BIOLOGICAL TECHNICAL REPORT

FOR

MORENO VALLEY TRADE CENTER PROPERTY

LOCATED IN THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA

Prepared For:

Hillwood
901 Via Piemonte, Suite 175
Ontario, California 91764
Contact: John Grace
Phone: (951) 256-5924

Prepared By:

Glenn Lukos Associates, Inc.
1940 E. Deere Avenue, Suite 250
Santa Ana, California 92705
Phone: (949) 340-0256
Report Preparer: David Smith/Martin Rasnick

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INFORMATION SUMMARY

A. Report Date: June 2020

B. Report Title: Biotechnical Report for Moreno Valley Trade Center Property

C. Project Site Location: The Project is located south of Highway 60 and north of Alessandro Boulevard in the City of Moreno Valley, Riverside County, California. The Study Area is located north of Encelia Avenue, west of Redlands Boulevard, south of Eucalyptus Boulevard, and east of undeveloped land, and is bordered by residential development to the south, commercial development to the north, and undeveloped lands to the east and west. The Study Area occurs within Section 2 of Township 3 South, Range 3 West, as depicted on the USGS Sunnymead, California quadrangle. The Study Area is located at latitude 33.933871º N and longitude -117.161237º W (center reading).

D. Owner/Applicant:
John Grace
Vice President, Development
901 Via Piemonte, Suite 175
Ontario, California 91764
Phone: (951) 256-5924
Email: John.Grace@hillwood.com

E. Principal Investigator:
Glenn Lukos Associates, Inc.
1940 E. Deere Avenue, Suite 250
Santa Ana, California 92705
Phone: (949) 837-0404
Report Preparer: David Smith/Martin Rasnick

F. Individuals Conducting Fieldwork: April Nakagawa, David Smith, Jillian Stephens, Lesley Lokovic Gamber, and Martin Rasnick

G. Report Summary:

This report describes the current biological conditions for the Moreno Valley Trade Center Project [Project] and evaluates impacts to biological resources from development of the Project.

The proposed 84.68-acre Project (72.46-acre onsite impact area and 12.22-acre offsite impact area) is located within the Reche Canyon/Badlands Area Plan of the Western Riverside County Multiple Species Habitat Conservation Plan [MSHCP] (Dudek 2003) but is not located within

the MSHCP Criteria Area/Conservation Area. The proposed Project is located within the burrowing owl survey area but is not located within any other MSHCP species survey areas.

Glenn Lukos Associates, Inc. (GLA) biologists/regulatory specialists conducted general biological and site-specific surveys on December 6, 2019 and March 6, 2020 for the Project and conducted focused burrowing owl (*Athene cunicularia*) surveys on March 6 and 30, and April 3 and 17, 2020. GLA also conducted a jurisdictional delineation on December 6, 2019 and March 30, 2020. Pursuant to MSHCP policies, biological surveys included habitat assessments for special status species and animal species. In addition, GLA conducted vegetation mapping, including potential MSHCP riparian/riverine areas, and an evaluation of federal and state jurisdictional waters.

The proposed Project may result in impacts to five sensitive species; loggerhead shrike, white-tailed kite, Los Angeles pocket mouse, northwestern San Diego pocket mouse, and San Diego black-tailed jackrabbit. As all of these species are covered under the MSHCP, impacts to these species would be less than significant with consistency and participation with the MSHCP. The northern harrier was detected foraging on site, but there is no nesting habitat for the harrier within the Project or its off site impact areas. The harrier is also considered a covered species under the MSHCP and any impacts to this species would be less than significant with consistency and participation with the MSHCP.

The proposed Project would not impact waters subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) but would impact waters subject to the jurisdictions of the Santa Ana Regional Water Quality Control Board (Regional Board) and California Department of Fish and Wildlife (CDFW). The Project will impact also MSHCP riverine areas.

The proposed Project would result in the loss of habitat for special-status animal species, including MSHCP Covered Species. Impacts to Covered Species would be less than significant with consistency and participation with the MSHCP.

The proposed Project would be consistent with all applicable MSHCP policies, specifically pertaining to the Project's relationship to reserve assembly, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures). Through compliance with the MSHCP, the Plan would fully mitigate for potentially significant impacts under CEQA that would occur by the Project, including potential cumulative impacts.

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1.0 INTRODUCTION

1.1 Background and Scope of Work

This document provides the results of general biological surveys and focused biological surveys for the approximately 72.46-acre Moreno Valley Trade Center Property (the Project) and its associated 12.22-acre Offsite Impacts located in the City of Moreno Valley, Riverside County, California. This report identifies and evaluates impacts to biological resources associated with the proposed Project in the context of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), the California Environmental Quality Act (CEQA), and State and Federal regulations such as the Endangered Species Act (ESA), Clean Water Act (CWA), and the California Fish and Game Code.

The scope of this report includes a discussion of existing conditions for the approximately 84.68-acre Study Area, all methods employed regarding the general biological surveys and focused biological surveys, the documentation of botanical and wildlife resources identified (including special-status species), and an analysis of impacts to biological resources. Methods of the study include a review of relevant literature, field surveys, and a Geographical Information System (GIS)-based analysis of vegetation communities. As appropriate, this report is consistent with accepted scientific and technical standards and survey guideline requirements issued by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), the California Native Plant Society (CNPS), and other applicable agencies/organizations.

The field study focused on a number of primary objectives that would comply with CEQA and MSHCP requirements, including (1) general biological surveys and vegetation mapping; (2) habitat assessments for special-status plant species (including species with applicable MSHCP survey requirements); (3) habitat assessments for special-status wildlife species (including species with applicable MSHCP survey requirements); (4) assessment for the presence of wildlife movement and colonial nursery sites; (5) assessments for MSHCP riparian/riverine areas and vernal pools; and (6) assessments for areas subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) jurisdiction pursuant to Section 404 of the Clean Water Act, State Water Quality Control Board pursuant to Section 401 of the Clean Water Act, and CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600–1616 of the California Fish and Game Code. Observations of all plant and wildlife species were recorded during the biological studies and are included as Appendix A: Floral Compendium and Appendix B: Faunal Compendium.

1.2 Project Location

The Project Site comprises approximately 84.68 acres in the City of Moreno Valley, Riverside County, California [Exhibit 1 – Regional Map] and is located within Section 2 of Township 3 South, Range 3 West, of the U.S. Geological Survey (USGS) 7.5” quadrangle map Sunnymead (dated 1967 and photorevised in 1980)[Exhibit 2 – Vicinity Map]. The Project Site is bordered by Eucalyptus Avenue to the north, Redlands Boulevard to the east, Encelia Avenue to the south, and disturbed undeveloped lands and the Quincy Channel to the west [Exhibit 3 – Site Plan Map].

1.3 Project Description

For this report, the term *Project Site* is defined as the area of onsite, permanent impacts equaling 69.66 acres [Exhibit 3 – Site Plan Map]. The term *Offsite Impact Area* includes the areas not on-site that are to be directly and permanently impacted by the Project, totaling 12.22 acres. This report analyzes the combined impact area totaling 81.88 acres. The Project Site is composed of Assessor's Parcel Numbers (APNs): 488-340-002 through 488-340-012. For this document, we have assumed that all direct impacts would be permanent. The term *Study Area* includes both the Project Site, the Offsite Impact Area, and those areas within the project proponent's property limit that will not be directly impacted, for a total area of 84.68 acres.

The Project consists of a development plan for a light industrial building with 1,332,380 square feet of building floor area, inclusive of warehouse/storage space and supporting office space. The proposed building would operate as a cross-dock warehouse with 104 loading docks on the north side of the building and 120 loading docks on the south side of the building. Truck trailer parking spaces (278 total) also would be provided within the truck courts/loading areas on the north and south sides of the building. The truck courts/loading areas would be enclosed and screened from public viewing areas by solid screen walls. Automobile parking areas would be provided on the western and eastern sides of the building; a total of 637 automobile parking spaces would be provided on-site. Access to the Project Site would be provided by up to eight (8) driveways: two (2) driveways from Eucalyptus Avenue, two (2) driveways from Redlands Avenue, and at least two (2) or no more than four (4) driveways from Encelia Avenue. The proposed driveways to Encelia Avenue would be restricted to automobile traffic only; no heavy trucks would be permitted to enter/exit the site from the proposed Encelia Avenue driveways.

Additional off-site improvements would include various connections and infrastructure improvements within Redlands Boulevard and Eucalyptus Avenue, totaling approximately 12.22 acres.

1.4 Relationship of the Study Area to the MSHCP

1.4.1 MSHCP Background

The Western Riverside County MSHCP is a comprehensive habitat conservation/planning program for Western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats.

Through agreements with the U.S. Fish and Wildlife Service (USFWS) and CDFW, the MSHCP designates 146 special-status animal and plant species as Covered Species, of which the majority have no project-specific survey/conservation requirements. The MSHCP provides mitigation for project-specific impacts to these species for Projects that are compliant/consistent with MSHCP requirements, such that the impacts are reduced to below a level of significance pursuant to CEQA.

The Covered Species that are not yet adequately conserved have additional requirements in order for these species to ultimately be considered "adequately conserved". A number of these species have survey requirements based on a project's occurrence within a designated MSHCP survey area and/or based on the presence of suitable habitat. These include Narrow Endemic Plant Species (MSHCP *Volume I, Section 6.1.3*), as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species (MSHCP *Volume I, Section 6.3.2*) identified by the Criteria Area Plant Species Survey Areas (CAPSSA); animals species (burrowing owl, mammals, amphibians) identified by survey areas (MSHCP *Volume I, Section 6.3.2*); and species associated with riparian/riverine areas and vernal pool habitats, i.e., least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and three species of listed fairy shrimp (MSHCP *Volume I, Section 6.1.2*). An additional 28 species (MSHCP *Volume I, Table 9.3*) not yet adequately conserved have species-specific objectives in order for the species to become adequately conserved. However, these species do not have project-specific survey requirements.

The goal of the MSHCP is to have a total Conservation Area in excess of 500,000 acres, including approximately 347,000 acres on existing Public/Quasi-Public (PQP) Lands, and approximately 153,000 acres of Additional Reserve Lands targeted within the MSHCP Criteria Area. The MSHCP is divided into 16 separate Area Plans, each with its own conservation goals and objectives. Within each Area Plan, the Criteria Area is divided into Subunits, and further divided into Criteria Cells and Cell Groups (a group of criteria cells). Each Cell Group and ungrouped, independent Cell has designated "criteria" for the purpose of targeting additional conservation lands for acquisition. Projects located within the Criteria Area are subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process to determine if lands are targeted for inclusion in the MSHCP Reserve. In addition, all Projects located within the Criteria Area are subject to the Joint Project Review (JPR) process, where the Project is reviewed by the Regional Conservation Authority (RCA) to determine overall compliance/consistency with the biological requirements of the MSHCP.

1.4.2 Relationship of the Study Area to the MSHCP

The Project is located within the Reche Canyon/Badlands Area Plan of the MSHCP, but is not located within the MSHCP Criteria Area [Exhibit 4 – MSHCP Overlay Map] or existing Conserved Lands. The Project is located within the MSHCP Burrowing Owl Survey Area, but is not located within the Narrow Endemic Plan Species Survey Area (NEPSSA), the MSHCP Criteria Area Plant Species Survey Area (CAPSSA), the Mammal or Amphibian Survey Areas, or Core and Linkage areas.

Within the designated Survey Areas, the MSHCP requires habitat assessments, and focused surveys within areas of suitable habitat. For locations with positive survey results, the MSHCP requires that 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species have been met throughout the MSHCP. Findings of equivalency shall be made demonstrating that the 90-percent standard has been met, if applicable. If equivalency findings cannot be demonstrated, then "biologically equivalent or superior preservation" must be provided.

2.0 METHODOLOGY

In order to adequately identify biological resources in accordance with the requirements of CEQA, Glenn Lukos Associates (GLA) assembled biological data consisting of following main components:

- Delineation of aquatic resources (including wetlands and riparian habitat) subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), CDFW, and MSHCP riparian/riverine areas and vernal pools policy;
- Performance of vegetation mapping for the Project Site;
- Performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA and the MSHCP.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the CNDDB (CDFW 2020), the CNPS 8th edition online inventory (CNPS 2020), Natural Resource Conservation Service soil data (NRCS 2020), MSHCP species and habitat maps and sensitive soil maps (Dudek 2003), other pertinent literature, and knowledge of the region. Site-specific general surveys were conducted on foot in the proposed development areas for each target plant or animal species identified below. Table 2-1 provides a summary list of survey dates, survey types and personnel.

Table 2-1. Summary of Biological Surveys for the Project

Survey Type	2019/2020 Survey Dates	Biologist(s)
General Biological Survey	12/06/2019	AN
Evaluation of MSHCP Riparian/Riverine Areas	12/06/2019 3/31/2020	AN LLG
Evaluation of MSHCP Vernal Pools and Fairy Shrimp Habitat	12/06/2019	AN
Delineation of Federal and State Jurisdictional Waters	12/06/2019 3/31/2020	AN, LLG, MAR
General Botanical Survey	3/06/20	JS
Focused Burrowing Owl Surveys	3/06/20 3/30/20 4/03/20 4/17/20	AN DS DS DS

LLG – Lesley Lokovic Gamber, AN – April Nakagawa, MAR – Martin Rasnick, DS – David Smith, JS – Jillian Stephens

Individual plants and wildlife species were evaluated in this report based on their "special-status." For this report, plants were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State Endangered Species Act (ESA); and/or
- CNPS Rare Plant Inventory Rank 1A, 1B, 2A, 2B, 3, or 4).

Wildlife species were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State ESA; or
- Designation by the State as a Species of Special Concern (SSC) or California Fully Protected (CFP) species; or
- Global (G) and/or State (S) ranking of category 3 or less based on CDFW (see Section 3.2.2 below for further explanation);

Vegetation communities and habitats were considered "special-status" based on one or more of the following criteria:

- Global (G) and/or State (S) ranking of category 3 or less based on CDFW (see Section 3.2.2 below for further explanation); and
- Riparian/riverine habitat.

2.1 Botanical Resources

A site-specific survey program was designed to accurately document the botanical resources within the Project Site, and consisted of five components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur within the Project Site; (3) a general botanical survey; (4) vegetation mapping; and (5) habitat assessments for special-status plants (including those with MSHCP requirements).

2.1.1 Literature Search

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included the following:

- California Native Plant Society, Rare Plant Program. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39) (CNPS 2020); and

- CNDDB for the USGS 7.5' quadrangle(s): Sunnymead and all surrounding quadrangles (CDFW 2020).

2.1.2 Vegetation Mapping

The vegetation/land uses within the Project Site were mapped/classified based on the dominant plant species present, or based on the applicable land use (e.g., developed). Since the entire Project Site is disturbed or developed, including the presence of ornamental vegetation, the mapping did not follow a specific classification system (e.g., Holland [1986]). Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph.

2.1.3 Special-Status Plant Species and Habitats Evaluated for the Project Site

A literature search was conducted to obtain a list of special-status plants with the potential to occur within the Project Site. The CNDDB was initially consulted to determine well-known occurrences of plants and habitats of special concern in the region. Other sources used to develop a list of target species for the survey program included the CNPS online inventory (2020) and the MSHCP (Dudek 2003).

Based on this information, vegetation profiles and a list of target sensitive plant species and habitats that could occur within the Project Site were developed and incorporated into a mapping and survey program to achieve the following goals: (1) characterize the vegetation associations and land use; (2) prepare a detailed floristic compendium; (3) identify the potential for any special-status plants that may occur within the Project Site; and (4) prepare a map showing the distribution of any sensitive botanical resources associated with the Project Site, if applicable.

The Project Site is not located within the MSHCP plant survey areas (i.e., NEPSSA or CAPSSA). As such, focused plant surveys are not required pursuant to the MSHCP.

2.1.4 Botanical Surveys

GLA biologist Jillian Stephens visited the site on March 6, 2020 to conduct a general botanical survey. The survey was conducted in accordance with accepted botanical survey guidelines (CDFG 2009, CNPS 2001, USFWS 2000). As applicable, the survey was conducted at an appropriate time based on precipitation and flowering periods. An aerial photograph, a soil map, and/or a topographic map were used to determine the community types and other physical features that may support sensitive and uncommon taxa or communities within the Project Site. The survey was conducted by following meandering transects within target areas of suitable habitat. All plant species encountered during the field survey were identified and recorded following the above-referenced guidelines adopted by CNPS (2010) and CDFW by Nelson (1984). A complete list of the plant species observed is provided in Appendix A. Scientific nomenclature and common names used in this report follow Baldwin et al (2012), and Munz (1974).

2.2 Wildlife Resources

Wildlife species were evaluated and detected during the field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project Site by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during the visits. A complete list of wildlife species observed within the Project Site is provided in Appendix B. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG 2008), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians 6th Edition, Collins and Taggert (2009) for amphibians and reptiles, and the American Ornithologists' Union Checklist 7th Edition (2009) for birds. The

methodology (including any applicable survey protocols) utilized to conduct general survey(s), habitat assessment(s), and/or focused surveys for special-status animals are included below.

2.2.1 General Surveys

Birds

During the general biological and reconnaissance survey within the Project Site, birds were identified incidentally within each habitat type. Birds were detected by both direct observation and by vocalizations and were recorded in field notes.

Mammals

During general biological and reconnaissance survey within the Project Site, mammals were identified incidentally within each habitat type. Mammals were detected both by direct observations and by the presence of diagnostic sign (i.e. tracks, burrows, scat, etc.).

Reptiles and Amphibians

During general biological and reconnaissance surveys within the Project Site, reptiles and amphibians were identified incidentally during surveys within each habitat type. Habitats were examined for diagnostic reptile sign, which include shed skins, scat, tracks, snake prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

2.2.2 Special-Status Animal Species Evaluated for the Project Site

A literature search was conducted to obtain a list of special-status wildlife species with the potential to occur within the Project Site. Species were evaluated based on three factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in vicinity of the Project Site, (2) species survey areas as identified by the MSHCP for the Project Site; and 3) any other special-status animals that are known to occur within the vicinity of the Project Site, or for which potentially suitable habitat occurs on the Project Site.

2.2.3 Habitat Assessment for Special-Status Animal Species

GLA biologist (April Nakagawa) conducted habitat assessments for special-status animal species on December 6, 2019. An aerial photograph, soil map and/or topographic map were used to determine the community types and other physical features that may support special-status and uncommon taxa within the Project Site.

2.2.4 Focused Surveys for Special-Status Animals Species

Burrowing Owl

The majority of the Project Site is located within the MSHCP survey area for the burrowing owl (*Athene cunicularia*). GLA biologists April Nakagawa and David Smith conducted focused surveys for the burrowing owl for all suitable habitat areas within the Project Site. Surveys were conducted in accordance with survey guidelines described in the 2006 MSHCP Burrowing Owl Survey Instructions. The guidelines stipulate that four focused survey visits be conducted on separate dates between March 1 and August 31. Within areas of suitable habitat, the MSHCP first requires a focused burrow survey to map all potentially suitable burrows. The focused burrow survey was conducted on March 6, 2020. Focused burrowing owl surveys were conducted on March 6, March 30, April 3, and April 17, 2020. The burrowing owl survey visits were generally conducted within a survey window from one hour prior to sunrise to two hours after sunrise.

The surveys were conducted during weather that was conducive to observing owls outside their burrows and detecting burrowing owl sign and not during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Additionally, all work was performed more than 5 days after a rain event. Refer to Table 2-1 in Section 2.0 for survey condition details.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Exhibit 8 identifies the burrowing owl survey areas at the Project Site. Transects were spaced between 22 feet and 65 feet apart, adjusting for vegetation height and density, in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 320 feet along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Transect locations are provided on Exhibit 8, along with the 500-foot buffer area. Table 2-2 summarizes the burrowing owl survey visits. The results of the burrowing owl surveys are documented in Section 4.0 of this report.

Table 2-2. Summary of Burrowing Owl Surveys

Survey Date	Biologist(s)	Start/End Time	Start/End Temperature (°F)	Start/End Wind Speed (mph)	Cloud Cover (%)
03/06/2020	AN	0615/0915	57/64	0-3	20%
03/30/2020	DS	0600/0900	43/54	0-2	10%
04/03/2020	DS	0555/0855	51/57	0-1	60%
04/17/2020	DS	0610/0910	45/55	0-1	0%

AN = April Nakagawa, DS = David Smith

2.3 Jurisdictional Waters

The Project was delineated to identify the limits of jurisdictional waters, including waters of the U.S. (including wetlands) subject to the jurisdiction of the Corps and Regional Board, and waters

of the State (including riparian vegetation) subject to the jurisdiction of CDFW. Prior to beginning the field delineation, a 200-scale color aerial photograph and the previously cited USGS topographic maps were examined to determine the locations of potential areas of Corps/CDFW jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Potential wetland habitats at the subject site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[1] (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement)[2]. The presence of an Ordinary High Water Mark (OHWM) was determined using the 2008 Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States[3] in conjunction with the Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.[4] While in the field the limits of the OHWM, wetlands (if applicable), and CDFW jurisdiction were recorded using GPS technology and/or on copies of the aerial photography. Other data were recorded onto the appropriate datasheets.

2.4 MSHCP Riparian/Riverine Areas and Vernal Pools

Volume I, Section 6.1.2 of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools would occur within the MSHCP Plan Area. The purpose is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained. The MSHCP requires that as projects are proposed within the overall Plan Area, the effect of those projects on riparian/riverine areas and vernal pools must be addressed.

The MSHCP defines riparian/riverine areas as *lands which contain Habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.*

The MSHCP defines vernal pools as *seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and/or vegetation during the drier portion of the growing season.*

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[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

[2] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Version 2.0). Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

[3] Lichvar, R. W., and S. M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. (http://www.crrel.usace.army.mil/library/technicalreports/ERDC-CRREL-TR-08-12.pdf).

[4] Curtis, Katherine E. and Robert Lichevar. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TN-10-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

GLA surveyed the Project Site for riparian/riverine areas and vernal pool/seasonal pool habitat, including features with the potential to support fairy shrimp. To assess for vernal/seasonal pools (including fairy shrimp habitat), GLA biologists evaluated the topography of the site, including whether the site contained depressional features/topography with the potential to become inundated; whether the site contained soils associated with vernal/seasonal pools; and whether the site supported plants that suggested areas of localized ponding. The site was evaluated on December 6, 2019 and re-evaluated on March 30, 2020.

3.0 REGULATORY SETTING

The proposed Project is subject to state and federal laws and regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state- and federally-listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; special-status species which are not listed as threatened or endangered by the state or federal governments; and special-status vegetation communities.

3.1 Endangered Species Acts

3.1.1 California Endangered Species Act

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, 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 determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

3.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification that result in injury to, or death of species as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.
- Sections 2090-2097 of the CESA require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as

well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

3.1.4 Take Authorizations Pursuant to the MSHCP

The Western Riverside County MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the federal and state wildlife agencies and participating entities. The MSHCP is a comprehensive habitat conservation-planning program for western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the MSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the MSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species pursuant to Section 10(a) of the FESA.

Through agreements with the U.S. Fish and Wildlife Service (USFWS) and the CDFW, the MSHCP designates 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 "Covered Species" designated under the MSHCP, the majority of these species have no additional survey/conservation requirements. In addition, through project participation with the MSHCP, the MSHCP provides mitigation for project-specific impacts to Covered Species so that the impacts would be reduced to below a level of significance pursuant to CEQA. As noted above, project-specific survey requirements exist for species designated as "Covered Species not yet adequately conserved". These include Narrow Endemic Plant Species, as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species identified by the Criteria Area Species Survey Areas (CASSA); animals species as identified by survey area; and plant and animal species associated with riparian/riverine areas and vernal pool habitats (*Volume I, Section 6.1.2* of the MSHCP document).

For projects that have a federal nexus such as through federal Clean Water Act Section 404 permitting, take authorization for federally listed covered species would occur under Section 7 (not Section 10) of FESA and that USFWS would provide a MSHCP consistency review of the proposed project, resulting in a biological opinion. The biological opinion would require no more compensation than what is required to be consistent with the MSHCP.

3.2 California Environmental Quality Act

3.2.1 CEQA Guidelines Section 15380

CEQA requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that

could potentially meet the criteria for state listing. For plants, CDFW recognizes that plants on Lists 1A, 1B, or 2 of the CNPS *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants CNPS Ranked 3 or 4.

3.2.2 Special-Status Plants, Wildlife and Vegetation Communities Evaluated Under CEQA

Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. This term is employed in this document, but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For this report the following acronyms are used for federal special-status species:

- FE Federally listed as Endangered
- FT Federally listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FC Federal Candidate Species (former C1 species)

State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (SFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California SSC are designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's CNDDB project. Informally listed taxa are not protected but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State Candidate for listing as Endangered

- SCT State Candidate for listing as Threatened
- SFP State Fully Protected
- SP State Protected
- SSC State Species of Special Concern

CNDDB Global/State Rankings

The CNDDB provides global and state rankings for species and communities based on a system developed by The Nature Conservancy to measure rarity of a species. The ranking provides a shorthand formula about how rare a species/community is and is based on the best information available from multiple sources, including state and federal listings, and other groups that recognize species as sensitive (e.g., Bureau of Land Management, Audubon Society, etc.). State and global rankings are used to prioritize conservation and protection efforts so that the rarest species/communities receive immediate attention. In both cases, the lower ranking (i.e., G1 or S1) indicates extreme rarity. Rare species are given a ranking from 1 to 3. Species with a ranking of 4 or 5 is considered to be common. If the exact global/state ranking is undetermined, a range is generally provided. For example, a global ranking of "G1G3" indicates that a species/community global rarity is between G1 and G3. If the animal being considered is a subspecies of a broader species, a "T" ranking is attached to the global ranking. The following are descriptions of global and state rankings:

Global Rankings

- G1 – Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or because of some factor(s) making it especially vulnerable to extinction.
- G2 – Imperiled globally because of rarity (6-20 occurrences), or because of some other factor(s) making it very vulnerable to extinction throughout its range.
- G3 – Either very rare and local throughout its range (21 to 100 occurrences) or found locally (even abundantly at some of its locations) in a restricted range (e.g., a physiographic region), or because of some other factor(s) making it vulnerable to extinction throughout its range.
- G4 – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5 – Common, widespread and abundant.

