions before translocation. The donor and receiver site may require pre-translocation preparation in the form of dethatching and site preparation. Translocation shall be overseen by a Restoration Ecologist familiar with the species and implemented by a qualified habitat translocation contractor.
- To maintain the inter-population genetic structure of the species, as many plants and rhizomes within a population or patch shall be harvested and translocated to the extent that the entire patch is salvaged as feasible. Aspect and cardinal directions shall be marked for each salvaged patch at the donor site and retained at the receiver site.
- Translocation may occur directly from the donor site to the receiver site; alternately, donor plants may be stored at a qualified native plant nursery before outplanting at the receiver site.
- The translocated plants shall be monitored and maintained for 5 years post-translocation and managed in perpetuity.

1.4 San Diego Ambrosia Biology

USFWS Status: Endangered (July 2, 2002)
CDFW Status: None
MSCP Status: Covered
Other: County List A; CNPS CRPR 1B.1.

San Diego ambrosia is a clonal species that predominantly spreads through rhizomes. The genetics of two populations in San Diego, Mission Trails and the National Wildlife Refuge, have been studied (Friar 2009), but little is known about the remaining populations, including the genetic structure and relationships in translocated populations. The USFWS listed the San Diego ambrosia as endangered on July 2, 2002 (Federal Register Vol. 67, No. 127). The following species account for *Ambrosia pumila* gives a detailed description and the most current information about the species' habitat, natural history, and genetics, historical distribution, and current status.

Source: SanGIS Imagery 2017.

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Figure 4

San Diego Ambrosia Impacts

Weld Boulevard Distribution Center Project

1.4.1 Habitat

San Diego ambrosia occurs in the upper terraces of creek beds, seasonally dry drainages, open floodplains, and occasionally on the watershed margins of vernal pools. While these wetlands-associated habitats are usually associated with sandy alluvium or riverwash type soils, the species seems to favor uplands dominated by loamy or clay soils as long as it received occasional flooding. Elevations for this species include less than 600 feet in San Diego County. At Mission Trails Regional Park in San Diego, patches of San Diego ambrosia occur upon slope angles ranging from 0 to 18 percent with the vast majority of plants occurring at slope angles of less than 5 percent (Dudek 1997). Onsite, one patch occurs on flat terrain, while the other grows on the slope of a knoll that exceeds a 20 percent slope ratio. San Diego ambrosia can be found in association with a number of plant species including saltgrass (*Distichlis spicata*), California buckwheat (*Eriogonum fasciculatum*), dove weed (*Eremocarpus setigerus*), non-native grasses (*Poaceae*), yellow star-thistle (*Centaurea melitensis*), western ragweed (*Ambrosia psilostachya*), fascicled tarweed (*Hemizonia fasciculata*), and graceful tarplant (*Holocarpha virgata*).

1.4.2 Biology

The leaves of San Diego ambrosia, an herbaceous perennial, are finely divided with short, soft, gray-white hairs. Tiny flowers are present from June to September. Separate male and female flower clusters are found on the same plant. Male flowers are yellow to translucent and are borne in clusters on the end of the flower stalk. Female flowers lack petals, are yellowish-white, and are found in clusters below male flowers at the base of the leaves. Male flowers are downward-facing and located above female flowers.

San Diego ambrosia reproduces by vegetative reproduction through the spread of underground stems (rhizomes). Aerial stems sprout from underground rhizomes in early spring after winter rains. Aerial stems range from 5 to 30 centimeters in height, occasionally reaching 50 centimeters. The aerial stems persist until late summer when the dead stems persist or deteriorate. If the stems deteriorate, this species may be difficult to observe during some parts of the year. In addition, above ground plant matter is dependent on seasonal conditions, and may vary throughout the year.

In addition to self-pollination, wind is also considered to be a major method used for pollination (USFWS 2010), with other pollen carriers, such as crawling insects, less significant. However, because perennial species of ambrosia produce less seeds than annual species, most reproductive resources are allocated to the rhizomes. The major form of dispersal for this species is by means of rhizome extension. “There are no known examples of transplanted or reintroduced occurrences of this species in which sexual reproduction has occurred to sustain either a viable population or exhibit the genetic diversity found in a naturally occurring population” (USFWS 2002). It appears that the species favors vegetative reproduction through rhizomes over sexual reproduction, potentially as a response to the poor genetic variability of the species (McGlaughlin and Friar 2007). Sexual reproduction and seed set are not considered to be common in this taxon, and it is believed that tall, non-native vegetation surrounding ambrosia stands may preclude successful wind pollination (McGlaughlin and Friar 2006, Johnson el al. 2009). Flood disturbance may allow for long distance dispersal. Therefore, dispersal in this species is limited, and management of populations is crucial.

1.4.3 Genetics

Vegetative reproduction occurs by means of extension of rhizomes. The implication of this type of reproduction is that each population could be one genetically distinct individual restricted to the immediate appropriate habitat. Current genetic research conducted by Dr. E. Friar has determined that gene flow occurs at a very small scale, on the order of tens of meters (Friar, pers. comm. 2009, McGlaughlin and Friar 2007).

It was found that genetic diversity across populations is limited, but there is a robust diverse genetic structure evident within populations among plots; this might be a result of breeding within populations and lack of sexual reproduction (McGlaughlin and Friar 2007). Genetic structure plays an important role in the sustainability of the species and also guides translocation methods. Therefore, the Plan includes a section on the biology of the species to inform translocation and long-term management.

It was previously thought that transplantation and propagation may lead to further reduction of low genetic diversity and low rates of sexual reproduction. It was believed that if small samples of root material were collected from isolated populations and propagated and transplanted over larger areas, reproductive function problems may increase. However, based on the robust genetic structure within stands and populations, it is not likely that transplantation and propagation will affect a decline of genetic structure. Therefore, it should be possible to transplant a new population fairly close (e.g. 100 meters) to a previous one without the threat of genetic contamination but with the possibility of an increase in genetic diversity (Friar pers. comm. 2009).

1.4.4 Major Threats

Primary threats to this species include loss of habitat, habitat fragmentation, herbivory by gophers and snails (and possibly by rabbits and deer), isolation, low genetic variation, and competition with non-native species. Because so few populations remain, direct impacts to any existing population are significant because of the effect it might have on the survival of the species as a whole.

1.4.5 San Diego Ambrosia Distribution

San Diego ambrosia is endemic (occurs only within a very small geographic area) to southern California and northern Baja California, Mexico. This species is distributed from western Riverside County and western San Diego County, California, south in widely scattered populations along the west coast of Baja California, Mexico (Munz 1974; Reiser 1994). Additional populations occur in the central highlands of Baja California in the vicinity of Laguna Chapala near Catavina (Burrascano 1997). The complex of populations near Laguna Chapala reportedly contains the largest number of individuals. The status of populations between Cabo Colonet and the U.S. border are less certain and are rapidly disappearing due to recreational uses, development, and agricultural conversion.

Sensitive species database searches conducted for this report indicate that this species has been documented historically from approximately 61 locations throughout western San Diego County. Of the 61 records, 18 are from SANDAG, and the rest are from CNDDB. However, ambrosia populations have experienced a rapid decline over the last half century. In 2002, it was believed that only 12 existing occurrences, approximately 24 percent, of this species remained in San Diego County (USFWS 2002). Three occurrences have been reported from Riverside County.

1.4.6 Current Status Onsite

Approximately 250 stems (species grows via rhizomes; therefore, the actual number of plants is indeterminate) were observed in the central portion of the site in 2008. The patch was confirmed in 2015; in addition, approximately 3,000 stems were observed in the eastern portion of the project site in 2015. Vince Scheidt surveyed the population in 2018 (Scheidt, pers. comm. 2020); however, his data are not yet publicly available. The patch was confirmed and re-delineated in 2020; however, a stem count could not be performed due to the senesced conditions of the aerial stems (Figure 3).