State Rankings

- S1 – Extremely rare; typically 5 or fewer known occurrences in the state; or only a few remaining individuals; may be especially vulnerable to extirpation.
- S2 – Very rare; typically between 6 and 20 known occurrences; may be susceptible to becoming extirpated.
- S3 – Rare to uncommon; typically 21 to 50 known occurrences; S3 ranked species are not yet susceptible to becoming extirpated in the state but may be if additional populations are destroyed.

- S4 - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 - Common, widespread, and abundant in the state.

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS's Eighth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five ranks. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity that are summarized in Table 3-1.

Table 3-1. CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions

CNPS Rank	Comments
Rank 1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years.
Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
Rank 2A – Plants presumed Extirpated in California, But Common Elsewhere	Species that are presumed extinct in California but more common outside of California
Rank 2B – Plants Rare, Threatened or Endangered in California, But More Common Elsewhere	Species that are rare in California but more common outside of California
Rank 3 – Plants About Which More Information Is Needed (A Review List)	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific rank. In addition, many of the Rank 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
Rank 4 – Plants of Limited Distribution (A Watch List)	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for Rank 3 species, CNPS lacks survey data to accurately determine status in California. Many species have been placed on Rank 4 in previous editions of the "Inventory" and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	**Comments**
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.

CNPS Rank	Comments
.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.
.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

3.3 Jurisdictional Waters

3.3.1 Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a)[5] as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
> *(2) All interstate waters including interstate wetlands;*
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
> *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
> *(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
> *(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...*
> *(4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
> *(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
> *(6) The territorial seas;*
> *(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*
> (8) *Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

[5] On January 23, 2020, the U.S. Environmental Protection Agency (EPA) and the Corps finalized the Navigable Waters Protection Rule to redefine "Waters of the United States" and thereby establish federal regulatory authority under the Clean Water Act. The Navigable Waters Protection Rule is expected to be published in the Federal Register in the first quarter of 2020 and will become effective 60 days after publication in the Federal Register. Implementation of the Navigable Waters Protection Rule may result in a change to the delineated areas of Corps jurisdiction as outlined in this report.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

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

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

1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, the U.S. Environmental Protection Agency (EPA) asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc*.) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

2. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the EPA and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands, as set forth in the chart below, the Corps must apply the "significant nexus" standard.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on Project Sites for which a jurisdictional determination is being sought from the Corps.

The Corps and EPA will assert jurisdiction over the following waters:

- Traditional navigable waters.
- Wetlands adjacent to traditional navigable waters.
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).
- Wetlands that directly abut such tributaries.

The Corps and EPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:

- Non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow).
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.
- Significant nexus includes consideration of hydrologic and ecologic factors.

3. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published the Wetland Manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the Wetland Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the Wetland Manual and Arid West Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the Arid West 2016 Regional Wetland Plant List[6],[7]);
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- Whereas the Wetland Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

3.3.2 Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into waters of the United States[8] and waters of the

[6] Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Arid West 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

[7] Note the Corps also publishes a National List of Plant Species that Occur in Wetlands (Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016.); however, the Regional Wetland Plant List should be used for wetland delineations within the Arid West Region.

[8] Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code or Regulations title 23, section 3831(w)). This regulation has remained in effect despite subsequent

state. Waters of the United States are defined above in Section II.A and waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050[e]).

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

1. State Wetland Definition

The Water Boards define an area as wetland[9] as follows: *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

The following wetlands are waters of the state:

1. *Natural wetlands;*
2. *Wetlands created by modification of a surface water of the state;[10] and*
3. *Artificial wetlands[11] that meet any of the following criteria:*

    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
    b. Specifically identified in a water quality control plan as a wetland or other water of the state;

changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S." under the federal Clean Water Act.

[9] State Water Resources Control Board. 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. [For Inclusion in the Water Quality Control Plans for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California].

[10] "Created by modification of a surface water of the state" means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

[11] Artificial wetlands are wetlands that result from human activity.

c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):

i. Industrial or municipal wastewater treatment or disposal,
ii. Settling of sediment,
iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,
viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.[12]

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

3.3.3 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1617 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has

[12] Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board's authority to issue or waive waste discharge requirements or take other actions as applicable.

supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW also defines a stream as "a body of water that flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators."

It is important to note that the Fish and Game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

4.0 RESULTS

This section provides the results of general biological surveys, vegetation mapping, habitat assessments for special-status plants and a general botanical survey, habitat assessments and focused surveys for special-status animals, an assessment for MSHCP riparian/riverine areas and vernal pools, and a jurisdictional delineation for Waters of the United States (including wetlands) subject to the jurisdiction of the Corps and Regional Board, and streams (including riparian vegetation) and lakes subject to the jurisdiction of CDFW.

4.1 Existing Conditions

The Study Area primarily consists of annually maintained agricultural fields that support predominantly ruderal vegetation, with the southeastern portion containing an active plant nursery. The Study Area and the surrounding landscape has been historically disked since 1966[13]. Currently the surrounding land uses include commercial industry to the north, residential development to the south, and agricultural uses to the east and west. The Project slopes gently to the southeast, with elevations on site ranging from approximately 1710 feet above mean sea level (amsl) in the southeast to 1751 feet amsl in the northwest. The Quincy Channel enters the northwestern portion of the Study Area through a culvert and flows in a southerly direction for 1487 linear feet before continuing off-site to the southwest [Exhibit 6 – Site Photographs]. Two ephemeral drainage ditches, which were constructed in, and drain wholly within upland areas, occur along the northern and eastern boundaries of the Project Site parallel to Eucalyptus Avenue and Redlands Boulevard, respectively. Soils on site consist of loam, fine sand, and fine sandy loam from the Metz and San Emigdio series [Exhibit 9 – Soils Map].

4.2 Vegetation Mapping

The Study Area supports the following vegetation/land use types: Disturbed/Developed, Disturbed/Ruderal, Ornamental, and Ruderal. Table 4-1 provides a summary of the vegetation types and their corresponding acreage. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 5. Photographs depicting the site are shown in Exhibit 6.

[13] *Historic Aerials*, www.historicaerials.com/.

Table 4-1. Summary of Vegetation/Land Use Types for the Study Area

VEGETATION/LAND USE TYPE	ONSITE AREAS (acres)	OFFSITE IMPACT AREA (acres)	TOTAL (acres)
Disturbed/Developed	14.77	12.22	**26.99**
Disturbed/Ruderal	53.39	0	**53.39**
Ornamental	0.80	0	**0.80**
Ruderal	3.49	0	**3.49**
Total	**72.46**	**12.22**	**84.68**

Disturbed/Developed
The Study Area supports 26.99 acres of disturbed/developed areas, including 14.77 acres onsite and 12.22 acres offsite. These onsite areas consist of vehicular access roads located along the western and southern portions of the site and an active plant nursery located in the southeastern corner of the site. The offsite areas consist of existing paved roadways.

Disturbed/Ruderal
The Study Area supports 53.39 acres of disturbed/ruderal lands, all of which are associated with the onsite portions of the Project. These lands cover the majority of the Study Area and were historically used for farming. These areas are routinely disked for weed abatement. Dominant plant species observed included London rocket (*Sisymbrium irio*), cheeseweed (*Malva parviflora*), common fiddleneck (*Amsinckia intermedia*), red brome (*Bromus madritensis* ssp. *rubens*), and Russian thistle (*Salsola australis*), with some areas having dense patches of non-native grasses. Other species detected included wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), common barley (*Hordum vulgare*), common Mediterranean grass (*Schismus barbatus*), field mustard (*Brassica rapa*), flax-leaved horseweed (*Erigeron bonariensis*), lambs quarters (*Chenopodium album*), prickly lettuce (*Lactuca serriola*), red brome (*Bromus madritensis* ssp. *rubens*), silver wattle (*Acacia dealbata*), white horehound (*Marrubium vulgare*), annual bursage (*Ambrosia acanthicarpa*), salt heliotrope (*Heliotropium curassavicum*), and western sunflower (*Helianthus annuus*).

Additionally, the disturbed/ruderal lands support sparse occurrences of ornamentally planted southern California black walnut (*Juglans californica*) and Peruvian pepper tree (*Schinus molle*).

Ornamental
The Study Area contains 0.80 acre of lands supporting trees that were planted at the site or that established from other ornamental plantings, all of which are associated with the onsite portion of the Project. These areas primarily consist of non-native or planted tree species occurring in the central and southeastern portions of the Study Area. Dominant plant species observed included Fremont cottonwood (*Populus fremontii*) and red gum (*Eucalyptus camaldulensis*).

Ruderal
The Study Area supports 3.49 acres of ruderal lands, all of which are associated with the onsite portion of the Project. These areas primarily consist of non-native ruderal vegetation that have not been historically maintained. Ruderal areas on site are primarily associated with Quincy Channel along the western boundary of the Study Area and with fence-lines in the eastern

portions of the site. In the Quincy Creek section of ruderal lands, the dominant plant species within these areas included common fiddleneck, London rocket, and Russian thistle. Additional plant species observed included giant reed (*Arundo donax*), castor bean (*Ricinis communis*), Mexican fan palm (*Washingtonia robusta*), red-stemmed filaree (*Erodium cicutarium*), tamarisk (*Tamarix* sp.), tree of heaven (*Ailanthus altissima*), and tree tobacco (*Nicotiana glauca*). In the eastern portion of ruderal lands on site, dominant plants include common Mediterranean grass, common barley, cheeseweed, fiddleneck, and London rocket.

4.3 Special-Status Vegetation Communities

The CNDDB identifies the following 8 special-status vegetation communities for the Sunnymead and surrounding quadrangle maps: Riversidian Alluvial Fan Sage Scrub, Southern Riparian Forest, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Canyon Live Oak Ravine Forest, Southern Sycamore Alder Riparian Woodland, Southern Riparian Scrub, and Southern Willow Scrub. The Project Site does not contain any special-status vegetation types, including those identified by the CNDDB.

4.4 Special-Status Plants

No special-status plants were detected at the Study Area. Table 4-2 provides a list of special-status plants evaluated for the Study Area through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors: 1) species identified by the CNDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the Study Area, 2) applicable MSHCP survey areas, and 3) any other special-status plants that are known to occur within the vicinity of the Study Area, or for which potentially suitable habitat occurs within the site.

Table 4-2. Special-Status Plants Evaluated for the Study Area

Species Name	Status	Habitat Requirements	Occurrence
Bristly sedge *Carex comosa*	Federal: None State: None CNPS: Rank 2B.1	Coastal prairie, marshes and swamps (lake margins), and valley and foothill grassland.	Does not occur due to a lack of suitable habitat.
California satintail *Imperata brevifolia*	Federal: None State: None CNPS: Rank 2B.1	Mesic soils in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub.	Does not occur due to a lack of suitable habitat.
California screw moss *Tortula californica*	Federal: None State: None CNPS: Rank 1B.2	Sandy soil in chenopod scrub, and valley and foothill grassland.	Does not occur due to a lack of suitable habitat.
Chaparral ragwort *Senecio aphanactis*	Federal: None State: None CNPS: Rank 2B.2	Chaparral, cismontane woodland, coastal scrub. Sometimes associated with alkaline soils.	Does not occur due to a lack of suitable habitat.
Chaparral sand-verbena *Abronia villosa* var. *aurita*	Federal: None State: None CNPS: Rank 1B.1	Sandy soils in chaparral, coastal sage scrub.	Does not occur due to a lack of suitable habitat

Species Name	Status	Habitat Requirements	Occurrence
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Playas, vernal pools, marshes and swamps (coastal salt).	Does not occur due to a lack of suitable habitat.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	Federal: None State: None CNPS: Rank 1B.2	Alkaline soils in coastal sage scrub, coastal bluff scrub.	Does not occur due to a lack of suitable habitat.
Gambel's water cress *Nasturtium gambelii*	Federal: FE State: ST CNPS: Rank 1B.1	Marshes and swamps (freshwater or brackish).	Does not occur due to a lack of suitable habitat.
Horn's milk-vetch *Astragalus hornii* var. *hornii*	Federal: None State: None CNPS: Rank 1B.1	Lake margins with alkaline soils, meadows and seeps, and playas.	Does not occur due to a lack of suitable habitat.
Jaeger's (bush) milk-vetch *Astragalus pachypus* var. *jaegeri*	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland.	Does not occur due to a lack of suitable habitat.
Little mousetail *Myosurus minimus* ssp. *apus*	Federal: None State: None CNPS: Rank 3.1 MSHCP(d)	Valley and foothill grassland, vernal pools (alkaline soils).	Does not occur due to a lack of suitable habitat.
Long-spined spineflower *Chorizanthe polygonoides* var. *longispina*	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Clay soils in chaparral, coastal sage scrub, meadows and seeps, and valley and foothill grasslands	Does not occur due to a lack of suitable habitat or soils.
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	Federal: None State: None CNPS: Rank 1A	Marshes and swamps (coastal salt and freshwater).	Does not occur due to a lack of suitable habitat.
Marsh sandwort *Arenaria paludicola*	Federal: FE State: SE CNPS: Rank 1B.1	Bogs and fens, freshwater marshes and swamps.	Does not occur due to a lack of suitable habitat.
Mesa horkelia *Horkelia cuneata* var. *puberula*	Federal: None State: None CNPS: Rank 1B.1	Sandy or gravelly soils in chaparral (maritime), cismontane woodland, and coastal scrub.	Does not occur due to a lack of suitable habitat.
Mud nama *Nama stenocarpum*	Federal: None State: None CNPS: Rank 2B.2 MSHCP(d)	Marshes and swamps	Does not occur due to a lack of suitable habitat.
Munz's onion *Allium munzii*	Federal: FE State: ST CNPS: Rank 1B.1 MSHCP(b)	Clay soils in chaparral, coastal sage scrub, and valley and foothill grasslands	Does not occur due to a lack of suitable habitat or soils.
Nevin's barberry *Berberis nevinii*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(d)	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub.	Does not occur due to a lack of suitable habitat.
Palmer's grapplinghook *Harpagonella palmeri*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils.	Does not occur due to a lack of suitable habitat or soils.

Species Name	Status	Habitat Requirements	Occurrence
Parish's brittlescale *Atriplex parishii*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Chenopod scrub, playas, vernal pools.	Does not occur due to a lack of suitable habitat.
Parish's bush-mallow *Malacothamnus parishii*	Federal: None State: None CNPS: Rank 1A	Chaparral and coastal scrub	Does not occur due to a lack of suitable habitat.
Parish's desert-thorn *Lycium parishii*	Federal: None State: None CNPS: Rank 2B.3	Coastal sage scrub, Sonoran desert scrub	Does not occur due to a lack of suitable habitat.
Parish's gooseberry *Ribes divaricatum* var. *parishii*	Federal: None State: None CNPS: Rank 1A	Riparian woodland	Does not occur due to a lack of suitable habitat.
Parry's spineflower *Chorizanthe parryi* var. *parryi*	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.	Does not occur due to a lack of suitable habitat.
Payson's jewelflower *Caulanthus simulans*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Sandy or granitic soils in chaparral and coastal scrub.	Does not occur due to a lack of suitable habitat.
Peruvian dodder *Cuscuta obtusiflora var. glandulosa*	Federal: None State: None CNPS: Rank 2B.2	Marshes and swamps (freshwater). Annual vine (parasitic). Blooming period July - October.	Does not occur due to a lack of suitable habitat.
Plummer's mariposa lily *Calochortus plummerae*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland.	Does not occur due to a lack of suitable habitat or soils.
Prairie wedge grass *Sphenopholis obtusata*	Federal: None State: None CNPS: Rank 2B.2	Mesic soils in cismontane woodland, meadows and seeps.	Does not occur due to a lack of suitable habitat.
Pringle's monardella *Monardella pringlei*	Federal: None State: None CNPS: Rank 1A	Sandy soils in coastal sage scrub.	Does not occur due to a lack of suitable habitat.
Robinson's pepper grass *Lepidium virginicum* var. *robinsonii*	Federal: None State: None CNPS: Rank 4.3	Chaparral, coastal sage scrub	Does not occur due to a lack of suitable habitat.
Salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimum*	Federal: FE State: SE CNPS: Rank 1B.2	Coastal dune, coastal salt marshes and swamps.	Does not occur due to a lack of suitable habitat.
Salt Spring checkerbloom *Sidalcea neomexicana*	Federal: None State: None CNPS: Rank 2B.2	Mesic, alkaline soils in chaparral, coastal sage scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
San Bernardino aster *Symphyotrichum defoliatum*	Federal: None State: None CNPS: Rank 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic).	Does not occur due to a lack of suitable habitat.
San Jacinto Valley crownscale *Atriplex coronata* var. *notatior*	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	Does not occur due to a lack of suitable habitat.
Santa Ana River woolly star *Eriastrum densifolium* ssp. *sanctorum*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP	Alluvial fan sage scrub, chaparral. Occurring on sandy or rocky soils.	Does not occur due to a lack of suitable habitat.
Slender-horned spineflower *Dodecahema leptoceras*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	Does not occur due to a lack of suitable habitat.
Smooth tarplant *Centromadia pungens* ssp. *laevis*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grasslands, disturbed habitats.	Does not occur due to a lack of suitable habitat.
Spreading navarretia *Navarretia fossalis*	Federal: FT State: None CNPS: Rank 1B.1 MSHCP(b)	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	Does not occur due to a lack of suitable habitat.
Thread-leaved brodiaea *Brodiaea filifolia*	Federal: FT State: SE CNPS: Rank 1B.1 MSHCP(d)	Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools.	Does not occur due to a lack of suitable habitat or soils.
White-bracted spineflower *Chorizanthe xanti* var. *leucotheca*	Federal: None State: None CNPS: Rank 1B.2	Sandy or gravelly soils in Mojavean desert scrub and pinyon and juniper woodland.	Does not occur due to a lack of suitable habitat.
Woven-spored lichen *Texosporium sancti-jacobi*	Federal: None State: None CNPS: Rank 3	On soil, small mammal pellets, dead twigs, and on *Selaginella* spp. Chaparral (openings).	Does not occur due to a lack of suitable habitat.
Wright's trichocoronis *Trichocoronis wrightii* var. *wrightii*	Federal: None State: None CNPS: Rank 2B.1 MSHCP(b)	Alkaline soils in meadows and seeps, marshes and swamps, riparian scrub, vernal pools.	Does not occur due to a lack of suitable habitat.

STATUS

Federal
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate

State
SE – State Endangered
ST – State Threatened

CNPS
Rank 1A – Plants presumed extirpated in California and either rare or extinct elsewhere.
Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.
Rank 2A – Plants presumed extirpated in California, but common elsewhere.
Rank 2B – Plants rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 – Plants about which more information is needed (a review list).
Rank 4 – Plants of limited distribution (a watch list).

Threat Code extension
.1 – Seriously endangered in California (over 80% occurrences threatened)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected onsite incidentally or through focused surveys

4.4.1 Special-Status Plants Detected at the Study Area

No special-status plants were detected at the Study Area.

4.5 Special-Status Animals

One special-status animal, the northern harrier (*Circus cyaneus)* was detected foraging within the Study Area, but no special-status animals were detected inhabiting the Study Area. Table 4-3 provides a list of special-status animals evaluated for the Study Area through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Study Area, 2) applicable MSHCP survey areas, and 3) any other special-status animals that are known to occur within the vicinity of the Study Area, for which potentially suitable habitat occurs on the site.

Table 4-3. Special-Status Animals Evaluated for the Study Area

Species Name	Status	Habitat Requirements	Occurrence
Invertebrates			
Crotch bumble bee *Bombus crotchii*	Federal: None State: CE	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Does not occur due to a lack of suitable habitat.
Delhi-sands flower-loving fly *Raphiomidas terminatus abdominalis*	Federal: FE State: None MSHCP	Fine, sandy soils, often associated with wholly or partially consolidated dunes referred to as the "Delhi" series. Vegetation consists of a sparse cover, including Californica buckwheat, California croton, deerweed, and evening primrose.	Does not occur due to a lack of suitable habitat.
Quino checkerspot butterfly *Euphydryas editha quino*	Federal: FE State: None MSHCP	Larval and adult phases each have distinct habitat requirements tied to host plant species and topography. Larval host plants include *Plantago erecta* and *Castilleja exserta*. Adults occur on sparsely vegetated rounded hilltops and ridgelines, and are known to disperse through disturbed habitats to reach suitable nectar plants.	Does not occur due to a lack of suitable habitat.
Riverside fairy shrimp *Streptocephalus woottoni*	Federal: FE State: None MSHCP(a)	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds.	Does not occur due to a lack of suitable habitat.
Fish			
Arroyo chub *Gila orcutti*	Federal: None State: SSC MSHCP	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Does not occur due to a lack of suitable habitat.
Santa Ana speckled dace *Rhinichthys osculus* ssp. *3*	Federal: None State: SSC	Occurs in the headwaters of the Santa Ana and San Gabriel Rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Does not occur due to a lack of suitable habitat.
Santa Ana sucker *Catostomus santaanae*	Federal: FT State: None MSHCP	Small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates.	Does not occur due to a lack of suitable habitat.
Southern steelhead - southern California DPS	Federal: FE State: None	Clear, swift moving streams with gravel for spawning. Federal listing refers to populations from Santa	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Oncorhynchus mykiss irideus		Maria river south to southern extent of range (San Mateo Creek in San Diego county.)	
Amphibians			
Western spadefoot *Spea hammondii*	Federal: None State: SSC MSHCP	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur due to a lack of suitable habitat.
Reptiles			
California glossy snake *Arizona elegans occidentalis*	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Does not occur due to a lack of suitable habitat.
Coast horned lizard *Phrynosoma blainvillii*	Federal: None State: SSC MSHCP	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Does not occur due to a lack of suitable habitat.
Coastal whiptail *Aspidoscelis tigris stejnegeri (multiscutatus)*	Federal: None State: SSC MSHCP	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Does not occur due to a lack of suitable habitat.
Red-diamond rattlesnake *Crotalus ruber*	Federal: None State: SSC MSHCP	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Not expected to occur due to a lack of rock outcrops and overall lack of suitable habitat.
San Bernardino ringneck snake *Diadophis punctatus modestus*	Federal: None State: None	Moist habitats including woodlands, forest, grasslands, chaparral, farms, and gardens.	Does not occur due to a lack of suitable habitat.
San Diego banded gecko *Coleonyx variegatus abbotti*	Federal: None State: SSC MSHCP	Primarily a desert species, but also occurs in cismontane chaparral, desert scrub, and open sand dunes.	Does not occur due to a lack of suitable habitat.
Southern California legless lizard *Anniella stebbinsi*	Federal: None State: SSC	Broadleaved upland forest, chaparral, coastal dunes, coastal scrub; found in a broader range of habitats that any of the other species in the genus. Often locally abundant, specimens are found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans	Does not occur due to a lack of suitable habitat.
Two-striped garter snake *Thamnophis hammondii*	Federal: None State: SSC	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Does not occur due to a lack of suitable habitat.
Western pond turtle *Emys marmorata*	Federal: None State: SSC MSHCP	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks,	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
		submerged vegetation, and undercut banks.	
Birds			
Bald eagle (nesting & wintering) *Haliaeetus leucocephalus*	Federal: Delisted State: SE, FP MSHCP	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Does not occur due to a lack of suitable habitat.
Burrowing owl (burrow sites & some wintering sites) *Athene cunicularia*	Federal: NONE State: SSC MSHCP(c)	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Confirmed absent through protocol focused surveys.
California black rail *Laterallus jamaicensis coturniculus*	Federal: NONE State: ST, FP	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	Does not occur due to a lack of suitable habitat.
Coastal cactus wren (San Diego & Orange County only) *Campylorhynchus brunneicapillus sandiegensis*	Federal: None State: SSC MSHCP	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	Does not occur due to a lack of suitable habitat.
Coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: SSC MSHCP	Low elevation coastal sage scrub and coastal bluff scrub.	Does not occur due to a lack of suitable habitat.
Golden eagle (nesting & wintering) *Aquila chrysaetos*	Federal: None State: WL, FP MSHCP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Does not occur due to a lack of suitable habitat.
Least Bell's vireo (nesting) *Vireo bellii pusillus*	Federal: FE State: SE MSHCP(a)	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Does not occur due to a lack of suitable habitat.
Loggerhead shrike (nesting) *Lanius ludovicianus*	Federal: None State: SSC MSHCP	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Low potential to occur.
Long-eared owl (nesting) *Asio otus*	Federal: None State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Northern harrier (nesting) *Circus cyaneus*	Federal: None State: SSC MSHCP	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Detected foraging at the Project Site. The Project Site does not support suitable nesting habitat.
Southwestern willow flycatcher (nesting) *Empidonax traillii extimus*	Federal: FE State: SE MSHCP(a)	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Does not occur due to a lack of suitable habitat.
Swainson's hawk (nesting) *Buteo swainsoni*	Federal: NONE State: ST MSHCP	Summer in wide open spaces of the American West. Nest in grasslands, but can use sage flats and agricultural lands. Nests are placed in lone trees.	Low potential to forage. This species was not observed nesting at the site.
Tricolored blackbird (nesting colony) *Agelaius tricolor*	Federal: NONE State: CE, SSC MSHCP	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	The Project Site does not support a nesting colony of tri-colored blackbird.
Western yellow-billed cuckoo (nesting) *Coccyzus americanus occidentalis*	Federal: FT, NONE State: SE MSHCP(a)	Dense, wide riparian woodlands with well-developed understories.	Does not occur due to a lack of suitable habitat.
White-tailed kite (nesting) *Elanus leucurus*	Federal: None State: FP MSHCP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Low potential to forage. This species was not observed nesting at the site.
Yellow-headed blackbird (nesting) *Xanthocephalus xanthocephalus*	Federal: None State: SSC	Breed and roost in freshwater wetlands with dense, emergent vegetation such as cattails. Often forage in fields, typically wintering in large, open agricultural areas.	Does not occur due to a lack of suitable habitat.
Yellow warbler (nesting) *Setophaga petechia*	Federal: NONE State: SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Does not occur due to a lack of suitable habitat.
Yellow-breasted chat (nesting) *Icteria virens*	Federal: None State: SSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Does not occur due to a lack of suitable habitat.
Mammals			
American badger *Taxidea taxus*	Federal: None State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Does not occur due to a lack of suitable habitat.
Lesser long-nosed bat	Federal: FE State: None WBWG: H	Thorn scrub and deciduous forest. Roosts in caves and mines.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Leptonycteris yerbabuenae			
Los Angeles pocket mouse *Perognathus longimembris brevinasus*	Federal: None State: SSC MSHCP(c)	Fine, sandy soils in coastal sage scrub and grasslands.	Low potential to occur.
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	Federal: None State: SSC MSHCP	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	Low potential to occur.
Pallid bat *Antrozous pallidus*	Federal: None State: SSC WBWG: H	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Not expected to occur due to a lack of suitable habitat.
Pocketed free-tailed bat *Nyctinomops femorosaccus*	Federal: None State: SSC WBWG: M	Rocky areas with high cliffs in pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian.	Does not occur due to a lack of suitable habitat.
San Bernardino kangaroo rat *Dipodomys merriami parvus*	Federal: FE State: SSC MSHCP©	Typically found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and floodplains, and along washes with nearby sage scrub.	Does not occur due to a lack of suitable habitat.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Federal: None State: SSC MSHCP	Occupies a variety of habitats, but is most common among shortgrass habitats. Also occurs in sage scrub, but needs open habitats.	Low potential to occur.
San Diego desert woodrat *Neotoma lepida intermedia*	Federal: None State: SSC MSHCP	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Confirmed absent during surveys by a lack of middens.
Southern grasshopper mouse *Onychomys torridus ramona*	Federal: None State: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Does not occur due to a lack of suitable habitat.
Stephens' kangaroo rat *Dipodomys stephensi*	Federal: FE State: ST MSHCP	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Does not occur due to a lack of suitable habitat.
Western mastiff bat *Eumops perotis californicus*	Federal: None State: SSC WBWG: H	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Does not occur due to a lack of suitable habitat.
Western yellow bat *Lasiurus xanthinus*	Federal: None State: SSC WBWG: H	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Does not occur due to a lack of suitable habitat.

STATUS

Federal	**State**
FE – Federally Endangered	SE – State Endangered
FT – Federally Threatened	ST – State Threatened
FPT – Federally Proposed Threatened	SC– State Candidate
FC – Federal Candidate	CFP – California Fully-Protected Species
BGEPA– Bald and Golden Eagle Protection Act	SSC – Species of Special Concern

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

Western Bat Working Group (WBWG)
H – High Priority
LM – Low-Medium Priority
M – Medium Priority
MH – Medium-High Priority

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected onsite incidentally or through focused surveys

4.5.1 Special-Status Wildlife Species Observed within the Study Area

Birds

Northern Harrier (*Circus cyaneus*) - The northern harrier is designated as a CDFW Species of Special Concern for nesting and is a covered species under the MSHCP without additional survey or conservation requirements.

The northern harrier frequents open wetlands, wet and lightly grazed pastures, old fields, dry uplands, upland prairies, mesic grasslands, drained marshlands, croplands, shrub-steppe, meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands and is seldom found in wooded areas (Bent 1937; and Bildstein 1996). In general, it prefers saltwater marshes, wet meadows, sloughs, and bogs for its nesting and foraging habitat and if these are absent, it hunts open fields and is frequently observed hunting over agricultural areas (Call 1978).

The northern harrier was detected during the biological surveys; however, the site does not contain suitable nesting habitat for the northern harrier. Approximately 56.88 acres of the Project Site contains suitable foraging habitat (disturbed/ruderal, ruderal). The Offsite Impacts Area associated with Project Site does not support potential foraging or nesting habitat.

4.5.2 Special-Status Wildlife Species Not Observed but with a Potential to Occur at the Study Area

Birds

Loggerhead Shrike (*Lanius ludovicianus*) - The loggerhead shrike is designated as a CDFW Species of Special Concern when nesting and a covered species under the MSHCP without additional survey or conservation requirements. The loggerhead shrike is known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs (Unitt 1984; Yosef 1996).

The Project site supports approximately 56.88 acres of potential foraging habitat (disturbed/ruderal, ruderal), all of which are associated with onsite portions of the Project.

White-tailed Kite (*Elanus leucurus*) – The white-tailed kite is designated as a California Fully Protected Species by CDFW and is a covered species under the MSHCP without additional survey or conservation requirements. As a covered species, the MSHCP allows for the loss of habitat for white-tailed kites; however, the MSHCP does not allow for the direct take of Fully Protected Species, including the white-tailed kite.

The white-tailed kite inhabits low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Riparian areas adjacent to open areas are used for nesting (Dunk 1995). Substantial groves of dense, broad-leafed deciduous trees are used for nesting and roosting (Brown and Amadon 1968).

The Project Site does not support nesting habitat; however, approximately 56.88 acres of the site supports potential foraging habitat (disturbed/ruderal, ruderal).

Mammals

Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*) – The Los Angeles pocket mouse is designated as a CDFW Species of Special Concern and is a covered species under the MSHCP with special survey requirements. However, the Study Area does not occur within a mammal survey area. Habitat of the Los Angeles pocket mouse has never been specifically defined, although Grinnell (1933) indicated that the subspecies "inhabits open ground of fine sandy composition" (cited in Brylski *et al.* 1993). This observation is supported by others who also state that the Los Angeles pocket mouse prefers fine, sandy soils and may utilize these soil types for burrowing (*e.g.*, Jameson and Peters 1988). This subspecies may be restricted to lower elevation grassland and coastal sage scrub (Patten *et al.* 1992).

Vegetation associations probably are important for the Los Angeles pocket mouse and, like other heteromyid species, it probably prefers sparsely vegetated habitats. However, soil characteristics probably also must be appropriate for a site to support the Los Angeles pocket mouse. Nonetheless, the habitat associated with the Los Angeles pocket mouse include non-native grassland, Riversidean sage scrub, Riversidean alluvial fan sage scrub, chaparral and redshank chaparral.

The Study Area supports approximately 3.49 acres of potential suitable habitat (ruderal), all of which occurs within the Project Site. Although the Project Site is disturbed, small mammal burrows were detected, and suitable burrows have the potential to occur onsite, and therefore a total of 3.49 acres of potential habitat is present.

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*) – The northwestern San Diego pocket mouse is designated as a CDFW Species of Special Concern and is a covered species under the MSHCP without additional survey or conservation requirements. The northwestern San Diego pocket mouse inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities.

The Study Area supports approximately 3.49 acres of potential suitable habitat (ruderal), all of which occurs within the Project Site. Although the Project Site is disturbed, small mammal burrows were detected, and suitable burrows have the potential to occur onsite, and therefore a total of 3.49 acres of potential habitat is present. As previously stated, this species is covered under the MSHCP.

San Diego Black-Tailed Jackrabbit (*Lepus californicus bennettii*) – The San Diego black-tailed jackrabbit is designated as a CDFW Species of Special Concern and is a covered species under the MSHCP without additional survey or conservation requirements.

The black-tailed-jackrabbit occupies many diverse habitats, but primarily is found in arid regions supporting short-grass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to locomote, and the openness of open scrub habitat probably is preferred over dense chaparral. Black-tailed jackrabbits are found in most areas that support annual grassland, Riversidean sage scrub, alluvial fan sage scrub, Great Basin sagebrush, chaparral, disturbed habitat, and agriculture. Black-tailed-jackrabbits typically do not burrow but take shelter at the base of shrubs in shallow depressions called forms.

The Study Area supports approximately 3.49 acres of potential suitable habitat (ruderal), all of which occurs within the Project Site. Although the Project Site is disturbed, small mammal burrows were detected, and suitable burrows have the potential to occur onsite, and therefore a total of 3.49 acres of potential habitat is present.

4.5.3 Special-Status Wildlife Species Confirmed Absent Through Focused Surveys at the Project Site

Birds

Burrowing Owl (*Athene cunicularia*) - The burrowing owl is designated as a CDFW Species of Special Concern. The burrowing owl is a covered not adequately conserved species under the MSHCP, which means that projects located within the burrowing owl survey area may have to evaluate avoidance measures if burrowing owls are present.

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident (Haug, *et al.* 1993). They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover.

The burrowing owl was not detected at the Project Site during the focused burrowing owl surveys. Exhibit 8 (Burrowing Owl Survey Area/Burrow Map) depicts the location of the burrowing owl survey areas and of burrows detected during the focused burrow survey. GLA biologists did not observe burrowing owls, or evidence of burrowing owls (e.g., cast pellets, preened feathers, or whitewash clustered at a burrow).

4.5.4 Raptor Use

Southern California holds a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. This type of habitat has declined severely in the region, affecting many species, but especially raptors. A few species, such as Red-tailed Hawk (*Buteo jamaicensis*) and American Kestrel (*Falco sparverius*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in vicinity of nesting sites.

Many of the raptors that would be expected to forage and nest within Western Riverside County are covered species under the MSHCP, with the MSHCP providing the necessary conservation to offset project impacts to foraging and/or nesting habitats. Some common raptor species (e.g., American kestrel and red-tailed hawk) are not covered by the MSHCP but are expected to be conserved with implementation of the Plan due to the parallel habitat needs with those raptors covered under the Plan. It is important to understand that the MSHCP does not provide MBTA and Fish and Game Code take for raptors covered under the Plan.

The Project Site provides marginal foraging habitat for raptors, including several special-status raptors. Raptor species detected within the overall Study Area were Cooper's hawk (*Accipiter cooperii*), northern harrier (*Circus hudsonius*), and red-tailed hawk (*Buteo jamaicensis*) [Appendix B – Faunal Compendium].

The Project Site supports limited potential nesting habitat (e.g., mature trees, shrubs) for tree-nesting raptor species such as Cooper's hawk and red-tailed hawk. The Project Site is also expected to provide foraging habitat for all of these species in the form of insects, spiders, lizards, snakes, small mammals, and other birds.

4.6 Nesting Birds

The Project Site contains trees, shrubs, and ground cover that provide suitable habitat for nesting native birds. Mortality of native birds (including eggs) is prohibited under California Fish and Game Code.[14]

4.7 Wildlife Linkages/ Corridors and Nursery Sites

Habitat linkages are areas which provide a communication between two or more other habitat areas which are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted, but may can be vital to the long-term health of connected habitats. Linkage values are often addressed in terms of "gene flow" between populations, with movement taking potentially many generations.

Corridors are similar to linkages but provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired.

Wildlife nurseries are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies. Nurseries can be important to both special-status species as well as commonly occurring species.

The Project Site has been disked and maintained for decades, resulting in an overall disturbed habitat area. The site is surrounded by disturbed or developed areas. Commercial development borders the Project Site to the north, residential development borders the Study Area to the south, and undeveloped disturbed lands surround the Study Area to the east and west. The Study Area does not occur within an existing or proposed Core, Linkage, or Constrained Linkage as identified by the MSHCP. Although the Study Area may provide for the local movement of wildlife, including small and medium-sized mammals, the Study Area is not part of a significant regional wildlife movement corridor, as identified by the MSHCP.

4.8 Critical Habitat

The Project Site does not contain USFWS-designated critical habitat.

[14] Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

4.9 Jurisdictional Waters

4.9.1 Corps Jurisdiction

Corps jurisdiction associated with the Study Area totals approximately 0.63 acre of waters of the United States, none of which supports wetlands. A total of 1,487 linear feet of ephemeral stream is present. Corps jurisdiction associated with the Study Area is limited to one blue-line stream, the Quincy Channel (Exhibit 7A). The Quincy Channel is an ephemeral drainage feature that accepts urban flow and storm water runoff from the City of Moreno Valley and its surrounding areas. The two ephemeral drainage ditches at the Study Area (Ditch 1 and Ditch 2) do not constitute Corps jurisdiction as they have been constructed in, and drain, wholly upland areas with no relatively permanent flow of water.

4.9.2 Regional Water Quality Control Board Jurisdiction

Regional Board jurisdiction associated with the Study Area totals approximately 1.02 acres, none of which supports wetlands. A total of 5,057 linear feet of ephemeral stream is present. Of this total, 0.63 acre (1,487 linear feet) are considered waters of the United States within Corps jurisdiction and 0.39 acre (3,570 linear feet) are considered waters of the state outside of Corps jurisdiction. Regional Board jurisdiction associated with the Study Area is limited to one blue-line stream, the Quincy Channel, and two ephemeral drainage ditches (Ditch 1 and Ditch 2) that were constructed in and drain wholly upland areas (Exhibit 7B). Regional Board jurisdiction associated with each feature is summarized in Table 4-4 below.

Table 4-4: Regional Board Jurisdiction

Drainage Name	Total Regional Board Non-Wetland Waters (Acres)	Total Regional Board Wetland Waters (Acres)	Total Regional Board Jurisdiction (Acres)	Total Linear Feet
Quincy Channel	0.63	0	0.63	1,487
Ditch 1	0.21	0	0.21	2,295
Ditch 2	0.18	0	0.18	1,275
Total	**1.02**	**0**	**1.02**	**5,057**

4.9.3 CDFW Jurisdiction

CDFW jurisdiction associated with the Study Area totals approximately 2.73 acres, of which 0.02 acre consists of riparian vegetation. A total of 5,057 linear feet of ephemeral stream is present. The boundaries of CDFW jurisdiction are depicted on Exhibit 7C. CDFW Jurisdiction associated with each feature is summarized in Table 4-5 below.

Table 4-5: CDFW Jurisdiction

Drainage Name	Non-Riparian Stream (Acres)	Riparian Vegetation (Acres)	Total CDFW Jurisdiction (Acres)	Total Linear Feet
Quincy Channel	2.14	0.02	2.16	1,487
Ditch 1	0.21	0	0.21	2,295
Ditch 2	0.36	0	0.36	1,275
Total	**2.71**	**0.02**	**2.73**	**5,057**

4.10 MSHCP Riparian/Riverine Areas and Vernal Pools

As noted in Section 4.9.2 and 4.9.3 above, the Study Area contains the Quincy Channel and two ephemeral drainage ditches artificially constructed to collect road and agricultural runoff. These drainage features qualify as MSHCP Riparian/Riverine areas. As such, a total of 2.73 acres of MSHCP Riparian/Riverine areas occur within the Study Area, of which 2.71 acres is riverine and 0.02-acre is riparian [Exhibit 7D – MSHCP Riparian/Riverine Areas Map]. The riverine areas are dominated by ruderal, weedy vegetation, which is not suitable habitat for Riparian/Riverine associated sensitive species such as least Bells vireo or western yellow-billed cuckoo. Riparian areas on site are too small to support Riparian/Riverine associated sensitive species and are not viable habitat.

No vernal or seasonal pools are present within the Study Area. The Study Area is a maintained agricultural field that lacked ponding features upon multiple visits within a week of rainfall. This lack of vernal pool habitat precludes the occurrence of any listed fairy shrimp species.

5.0 IMPACT ANALYSIS

The following discussion examines the potential impacts to plant and wildlife resources that would occur as a result of the proposed project. Impacts (or effects) can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or animals, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Indirect impacts pertain to those impacts that result in a change to the physical environment, but which is not immediately related to a project. Indirect (or secondary) impacts are those that are reasonably foreseeable and caused by a project but occur at a different time or place. Indirect impacts can occur at the urban/wildland interface of projects, to biological resources located downstream from projects, and other offsite areas where the effects of the project may be experienced by plants and wildlife. Examples of indirect impacts include the effects of increases in ambient levels of noise or light; predation by domestic pets; competition with exotic plants and animals; introduction of toxics, including pesticides; and other human disturbances such as hiking, off-road vehicle use, unauthorized dumping, etc. Indirect impacts are often attributed to the subsequent day-to-day activities associated with project build-out, such as increased noise,

the use of artificial light sources, and invasive ornamental plantings that may encroach into native areas. Indirect effects may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by non-native invasive species, as well as changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to Project Sites.

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. A cumulative impact can occur from multiple individual effects from the same project, or from several projects. The cumulative impact from several projects is the change in the environment resulting from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

5.1 California Environmental Quality Act (CEQA)

5.1.1 Thresholds of Significance

Environmental impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California:

> *"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..."*

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

5.1.2 Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 2018 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

> *a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
>
> *b) 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.*
>
> *c) 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.*
>
> *d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*
>
> *e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
>
> *f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

5.2 Special-Status Species

Appendix G(a) of the CEQA guidelines asks if a project is likely to "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service."

5.2.1 Special-Status Plants

The proposed Project will not impact special-status plants. No special-status plant species were detected during biological surveys of the site, and the soils and conditions of the Study Area do

not have the potential to support special status plants. Additionally, the Study Area does not occur with NEPSSA and/or CAPSSA.

5.2.2 Special-Status Animals

The proposed Project would impact habitat for the following non-listed, special-status species that have potential to occur, but that are covered by the MSHCP: 1) Birds: loggerhead shrike, northern harrier, white-tailed kite; and 2) Mammals: Los Angeles pocket mouse, northwestern San Diego pocket mouse and San Diego black-tailed jackrabbit.

5.3 Sensitive Vegetation Communities

Appendix G(a) of the CEQA guidelines asks if a project is likely to "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."

As shown in Table 5-1 below, the proposed Project would permanently impact a total of 81.88 acres of vegetation communities, of which 69.66 occur within the Project Site, and 12.22 occur in the Offsite Impacts Area. Impacts would occur to approximately 53.37 acres of disturbed/ruderal areas, 1.41 acres of ruderal areas, and 0.71 acres of ornamental areas, and approximately 26.39 acres of disturbed/developed areas (14.17 acres on-site and 12.22 acres offsite) [Exhibit 10 – Vegetation Impact Map]. None of the vegetation communities to be impacted by the Project are considered as sensitive communities.

Table 5-1. Summary of Vegetation/Land Use Impacts for the Study Area

Vegetation Type	Project Site Impacts	Offsite Impacts	Impact Totals (Acres)
Disturbed/Developed	14.17	12.22	69.66
Disturbed/Ruderal	53.37	0	53.37
Ornamental	0.71	0	0.71
Ruderal	1.41	0	1.41
Total	**69.66**	**12.22**	**81.88**

5.4 Wetlands

Appendix G(c) of the State CEQA guidelines asks if a project is likely to "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."

The Project Site does not contain any state or federally protected wetlands.

5.5 Wildlife Movement and Native Wildlife Nursery Sites

Appendix G(d) of the State CEQA guidelines asks if a project is likely to "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with

established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites."

The Project site lacks migratory wildlife corridors/linkages and wildlife nursery sites. Therefore, the proposed Project would not interfere or impact (1) the movement of native resident or migratory fish or wildlife species or (2) established native resident or migratory wildlife corridors, or (3) impede the use of native wildlife nursery sites.

The Project has the potential to impact active bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting birds are prohibited by the MBTA and California Fish and Game Code.

Although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code, impacts to native birds by the proposed Project would not be a significant impact under CEQA. The native birds with potential to nest on the Study Area would be those that are extremely common to the region and highly adapted to human landscapes (e.g., house finch, mourning dove). The number of individuals potentially affected by the Project would not significantly affect regional, let alone local populations of such species. A measure is identified in Section 6.0 of this report to avoid impacts to nesting birds.

5.6 Local Policies or Ordinances

Appendix G(e) of the State CEQA guidelines asks if a project is likely to "conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance."

The Project will not conflict with any local policies or ordinances protecting biological resources.

5.7 Habitat Conservation Plans

Appendix G(f) of the State CEQA guidelines asks if a project is likely to "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan."

As discussed throughout this report, the Project is within the Western Riverside County MSHCP. Section 7.0 of this report analyzes compliance of the Project with the Reserve Assembly and species/habitat requirements of the MSHCP. Impacts to species/habitats with MSHCP requirements are summarized here. Through compliance with the applicable requirements, the Project will not conflict with the provisions of the MSHCP.

5.7.1 Impacts to Burrowing Owl

No burrowing owls or physical evidence of burrowing owls were detected in the Project Site during focused surveys. However, pursuant to the 2006 MSHCP Burrowing Owl Survey Instructions, pre-construction owl surveys must be performed no more than 30 days prior to disturbance. If burrowing owls are detected during pre-construction surveys, then the owls must

be relocated from the site outside of the breeding season following accepted protocols, and subject to the approval of the Regional Conservation Authority (RCA), CDFW, and USFWS.

5.7.2 Impacts to MSHCP Riparian/Riverine Resources

As noted in Section 4.10, the Project contains the Quincy Channel and two ephemeral drainage ditches artificially constructed to collect road and agricultural runoff. The Project, as approved, will result in permanent impacts to 0.57 acre of MSHCP Riverine areas within these two ditches. No MSHCP Riparian areas will be impacted [Exhibit 11C].

5.8 Jurisdictional Waters

The Project, as proposed, will result in permanent impacts to 0.39 acre of Regional Board jurisdiction, none of which consist of jurisdictional wetlands [Exhibit 11A], and 0.57 acre of CDFW jurisdiction, none of which consists of vegetated riparian habitat and all of which consists of non-riparian, man-made roadside ditches, which were constructed in, and drain wholly within upland areas [Exhibit 11B]. A total of 3,570 linear feet of roadside ditch will be permanently impacted.

5.9 Indirect Impacts to Biological Resources

In the context of biological resources, indirect effects are those effects associated with developing areas adjacent to adjacent native open space.

The Project is not expected to result in significant indirect impacts to special-status biological resources, with the implementation of measures pursuant to the MSHCP Urban/Wildlands Interface Guidelines (*Volume I, Section 6.1.4* of the MSHCP). These guidelines are intended to address indirect effects associated with locating projects (particularly development) in proximity to the MSHCP Conservation Area. To minimize potential edge effects, the guidelines are to be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area. The Project will implement measure consistent with the MSHCP guidelines to address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasives;
- Barriers; and
- Grading/Land Development.

The Project is not located adjacent to the MSHCP Conservation Area; therefore, it is not subject to the Urban/Wildland Interface Guidelines. Furthermore, the Project will not result in adverse indirect effects to special-status resources.

5.10 Cumulative Impacts to Biological Resources

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered potentially significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project.

Anticipated cumulative impacts are addressed by the MSHCP, which, as currently adopted, addresses 146 "Covered Species" that represent a broad range of habitats and geographical areas within Western Riverside County, including threatened and endangered species and regionally- or locally-sensitive species that have specific habitat requirements and conservation and management needs. The MSHCP addresses biological impacts for take of Covered Species within the MSHCP area. Impacts to Covered Species and establishment and implementation of a regional conservation strategy and other measures included in the MSHCP are intended to address the federal, state, and local mitigation requirements for these species and their habitats. Specifically, Section 4.4 of the MSHCP states that:

The MSHCP was specifically designed to cover a large geographical area so that it would protect numerous endangered species and habitats throughout the region. It is the projected cumulative effect of future development that has required the preparation and implementation of the MSHCP to protect multiple habitats and multiple endangered species.

The proposed Project would remove potential low-quality habitat for loggerhead shrike, white-tailed kite, Los Angeles pocket mouse, northwestern San Diego pocket mouse, and San Diego black-tailed jackrabbit. The Study Area is not expected to provide valuable habitat for any of these species due to the disturbed nature of the site. Given the low number of individuals potentially affected, the status of each species in Western Riverside County, and the small amount of potential habitat proposed for removal, the Project would not make a cumulatively considerable contribution to the regional decline of these species. All of these species are also fully covered under the MSHCP and any potential cumulative impacts would be mitigated through payment of fees and participation in the Plan.

No cumulative impacts would occur to state and federal waters and wetlands, MSHCP riparian/riverine or vernal pool resources, wildlife linkage/corridors, or wildlife nurseries.

6.0 MITIGATION/AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for actual or potential impacts to special-status resources.

6.1 Burrowing Owl

The Project Site contains suitable habitat for burrowing owls; however, burrowing owls were not detected onsite during focused surveys. MSHCP Objective 6 for burrowing owls requires that

pre-construction surveys prior to site grading. As such, the following measure is recommended to avoid direct impacts to burrowing owls and to ensure consistency with the MSHCP.

- **Pre-Construction Survey.** A 30-day pre-construction survey for burrowing owls is required prior to future ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, etc.) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the Study Area prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the RCA and the Wildlife Agencies and will need to coordinate in the future with the RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure that burrowing owl have not colonized the site since it was last disturbed. If burrowing owls are found, the same coordination described above will be necessary.

6.2 Nesting Birds

The Project Site contains vegetation with the potential to support native nesting birds. As discussed above, the California Fish and Game Code prohibits mortality of native birds, including eggs. The following measure is recommended to avoid mortality to nesting birds:

- As feasible, vegetation clearing should be conducted outside of the nesting season, which is generally identified as February 1 through September 15. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

6.3 Jurisdictional Waters

As noted above in Section 5.8, the proposed Project will permanently impact to 0.39 acre of Regional Board jurisdiction, none of which consists of jurisdictional wetlands, and 0.57 acre of CDFW jurisdiction, none of which consists of riparian habitat. A total of 3,570 linear feet of roadside ditch will be permanently impacted.