1.5 Receiver Site Location and Conditions

We developed a receiver site suitability GIS model that identified any conserved or open space areas within the San Diego River watershed. We then evaluated mapped soils, vegetation, and wetlands/creek data for each conserved property, and also classified property ownership by private, public, or land conservancies. Based on the model output, we identified four potential properties suitable as ambrosia receiver site: 1. El Monte Habitat Preserve associated with the El Monte gravel and sand mining operation along El Monte Road in Lakeside, CA; 2. Hanson Pond Preserve owned by the Endangered Habitat Conservancy (EHC), also located along El Monte Road in Lakeside, CA; 3. Palmer Property, a property on Alpine Blvd., in Alpine, CA, also owned and conserved by the EHC; and 4. a County-owned site within the Mission Trails Regional Park near Big Rock Park (the site of an extirpated San Diego ambrosia location) along Mesa Road in Santee, CA. The El Monte Habitat Preserve was removed from the list because the site would not be brought into conservation until gravel mining was completed, and therefore, would not be immediately available. We undertook field reconnaissance evaluations of the suitability of several locations on the Mission Trails, Hanson Pond and Palmer sites. The sites are listed by priority with the Mission Trails site the preferred translocation receiver site, and the Hanson Pond site the second preferred alternative.

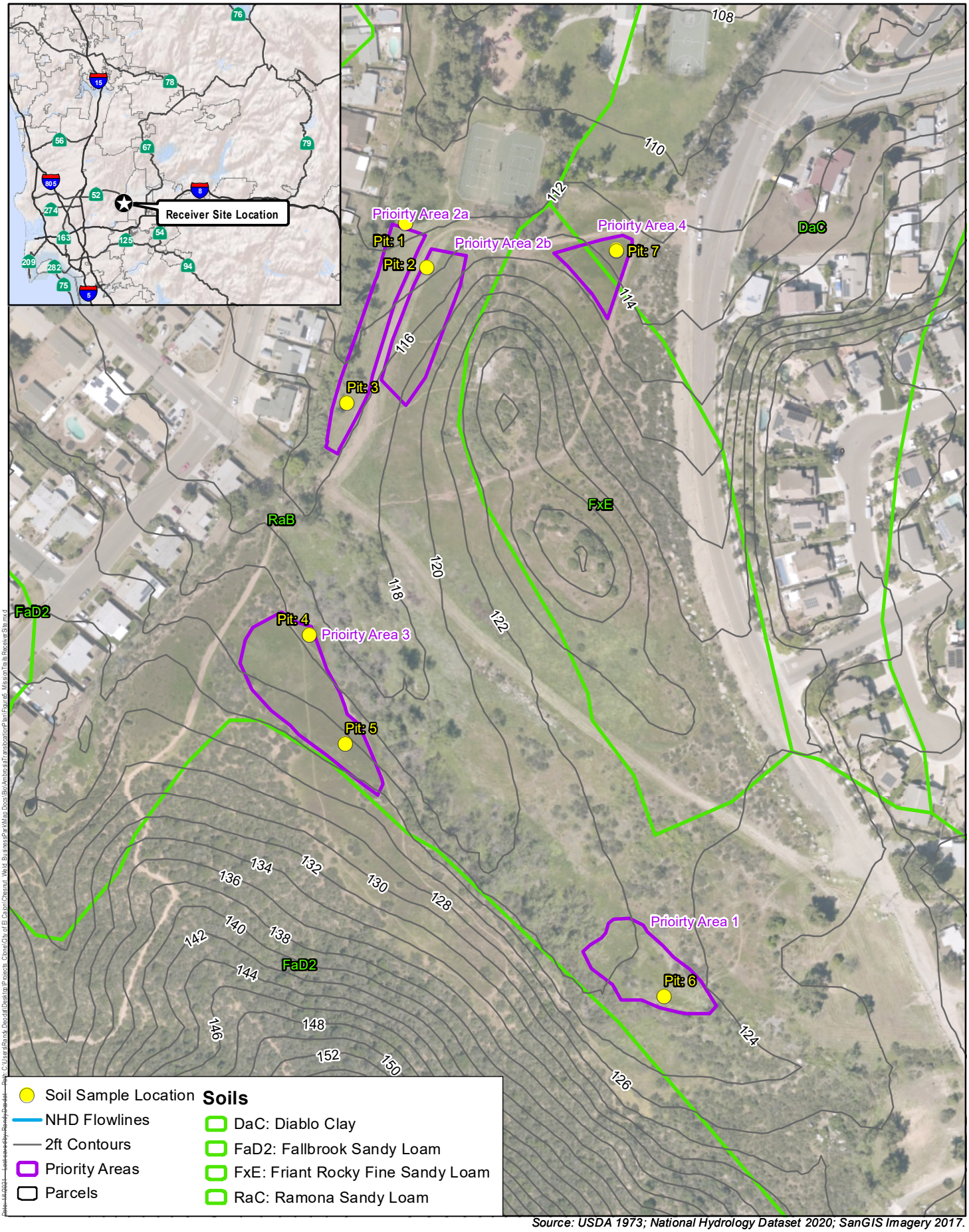
1.5.1 Mission Trails at Big Rock Park

The Mission Trails site is located in the San Diego River watershed along Mesa Road in the City of Santee on a County-owned portion of the Mission Trails Regional Park. The area occurs just south of Big Rock Park which harbored a now extirpated population of San Diego ambrosia, most likely lost to the development of the park. There are several areas suitable as receiver sites for the transplanted ambrosia population, all along the first order terrace above an unnamed drainage (tributary to the San Diego River) that parallels Big Rock Road and then splits to run along Big Rock Road and Mesa Road (Figure 5).

The field-investigated soils vary between sandy loams with a thick organic layer along the riparian habitat associated with the drainage to more red clayey loams higher up above the drainage at non-native grassland dominated sites. Mapped soils are suitable for San Diego ambrosia and include Diablo clay (2 to 9 percent slope), Fallbrook sandy loam (9 to 15 percent slope), Friant rocky fine sandy loam (9 to 30 percent slope), and Ramona sandy loam (2 to 5 percent slope). Vegetation is dominated by non-native grassland, coastal sage scrub, chaparral, and riparian habitat along the drainage. Two stands of the highly invasive giant reed (*Arundo donax*) occur along the drainage near Big Rock Park; they would need to be removed and controlled as part of the management effort for the translocation. The area contains multiple trails and the transplanted population would need to be fenced to be protected from trespassing and vandalism. The City of San Diego maintains the site and regularly mows the areas along the trails.

1.5.2 Hanson Pond Preserve

The Hanson Pond Preserve is an old gravel mining site conserved by EHC (Figure 6). The site is located off El Monte Road in the San Diego River watershed, and consists of a pond (excavated pit) and undulated land surrounding the pond (spoils). Besides the riparian and lacustrine habitats surrounding Hanson Pond, the site is occupied by non-native grassland and disturbed habitat dominated by crown daisy (*Glebionis coronaria*) and other non-native and invasive species. Areas surrounding the pond include native freshwater marsh, willow riparian habitat, mulefat scrub and coyote bush-dominated coastal sage scrub. Mapped soils on the site include Tujunga sand, five percent slope. However, the mine spoils are characterized by loamy soils, potentially from the Friant fine sandy loam and Huerhuero loam soil classifications, which also occur on the fringes of the site.