The following mitigation measure is recommended for the Project:

Prior to impacting the jurisdictional areas, the Project proponent will obtain a Section 1602 Streambed Alteration Agreement from CDFW and a Section 13260 Waste Discharge Order from the Regional Board.

Additionally, the following is recommended to compensate for Project impacts to CDFW and Regional Board jurisdiction and comply with state law:

1) The purchase of 0.57 acre of re-establishment credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank; *and*

2) The purchase of 0.57 acre of rehabilitation credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank;

In the event that compensatory mitigation credits are not available from the Riverpark Mitigation Bank at the time of proposed work commencement, the Applicant will enter into an agreement to purchase rehabilitation credits from the Santa Ana River Watershed In-Lieu Fee Program (SARW-ILFP) at a 2:1 mitigation-to-impact ratio. The compensatory mitigation would consist of the rehabilitation of riparian habitat within the Santa Ana River Watershed. It is understood that this mitigation proposal through the SARW-ILFP would constitute permittee-responsible mitigation and would require an amendment to the approved mitigation proposal and DBESP.

7.0 MSHCP CONSISTENCY ANALYSIS

The purpose of this section is to provide an analysis of the proposed Project with respect to compliance with biological aspects of the Western Riverside County MSHCP. Specifically, this analysis evaluates the proposed Project with respect to the Project's consistency with MSHCP Reserve assembly requirements, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures).

7.1 Project Relationship to Reserve Assembly

The Project Site is not located within the MSHCP Criteria Area [Exhibit 4 – MSHCP Overlay]. As such, the proposed Project has not been identified by the MSHCP for Reserve Assembly and is not subject to the HANS process or the JPR process.

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

The MSHCP defines riparian/riverine areas as *lands which contain Habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.*

The MSHCP defines vernal pools as *seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and/or vegetation during the drier portion of the growing season.*

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

As noted in Section 4.9 and 4.10 above, the Study Area contains the Quincy Channel, which is considered a MSHCP riverine/riparian feature. The proposed Project will not impact the Quincy Channel. The Project site also contains two ephemeral drainage ditches that were artificially constructed to collect road and agricultural runoff, and meet the definition of MSHCP riverine/riparian.

The MSHCP riparian/riverine resources in the Study Area are the same as CDFW jurisdiction. The proposed Project would permanently impact approximately 0.57 acre of MSHCP riverine areas [Exhibit 11C]. CEQA states that a project must not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Section 6.1.2 requires that for unavoidable impacts to MSHCP riparian/riverine areas, such impacts must be mitigated for and approved through the DBESP process such that the lost functions and values are replaced so that a project is "biological equivalent or superior" to the existing condition. With the approval of a DBESP, the project would not conflict with the MSHCP with regards to the riparian/riverine policies, and any impacts to MSHCP riparian/riverine areas would be less than significant.

The Project site does not contain MSHCP vernal pools or other habitat with the potential to support listed fairy shrimp.

7.3 Protection of Narrow Endemic Plants

Volume I, Section 6.1.3 of the MSHCP requires that within identified Narrow Endemic Plant Species Survey Areas (NEPSSA), site-specific focused surveys for Narrow Endemic Plants Species will be required for all public and private projects where appropriate soils and habitat are present. The Project site does not occur within the NEPSSA. As such, focused surveys are not required by the MSHCP for NEPSSA species, and the proposed Project is consistent with *Volume I, Section 6.1.3* of the MSHCP.

7.4 Guidelines Pertaining to the Urban/Wildland Interface

The MSHCP Urban/Wildland Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. As the MSHCP Conservation Area is assembled, development is expected to occur adjacent to the Conservation Area. Future development in proximity to the MSHCP Conservation Area may result in edge effects with the potential to adversely affect biological resources within the

Conservation Area. To minimize such edge effects, the guidelines shall be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area and address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasive species;
- Barriers;
- Grading/Land Development.

As discussed in Section 5.0 of this report, the proposed Project does not occur adjacent to or near the MSHCP Conservation Area, and therefore the Urban/Wildland Interface Guidelines do not apply to the Project.

7.5 Additional Survey Needs and Procedures

Volume I, Section 6.3.2 of the MSHCP identifies that in addition to the Narrow Endemic Plant Species addressed in Section 6.1.3 of the MSHCP, additional surveys may be needed for other certain plant and animal species in conjunction with MSHCP implementation in order to achieve full coverage for these species. Within areas of suitable habitat, focused surveys are required if a Project occurs within a designated CAPSSA, or special animal species survey area (i.e., burrowing owl, amphibians, and mammals). The Project Site occurs within the burrowing owl survey area but does not occur within the amphibian or mammal survey areas, or within the CAPSSA. Focused burrowing owl surveys were conducted for the proposed Study Area, and no burrowing owls were detected. As indicated in Section 6.0 of this report, pre-construction burrowing owl surveys will occur within the 30 days of site disturbance in conjunction with MSHCP requirements. The proposed Project will be consistent with MSHCP Volume I, Section 6.3.2.

7.6 Conclusion of MSHCP Consistency

As outlined above, the proposed Project will be consistent with the biological requirements of the MSHCP; specifically pertaining to the Project's relationship to reserve assembly, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures).

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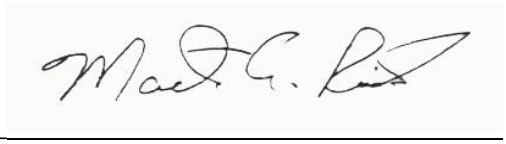
9.0 CERTIFICATION

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

Signed:  _____ Date: ____June 23, 2020_____

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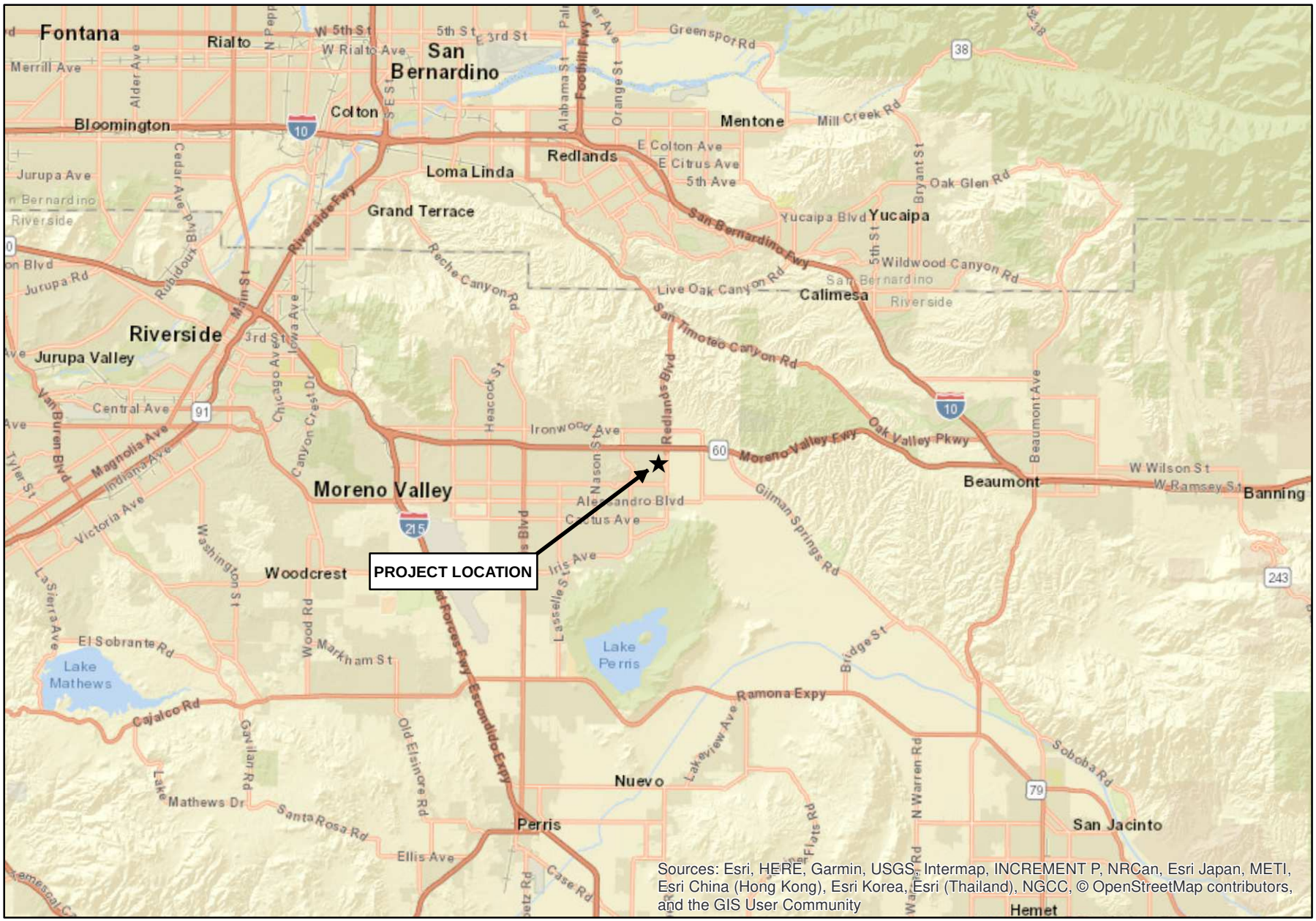


Source: ESRI World Street Map

N

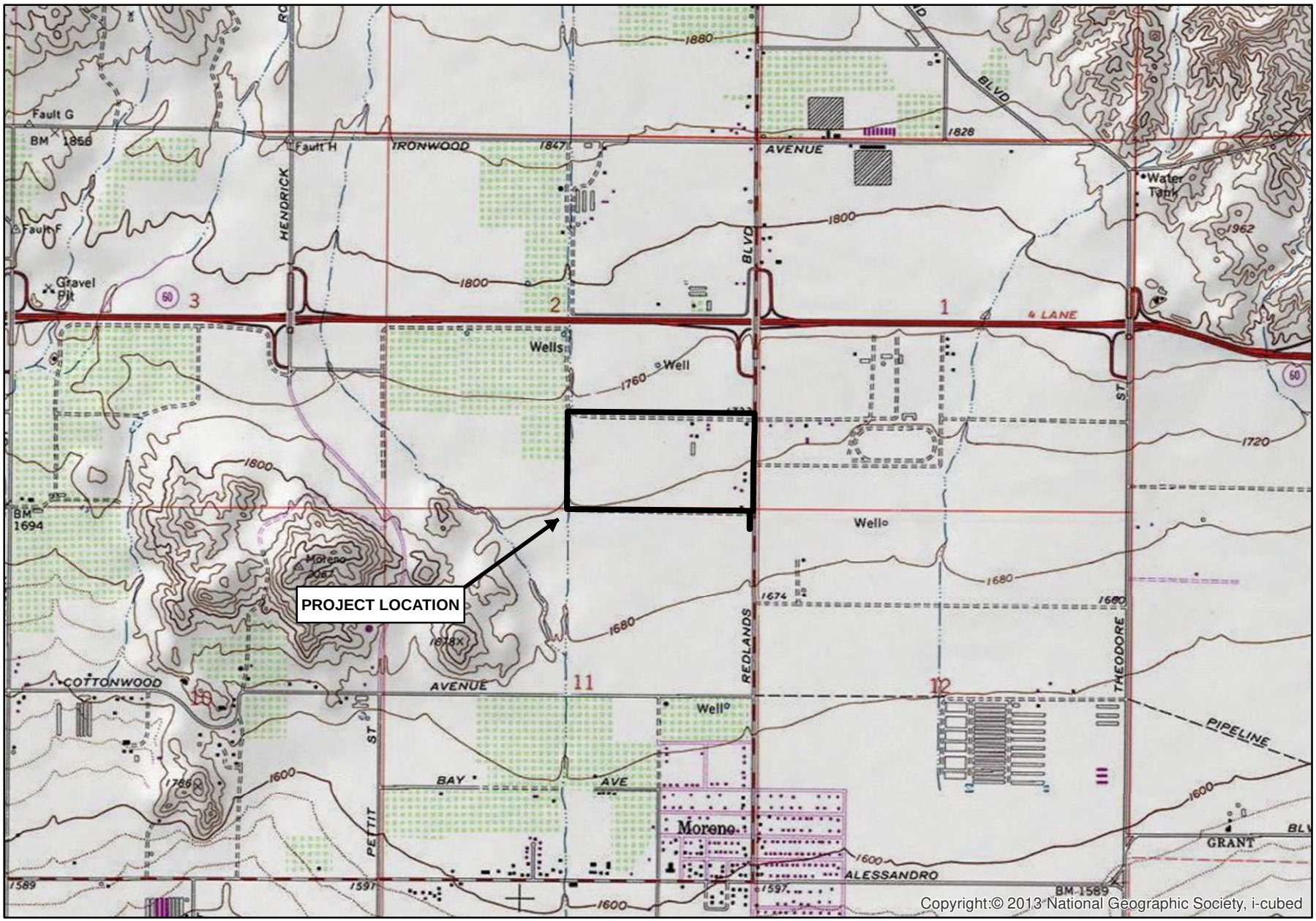
0 2 4 8 Miles

MORENO VALLEY TRADE CENTER

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Sunnymead, CA quadrangle

N

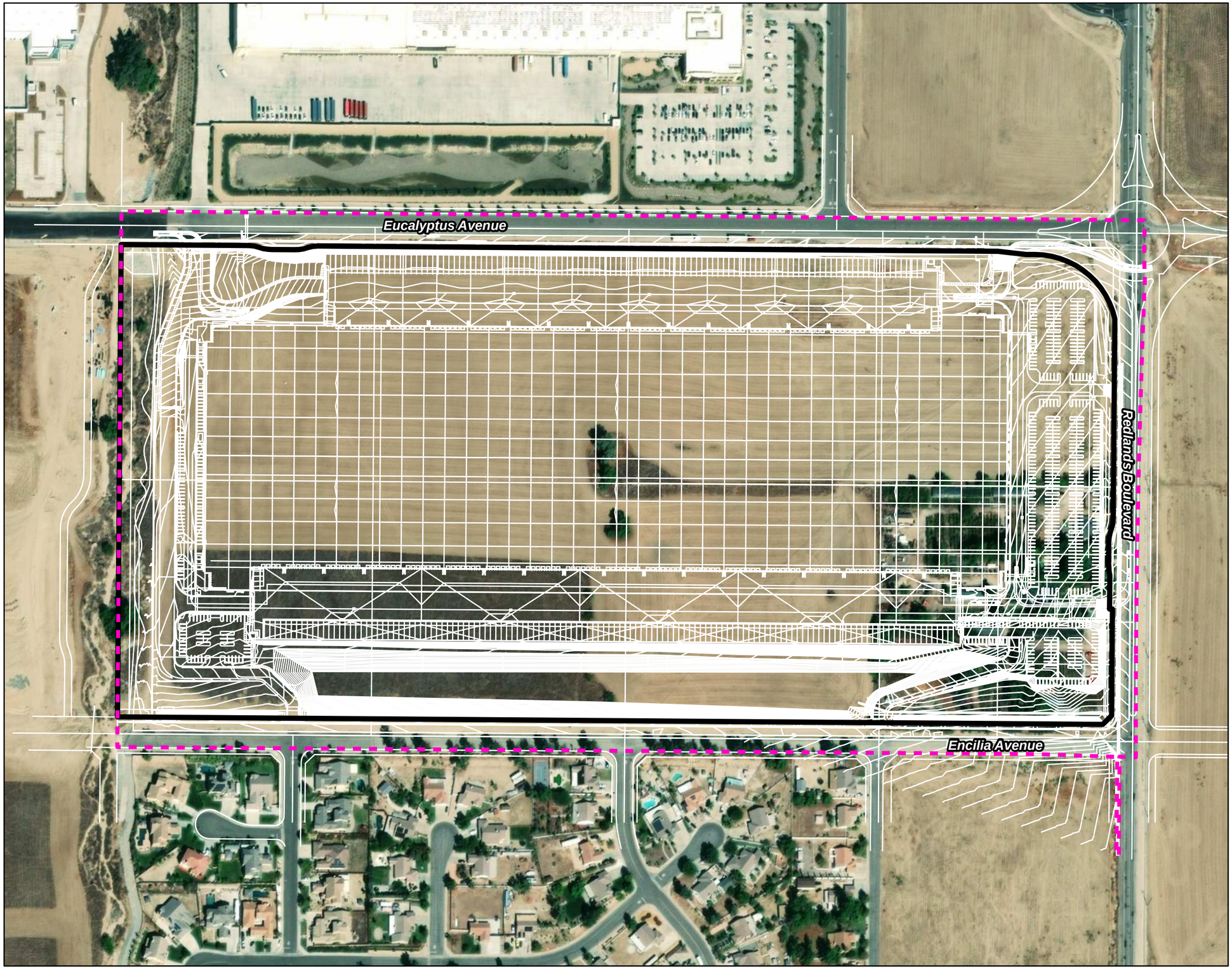
0 1,000 2,000 4,000 Feet

MORENO VALLEY TRADE CENTER

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Project Boundary

Study Area

Project Site Plan

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Site Plan Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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Project Boundary

Study Area

Burrowing Owl Survey Area

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

MSHCP Overlay Map

GLENN LUKOS ASSOCIATES

Exhibit 4

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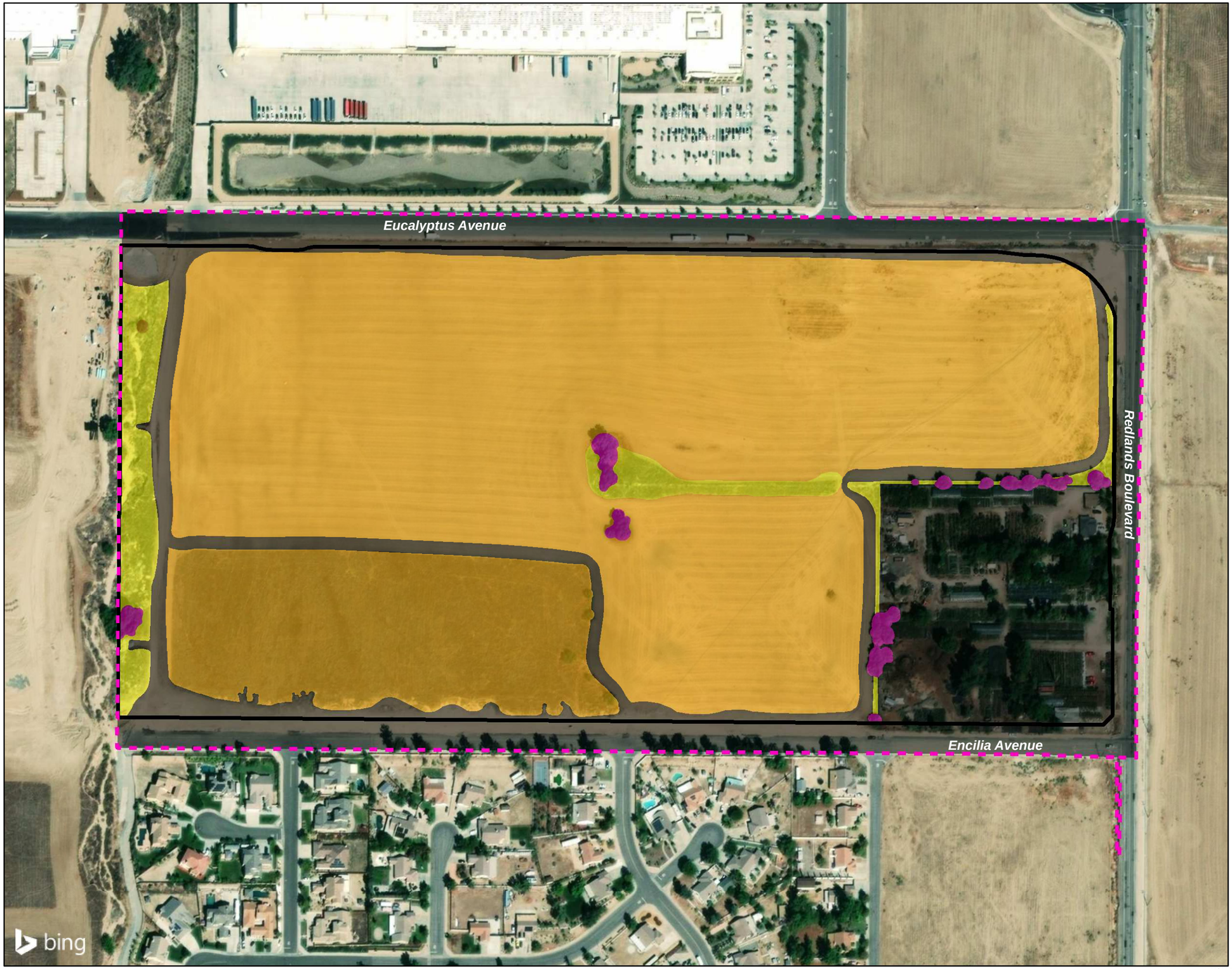

Project Boundary

Study Area

Ornamental

Ruderal

Disturbed/Ruderal

Disturbed/Developed

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 5

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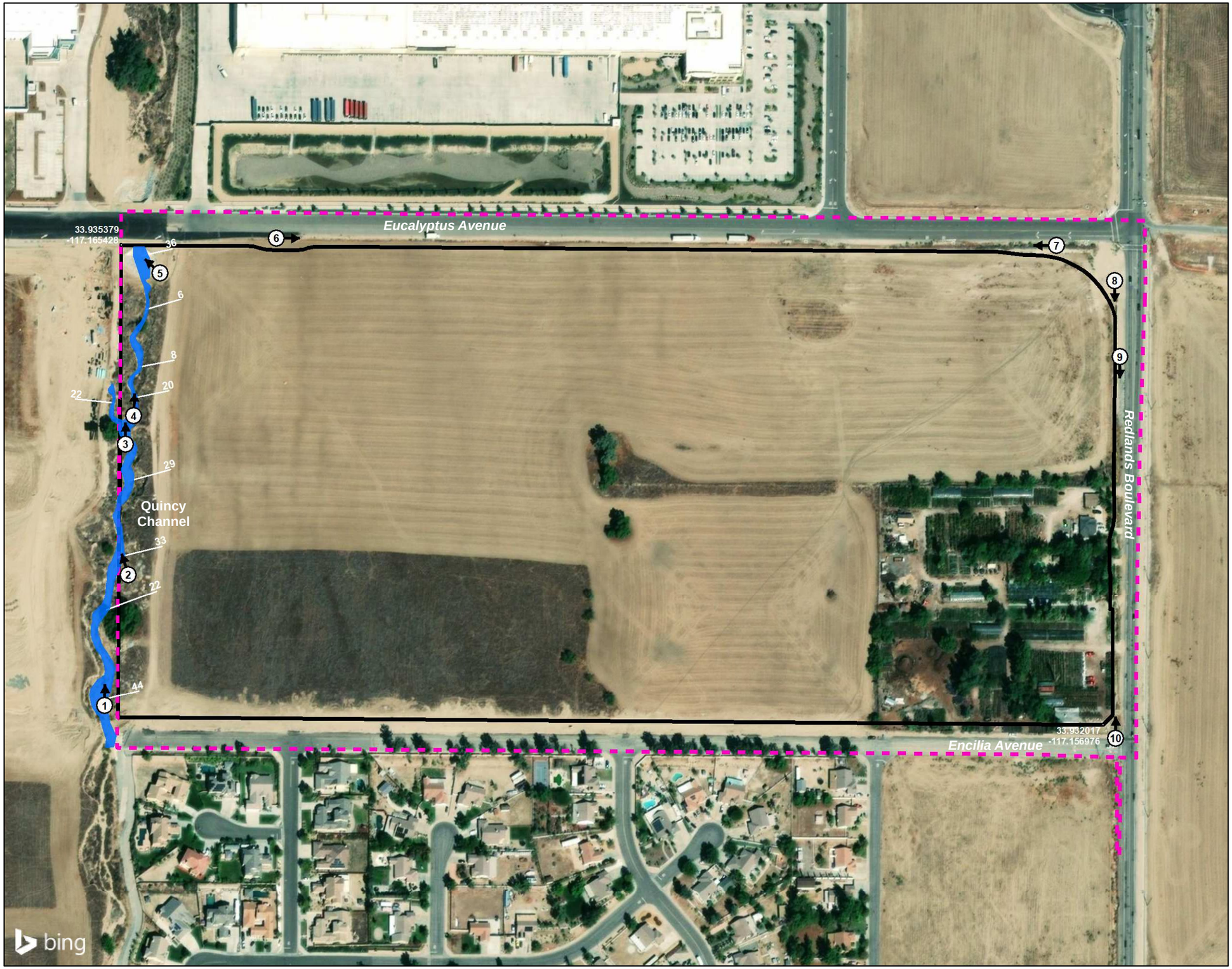
Photograph 1: Photo depicting the disturbed nature of the site where areas had been recently disked per annual maintenance.

Photograph 2: Photo depicts the disturbed/ruderal vegetation with ornamental trees in the background.

Photograph 3: Photo of Quincy Channel from the southwestern portion of the site.

Photograph 4: Photo of Drainage Ditch 2 running parallel to Redlands Boulevard. Note the lack of vegetation.



Project Boundary

Study Area

Non-Wetland Waters

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Corps Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 7A

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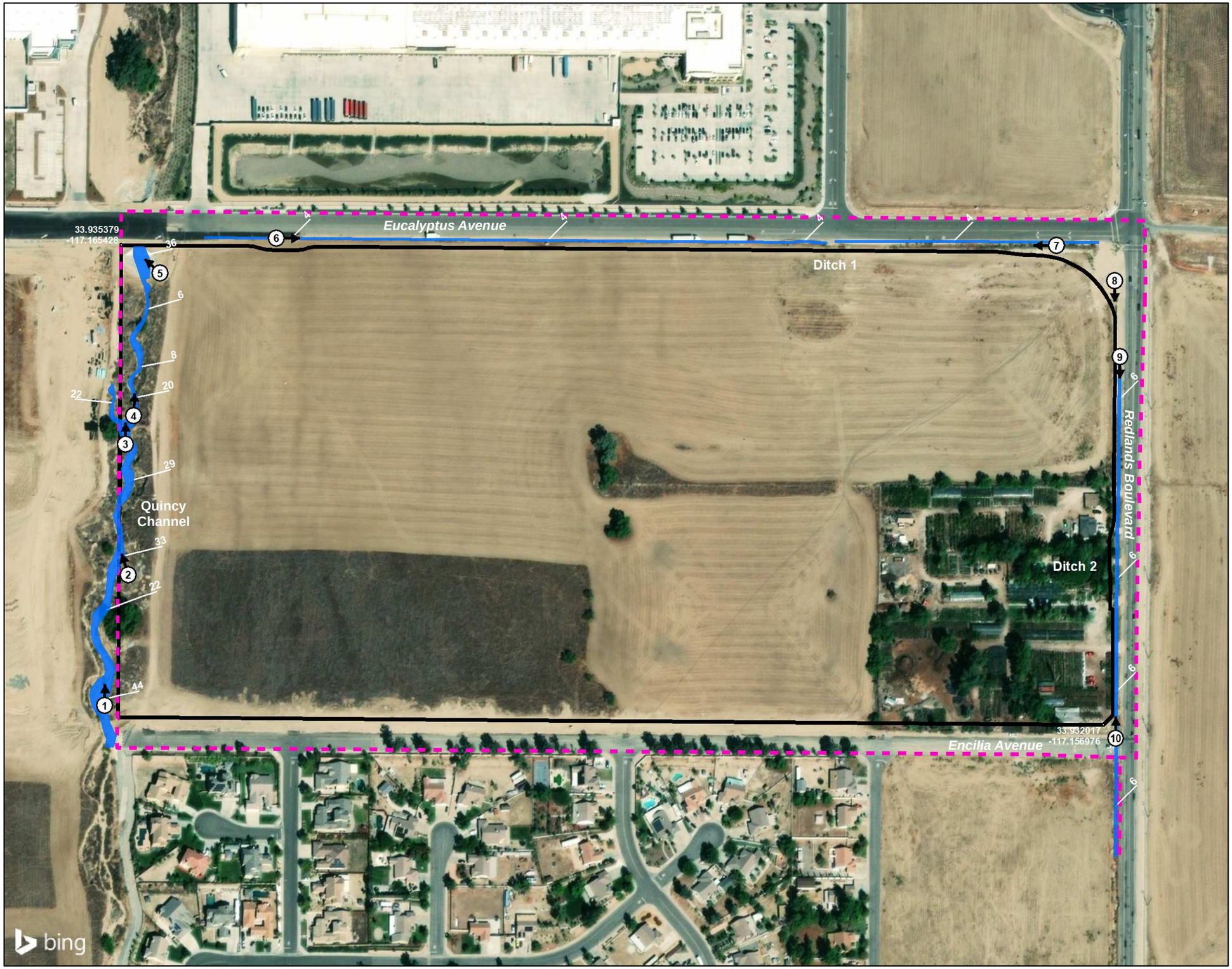

Project Boundary

Study Area

Non-Wetland Waters

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 7B

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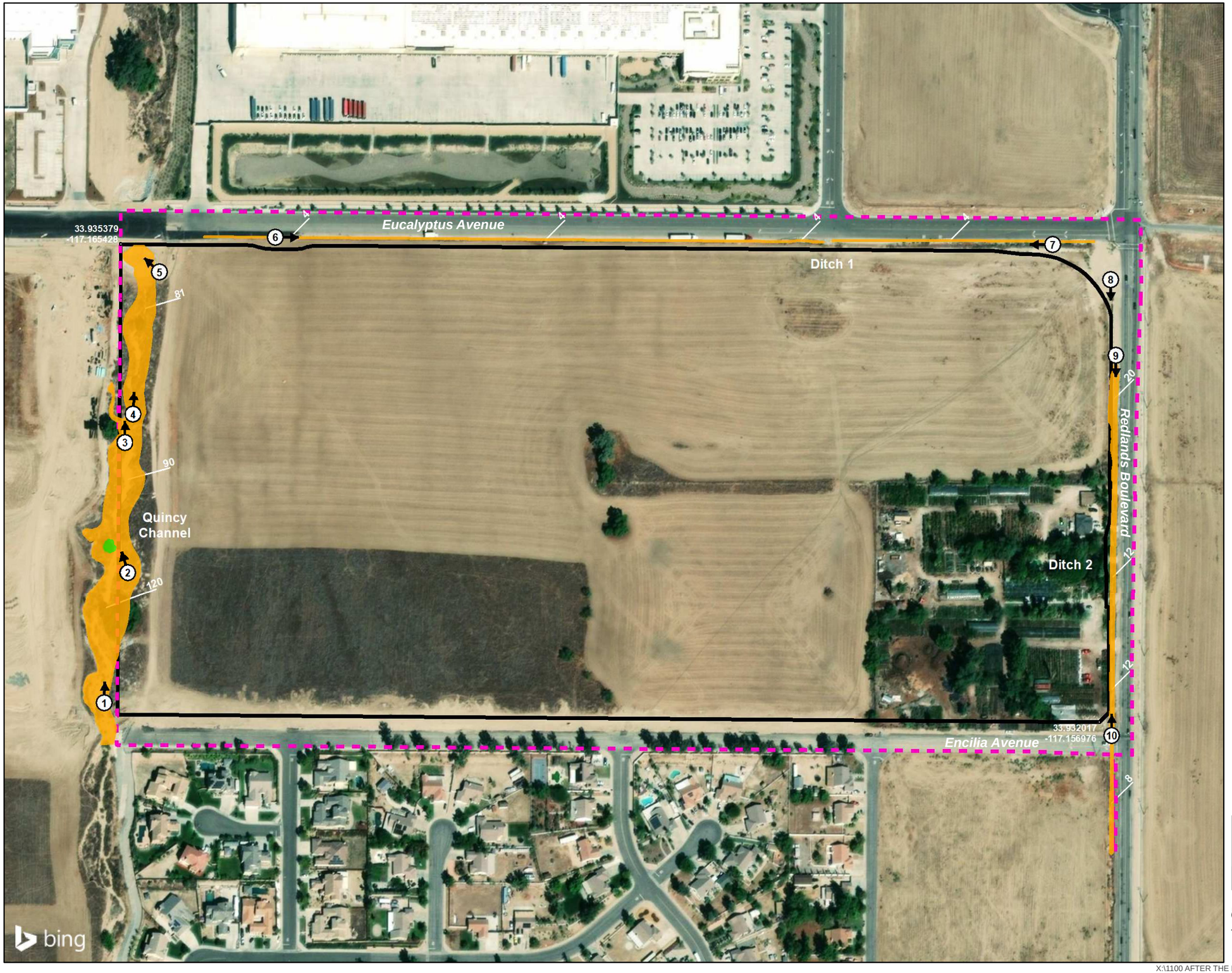

Project Boundary

Study Area

Riparian

Non-Riparian Streambed

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

CDFW Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 7C

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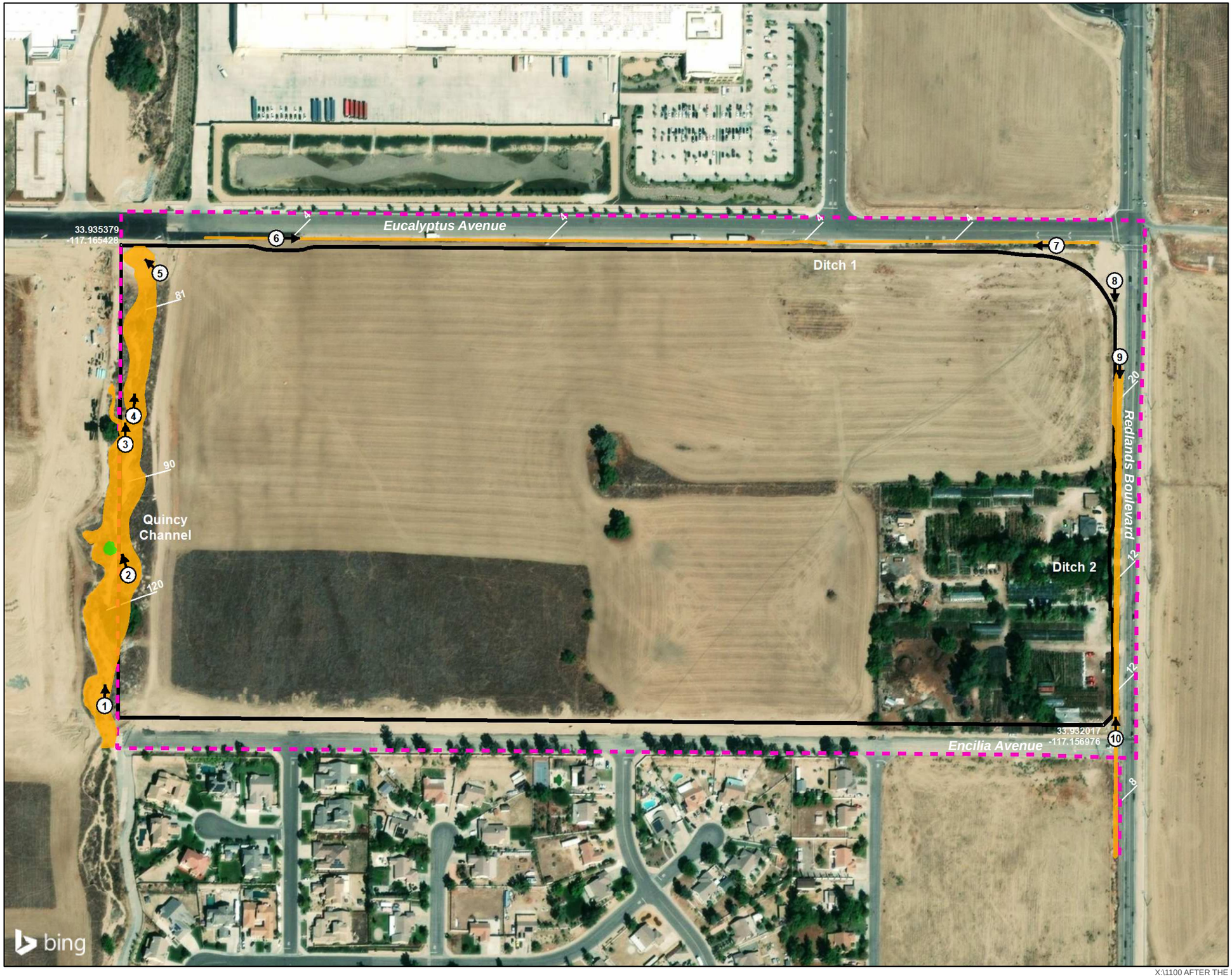

Project Boundary

Study Area / Impact Footprint

MSHCP Riparian

MSHCP Riverine

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

MSHCP Riparian/Riverine Map

GLENN LUKOS ASSOCIATES

Exhibit 7D

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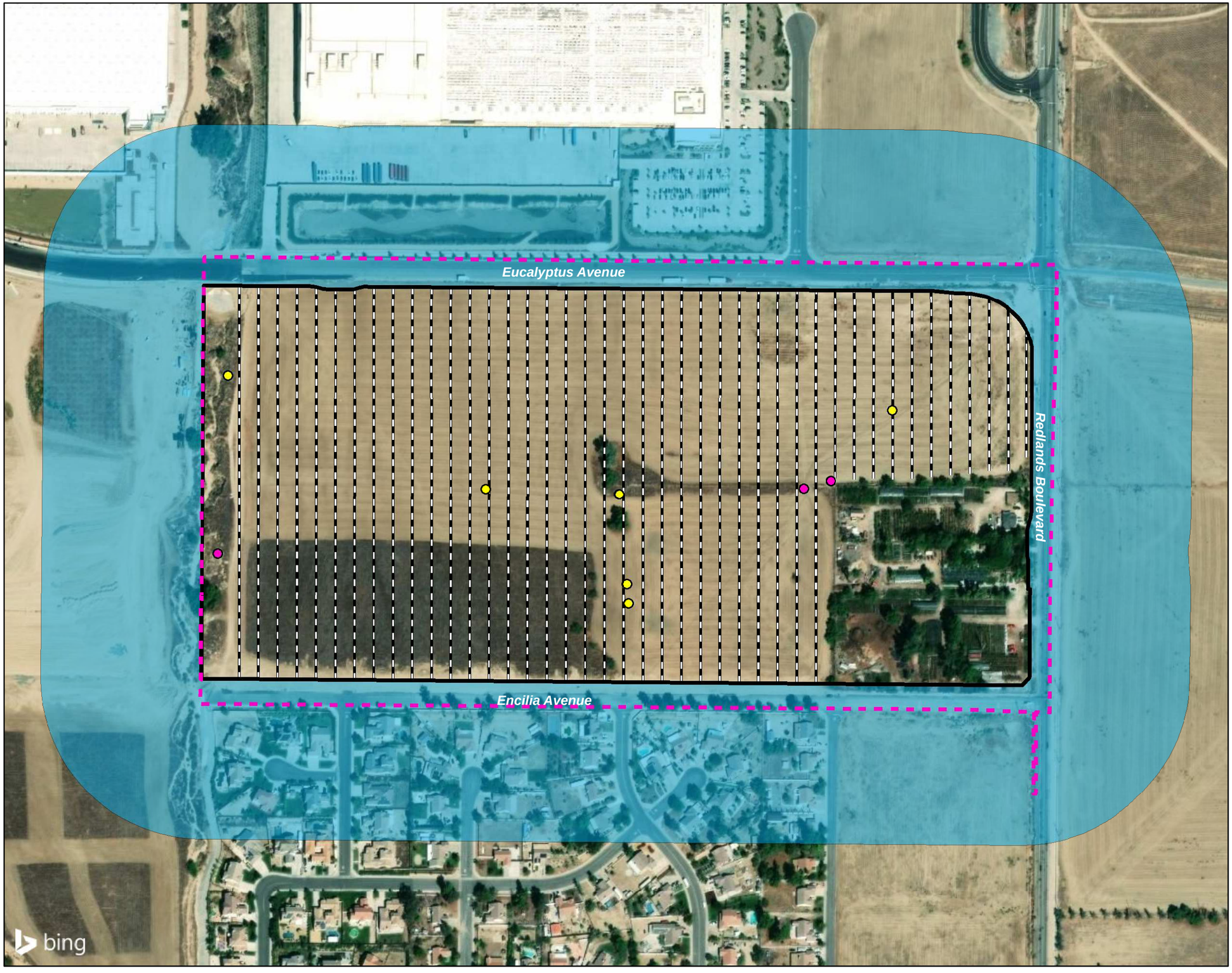

Project Boundary

Study Area

500' Buffer Area

Transects

Burrow

Burrow Complex

N

0 150 300 600

Feet

1 inch = 300 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Burrowing Owl Map

GLENN LUKOS ASSOCIATES

Exhibit 8

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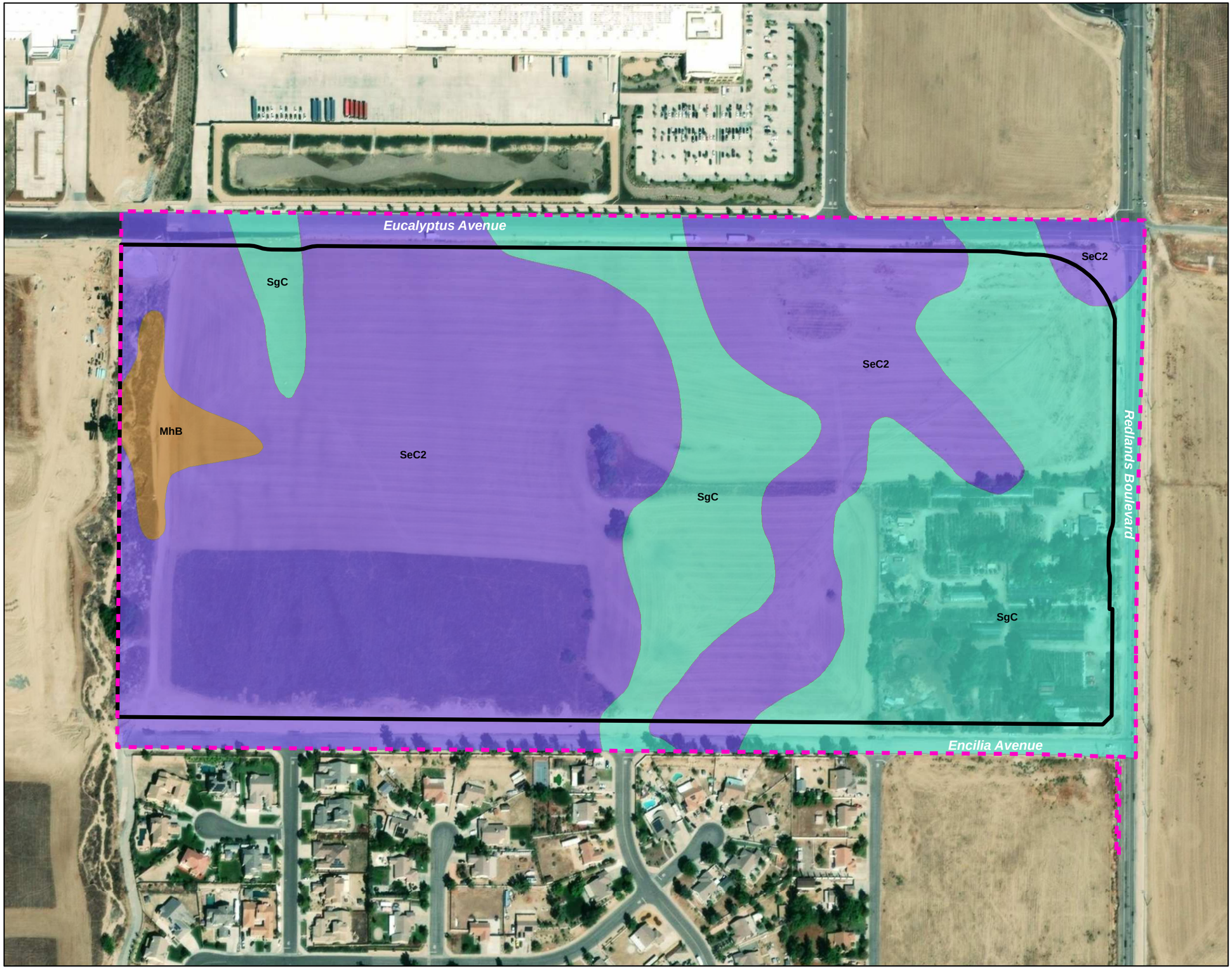

Project Boundary

Study Area

MhB - Metz loamy fine sand, sandy loam substratum, 0 to 5 per cent slopes

SeC2 - San Emigdio fine sandy loam, 2 to 8 percent slopes, eroded

SgC - San Emigdio loam, 2 to 8 percent slopes

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 9

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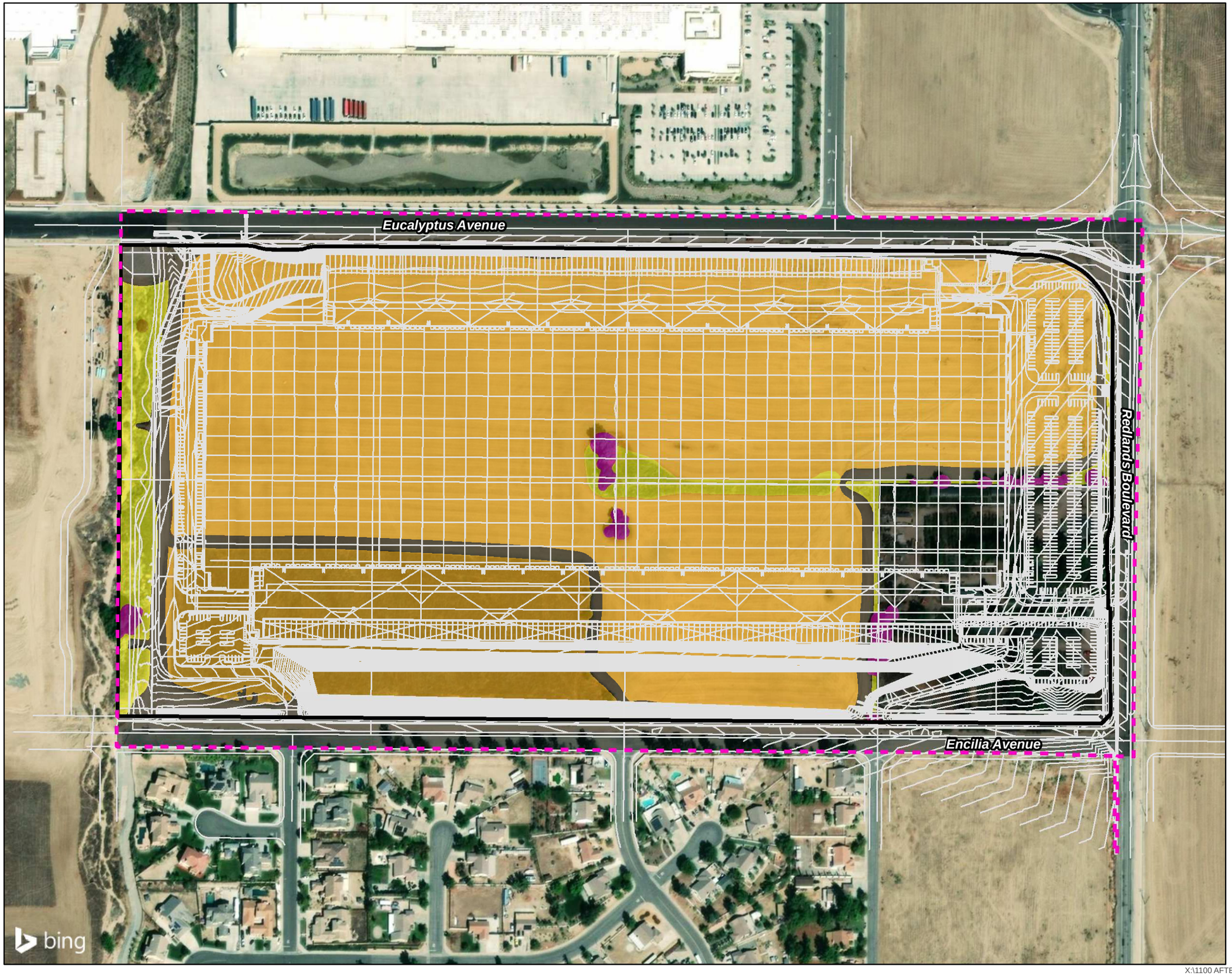