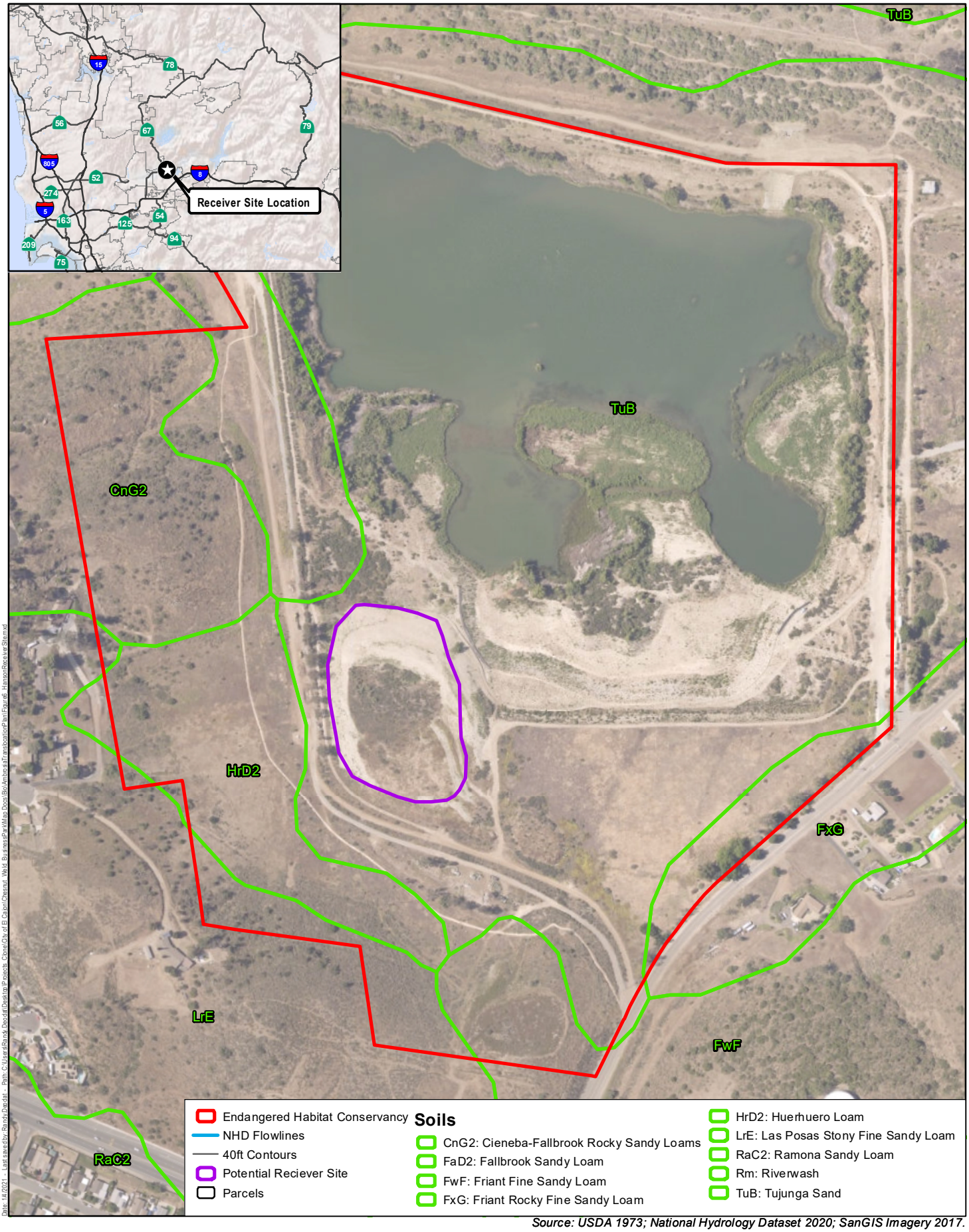
Source: USDA 1973; National Hydrology Dataset 2020; SanGIS Imagery 2017.

Harris & Associates

Figure 5

Mission Trails Potential Receiver Site

Weld Boulevard Distribution Center Project



Source: USDA 1973; National Hydrology Dataset 2020; SanGIS Imagery 2017.

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Figure 6

Hanson Pond Potential Receiver Site

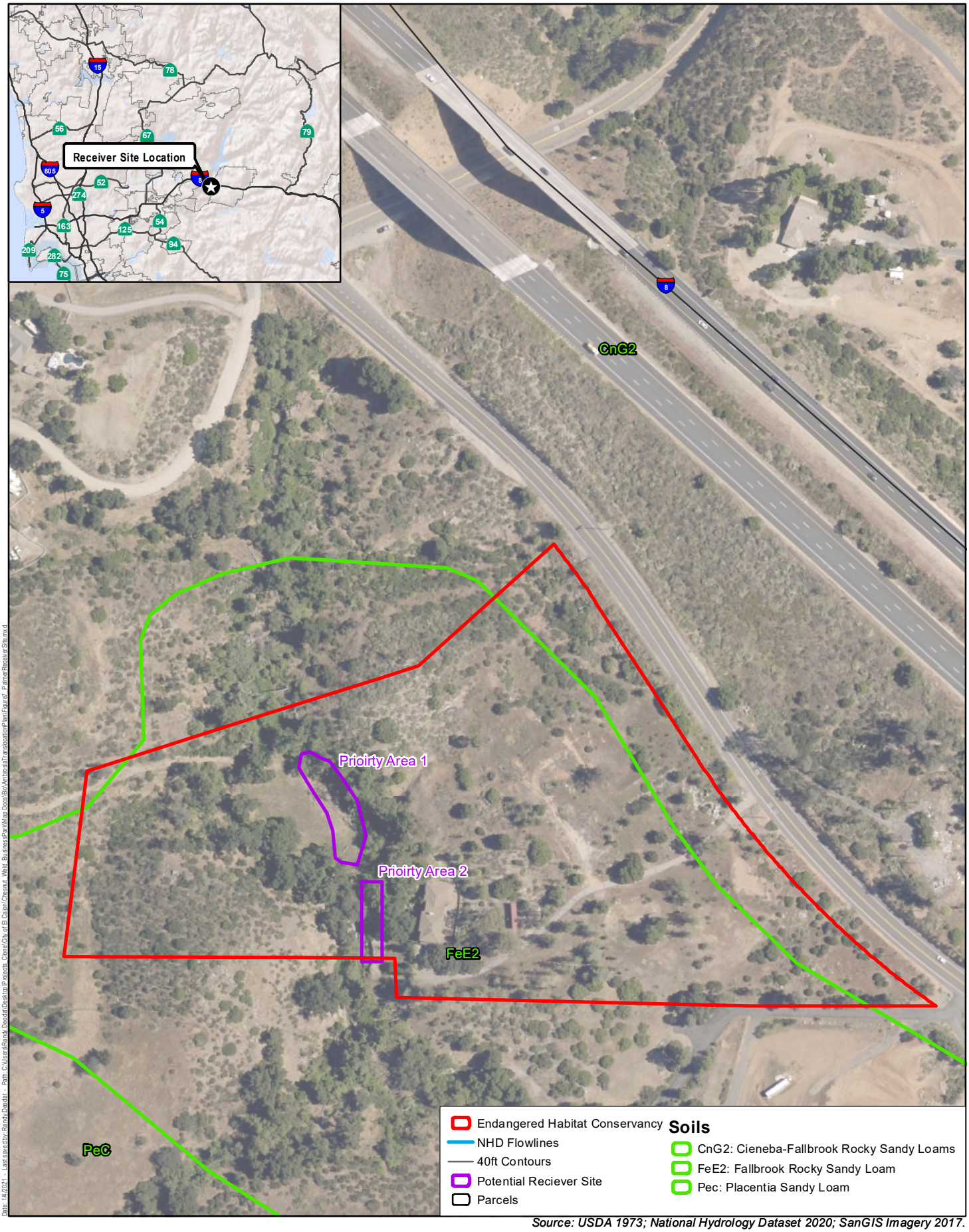
Weld Boulevard Distribution Center Project

In April 2018, 132 pots, all with multiple plant stems, were planted at two locations on the property by volunteers with Earth Discovery Institute and Endangered Habitats Conservancy. An additional nine pots were set aside for planting at a third experimental location. The two patches were planted within the floodplain of Hanson Pond, and the experimental patch was translocated on the upper banks above the pond at the foot of one of the spoil mounds. The plants were salvaged from a Caltrans parcel (CNDDB occurrence #20) by a volunteer group on March 27, 2018 (Sally Brown, pers. comm. 2020).The latter population is expanding, while the patches planted in the floodplain have not re-emerged and might have perished.

The top (plateau) of the spoil pile south of the pond would be the most suitable location for the Weld Blvd. ambrosia translocation based on the loamy soils and the fact that the experimental transplantation performs well in the same soil type. The site would be in excess of 100 meters apart from both of the existing translocation sites, and therefore, no genetic conflict would exist between the different translocation projects.