Project Boundary

Study Area

Project Site Plan

Ornamental

Ruderal

Disturbed/Ruderal

Disturbed/Developed

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

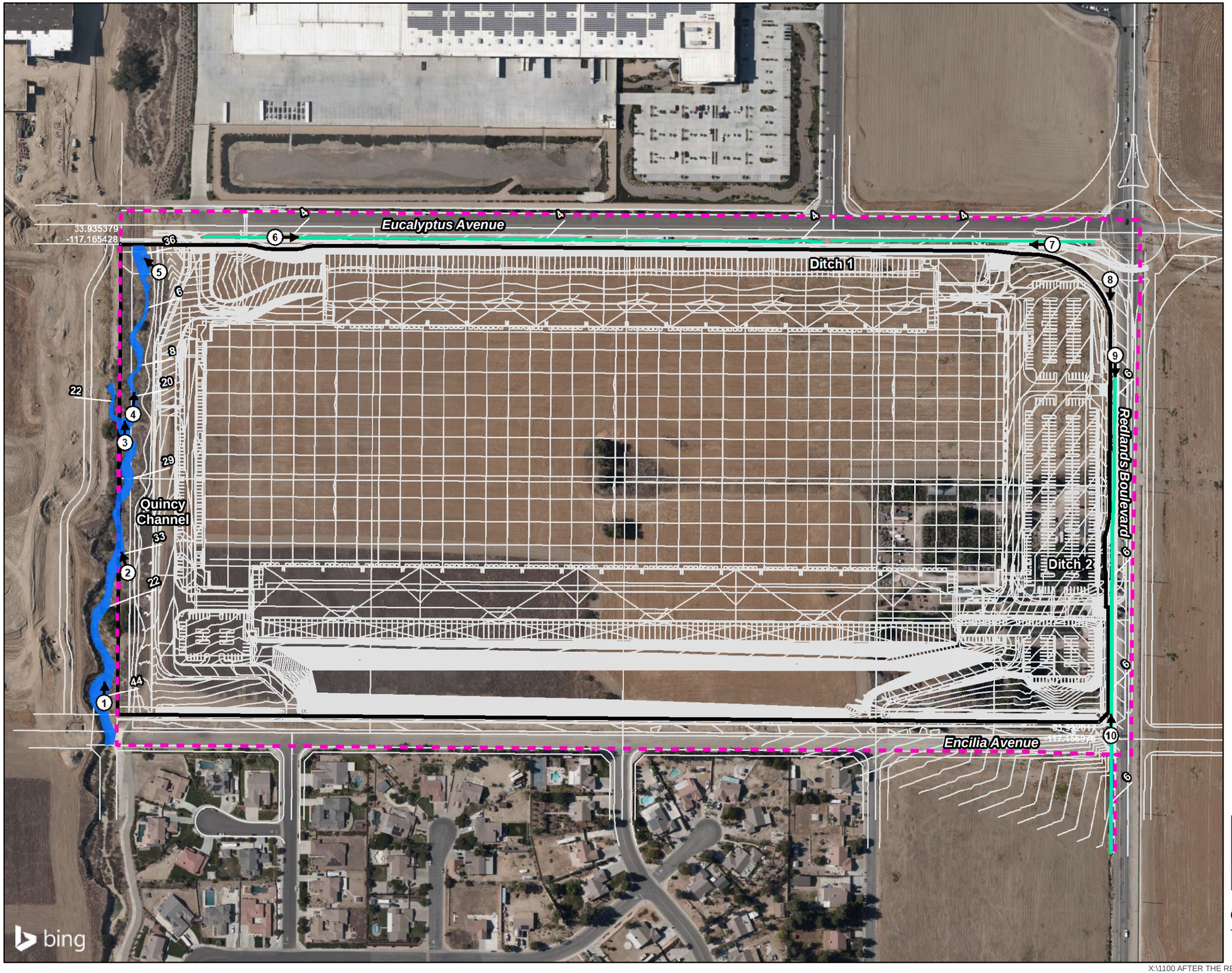
MORENO VALLEY TRADE CENTER

Vegetation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 10

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_Vegetation.mxd



Project Boundary

Study Area

Project Site Plan

Avoided Non-Wetland Waters

Impacted Non-Wetland Waters

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

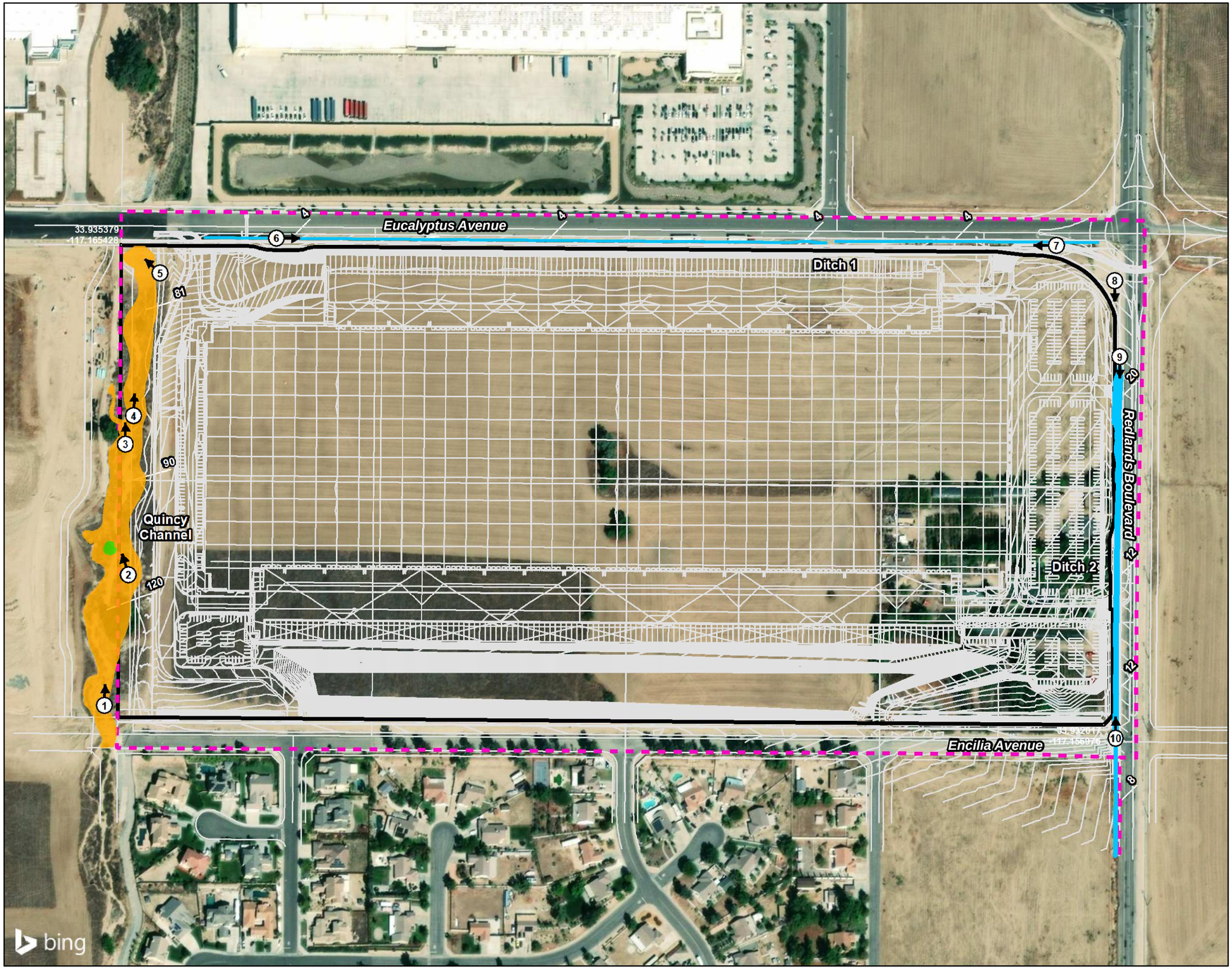
MORENO VALLEY TRADE CENTER

RWQCB Jurisdictional Delineation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 11A

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_JD_REV1_RWQCB.mxd



Project Boundary

Study Area

Project Site Plan

Avoided Riparian

Avoided Non-Riparian Streambed

Impacted Non-Riparian Streambed

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

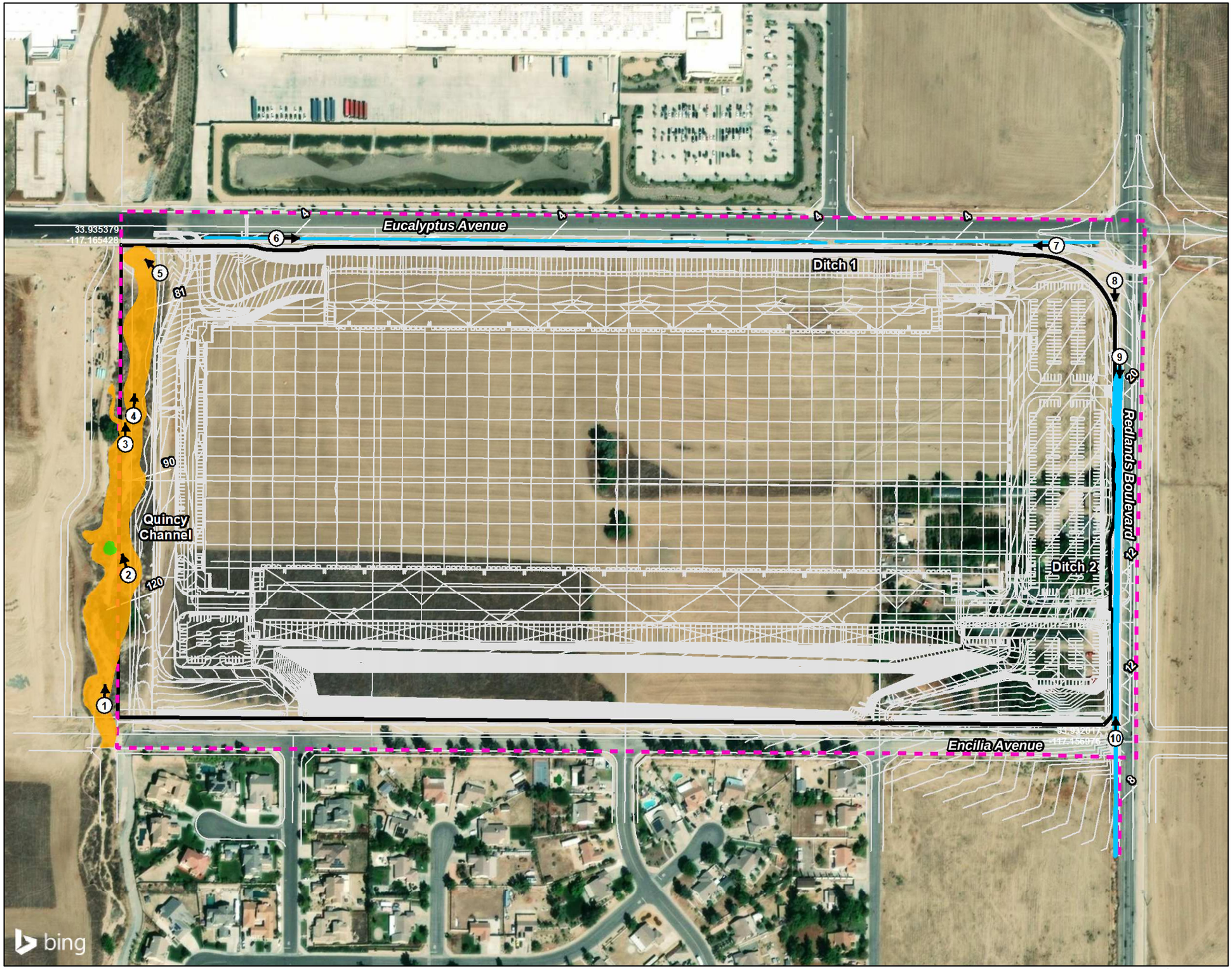
MORENO VALLEY TRADE CENTER

CDFW Jurisdictional Delineation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 11B

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_JD_REV1_CDFW.mxd



Project Boundary

Study Area

Project Site Plan

Avoided MSHCP Riparian

Avoided MSHCP Riverine

Impacted MSHCP Riverine

4 Width of Feature in Feet

① Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

MSHCP Riparian/Riverine Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 11C

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_JD_REV1_MSHCP.mxd

APPENDIX A

FLORAL COMPENDIUM

The floral compendium lists all species identified during floristic level/focused plant surveys conducted for the Project site. Taxonomy typically follows The Jepson Manual, 2nd Edition (2012). Common plant names are taken from Baldwin (2012), Munz (1974), and Roberts et al (2004) and Roberts (2008). An asterisk (*) denotes a non-native species.

SCIENTIFIC NAME	COMMON NAME
MAGNOLIOPHYTA	**FLOWERING PLANTS**
MAGNOLIIDS	**MAGNOLIID CLADE**
MONOCOTYLEDONS	**MONOCOTS**
ARECACEAE	**Palm Family**
* *Washingtonia robusta*	Mexican fan palm
POACEAE	**Grass Family**
* *Arundo donax*	giant reed
* *Avena fatua*	common wild oat
* *Bromus madritensis* subsp. *rubens*	foxtail chess
* *Hordeum murinum*	foxtail barley
* *Hordeum vulgare*	cultivated barley
* *Schismus barbatus*	Mediterranean grass
Triticum aestivum	common wheat
EUDICOTYLEDONS	**EUDICOTS**
ADOXACEAE	**Elderberry Family**
Sambucus nigra subsp. *caerulea*	Mexican elderberry
AMARANTHACEAE	**Amaranth Family**
* *Chenopodium album*	lamb's quarters
* *Salsola tragus*	Russian-thistle
ANACARDIACEAE	**Sumac Family**
* *Schinus molle*	Peruvian pepper tree
ASTERACEAE	**Sunflower Family**
Ambrosia acanthicarpa	annual bur-sage

	Artemisia dracunculus	tarragon
	Baccharis salicifolia	mulefat
*	*Conyza bonariensis*	flax-leaved horseweed
	Helianthus annuus	western sunflower
*	*Lactuca serriola*	prickly lettuce
*	*Oncosiphon piluliferum*	stink-net
*	*Senecio vulgaris*	common groundsel
BORAGINACEAE		**Borage Family**
	Amsinckia menziesii var. *intermedia*	common fiddleneck
	Heliotropium curassavicum	salt heliotrope
	Pectocarya linearis	slender pectocarya
	Phacelia distans	common phacelia
	Phacelia minor	wild Canterbury-bell
BRASSICACEAE		**Mustard Family**
*	*Brassica nigra*	black mustard
*	*Brassica rapa*	field mustard
*	*Capsella bursa-pastoris*	shepherd's purse
	Hirschfeldia incana	summer mustard
*	*Raphanus sativus*	wild radish
*	*Sisymbrium irio*	London rocket
EUPHORBIACEAE		**Spurge Family**
*	*Ricinis communis*	castor bean
FABACEAE		**Legume Family**
*	*Acacia* sp.	acacia
	Lupinus succulentus	arroyo lupine
GERANIACEAE		**Geranium Family**
*	*Erodium botrys*	long-beaked filaree
*	*Erodium cicutarium*	red-stemmed filaree
JUGLANDACEAE		**Walnut Family**
	Juglans californica var. *californica*	southern California black walnut
LAMIACEAE		**Mint Family**
*	*Marrubium vulgare*	horehound
MALVACEAE		**Mallow Family**
*	*Malva parviflora*	cheeseweed
MYRTACEAE		**Myrtle Family**
*	*Eucalyptus camaldulensis*	river red gum

SALICACEAE		**Willow Family**
	Populus fremontii subsp. *fremontii*	western cottonwood
SIMAROUBACEAE		**Simarouba Family**
*	*Ailanthus altissima*	Tree of heaven
SOLANACEAE		**Nightshade Family**
	Datura wrightii	jimsonweed
*	*Nicotiana glauca*	tree tobacco
TAMARICACEAE		**Tamarisk Family**
*	*Tamarix* sp.	tamarisk
URTICACEAE		**Nettle Family**
*	*Urtica urens*	dwarf nettle

APPENDIX B
FAUNAL COMPENDIUM

The faunal compendium lists species identified on the Project site. Scientific nomenclature and common names for vertebrate species referred to in this report follow Collins (2009) for amphibians and reptiles, Bradley, et al. (2014) for mammals, and AOU Checklist (1998) for birds. An (*) denotes non-native species.

LEPIDOPTERA	**BUTTERFLIES**
LYCAENIDAE	**Gossamer-Wing Butterflies**
Plebejus acmon	acmon blue
NYMPHALIDAE	**Brush-Footed Butterflies**
Limenitis archippus	viceroy
Precis coenia	common buckeye
REPTILIA	**REPTILES**
PHRYNOSOMATIDAE	**Phrynosomatid Lizards**
Uta stansburiana	common side-blotched lizard
Sceloporus occidentalis	western fence lizard
AVES	**BIRDS**
ANATIDAE	**Swans, Geese And Ducks**
Branta canadensis	Canada goose
ACCIPITRIDAE	**Hawks And Old World Vultures**
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Circus cyaneus	northern harrier
CHARADRIIDAE	**Plovers And Relatives**
Charadrius vociferus	killdeer
COLUMBIDAE	**Pigeons And doves**
* *Streptopelia decaocto*	Eurasian collared-dove
Zenaida macroura	mourning dove
CUCULIDAE	**Cuckoos, Roadrunners, and Anis**
Geococcyx californianus	greater roadrunner

APODIDAE	**Swifts**
Aeronautes saxatilis	white-throated swift
TROCHILIDAE	**Hummingbirds**
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
PICIDAE	**Woodpeckers And Allies**
Picoides nuttallii	Nuttall's woodpecker
TYRANNIDAE	**Tyrant Flycatchers**
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird
CORVIDAE	**Crows And Jays**
Aphelocoma californica	western scrub-jay
Corvus brachyrhynchos	American crow
ALAUDIDAE	**Larks**
Eremophila alpestris	horned lark
HIRUNDINIDAE	**Swallows**
Hirundo rustica	barn swallow
Petrochelidon pyrrhonota	cliff swallow
AEGITHALIDAE	**Long-Tailed Tits And Bushtits**
Psaltriparus minimus	bushtit
TROGLODYTIDAE	**Wrens**
Salpinctes obsoletus	rock wren
MIMIDAE	**Mockingbirds And Thrashers**
Mimus polyglottos	northern mockingbird
PARULIDAE	**Wood Warblers And Relatives**
Dendroica coronata	yellow-rumped warbler
Geothlypis trichas	common yellowthroat
EMBERIZIDAE	**Emberizids**
Melospiza melodia	song sparrow
Passerculus sandwichensis	savannah sparrow
Pipilo crissalis	California towhee
Zonotrichia leucophrys	white-crowned sparrow

ICTERIDAE	**Blackbirds**
Agelaius phoeniceus	red-winged blackbird
Sturnella neglecta	western meadowlark
FRINGILLIDAE	**Fringilline And Cardueline Finches and Allies**
Carpodacus mexicanus	house finch
PASSERIDAE	**Old World Sparrows**
* *Passer domesticus*	house sparrow
MAMMALIA	**MAMMALS**
LEPORIDAE	**Rabbits And Hares**
Sylvilagus audubonii	desert (Audubon's) cottontail
GEOMYIDAE	**Pocket Gophers**
Thomomys bottae	Botta's pocket gopher
SCIURIDAE	**Squirrels, Chipmunks, And Marmots**
Spermophilus beecheyi	California ground squirrel
CANIDAE	**Foxes, Wolves And Allies**
* *Canis familiaris*	feral dog

Taxonomy and nomenclature are based on the following.

Butterflies: Taxonomy and phylogeny is based on Jonathan Pelham. 2008. Catalogue of the Butterflies of the United States and Canada. Journal of Research on the Lepidoptera 40: xiv + 658 pp.

Amphibians and reptiles: Crother, B.I. et al.(2000. Scientific and standard English names of amphibians and reptiles of North America north of Mexico, with comments regarding confidence in our understanding. *Herpetological Circular* 29; and 2003 update.) for species taxonomy and nomenclature; Stebbins, R.C. (2003. A Field Guide to Western Reptiles and Amphibians, third edition, Houghton Mifflin, Boston.) for sequence and higher order taxonomy.

Birds: American Ornithologists' Union (1998. The A.O.U. Checklist of North American Birds, seventh edition. American Ornithologists' Union, Washington D.C.; and 2000, 2002, 2003, and 2004 supplements.).

Mammals: Grenfell, W.E., Parisi, M.D. and McGriff, D. (2003. Complete list of amphibians, reptiles, birds and mammals in California. California Department of Fish and Game. http://www.dfg.ca.gov/whdab/pdfs/species_list.pdf).

The faunal compendium lists species that were either observed within or adjacent to the Study Area (denoted by a '*'), or that have some potential to occur within or adjacent to the Study Area (denoted by a '+'). Taxonomy and common names are taken from the California Wildlife Habitat Relationships System (CDFG 2003); AOU (1998) and CDFG (1990) for birds; Stebbins (1985), Collins (1990), Jones et al. (1992), and CDFG (1990) for reptiles and amphibians; and CDFG (1990) for mammals.

Special status species are denoted by a !

GLENN LUKOS ASSOCIATES

Regulatory Services

June 23, 2020

John Grace
Hillwood
36 Discovery, Suite 120
Irvine, California 92618

SUBJECT: Jurisdictional Delineation of the Moreno Valley Trade Center Project, an Approximate 73-Acre Property Located in the City of Moreno Valley, Riverside County, California.

Dear Mr. Grace:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and California Department of Fish and Wildlife (CDFW) jurisdiction for the above-referenced property.[1]

The Moreno Valley Trade Center Project (Project) comprises approximately 73 acres and is centrally located at approximately latitude 33.935437, longitude -117. 161254 in the City of Moreno Valley, Riverside County, California [Exhibit 1 – Regional Map]. The site contains one blue line drainage and is within Section 2 of Township 3 South, Range 3 West, of the U.S. Geological Survey (USGS) 7.5" quadrangle map Sunnymead (dated 1967 and photorevised in 1980) [Exhibit 2 – Vicinity Map]. The Project site is bordered by Eucalyptus Avenue to the north, Redlands Boulevard to the east, Eucalyptus Avenue to the south, and disturbed undeveloped lands to the west.

On December 6, 2019 and March 31, 2020, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the Project site and adjacent off-site areas (collectively, "Study Area") to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act (CWA), (2) Regional Board jurisdiction pursuant to Section 401 of the CWA and Section 13260 of the California Water Code (CWC), and (3) CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. Enclosed are 250-scale maps [Exhibits 3A, 3B, 3C]

[1] This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries.

that depict the areas of Corps, Regional Board and CDFW jurisdiction. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 4.

Potential Corps jurisdiction associated with the Study Area totals approximately 0.63 acre of waters of the United States, none of which is wetland. A total of 1,487 linear feet of ephemeral stream is present.

Potential Regional Board jurisdiction associated with the Study Area totals approximately 1.02 acres, none of which is wetland. A total of 5,057 linear feet of ephemeral stream is present.

Potential CDFW jurisdiction associated with the Study Area totals approximately 2.73 acres and includes all areas within Corps jurisdiction. Of this total, 0.02 acre consists of riparian stream and 2.71 acres consist of non-riparian stream. A total of 5,057 linear feet of ephemeral stream is present.

I. METHODOLOGY

Prior to beginning the field delineation, a color aerial photograph, a topographic base map of the property, the previously cited USGS topographic map, and a soils map were examined to determine the locations of potential areas of Corps, Regional Board, and CDFW jurisdiction. Suspected jurisdictional areas were field checked for evidence of stream activity and/or wetland vegetation, soils and hydrology. Where applicable, reference was made to the 2008 Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (OWHM Manual)[2] to identify the width of Corps jurisdiction and suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[3] (Wetland Manual) and the 2006 Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement).[4] While in the field the potential limits of jurisdiction were recorded with a sub-meter Trimble GPS device in conjunction with a color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets.

[2] U.S. Army Corps of Engineers. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States

[3] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

[4] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

The National Cooperative Soil Survey (NCSS) has mapped the following soil types as occurring in the general vicinity of the project site (Exhibit 5):

Metz Loamy Fine Sand, Sandy Loam Subsratum, 0 to 5 Percent Slopes

The Metz series consists of very deep, somewhat excessively drained soils that formed in alluvial material from mixed, but dominantly sedimentary rocks. Metz soils occur on floodplains and alluvial fans with slopes of zero to 15 percent. Soils in the Metz series range from generally neutral to slightly or moderately alkaline.

San Emigdio Fine Sandy Loam, 2 to 8 Percent Slopes, Eroded; and San Emigdio Loam, 20 to 8 Percent Slope

The San Emigdio series consists of very deep, well drained soils that formed in dominantly sedimentary alluvium. San Emigdio soils occur on fans and floodplains with slopes of zero to 15 percent. Soils in the San Emigdio series generally range from neutral to mildly alkaline.

II. JURISDICTION

A. Army Corps of Engineers

Pursuant to Section 404 of the CWA, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a)[5] as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
> *(2) All interstate waters including interstate wetlands;*
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*

[5] On January 23, 2020, the U.S. Environmental Protection Agency (EPA) and the Corps finalized the *Navigable Waters Protection Rule* to redefine "Waters of the United States" and thereby establish federal regulatory authority under the Clean Water Act. The *Navigable Waters Protection Rule* is expected to be published in the Federal Register in the first quarter of 2020 and will become effective 60 days after publication in the Federal Register. Implementation of the *Navigable Waters Protection Rule* may result in a change to the delineated areas of Corps jurisdiction as outlined in this report.

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or
(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;
(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;
(6) The territorial seas;
(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.
(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

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

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

1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, the U.S. Environmental Protection Agency (EPA) asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of “waters of the United States” in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the CWA.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc*.) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

> *In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.*

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the CWA (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

2. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the EPA and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the CWA in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands, as set forth in the chart below, the Corps must apply the "significant nexus" standard.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps.

The Corps and EPA will assert jurisdiction over the following waters:

- Traditional navigable waters.
- Wetlands adjacent to traditional navigable waters.
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).
- Wetlands that directly abut such tributaries.

The Corps and EPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:

- Non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow).
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.
- Significant nexus includes consideration of hydrologic and ecologic factors.

3. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published the Wetland Manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the Wetland Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the Wetland Manual and Arid West Supplement provide great detail in

methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the Arid West 2016 Regional Wetland Plant List[6],[7]);
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- Whereas the Wetland Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

B. Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into waters of the United States[8] and waters of the state. Waters of the United States are defined above in Section II.A and waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050[e]).

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[6] Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Arid West 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

[7] Note the Corps also publishes a National List of Plant Species that Occur in Wetlands (Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016.); however, the Regional Wetland Plant List should be used for wetland delineations within the Arid West Region.

[8] Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code or Regulations title 23, section 3831(w)). This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S." under the federal Clean Water Act.

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

1. State Wetland Definition

The Water Boards define an area as wetland[9] as follows: *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

The following wetlands are waters of the state:

1. *Natural wetlands;*
2. *Wetlands created by modification of a surface water of the state;[10] and*
3. *Artificial wetlands[11] that meet any of the following criteria:*

    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
    b. Specifically identified in a water quality control plan as a wetland or other water of the state;
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or

[9] State Water Resources Control Board. 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. [For Inclusion in the Water Quality Control Plans for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California].
[10] "Created by modification of a surface water of the state" means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.
[11] Artificial wetlands are wetlands that result from human activity.

d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):

i. Industrial or municipal wastewater treatment or disposal,
ii. Settling of sediment,
iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,
viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.[12]

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

[12] Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board's authority to issue or waive waste discharge requirements or take other actions as applicable.

C. California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1617 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW also defines a stream as "a body of water that flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators."

It is important to note that the Fish and Game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

III. RESULTS

A. Corps Jurisdiction[13]

Potential Corps jurisdiction associated with the Study Area totals approximately 0.63 acre of waters of the United States, none of which is wetland. A total of 1,487 linear feet of ephemeral stream is present. Corps jurisdiction associated with the Study Area is limited to one blue-line stream, the Quincy Channel (Exhibit 3A). The Quincy Channel is an ephemeral drainage feature that accepts urban flow and storm water runoff from the City of Moreno Valley and its surrounding areas.

[13] On January 23, 2020, the U.S. Environmental Protection Agency (EPA) and the Corps finalized the *Navigable Waters Protection Rule* to redefine "Waters of the United States" and thereby establish federal regulatory authority under the Clean Water Act. The *Navigable Waters Protection Rule* is expected to be published in the Federal Register in the first quarter of 2020 and will become effective 60 days after publication in the Federal Register. Implementation of the *Navigable Waters Protection Rule* may result in a change to the delineated areas of Corps jurisdiction as outlined in this report.

The Quincy Channel enters the northwestern portion of the Project site through a reinforced triple box culvert under Eucalyptus Avenue. The channel meanders across the Project Study Area in a southerly direction for approximately 1,487 linear feet before continuing off-site past Encilia Avenue. The Quincy Channel ultimately discharges into the Perris Valley Storm Drain, which drains to the San Jacinto River, which is tributary to Lake Elsinore, which empties into Alberhill Creek/Temescal Wash, which is tributary to the Santa Ana River, which is tributary to the Pacific Ocean. The Corps retains jurisdiction of this drainage course because its final destination (the Pacific Ocean) is a TNW.

The Quincy Channel is a disturbed, soft-bottomed earthen channel with incised and eroded side slopes along a majority of its reach. The channel supports an OHWM ranging from six (6) to 44 feet in width as evidenced by the presence of litter and debris, changes in soil characteristics, debris wracking, and terracing. The channel bottom supports a loamy-sand substrate that is well-drained and was completely dry during our field delineation.

The Quincy Channel is generally unvegetated with scattered upland species along its banks and terraces that include castor bean (*Ricinus communis*), fiddleneck (*amsinckia* ssp.), tree tobacco (*Nicotiana glauca*), cheeseweed mallow (*Malva parviflora*), Russian thistle (*Salsola tragus*), mustard (*Brassica* ssp.), heliotrope (*Heliotropium curassavicum*), barley (*Hordeum* ssp.), stinging nettle (*Urtica urens*), London rocket (*Sisymbrium irio*), filaree (*Erodium* ssp.), Mexican fan palm (*Washingtonia robusta*), and various other non-native weedy species. Riparian vegetation is limited to one black walnut (*Juglans californica*). No wetland data pits were necessary due to a lack of hydrophytic vegetation and well-drained soils.

The boundaries of Corps jurisdiction/waters of the United States are depicted on Exhibit 3A. Site photographs are provided as Exhibit 4.

B. Regional Water Quality Control Board Jurisdiction

Potential Regional Board jurisdiction associated with the Study Area totals approximately 1.02 acres, none of which is wetland. A total of 5,057 linear feet of ephemeral stream is present. Of this total, 0.63 acre and 1,487 linear feet are considered waters of the United States within Corps jurisdiction and 0.39 acre and 3,570 linear feet are considered intrastate/isolated waters outside of Corps jurisdiction. Regional Board jurisdiction associated with the Study Area is limited to one blue-line stream, the Quincy Channel, and two ephemeral drainage ditches (Ditch 1 and Ditch 2) that were constructed in and drain wholly upland areas.

The boundaries of Regional Board jurisdiction are depicted on Exhibit 3B. Site photographs are provided as Exhibit 4. Regional Board jurisdiction associated with each feature is summarized in Table 1 and discussed below.

Table 1: Regional Board Jurisdiction

Drainage Name	Total Regional Board Non-Wetland Waters (Acres)	Total Regional Board Wetland Waters (Acres)	Total Regional Board Jurisdiction (Acres)	Total Linear Feet
Quincy Channel	0.63	0	0.63	1,487
Ditch 1	0.21	0	0.21	2,295
Ditch 2	0.18	0	0.18	1,275
Total	1.02	0	1.02	5,057

Quincy Channel

The Quincy Channel has been determined to be a Corps jurisdictional water subject to regulation pursuant to Section 401 and 404 of the CWA and does not need to be addressed separately pursuant to Section 13260 of the CWC, the Porter-Cologne Act. Refer to Section A above for a narrative description of this feature.

Ditch 1

Potential Regional Board jurisdiction associated with Ditch 1 totals 0.21 acre, none of which is wetland. A total of 2,295 linear feet of ephemeral ditch is present.

Ditch 1 is an isolated roadside ditch that was constructed in and drains wholly upland areas. This feature runs along the south side of Eucalyptus Avenue just outside and north of, the Project boundary for approximately 2,295 linear feet. Ditch 1 averages four (4) feet in width and conveys surface flow and road run-off from the adjacent uplands. Ditches that drain wholly upland areas and that do not carry a relatively permanent flow of water are not subject to regulation by the Corps or Regional Board pursuant to Sections 401 or 404 of the CWA. However, since this feature conveys surface flow with the potential to support beneficial uses, it may be regulated separately by the Regional Board pursuant to Section 13260 of the CWC, the Porter-Cologne Act.

Vegetation associated with Ditch 1 is limited to non-native upland species, including Russian thistle, London rocket, filaree, mustard, Cheeseweed mallow, lamb's quarters (*Chenopodium album*), jimson weed (*Datura stramonium*), barley (*Hordeum* ssp.), and other non-native weedy species . This feature lacks riparian vegetation and was completely dry during our field delineation.

Ditch 2

Potential Regional Board jurisdiction associated with Ditch 2 totals 0.18 acre, none of which is wetland. A total of 1,275 linear feet of ephemeral stream is present.

Ditch 2 is an isolated ditch was constructed in and drains wholly upland areas. This feature extends in a southerly direction just outside and east of, the Project boundary along the west side of Redlands Avenue. Ditch 2 is a partially-improved drainage ditch averaging six (6) feet in width and 1,275 linear feet within the Study Area before continuing off-site past Encilia Avenue. This feature conveys surface flow and road run-off from the adjacent uplands. Ditches that drain wholly upland areas and that do not carry a relatively permanent flow of water are not subject to regulation by the Corps or Regional Board pursuant to Sections 401 or 404 of the CWA. However, since this feature conveys surface flow with the potential to support beneficial uses, it may be regulated separately by the Regional Board pursuant to Section 13260 of the CWC, the Porter-Cologne Act.

Ditch 2 is generally unvegetated with inclusions of non-native weedy species along the banks including mustard, tree tobacco, castor bean, and Mexican fan palm. This feature lacks riparian vegetation and was completely dry during our field delineation.

C. CDFW Jurisdiction

Potential CDFW jurisdiction associated with the Study Area totals approximately 2.73 acres and includes all areas within Corps jurisdiction. Of this total, 0.02 acre consists of riparian stream and 2.71 acres consist of non-riparian stream. A total of 5,057 linear feet of ephemeral stream is present. The boundaries of CDFW jurisdiction are depicted on Exhibit 3C. Site photographs are provided as Exhibit 4. CDFW Jurisdiction associated with each feature is summarized in Table 2 and discussed below.

Table 2: CDFW Jurisdiction

Drainage Name	Total CDFW Non-Riparian Stream (Acres)	Total CDFW Riparian Stream (Acres)	Total CDFW Jurisdiction (Acres)	Total Linear Feet
Quincy Channel	2.14	0.02	2.16	1,487
Ditch 1	0.21	0	0.21	2,295
Ditch 2	0.36	0	0.36	1,275
Total	2.71	0.02	2.73	5,057

Quincy Channel

Potential CDFW jurisdiction associated with the Quincy Channel totals approximately 2.16 acres, of which, 0.02 acre consists of riparian stream and 2.14 acres consist of non-riparian stream. A total of 1,487 linear feet of ephemeral stream is present. CDFW jurisdiction is extended to the top of the bank of the drainage, with widths ranging up to 120 feet.

The Quincy Channel enters the northwestern portion of the Project site through a reinforced triple box culvert under Eucalyptus Avenue. The channel meanders across the Project Study Area in a southerly direction for approximately 1,487 linear feet before continuing off-site past Encilia Avenue. The Quincy Channel ultimately discharges into the Perris Valley Storm Drain, which drains to the San Jacinto River, which is tributary to Lake Elsinore, which empties into Alberhill Creek/Temescal Wash, which is tributary to the Santa Ana River, which is tributary to the Pacific Ocean.

The Quincy Channel is a disturbed, soft-bottomed earthen channel with incised and eroded side slopes along a majority of its reach. The channel exhibits the presence of litter and debris, changes in soil characteristics, debris wracking, and terracing. The channel bottom supports a loamy-sand substrate that is well-drained and was completely dry during our field delineation.

The Quincy Channel is generally unvegetated with scattered upland species along its banks and terraces that include castor bean (*Ricinus communis*), fiddleneck (*amsinckia* ssp.), tree tobacco (*Nicotiana glauca*), cheeseweed mallow (*Malva parviflora*), Russian thistle (*Salsola tragus*), mustard (*Brassica* ssp.), heliotrope (*Heliotropium curassavicum*), barley (*Hordeum* ssp.), stinging nettle (*Urtica urens*), London rocket (*Sisymbrium irio*), filaree (*Erodium* ssp.), Mexican fan palm (*Washingtonia robusta*), and various other non-native weedy species. Riparian vegetation is limited to one black walnut (*Juglans californica*).

Ditch 1

Potential CDFW jurisdiction associated with Ditch 1 totals 0.21 acre, none of which is riparian. A total of 2,295 linear feet of ephemeral stream is present.

Ditch 1 is an isolated roadside ditch that was constructed in and drains wholly upland areas. This feature runs along the south side of Eucalyptus Avenue just outside and north of, the Project boundary for approximately 2,295 linear feet. Ditch 1 averages four (4) feet in width and conveys surface flow and road run-off from the adjacent uplands. This feature conveys surface flow and road run-off from the adjacent uplands. Since this feature conveys surface flow and supports bed and bank, it may be regulated by the CDFW under Section 1602 of the Fish and Game Code.

Vegetation associated with Ditch 1 is limited to non-native upland species, including Russian thistle, London rocket, filaree, mustard, Cheeseweed mallow, lamb's quarters, jimson weed, barley, and other non-native weedy species. This feature lacks riparian vegetation and was completely dry during our field delineation.

Ditch 2

Potential CDFW jurisdiction associated with Ditch 2 totals 0.36 acre, none of which is riparian. A total of 1,275 linear feet of ephemeral stream is present. CDFW jurisdiction is extended to the top of the bank of this feature, with widths ranging from 12 to 20 feet.

Ditch 2 is an isolated ditch, which was constructed in, and drains wholly upland areas. This feature extends in a southerly direction just outside and east of, the Project boundary along the west side of Redlands Avenue. Ditch 2 is a partially-improved drainage ditch that extends 1,275 linear feet within the Study Area before continuing off-site past Encilia Avenue. This feature conveys surface flow and road run-off from the adjacent uplands. Since this feature conveys surface flow and supports bed and bank, it may be regulated by the CDFW under Section 1602 of the Fish and Game Code.

Ditch 2 is generally unvegetated with inclusions of non-native weedy species along the banks including mustard, tree tobacco, castor bean, and Mexican fan palm. This feature lacks riparian vegetation and was completely dry during our field delineation.

IV. DISCUSSION

Impact Analysis

An analysis of impacts will be performed based upon this delineation and the current project design (or design alternative) upon the client's request. This analysis will be provided as a separate memo and accompanying map.

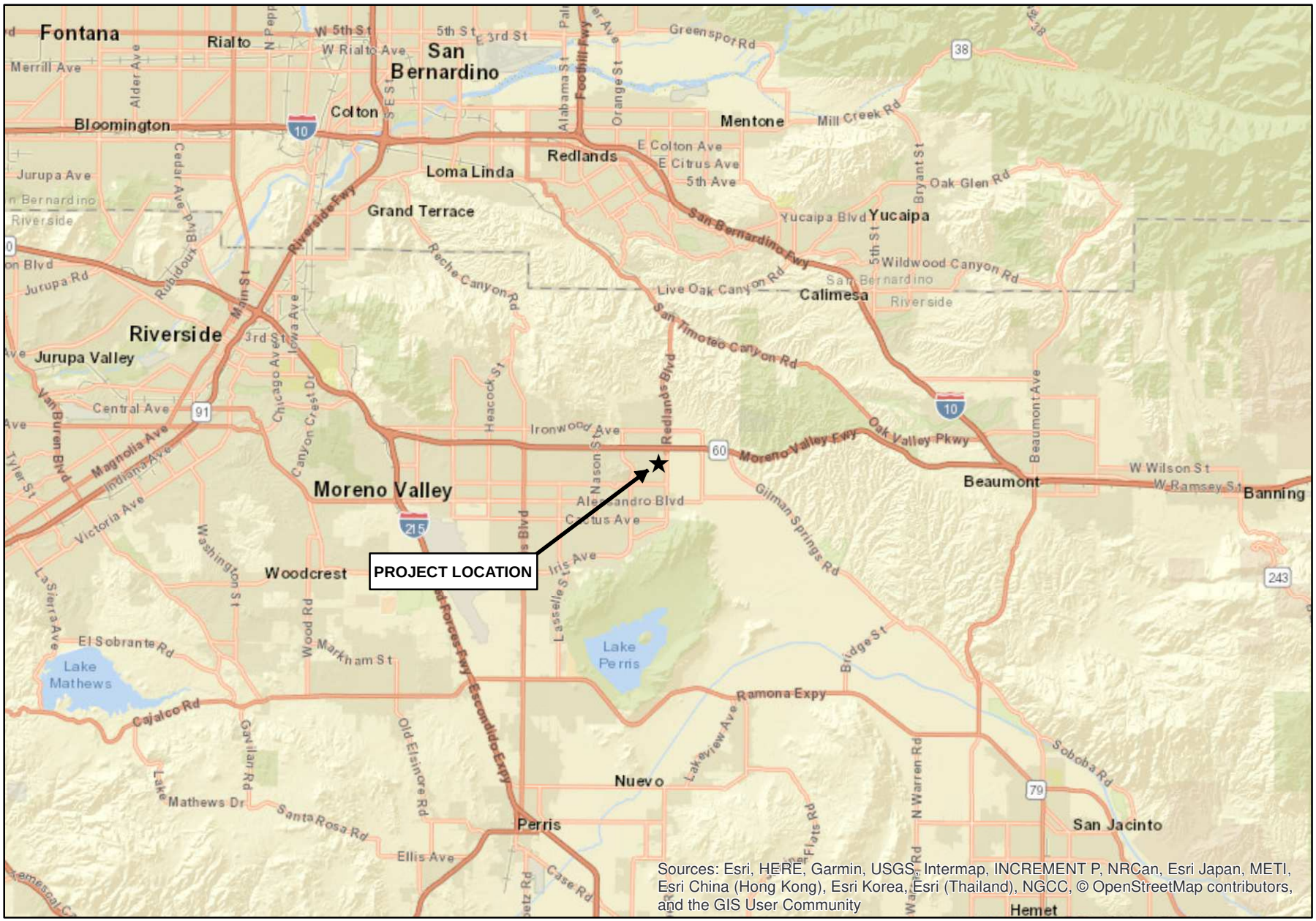
If you have any questions about this letter report, please contact Martin Rasnick at (949) 837-0404, x20 or at mrasnick@wetlandpermitting.com.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

Lesley Lokovic Gamber
Regulatory Specialist

P: 1459-1d.JD.rpt



Source: ESRI World Street Map

N

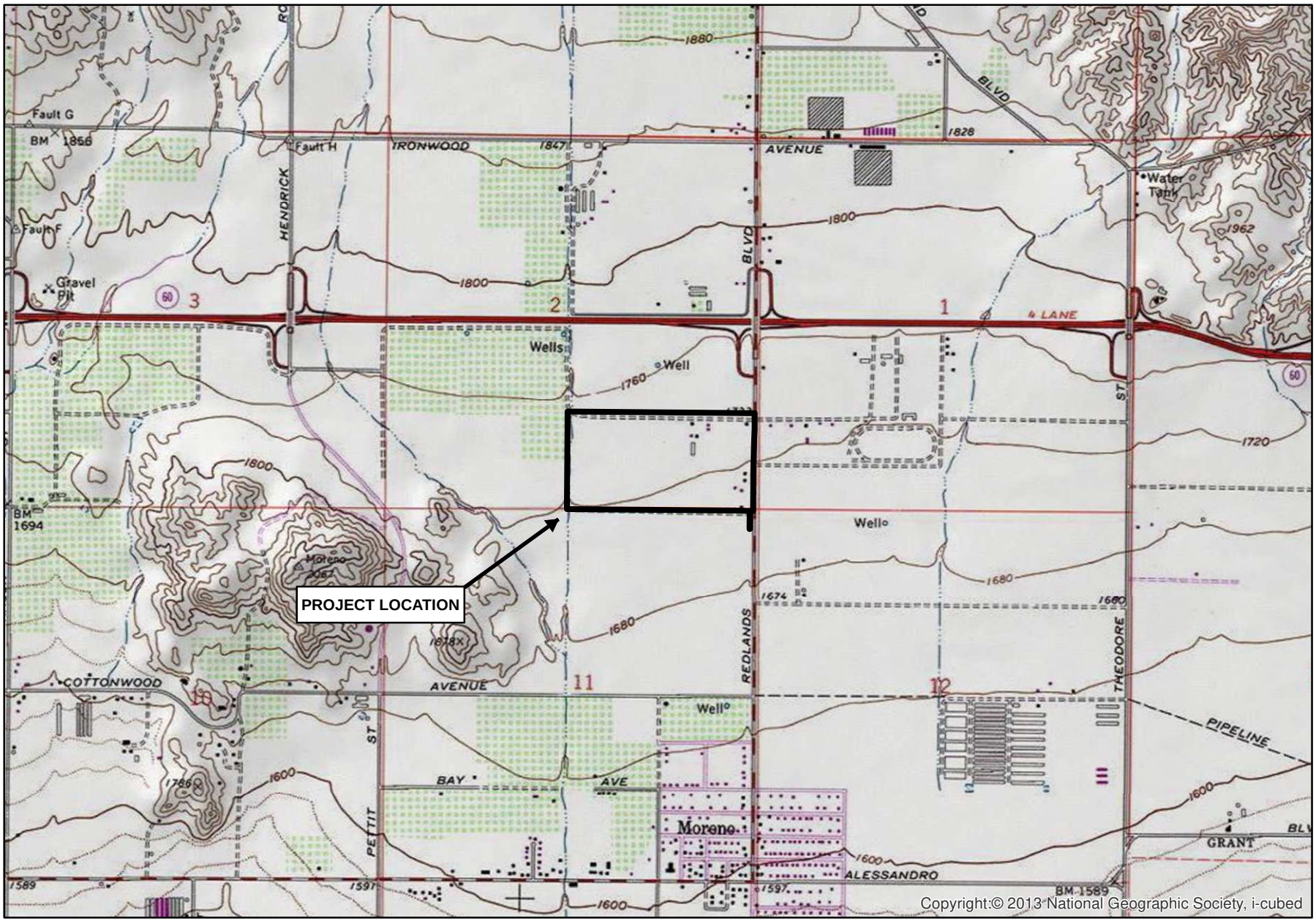
0 2 4 8 Miles

MORENO VALLEY TRADE CENTER

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Sunnymead, CA quadrangle

N

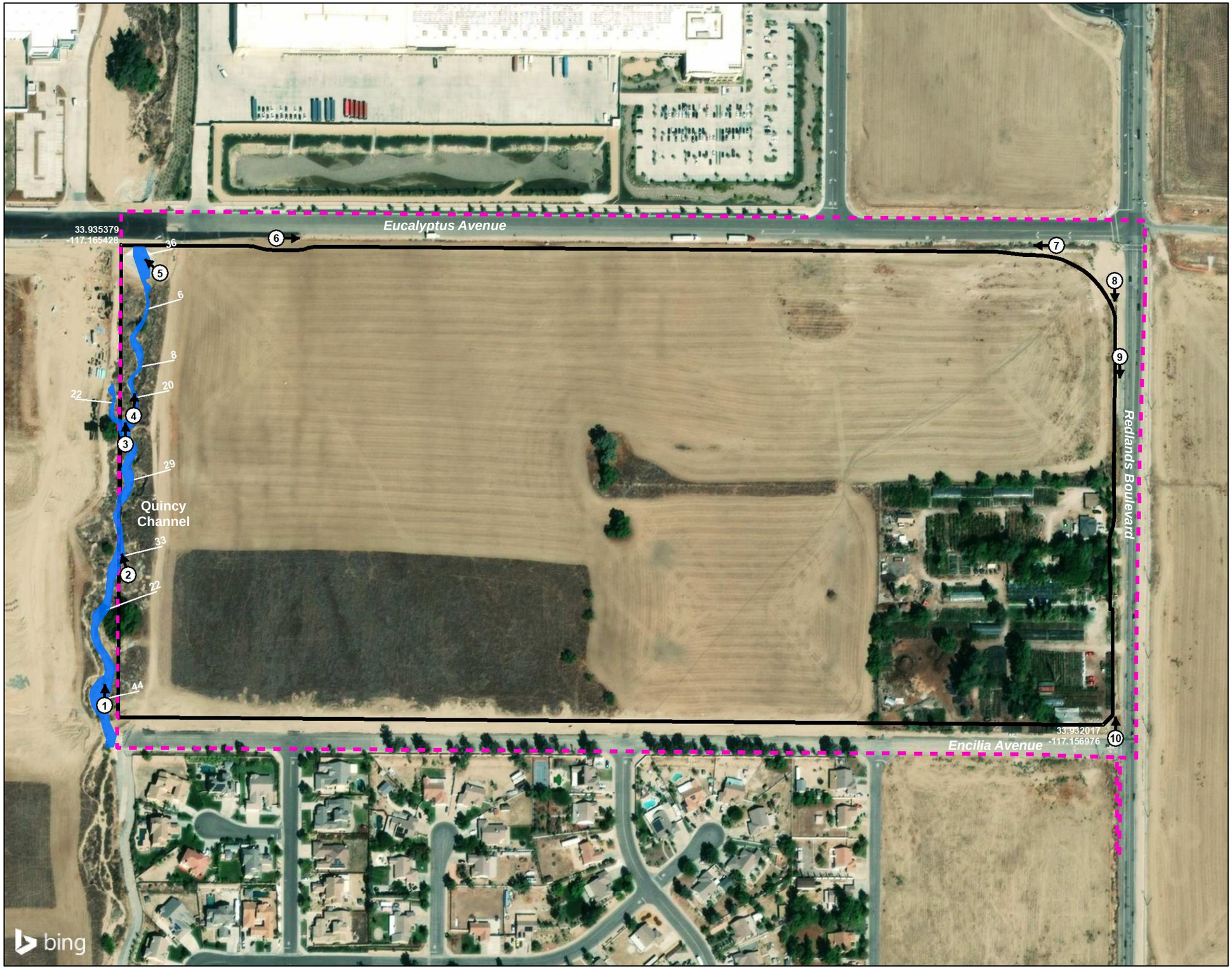
0 1,000 2,000 4,000 Feet

MORENO VALLEY TRADE CENTER

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Project Boundary

Study Area

Non-Wetland Waters

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Corps Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 3A

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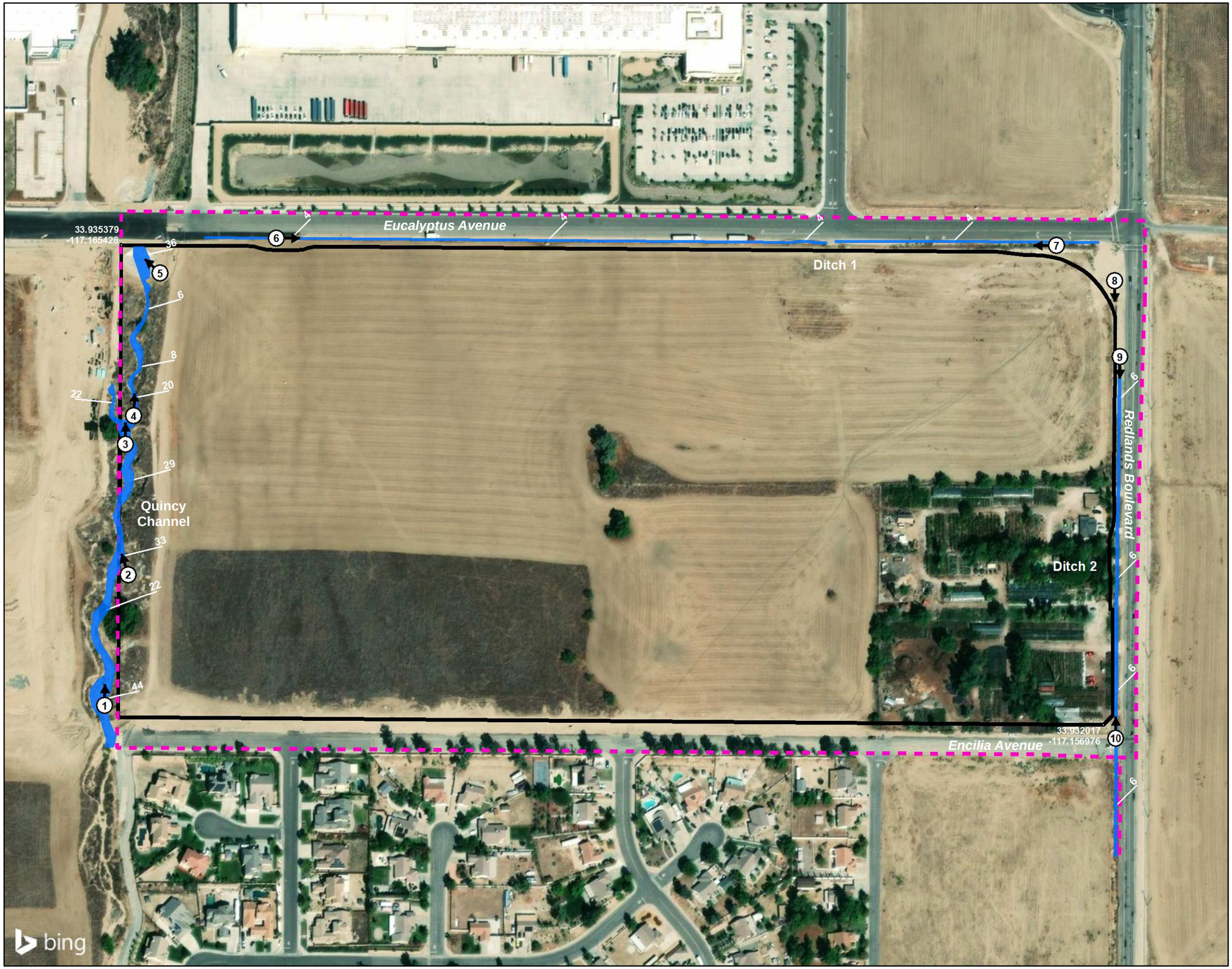