1.5.3 Palmer Property

The Palmer Property (Figure 7) was a residential property on Alpine Blvd. that was acquired by EHC to provide a strategic wildlife connection from EHC's Crestridge Preserve. The property is located at the eastern end of the San Diego River watershed, and is traversed by Alpine Creek, which runs permanently and is significantly incised. Vegetation communities include non-native grassland, willow riparian habitat, oak woodland and chaparral habitat. Two flat plateaus immediately above the top of bank area alongside the creek could potentially be suitable for transplantation of ambrosia. However, soils are mostly Fallbrook rocky sandy loam, which is a more permeable substrate than the loamy soils at the Hanson Pond spoil piles. Therefore, the Palmer Property is less suitable than the Hanson Pond site.



Source: USDA 1973; National Hydrology Dataset 2020; SanGIS Imagery 2017.

Harris & Associates

Figure 7

Palmer Potential Receiver Site

Weld Boulevard Distribution Center Project

2.0 Pre-Translocation Planning

2.1 Purpose and Goal

The proposed Project requires the translocation of ambrosia from the Weld Blvd. Distribution Center site to an offsite receiver site. The main goal of this translocation effort is to conserve the species in perpetuity at a suitable site that possesses the appropriate habitat components, is conserved, and has low edge effect potential. The objective of this effort is to successfully translocate the population of ambrosia from the development footprint so that it becomes established to the point that it can propagate and sustain itself in perpetuity without additional irrigation. The ambrosia population will be salvaged, transported, and transplanted to a suitable location at the conserved receiver site, and managed.

Achieving this goal will require the following actions:

- Improve receiver site conditions prior to translocation activities.
- Transplant ambrosia with the least amount of damage to roots and aerial shoots as possible.
- Minimize to the greatest extent possible the amount of nonnative seeds and number of plants that are transferred to the receiver site during ambrosia transplantation.
- Perform maintenance and monitoring during the 5-year post-translocation monitoring and maintenance period to achieve success according to success criteria.
- Manage the translocated population in perpetuity.

2.1 Responsible Parties

The Owner shall be responsible for the implementation, maintenance, monitoring, success, and long-term conservation and management of the translocated ambrosia population. Long-term conservation and management shall be funded by the Owner and provided by the receiver site land conservation organization (EHC) pursuant to the San Diego Ambrosia Habitat Management Plan (HMP) for this Project. The Owner shall provide financial assurances for translocation implementation, post-translocation monitoring/management, and success of the habitat translocation area, as outlined in this plan.

The Owner shall also invest a long-term management endowment, which shall be managed by a financial institution approved by the City of El Cajon and the Wildlife Agencies, such as the San Diego Foundation. The interested earned from the endowment shall be available to the management entity trusted with the long-term management of the translocated ambrosia population.

As the CEQA lead agency, the City of El Cajon will require successful mitigation of impacts to the San Diego ambrosia. Due to the plant's listing status as federally endangered, the USFWS will be included in all correspondence. In addition, the CDFW will also be informed of the translocation and translocation success as a courtesy to assist with the assessment of the species' status for potential listing in the future.

2.2 Personnel and Plant Sources

Qualified personnel that specialize in successful upland transplantation projects and with knowledge about the species shall be employed for implementation of the translocation, as described below. These personnel will be instrumental in ensuring successful implementation of this translocation plan and the continued survival of the species. The Owner and Manager of the receiver site (EHC) shall be contacted and informed of all steps of the translocation process, and may participate in site preparation and site management.

2.2.1 Restoration Ecologist

Translocation shall be overseen by a qualified Restoration Ecologist. The Restoration Ecologist shall have documented experience in upland and coastal sage scrub transplantation, and an understanding of the San Diego ambrosia biology (including genetics), and document the following minimum qualifications:

- Bachelor degree in biology, ecology, botany, landscape ecology, or an acceptable related field;
- More than five years of documented experience implementing successful upland transplantation in San Diego County; prior involvement in San Diego ambrosia studies, ambrosia translocation planning, or implementation.

The Restoration Ecologist shall oversee the work of the Translocation Contractor and assist in developing the appropriate translocation techniques, including plant salvage, transportation, potential storage at a native plant nursery, receiver site identification and preparation, planting installation, maintenance and monitoring, and City/agency consultation and reporting.

2.2.2 Translocation Installation Personnel

This Translocation Plan shall be implemented by a combination of the EHC (receiver site preparation), and an experienced native habitat Translocation Contractor with documented experience in native upland habitat transplantation, plant translocation, and ideally prior experience with San Diego ambrosia (as feasible) in San Diego County. The Contractor and EHC shall have a valid Restoration Contracting License, a valid Maintenance Gardener Pest Control Business License or Pest Control Business License, and a Qualified Applicator Certificate or Qualified Applicator License, with Category B, that would allow them to perform the required work for this Project. All licenses must be issued by the State of California, be registered in San Diego County, and be of current status. If a qualified applicator is not present during any non-toxic herbicide treatment, all applicators must have undergone documented herbicide application training. All work shall be performed by a trained crew in accordance with the standards and practices related to the trade. The translocation shall be conducted under the supervision of the Restoration Ecologist. The Contractor shall be familiar with native and non-native plant species in the region.

2.2.3 Interim Storage Location

A contractor's yard or contract nursery might be needed to temporarily store the salvaged ambrosia plants prior to outplanting. If it is found that the salvaged plants should be stored before transplanting, the contractor's yard shall be prepared to receive the ambrosia blocks. Alternatively, a qualified nursery shall be contacted prior to the salvage effort. The nursery shall be specialized in native plant propagation and shall have documented experience with the storage and propagation of sensitive native plant species.

2.3 Implementation Schedule

The schedule of ambrosia translocation is crucial for success of the process; this includes the salvage timing, transportation and interim storage duration, and timing of out-planting at the receiver site. Aerial shoots of ambrosia typically become visible during the late winter/early spring and begin flowering in late spring to early summer. During late summer/early fall, aerial shoots typically die back, making it difficult to detect the presence of ambrosia. Soil moisture levels and air temperatures can have an effect on the amount of stress an ambrosia transplant experiences. Ideally, translocation should occur when soil is moist and ambient temperatures range from 65 to 75 degrees Fahrenheit (around February/March). Prior to receiver site preparation and translocation, the City of El Cajon and Receiver Site Owner/Manager shall be notified,

and courtesy notification shall also be provided to the USFWS and CDFW. Table 1 depicts an ideal ambrosia translocation schedule.

Table 1. Ambrosia Translocation Schedule

Description	Timing	
	No Earlier Than	**No Later Than**
Notifications (City, USFWS, CDFW, Receiver Site Owner)	December 2020	January 2021
Donor and Receiver Site Preparation	January 2021	February 2021
Salvage and Translocation of San Diego Ambrosia	February 2021	March 2021
Potential Holding at Nursery	February 2021	March 2021
Outplanting at Receiver Site	February 2021	March 2021
Supplemental Watering	February 2021	June 2024
Five-Year Monitoring and Maintenance Period	March 2021	June 2026
Quantitative Monitoring Year 1: Direct Count	March 2021	May 2021
Quantitative Monitoring Year 5: Direct Count	March 2026	May 2021
Project Sign-Off	March 2026	June 2026
Long Term Management	April 2026	July 2026

Preferably, site preparation (e.g., clearing/grubbing, weeding/non-toxic herbicide application, dethatching, watering), installation of irrigation (at the receiver site), salvage and outplanting should occur from January through February to take advantage of the rainy season. To the extent possible, preparation of the receiver site should occur outside the nesting bird season (typically February through mid-September) to avoid disturbing any active nests adjacent to the translocation area. If the receiver site is not ready at the time that salvage must occur, or if salvage requires that plants be acclimatized to avoid translocation shock, the salvaged plants may have to be temporarily stored at the restoration yard. Translocation should occur during the cooler season of the year to provide time for plant establishment before the transplant area is exposed to drought and heat, and ideally, salvage of the donor population should occur when soils are moist and the plants have started emerging or expressing. Supplemental watering shall be provided during the plant establishment and up to two years prior to the end of the five-year monitoring and maintenance period. The five-year post-translocation maintenance and biological monitoring period shall begin upon acceptance of installation by the City, and end upon acceptance of the translocation project by the City. Concurrence by USFWS and CDFW is not mandatory as the agencies have no jurisdiction over the translocation effort; however, the agencies will be contacted and informed because of the sensitivity status of the species.

2.4 Contractor Education

All entities participating in the ambrosia translocation shall meet for a pre-construction meeting with the Restoration Ecologist and Translocation Contractor to review plans, site information, and contractor responsibilities before beginning work in the area, including site protection, site preparation procedures (specifically weeding and dethatching), salvage techniques, transportation requirements, handling and outplanting specifications, and supplemental watering. Handling of a federally endangered plant species requires care, specifically as this type of work is not regularly conducted by the Translocation Contractor.

2.5 Donor and Receiver Site Surveys

To verify that conditions at the donor and receiver sites are optimal for translocation of ambrosia, both sites shall be surveyed to assess native/nonnative vegetation cover and water availability. The donor site (Figure

3) will be visited to make observations and compile a record of conditions at the site; ideally, the survey shall occur when the plant is observable (in the late winter/early spring). Non-native species present within the donor site will be noted. The level of effort to perform dethatching of nonnative plants and removal of nonnative propagules from the soil surface within ambrosia patches during translocation activities will be estimated. The survey shall be conducted immediately upon the species being identifiable within the entirety of the patch configuration. The survey shall include mapping the perimeters of the patches using sub-meter accuracy GPS equipment. In addition, all visible aerial stems shall be counted in both patches and recorded. Finally, the perimeter of both patches shall be staked and flagged to allow for the successful salvage and collection of the entire patch. The donor site shall be surveyed and marked immediately prior to translocation to avoid vandalism of any markers and stakes.

The receiver site will be visited to collect the same data that were collected at the donor site to prepare the site for the ambrosia transplants. The site visit shall occur prior to translocation such that site conditions can be improved, including removal of non-native species, soil decompaction, and measures to preclude that invasive species will not re-emerge prior to translocation (no pre-emergent herbicides may be used). The exact area where translocation is to occur shall be marked and mapped and the translocation site shall be fenced (this may occur after translocation). Irrigation hook-ups or water truck access, and access route to transport the plantings to the site shall also be identified.

2.6 Access

A haul route and staging area shall be identified by the Translocation Contractor in collaboration with the Restoration Ecologist and receiver site owner/manager. All access routes, crossings and staging areas shall be restored following site preparation and planting/seeding, or when site access is no longer necessary and all remediation actions have been completed. The Restoration Ecologist shall survey and flag the perimeter of the translocation site and identify all necessary access controls, temporary fencing, storm water Best Management Practices (BMP), and signage.

2.7 Donor Site Watering

The donor population shall be watered thoroughly for several weeks prior to the salvage date to ensure that the population expresses itself and the soils are lose enough to successfully remove the plants with roots and rhizomes without damaging any plant parts (see Section 3.2.3).

3.0 Translocation Implementation

The success of this plan hinges on its proper implementation, including but not limited to, Translocation Contractor responsibilities and education, site preparation/protection, timing of installation, supplemental watering, perpetual maintenance/weed-pest-herbivore control/repairs, and guarantees.

Translocation shall be achieved through a systematic process that includes: 1) pre-construction kick-off meeting; 2) pre-construction special measures to protect existing native habitats and plants at the receiver site; 4) pre-construction removal of non-native and invasive weeds/pest species, non-toxic herbicide applications (if necessary), brushing/mowing, grubbing/tilling, and topsoil salvage as specified; 5) pre-construction soil de-compaction (tilling)/testing/amendment (if necessary) and seedbed preparation; 6) supplemental watering access/temporary irrigation installation; 7) salvage of extant population and transport to the receiver site or interim storage at nursery; 8) installation of salvaged ambrosia population; 9) final installation inspection; and, 10) post-translocation installation monitoring and maintenance of the site until success criteria are achieved.

3.1 Donor Site Preparation

3.1.1 Soil Moisture and Watering

Moisture levels at the donor site will be checked prior to the salvage event to verify that soil is adequately moist for removal of ambrosia blocks. Ideally, salvage should occur when soils are moist or wet. The ambrosia patches at the donor site shall be watered using a mobile water source (e.g., water truck). Watering of the donor site will occur until soil is moist to a minimum depth of 1 foot. Watering should be conducted for several weeks prior to salvage, as necessary (see Section 2.7), and immediately prior to salvage using a mobile water source (e.g., water truck). Watering of the donor site will occur until soil is moist to a minimum depth of 1 foot. This will assist with excavating ambrosia blocks cohesively and salvaging additional soils that may contain rhizomes.

3.1.2 Manual Removal of Invasive Species

Weed eradication/thatch removal shall be conducted at the donor site to minimize invasive weed colonization and transport to the receiver site. Control of non-native plant species that compete with native plants will be important for long-term sustainability of the translocation site. Recommended methods for control of particular species are based on the CalWeed Database of the California Interagency Noxious Weed Coordinating Committee, and Invasive Plants of California Wildlands by Bossard et al. (2000). Hand or mechanical means are preferred methods for control over herbicide treatment as even the use of non-toxic herbicides may impact the donor population.

The ambrosia population currently growing at the donor site is intermixed with nonnative grasses and other herbaceous native and nonnative plant species. Prior to translocation, the donor site will be mowed and dethatched. Non-native seeds shall be removed as feasible. The Restoration Ecologist will determine the extent of organic matter to be removed to clear away embedded nonnative seed. This action should be performed with care to avoid damaging aerial shoots or roots. Nonnative plant material and other debris will be properly disposed of each day following completion of work.

3.2 Receiver Site Preparation

3.2.1 Vegetation Management

The receiver site shall be mowed and dethatched and non-native species controlled. Depending on the types of invasives, different control methods may need to be employed. For example, the Mission Trails site shall be mowed, giant reed will need to be removed using glyphosate-based systemic herbicides, and non-native grasses shall be removed using the grass-specific Fusilade II, which has been successfully applied over the top of San Diego ambrosia to control annual weeds (Kelly et al., unpublished). At the Hanson Pond site, crown daisy population will require continuous, aggressive control and removal. After thatch removal at the receiver site, invasive species may be controlled by spot foliar non-toxic herbicide spray application on re-growth. This treatment shall be applied to the translocation area, and continued for at least two consecutive years following the methods detailed below. It is important that non-native forbs and grasses be controlled aggressively for the ambrosia to sustain itself.

Non-toxic herbicides that are registered for use in California for natural areas are specified only for particular weed species that may re-sprout from roots or rhizomes. The application of non-toxic herbicides must be implemented without harming non-target native species. Only EPA-approved, glyphosate-base, systemic herbicides (e.g., Rodeo/Aqua Master) shall be allowed because the translocation area occurs within 100 feet of water associated with the wetlands on the bottom of the slope. Glyphosate is a non-selective herbicide, and its mode of action works against both broadleaf weeds and grasses. The glyphosate-based herbicide shall be applied to non-native, broad-leaf plants (which are expected to emerge as a result of non-native grass species removal) twice during the growing season. Foliar spray application shall be at a minimum of two percent solution. Fusilade II may be used to control non-native grasses, including *Erodium* species, as needed.

If necessary, non-toxic herbicides shall be applied using either backpack sprayers (more cost effective) or equipment, such as a John Deere 6X4 gator or other all-terrain vehicle supporting an 80-gallon (g) "Stadium 80" by Brayton spray tank with a three-nozzled short boom that does not extend beyond the gator, or equivalent. A brightly colored dye shall be used in all herbicide applications to aid the applicator in achieving good coverage of the target species. The dye shall be a non-toxic material, such as Blazon, Turfmark, or equivalent, and shall be mixed with the herbicide at no more than half the rate specified on the label. Herbicide treatment shall be conducted only when weather conditions are conducive to effective uptake of the herbicide by the target species (e.g., sunny, dry with ambient temperatures 65 degrees Fahrenheit, and when plants are at the specified growing stage), and when wind conditions are such that herbicide drift is minimized (five mph or less) (LandIQ and CBI 2015). Treated areas shall not be disturbed until the applied non-toxic herbicide has had time to take effect per the manufacturer's instruction.

3.2.2 Planting Bed Preparation

After weed removal, the entire translocation area at the receiver site shall be deep-ripped as needed and as determined by the Restoration Ecologist (potentially to a depth of six inches). The ripped soil shall be raked and large soil clumps shall be broken out. Ripping may be conducted using a tiller or similar equipment or by hand using a pickax or garden hoe. After deep-ripping, the soil shall be scarified using a rake. The receiver site or translocation plots shall be fenced to preclude unauthorized access (both EHC properties are fenced).

Preparation of transplant areas (ambrosia plots) will be identified and staked in the field. The number of plots required will be confirmed after the pre-translocation survey of the donor population. The ambrosia plots will be sighted to face similar cardinal directions and slope conditions, aspect and exposure as the donor site. All ambrosia plots will be excavated to a depth of 12 to 18 inches to create a depression. A mini-excavator with rubber tracks will be used to decompact soil and carve out the ambrosia plot to form the slight depression to assure that sufficient water accumulates at the site during the rainy season to mimic conditions at the donor site. Following excavation of ambrosia plots, wire mesh will be used to line the plots for protection against subsurface herbivory by rodents (i.e., pocket gophers). Irrigation of the soil prior to creation of ambrosia plots will provide adequate soil moisture conditions for transplanted ambrosia. During receiver site preparation, impacts to native bunch grass species and native annuals will be avoided to the maximum extent possible.

The ambrosia translocation areas shall be protected using wire mesh fencing to protect the plantings from herbivory. Any non-invasive BMPs (i.e., erosion/sediment/perimeter control measures) shall be appropriately installed by the Translocation Contractor, including but not limited to silt fencing, coconut fiber coir rolls/wattles/blankets (or equivalent biofiber matrix material), to prevent sediment or non-toxic herbicides from entering the adjacent wetlands, streams and tributaries. Such BMPs shall be continually maintained, repaired, documented, photographed and included in progress reports as applicable.

3.2.3 Irrigation and Watering

Ideally, a temporary irrigation system shall be installed at the receiver site to provide reliable irrigation to the transplanted population. The Hanson Pond site contains an existing irrigation system associated with the Hanson Pond restoration, which will be extended to the ambrosia translocation site. Water connection is available through the existing irrigation system. A temporary, above-ground irrigation system shall be designed by a licensed landscape architect and installed at the translocation site.

Should irrigation line installation be infeasible, access to the site via dirt road is available so that a water truck or towable water tank can be staged at the site during irrigation events. Should the dirt road be too far to reach for a water truck, a temporary water tank will be installed at the site and filled as needed. Irrigation will consist of hauling a hose from the water tank parked on the access road to the ambrosia plots at which point a portable and adjustable impact sprinkler head will be attached to the water hose. Water will be sent through the irrigation hose to the sprinkler head via a gas-powered water pump connected to the water tank.

On the day of translocation, the Restoration Ecologist shall direct the Contractor on the proper amount of irrigation to promote adequate germination and establishment. The frequency of irrigation shall depend on the rate of evapotranspiration (ETo) and rate of infiltration of the soil, to be determined by the Restoration Ecologist. Adjustments to increase or decrease the amount of water applied will be performed in the field. The following guidelines shall be adhered to:

- Irrigate soil to full field capacity to the desired depth (approximately 18 to 24 inches) for several weeks prior to salvage.
- Irrigation may occur in pulses so that water could slowly percolate into the ambrosia plots.
- Initially keep the translocation areas moist, until ambrosia transplants have established.
- Allow soil to dry down to approximately 50 to 60 percent of field capacity (in the top 6 to 12 inches) before the next irrigation cycle.
- Adequate irrigation of ambrosia plots will be checked using a field moisture meter (12-inch rod).

Wetting of the full root zone and drying of the soil between irrigation events is essential to the maintenance of the plants and the promotion of a deep root zone that will support the vegetation. The irrigation schedule shall vary throughout the year based on weather conditions (i.e., precipitation and humidity) and plant needs. The irrigation schedule shall be determined by the Restoration Ecologist. Watering or irrigation shall be suspended in anticipation of forecasted rain events. Irrigation should be shut off or used sparingly, and for plant establishment only, during the summer months to adapt planting to summer dry conditions. Supplemental watering shall be tapered down during the first three years of the post-restoration maintenance period to acclimatize the planting to natural conditions.

Once the translocation site has reached Year 3 success criteria, no further irrigation shall occur, and the vegetation shall be subject to natural precipitation to meet the Year 5 success criteria. The translocation project must be successful for at least two years without supplemental water to be accepted by the City of El Cajon and the Wildlife Agencies. All above-ground irrigation fittings will be removed at the terminus of the short-term monitoring period.

3.3 Transplantation and Translocation

3.3.1 Salvage at Donor Site

Ideally, and provided that the soils at the donor site is moist (through rainfall or watering), the ambrosia population shall be salvaged/excavated using a mini-backhoe (301-series) and/or a mini-tractor with a 33-inch-wide bucket. The transplants shall be removed carefully from the bucket in blocks and placed in temporary storage vessels (flats). Ambrosia blocks will generally have dimensions relative to the size of the scooping part of the mini-excavator. Salvage of ambrosia to a depth of 9 to12 inches should be achieved through the use of mechanized equipment. All excess soils shall also be salvaged as it is likely to contain additional rhizomes.

If the Restoration Ecologist determines that soil adhesion is weak or the soils is too dry, hand tools will be used to excavate ambrosia blocks. Square-end or pitting shovels will be used to slice out blocks to a depth of 10 to 12 inches. After a block has been loosened from the earth, a horizontal cut along the bottom of the block will allow for complete removal and placement into flats. To prevent additional damage to exposed roots, ambrosia blocks should be nested into a 4- to 6-inch bed of loosely compacted soil that has been collected during salvage efforts from the donor site. This excess soil will be usable during the transplantation activities at the receiver site.

During the salvaging effort, the Restoration Ecologist shall count all aerial shoots at the donor site and estimate the density of aerial shoots per square meter. The Restoration Ecologist will determine when the salvage of ambrosia is complete. Once ambrosia has been salvaged it should be moistened if any signs of desiccation are apparent. If appropriate, additional removal of nonnative plants and seeds will occur to salvaged ambrosia prior to transport to the receiver site. Salvaged ambrosia will dry out relatively quickly, specifically if the weather is sunny and warm; 80 percent shade cloth will be used to cover transplants, which will slow the rate of desiccation of soil masses and overall stress to the plant's vascular system.

3.3.2 Ambrosia Reserve Stock

It is possible that the salvage plants require one to two weeks of interim storage to regain cohesion and recover from transplant shock. The plants shall be stored at the contractor's yard or a qualified nursery for no longer than two weeks prior to transportation to the receiver site. The plants shall be stored in flats and covered with 80 percent shade cloth, and shall be regularly watered.

Although the translocation effort is expected to be successful, a portion of the ambrosia population will be held in reserve in case there are unanticipated problems with the translocation effort (anthropogenic disturbance, fire, etc.). Approximately 10 percent of the donor site ambrosia population will be salvaged, planted in nursery containers, and propagated at a native plant nursery or stored at the contractor's yard in preparation for outplanting during the maintenance and monitoring program (discussed in Section 7 below). It is recommended that the reserve population be stored in planter pots with a minimum volume of 1 gallon. Ambrosia should be potted into soil from the donor site and as plugs measuring 4 inches in diameter by 6 inches in height, or appropriate dimensions to facilitate approximately 10 aerial shoots per pot. Approximately 1 cubic yard (enough soil for 200, one-gallon pots of ambrosia) of soil from the donor site should be salvaged and used strictly for the propagation of the reserved ambrosia. Soil should be salvaged to a maximum depth of 10 inches to avoid soil with higher clay content.

The reserved ambrosia should be maintained at a facility that has ample experience with the maintenance and propagation of ambrosia. If ambrosia is stored in a nursery where ambrosia from another project is already present, ensure that a minimum buffer of 300 feet from that population is maintained to avoid any potential gene flow (TAIC 2008).

Prior to propagating the original salvaged ambrosia, the Restoration Ecologist, in collaboration with the nursery or interim storage facility, shall verify that aerial shoot production is occurring with some regularity, taking into consideration that climate and moisture availability will affect vegetative growth (EDAW 2009). When aerial shoot production has increased from 50 to 100 percent, propagation would be acceptable. To propagate ambrosia, remove established ambrosia plug from the pot, separate soil mass into two portions, and repot both plugs into native soil from the donor site. Separating the original pot into more than four portions may reduce survival of propagated plugs. Chemical fertilizers may be used sparingly if the propagation effort has to be accelerated, although use of native soil usually provides all of the necessary components for plant survival. Irrigation of stored ambrosia is weather dependent. Excessive irrigation will hinder the development of a field-ready container stock; therefore, irrigating as close to what the climatic conditions are for that season is preferable. If ambrosia is stored outdoors, supplemental irrigation may be required, since the rate of desiccation is significantly higher when ambrosia transplants are stored in plastic planter pots. It is anticipated that 10 percent of the donor site ambrosia population will amount to approximately 400 aerial shoots (i.e., the reported estimate of aerial shoots for existing population is 3,500 to 4,000; however, the population could potentially be significantly larger) spread over 40 pots, or 10 shoots per pot. Efforts will be made to ensure that reserve stock is increased from 40 pots (~400 aerial shoots) to 200 pots (~2,000 to 3,000 aerial shoots at 10 to 15 aerial shoots per pot). Estimates that ambrosia aerial shoot density in pots following propagation will be 10 to 15 per pot is a conservative estimate. Propagated ambrosia with a beginning density of 10 aerial shoots could achieve a density of 25 aerial shoots per pot if natural climatic conditions promote vigorous growth (EDAW 2009).

If remedial planting is necessary, the ambrosia reserve stock will be planted within ambrosia plots only if more than 75 percent of the total cover is represented by bare ground. Otherwise, ambrosia will be planted immediately adjacent to ambrosia plots that show poor survivorship and/or cover. If ambrosia are to be planted during the maintenance and monitoring program as enhancement of a transplanted ambrosia population that is already exhibiting a positive (meeting success standards) trajectory, then planting will occur randomly within the interspaces between ambrosia plots. Pre- and post-planting irrigation will occur to ensure adequate moisture is provided, which will decrease transplant shock to the plant. Holes will be backfilled and tamped down by hand so that backfill is level with the surrounding soil surface.

3.3.3 Transport to Receiver Site

Following salvage from the donor site, ambrosia blocks will either be immediately transported to the receiver site or stored at the contractors' yard or nursery, as described in Section 3.3.2. Transport shall occur in moving truck or stake-bed truck. Prior to transport, all salvaged ambrosia will be checked by the Restoration Ecologist to verify that the temporary condition of the plants is acceptable. If roots are exposed, soil will be added to the transport containers. If desiccation of soil is apparent, the ambrosia block will be irrigated as needed. During transport of the ambrosia, some loss of turgor pressure (wilting) in the aerial shoots is expected. Frequent assessments to verifying adequate moisture levels will help to reduce the stress of aerial shoots. Survivorship of aerial shoots is not paramount to the survival of ambrosia transplants, but it will facilitate a quicker recovery and better establishment at the receiver site. More aerial shoots will ultimately result in a greater rate of photosynthesis. Consequently, more energy will be made available for root production.

3.3.4 Planting at Receiver Site

To facilitate a seamless translocation event, soil moisture at the receiver site should be checked prior to the translocation effort. The soil should be moist and workable with hand tools, and the ambrosia plots should be moist to a minimum depth of 12 inches. In the event that soil is not moist and workable, additional watering should be applied. When soil conditions are acceptable, ambrosia blocks will be planted in plots measuring 1 meter by 1 meter that have been lined with wire mesh having a maximum opening of 0.5 inch and wire-bound at corners. Salvaged ambrosia will be carefully placed into plots at a density ranging from 50 to 100 aerial shoots and back-filled with a 1:0.25 mixture of receiver site soil mixed with donor site soil. If the mechanized equipment option is used, any glazing on the underside of ambrosia blocks will be roughened by hand to facilitate better root growth during ambrosia establishment (TAIC 2008). Soil will be moderately tamped down by hand or foot to minimize the formation of voids in the soil. Ambrosia plots should be irrigated immediately after planting to reduce the level of transplant shock to ambrosia. Each ambrosia plot will be marked with several galvanized rods to delineate the original extent, which will help determine the establishment of ambrosia, recognized mainly by lateral rhizomatous growth. Each of the ambrosia plots will be marked so that 1-meter blocks could be assessed during future monitoring events. Digital photos or drone footage will be taken to photodocument the translocation event. During planting at the receiver site, impacts to native bunch grass species and native annuals will be avoided to the maximum extent possible.

At the conclusion of the installation, the Owner shall conduct a joint walk-through with the City of El Cajon, and USFWS/CDFW as feasible, to determine that the ambrosia translocation has been installed successfully, the translocation area is being maintained and monitored, watered, and weeds are being controlled.

4.0 Post-Translocation Monitoring

The Five-Year Post-Translocation Maintenance and Monitoring section provides guidance for maintenance of the translocation site and reporting requirements to be executed throughout the post-translocation period which begins when the City of El Cajon confirms that the translocation installation has been completed in compliance with the mitigation intent as identified in the Weld Blvd. Distribution Center CEQA Addendum (2021). The goal of post-translocation maintenance and monitoring is to monitor that the translocated plants are establishing and that the site is being maintained according to the specifications below. For success of ambrosia translocation, providing initial irrigation and maintaining a weed-free site in perpetuity is crucial. Specific focus should be placed on the survivability of the translocation and the overall reduction of invasive and exotic species.

4.1 Success Criteria

The following sections provide performance standards to determine the successful completion of the post-translocation mitigation and monitoring program. Attainment of these standards indicates the mitigation area is progressing toward the habitat functions and services specified for this plan. If the restored areas fail to meet the Year 5 standards after the full monitoring term, a specific set of remedial measures would be implemented, and the monitoring and maintenance period would be extended until all Year 5 standards are met or as otherwise provided in this document. Only areas failing to meet the success standards would require additional work (i.e., not all of the areas originally restored), and only when the entire mitigation site is meeting the Year 5 standards shall the entire site be signed off by the City.

The success standard should be to achieve 60 percent survival of transplanted ambrosia measured on the account of aerial stems rather than patch size at the end of the first 120 days. The success criteria for the remainder of the five-year post-restoration period are identified in Table 2.

Table 2. Post-Translocation Success Criteria

Monitoring Year	Aerial Stem Survivorship	Percent Cover	Cal-IPC Species Cover (%)	Non-Native Species Cover[1] (%)
1	65	15	0	50
2	75	20	0	35
3	85	25	0	20
4	90	25	0	10
5	95	25	0	5

4.2 Post-Translocation Monitoring

4.2.1 Establishment Monitoring

Establishment monitoring and maintenance shall begin as soon as translocation is complete. For the first 120 days post-translocation, the transplanted ambrosia population shall be monitored weekly for survival and fitness. The Restoration Ecologist shall evaluate establishment success and determine any appropriate remedial actions, including potential outplanting of the reserve stock. Success criteria shall be visually observed and noted, including native and non-native plant cover and percent bare ground. In addition, a

[1] Excludes low growing species such as *Erodium* sp.

post-translocation aerial stem count shall be conducted as a baseline for success monitoring. The Restoration Ecologist shall coordinate closely with the maintenance contractor regarding regular watering of the transplants and aggressive removal of non-native species, specifically crown daisy.

After the plants have established, monitoring and maintenance shall continue for the remainder of five years or until specified success standards have been met. Note: watering are anticipated to occur over at least three consecutive years following planting, during the plant-establishment, monitoring and maintenance periods.

4.2.2 Qualitative Monitoring

After the initial 120 days, qualitative surveys shall be conducted quarterly for five years and consist of a general site walk-through and a characterization of the translocation planting. General observations, such as health of planted and seeded species, signs of over/under watering, and drought stress shall be noted. Translocation plantings shall be examined to visually estimate species mortality, species composition, seedling recruitment, and erosion, weed, trespassing, and pest problems.

The Restoration Ecologist shall determine if supplemental irrigation is necessary during the first monitoring year (excluding summer months). The Restoration Ecologist shall devise a temporary irrigation strategy that shall not harm or disturb any natural vegetation communities. Any sign of erosion, vandalism, trespassing and other anthropogenic disturbances should be identified and repaired immediately.

4.2.3 Quantitative Monitoring

To augment qualitative survey data, quantitative data shall be collected and analyzed by the Restoration Ecologist once annually for 5 years to document and evaluate the progress of the translocation program toward meeting performance and success standards. Sampling shall be conducted at the translocation site in the spring of each year (at the peak of annual growth) to determine germination and transplant success, species mortality, pest problems, percentage of cover, and bare ground. Ideally, sampling events shall occur annually in April (and no later than May) of each long term monitoring year (Years 1-5). The actual timing may be adjusted by the Restoration Ecologist based on weather conditions.

Survivorship will be determined by performing direct counts of aerial stems during Year 1 and Year 5. During years 2 through 4, visual estimates of the number of aerial shoots will be conducted. Ocular estimates will be conducted by first conditioning the observer, which will include obtaining a baseline count of ambrosia within a 0.25-meter-square quadrat in at least 10 randomly selected ambrosia plots. During this process, the observer will develop an understanding of observed density of shoots and the correlating number of shoots present. After the observer is conditioned, a 1-meter quadrat will be placed over each ambrosia plot and the number of aerial shoots within shall be estimated.

In addition to survivorship, the cover of ambrosia aerial shoots will be estimated for each ambrosia plot. Utilizing a 1-meter quadrat with 25 subunits (valued at 4 percent cover per subunit), the observer will place the quadrat at each ambrosia plot and make a visual estimate of how much of the quadrat is filled by the lateral projection of ambrosia aerial shoots. Cover estimates for each ambrosia plot (50 plots) will be added and averaged to obtain an average cover per plot for the transplanted population.

4.3 Post-Translocation Maintenance

Post-translocation maintenance shall be conducted on a monthly basis throughout the first year, and every three months, or more frequently (as needed), for the remainder of the post-translocation period. Maintenance should include continues treatment of non-native grasses and invasive species, and re-seeding as necessary. Maintenance methods shall include weeding, temporary watering, on-going trash removal, and fence and sign maintenance. Maintenance may also include replacement of dead plant material, if applicable performance standards are not met. Irrigation will occur at least every week for the first 2 months, then approximately every 2 weeks for the remainder of the first post-translocation maintenance period year, as determined by the Restoration Ecologist or Maintenance Contractor; irrigation shall occur as needed throughout the first three years of the post-translocation maintenance period. If soil moisture is found to be high due to natural rainfall then irrigation will not occur until soil conditions require it (see Section 3.2.3).

4.3.1 Weed Control

Weed abatement shall be executed as described in Section 3.3. Workers shall be closely supervised if they are not familiar with native plant species. Weed abatement shall be performed for the duration of the maintenance/monitoring period. Weed monitoring and control shall be performed monthly or more frequently, as determined by the Restoration Ecologist. All personnel involved with weed abatement must be trained and familiar with identifying native and non-native plant species. All weed removal personnel shall be supervised by the Translocation Contractor. All "high" and "moderate" risk species, as identified in the California Invasive Plant Council (Cal-IPC 2016) invasive plant inventory shall be targeted for immediate removal (except for *Erodium* species). The Restoration Ecologist shall approve weed control methods (e.g. hand pulling, treatment with herbicide, mechanical methods); the ambrosia plots shall be weeded using manual techniques (no herbicide application).

All pesticides and herbicides shall only be applied by licensed pest-control personnel, and used in their appropriate applications Weed abatement activities shall be consistent with the following guidelines:

- Weeds shall not be allowed to set seed at any time during the contract period.
- Weeds shall be removed before reaching six inches in height or prior to flower, whichever comes first.
- Once treated, weed biomass shall be collected and removed from the site and disposed of in a legal manner.
- If used, herbicides shall not be applied within the ambrosia plots and used in a manner that does not result in overspray into ambrosia plots and adjacent native habitat areas.

4.3.2 Vandalism Control and Trash Removal

Vandalism of the translocation site, fences, or signs, shall be repaired within three working days of discovery. Trash removal and repair of fences and signs shall be conducted as needed, including the removal of horse manure from the staging area adjacent to the translocation site. All trash and debris shall be disposed off-site and in a legal manner.

4.3.3 Erosion Control

All erosion-related problems shall be repaired immediately upon discovery. The Restoration Ecologist shall inspect the site to determine the cause of the problem, and the crew shall install erosion control measures as directed by the Restoration Ecologist. Erosion control may include the installation of Best Management Practices (BMP), such as: fiber coirs, silt fencing, bio-fiber matrix (BFM), and silt traps. Erosion control

measures may also include the filling and securing of erosion gullies. All erosion control materials must be inspected and free of invasive species seeds (e.g. compostable coils, fill dirt). Reseeding of eroded areas may be necessary following BMP or gully repair. Any reseeding efforts in these repaired areas shall be directed by the Restoration Ecologist.

4.3.4 Herbivory Control

The Restoration Ecologist or maintenance personnel shall look for signs of herbivory (plant predation) during monitoring evaluations. If signs of herbivory are noted, the problem shall be immediately remedied as directed by the Restoration Ecologist. Material for a typical herbivory cage should consist of one-inch mesh poultry wire supported by two wood stakes. The timing of the removal of the cages shall be determined by the Restoration Ecologist. If herbivory is an ongoing problem, additional measures can be taken including the installation of fine-mesh flashing along the bottom 36 inches of fences, burying fences to a depth of 12-18 inches, and maintaining and repairing fences. If necessary, predator control shall be evaluated by the Restoration Ecologist on a case-by-case basis and shall be restricted to methods recommended by the Restoration Ecologist, including rodent control, ant control, and animal trapping and translocation.

4.4 Annual Reporting

Annual reports shall be prepared by the Restoration Ecologist and include the qualitative and quantitative results of on-site quarterly monitoring as well as recommendations, if necessary, for improving translocation success. The annual reports should summarize and discuss the results of the monitoring visits and compare successes for each monitoring year using basic statistical analysis. Successes and failures as well as representative photographs should also be included. Trespass, erosion, seed germination and container plant mortality as well as other relevant site conditions shall be discussed. Any recommendations to further site success should also be included. Annual reports shall be submitted to the City with a courtesy copy to USFWS and CDFW. A total of five annual reports shall be submitted with the fifth annual report doubling as the final report documenting translocation site success. The report must show that the goals and success criteria of the mitigation program have been met. The translocation project shall be accepted by the City following a field review of the site and written confirmation.

4.5 Final Performance Standards

Performance standards are the success standards that the translocation site shall meet after five years of monitoring and maintenance. It is expected that five years are not sufficient to create a complete climax community, which may take in excess of ten years depending on weather conditions and drought cycles. However, five years is typically a suitable timeframe for vegetation to establish and to create a successful plant community that can sustain itself in perpetuity without much human interference or maintenance.

Remediation measures might be necessary to meet final success criteria. Potential remediation measures may include extending the long-term maintenance and monitoring period, planting all of the reserve stock, aggressively removing non-native species, supplemental watering, installing erosion control measures, and repairing herbivory controls and fencing. Adaptive management strategies should be employed to develop appropriate remediation measures based on the perceived problems.

4.6 Project Completion

Upon completion of the five-year maintenance and monitoring period and upon approval by the City, all non-deteriorating temporary measures associated with the translocation project shall be removed from the

receiver site, including silt fencing, herbivory cages, and irrigation, as feasible. Disintegrating measures such as fiber rolls and coirs may remain, if necessary to protect the translocation site and adjacent habitat.

If the City considers the translocation project unsuccessful, in part or in whole, because approved success criteria were not met, the monitoring period shall be extended until new success criteria are met. New success criteria and recommended remediation measures shall be included in the supplemental translocation program. The USFWS and CDFW will be informed and copied on the project completion or remediation actions.

4.7 Long-Term Maintenance and Monitoring

Once the mitigation project has been successfully completed, the EHC shall accept responsibility for long-term management upon receipt of a letter from the City of El Cajon stating that they accept the translocation efforts as complete, and after release of the invested endowment funds to the EHC. Annual management and monitoring cost estimates shall be provided to the EHC to continue managing the translocation, specifically performing aggressive weed control.

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