Project Boundary

Study Area

Non-Wetland Waters

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 3B

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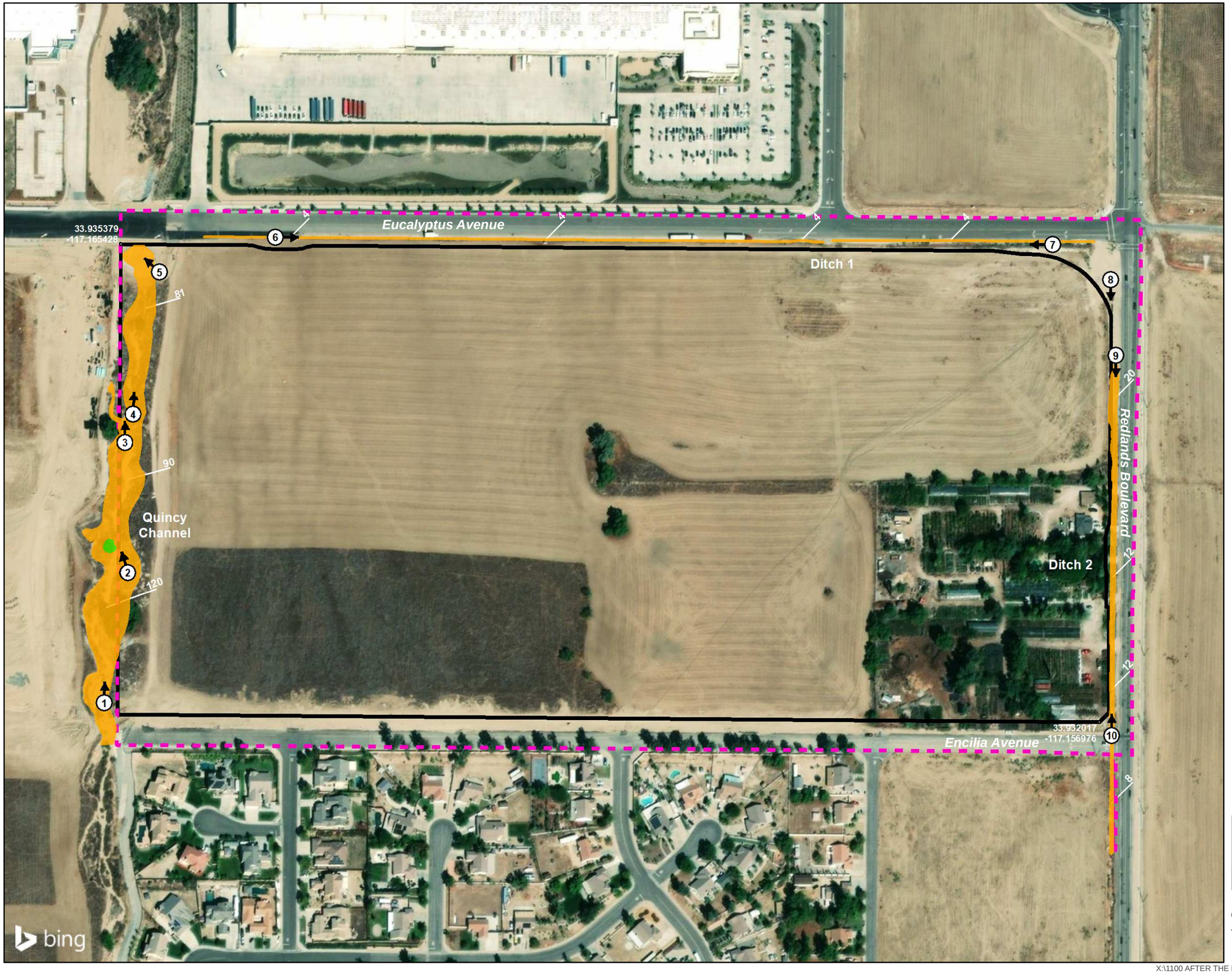

Project Boundary

Study Area

Riparian

Non-Riparian Streambed

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

CDFW Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 3C

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Photograph 1: 03-31-20. Southern portion of Quincy Channel looking north.

Photograph 2: 03-31-20. South-central portion of Quincy Channel looking north.

Photograph 3: 03-31-20. View depicting central portion of Quincy Channel looking north towards tributary confluence with main channel.

Photograph 4: 03-31-20. Additional view of Quincy Channel looking north.

GLENN LUKOS ASSOCIATES

MORENO VALLEY LOGISTICS CENTER PROPERTY

Site Photographs

Photograph 5: 03-31-20. Northern/upstream reach of Quincy Channel looking northwest towards Eucalyptus Avenue.

Photograph 6: 03-31-20. Representative view of roadside ditch looking east.

Photograph 7: 03-31-20. Additional view of roadside ditch looking west.

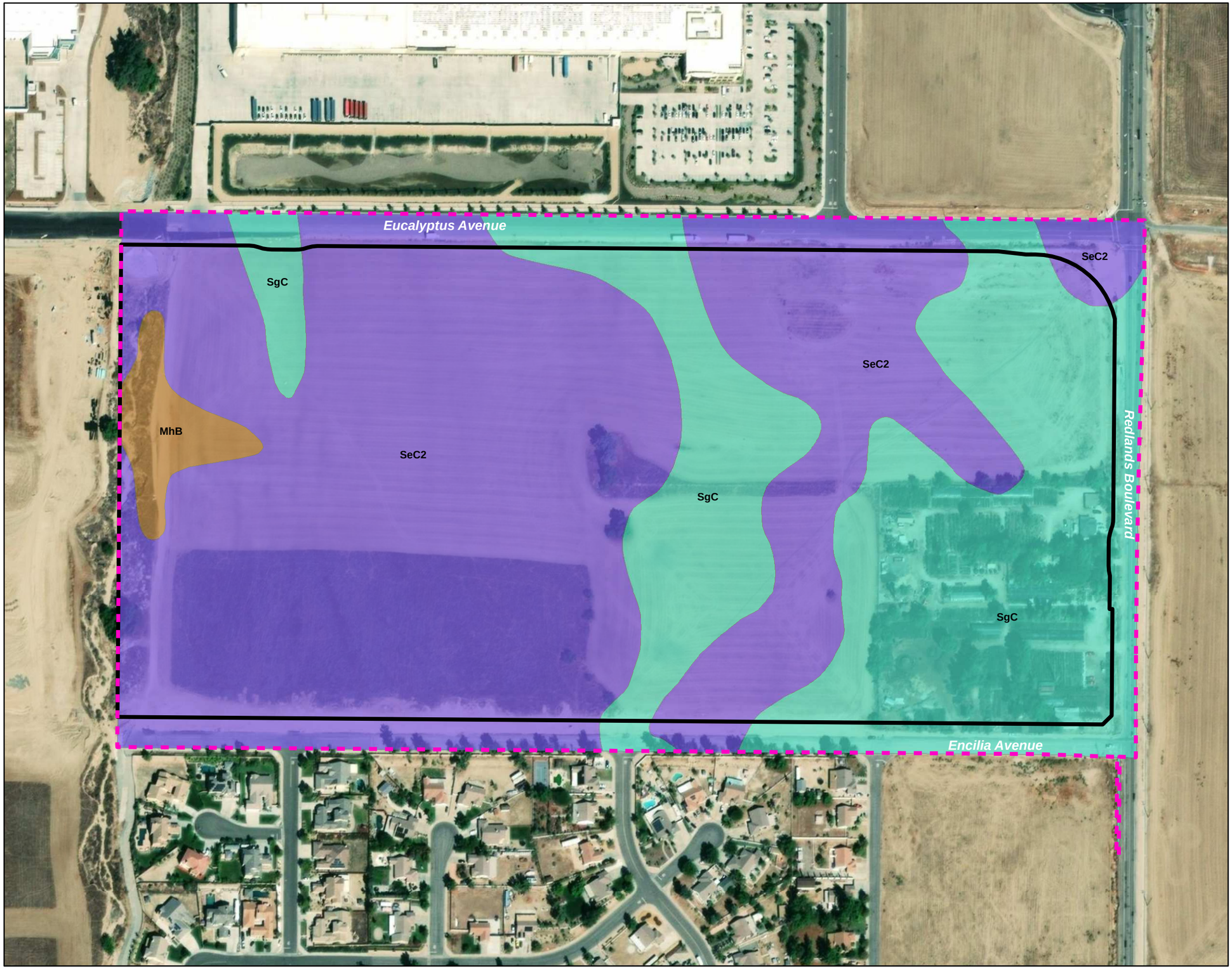
Photograph 8: 03-31-20. View of non-jurisdictional v-ditch constructed in the uplands.

Photograph 9: 03-31-20. Start of improved portion of ephemeral storm drain ditch looking south.

Photograph 10: 03-31-20. Southern portion of ephemeral ditch near intersection of Encilia Ave. and Redlands Blvd. looking north.

MORENO VALLEY LOGISTICS CENTER PROPERTY

Site Photographs



Project Boundary

Study Area

MhB - Metz loamy fine sand, sandy loam substratum, 0 to 5 per cent slopes

SeC2 - San Emigdio fine sandy loam, 2 to 8 percent slopes, eroded

SgC - San Emigdio loam, 2 to 8 percent slopes

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 5

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DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION (DBESP) ANALYSIS

FOR IMPACTS TO MSHCP RIPARIAN/RIVERINE AREAS

MORENO VALLEY TRADE CENTER PROJECT LOCATED IN THE COUNTY OF RIVERSIDE, CALIFORNIA

APNs:
488-340-002 THROUGH 488-340-012

Permittee:

City of Moreno Valley
14177 Frederick Street
Moreno Valley, California 92553

Prepared For:

Hillwood
901 Via Piemonte, Suite 175
Ontario, California 91764
Contact: John Grace
Phone: (951) 256-5924

Prepared By:

Glenn Lukos Associates, Inc.
1940 E. Deere Avenue, Suite 250
Santa Ana, California 92705
Phone: (949) 340-3851
Report Preparer: Martin Rasnick

July 8, 2020

TABLE OF CONTENTS

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EXHIBITS

1.0 EXECUTIVE SUMMARY

This document provides an analysis in support of a Determination of Biologically Equivalent or Superior Preservation (DBESP) for the Moreno Valley Trade Center Project (the Project) located in the City of Moreno Valley, Riverside County, California, in regard to the Multiple Species Habitat Conservation Plan (MSHCP) requirements for *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP Volume I, Section 6.1.2)*.

This document has been prepared following the 2019 MSHCP DBESP Report Template and is consistent with the guidelines identified in *Volume I, Section 6.1.2* of the MSHCP document (Dudek 2003), to demonstrate that with the appropriate mitigation, the Project will represent a "biologically equivalent or superior alternative". This document analyzes onsite sensitive biological resources, including a summary of findings of general and focused biological surveys, and vegetation mapping. A more detailed reporting of biological resources, including results of species-specific focused surveys, are contained within the Project's Biological Technical Report [Glenn Lukos Associates Inc. (GLA), 2020].

This document describes compensatory mitigation for impacts to unvegetated riverine areas, which are expected to be considered equivalent or superior mitigation for the Project, as compared to avoidance of such resources on site.

This document also describes compensatory mitigation for impacts to the burrowing owl (*Athene cunicularia*), which is expected to be considered equivalent or superior mitigation for the Project, as compared to avoidance of such resources on site.

2.0 INTRODUCTION

2.1 Project Area

The Project Site comprises approximately 84.68 acres in the City of Moreno Valley, Riverside County, California [Exhibit 1 – Regional Map] and is located within Section 2 of Township 3 South, Range 3 West, of the U.S. Geological Survey (USGS) 7.5" quadrangle map Sunnymead (dated 1967 and photorevised in 1980)[Exhibit 2 – Vicinity Map]. The Project Site is bordered by Eucalyptus Avenue to the north, Redlands Boulevard to the east, Encelia Avenue to the south, and disturbed undeveloped lands and the Quincy Channel to the west [Exhibit 3 – Aerial Map and Exhibit _ 4, Site Plan Map].

City staff may access the Project site from eastbound State Route (SR) 60. Exit at Redlands Boulevard and turn right. Continue on Redlands Boulevard past Eucalyptus Avenue and the site is on the right.

For this report, the term *Project Site* is defined as the area of onsite, permanent impacts equaling 69.66 acres [Exhibit 4 – Site Plan Map]. The term *Offsite Impact Area* includes the areas not on-site that are to be directly and permanently impacted by the Project, totaling 12.22 acres. This report analyzes the combined impact area totaling 81.88 acres. The Project Site is composed of

Assessor's Parcel Numbers (APNs): 488-340-002 through 488-340-012. For this document, we have assumed that all direct impacts would be permanent. The term *Study Area* includes both the Project Site, the Offsite Impact Area, and those areas within the project proponent's property limit that will not be directly impacted, for a total area of 84.68 acres.

2.2 Project Description

The Project consists of a development plan for a light industrial building with 1,332,380 square feet of building floor area, inclusive of warehouse/storage space and supporting office space. The proposed building would operate as a cross-dock warehouse with 104 loading docks on the north side of the building and 120 loading docks on the south side of the building. Truck trailer parking spaces (278 total) also would be provided within the truck courts/loading areas on the north and south sides of the building. The truck courts/loading areas would be enclosed and screened from public viewing areas by solid screen walls. Automobile parking areas would be provided on the western and eastern sides of the building; a total of 637 automobile parking spaces would be provided on-site. Access to the Project Site would be provided by up to eight (8) driveways: two (2) driveways from Eucalyptus Avenue, two (2) driveways from Redlands Avenue, and at least two (2) or no more than four (4) driveways from Encelia Avenue. The proposed driveways to Encelia Avenue would be restricted to automobile traffic only; no heavy trucks would be permitted to enter/exit the site from the proposed Encelia Avenue driveways.

Additional off-site improvements would include various connections and infrastructure improvements within Redlands Boulevard and Eucalyptus Avenue, totaling approximately 12.22 acres.

All impacts associated with the Project would be permanent, including both the onsite and offsite areas. The Project would not have any temporary impacts.

2.3 Existing Conditions

The Study Area primarily consists of annually maintained agricultural fields that support predominantly ruderal vegetation, with the southeastern portion containing an active plant nursery. The Study Area and the surrounding landscape has been historically disked since 1966[1]. Currently the surrounding land uses include commercial industry to the north, residential development to the south, and agricultural uses to the east and west. The Project slopes gently to the southeast, with elevations on site ranging from approximately 1,710 feet above mean sea level (amsl) in the southeast to 1,751 feet amsl in the northwest. The Quincy Channel enters the northwestern portion of the Study Area through a culvert under Eucalyptus Avenue and flows in a southerly direction for 1,487 linear feet before continuing off-site to the south [Exhibit 7 – Site Photographs]. Two ephemeral drainage ditches, which were constructed in, and drain wholly within upland areas, occur along the northern and eastern boundaries of the Project Site parallel to Eucalyptus Avenue and Redlands Boulevard, respectively.

Soils on site consist of loam, fine sand, and fine sandy loam from the Metz and San Emigdio series [Exhibit 5 – Soils Map].

[1] *Historic Aerials*, www.historicaerials.com/.

The Study Area supports the following vegetation/land use types: Disturbed/Developed, Disturbed/Ruderal, Ornamental, and Ruderal. Table 2-1 provides a summary of the vegetation types and their corresponding acreage. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 6. Photographs depicting the site are shown in Exhibit 7.

Table 2-1. Summary of Vegetation/Land Use Types for the Study Area

VEGETATION/LAND USE TYPE	ONSITE AREAS (acres)	OFFSITE IMPACT AREA (acres)	TOTAL (acres)
Disturbed/Developed	14.77	12.22	**26.99**
Disturbed/Ruderal	53.39	0	**53.39**
Ornamental	0.80	0	**0.80**
Ruderal	3.49	0	**3.49**
Total	**72.46**	**12.22**	**84.68**

2.3.1 Disturbed/Developed

The Study Area supports 26.99 acres of disturbed/developed areas, including 14.77 acres onsite and 12.22 acres offsite. These onsite areas consist of vehicular access roads located along the western and southern portions of the site and an active plant nursery located in the southeastern corner of the site. The offsite areas consist of existing paved roadways.

2.3.2 Disturbed/Ruderal

The Study Area supports 53.39 acres of disturbed/ruderal lands, all of which are associated with the onsite portions of the Project. These lands cover the majority of the Study Area and were historically used for farming. These areas are routinely disked for weed abatement. Dominant plant species observed included London rocket (*Sisymbrium irio*), cheeseweed (*Malva parviflora*), common fiddleneck (*Amsinckia intermedia*), red brome (*Bromus madritensis* ssp. *rubens*), and Russian thistle (*Salsola australis*), with some areas having dense patches of non-native grasses. Other species detected included wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), common barley (*Hordum vulgare*), common Mediterranean grass (*Schismus barbatus*), field mustard (*Brassica rapa*), flax-leaved horseweed (*Erigeron bonariensis*), lambs quarters (*Chenopodium album*), prickly lettuce (*Lactuca serriola*), red brome (*Bromus madritensis* ssp. *rubens*), silver wattle (*Acacia dealbata*), white horehound (*Marrubium vulgare*), annual bursage (*Ambrosia acanthicarpa*), salt heliotrope (*Heliotropium curassavicum*), and western sunflower (*Helianthus annuus*).

Additionally, the disturbed/ruderal lands support sparse occurrences of ornamentally planted southern California black walnut (*Juglans californica*) and Peruvian pepper tree (*Schinus molle*).

2.3.3 Ornamental

The Study Area contains 0.80 acre of lands supporting trees that were planted at the site or that established from other ornamental plantings, all of which are associated with the onsite portion of the Project. These areas primarily consist of non-native or planted tree species occurring in the

central and southeastern portions of the Study Area. Dominant plant species observed included Fremont cottonwood (*Populus fremontii*) and red gum (*Eucalyptus camaldulensis*).

2.3.4 Ruderal

The Study Area supports 3.49 acres of ruderal lands, all of which are associated with the onsite portion of the Project. These areas primarily consist of non-native ruderal vegetation that have not been historically maintained. Ruderal areas on site are primarily associated with Quincy Channel along the western boundary of the Study Area and with fence-lines in the eastern portions of the site. In the Quincy Creek section of ruderal lands, the dominant plant species within these areas included common fiddleneck, London rocket, and Russian thistle. Additional plant species observed included giant reed (*Arundo donax*), castor bean (*Ricinis communis*), Mexican fan palm (*Washingtonia robusta*), red-stemmed filaree (*Erodium cicutarium*), tamarisk (*Tamarix* sp.), tree of heaven (*Ailanthus altissima*), and tree tobacco (*Nicotiana glauca*). In the eastern portion of ruderal lands on site, dominant plants include common Mediterranean grass, common barley, cheeseweed, fiddleneck, and London rocket.

3.0 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

3.1 Methods

The MSHCP defines riparian areas as *lands which contain Habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source*. In the absence of riparian habitat, the MSHCP defines riverine areas as *areas with fresh water flow during all or a portion of the year.*

The MSHCP defines vernal pools as *seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and/or vegetation during the drier portion of the growing season.*

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters, or from the alteration of natural stream courses, areas demonstrating characteristics as described above and which are artificially created are not included in these definitions.

The MSHCP requires habitat assessments/focused surveys for certain species identified under Section 6.1.2, including riparian birds and fairy shrimp. Bird species requiring assessments include least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). Fairy srhimp speces requiring assessments include listed species such as Riverside fairy shrimp (*Streptocephalus woottoni*), Santa Rosa Plataeu fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp (*Branchinecta lynchi*). Although not directly referenced by Section 6.1.2, assessments also should consider the San Diego fairy shrimp (*Branchinecta sandiegonensis*) where appropriate. For fairy shrimp, habitat assessments should consider all non-vernal pool

features that could sufficiently hold water including stock ponds, ephemeral pools, road ruts, and other human-made depressions.

GLA biologists reviewed the Study Area to document MSHCP riparian/riverine resources on December 6, 2019 and March 31, 2020. Prior to beginning the field assessment, a color aerial photograph, a topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential riparian/riverine areas. Suspected resources were field-checked for the presence of definable channels and/or riparian vegetation. While in the field, the limits of riparian/riverine resources were recorded onto a color aerial photograph using visible landmarks and/or sub-meter accuracy global positioning system (GPS) devices.

To assess the Study Area for vernal/seasonal pools (including fairy shrimp habitat), GLA biologists evaluated the topography of the site, including whether the site contained depressional features/topography with the potential to become inundated; whether the site contained soils associated with vernal/seasonal pools; and whether the site supported plants that suggested areas of localized ponding. The site was evaluated by GLA biologists on December 6, 2019.

3.2 Burrowing Owl

The majority of the Project Site is located within the MSHCP survey area for the burrowing owl (*Athene cunicularia*). GLA biologists April Nakagawa and David Smith conducted focused surveys for the burrowing owl for all suitable habitat areas within the Project Site. Surveys were conducted in accordance with survey guidelines described in the 2006 MSHCP Burrowing Owl Survey Instructions. The guidelines stipulate that four focused survey visits be conducted on separate dates between March 1 and August 31. Within areas of suitable habitat, the MSHCP first requires a focused burrow survey to map all potentially suitable burrows. The focused burrow survey was conducted on March 6, 2020. Focused burrowing owl surveys were conducted on March 6, March 30, April 3, and April 17, 2020. The burrowing owl survey visits were generally conducted within a survey window from one hour prior to sunrise to two hours after sunrise.

The surveys were conducted during weather that was conducive to observing owls outside their burrows and detecting burrowing owl sign and not during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Additionally, all work was performed more than 5 days after a rain event.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Exhibit 10 identifies the burrowing owl survey areas at the Project Site. Transects were spaced between 22 feet and 65 feet apart, adjusting for vegetation height and density, in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 320 feet along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Transect locations are provided on Exhibit 10, along with the 500-foot buffer area. Table 3-1 summarizes the burrowing owl survey visits.

Table 3-1. Summary of Burrowing Owl Surveys

Survey Date	Biologist(s)	Start/End Time	Start/End Temperature (°F)	Start/End Wind Speed (mph)	Cloud Cover (%)
03/06/2020	AN	0615/0915	57/64	0-3	20%
03/30/2020	DS	0600/0900	43/54	0-2	10%
04/03/2020	DS	0555/0855	51/57	0-1	60%
04/17/2020	DS	0610/0910	45/55	0-1	0%

AN = April Nakagawa, DS = David Smith

3.3 Results/Impacts

3.3.1 Results

The Study Area contains the Quincy Channel and two ephemeral drainage ditches artificially constructed to collect road and agricultural runoff. These drainage features qualify as MSHCP Riparian/Riverine areas. As such, a total of 2.73 acres of MSHCP Riparian/Riverine areas occur within the Study Area, of which 2.71 acres is riverine and 0.02-acre is riparian [Exhibit 8 – MSHCP Riparian/Riverine Areas Map]. The riverine areas are dominated by ruderal, weedy vegetation, which is not suitable habitat for Riparian/Riverine associated sensitive species such as least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo. Riparian areas on site are too small to support Riparian/Riverine associated sensitive species and are not viable habitat.

No vernal or seasonal pools are present within the Study Area. As discussed above, no ponding was observed at the site during biological surveys, including those that occurred following periods of substantial rainfall. The site lacks the suitable topography (including localized depressions) to support prolonged inundation necessary to support fairy shrimp. In addition, the site is mapped as containing fine sand, loam, and sandy loam soils, which are generally not associated with vernal pools. Observations of the soils at the site showed a lack of clay soil components. Lastly, no plants were observed at the site that are associated with vernal pools and similar habitats that experience prolonged inundation.

The Project site supports approximately 71.65 acres of potential habitat (disturbed/developed, disturbed/ruderal, and ruderal) for the burrowing owl. The Offsite Impacts area supports approximately 12.22 acres of potential habitat (disturbed/developed). A total of 83.87 acres of potential habitat is present.

GLA biologists did not observe burrowing owls, or evidence of burrowing owls (e.g., cast pellets, preened feathers, or whitewash clustered at a burrow) during the general biological surveys conducted in December 2019, and did not detect the burrowing owl during focused burrowing owl surveys conducted in March and April 2020. Exhibit 10 – Burrowing Owl Survey Area/Burrow Map, depicts the location of the burrowing owl survey areas and of burrows detected during the focused burrow survey. This species was confirmed absent from the Study Area.

3.3.2 Impacts

Pursuant to Volume I, Section 6.1.2 of the MSHCP, projects must consider alternatives providing for 100 percent avoidance of riparian/riverine areas. If avoidance is infeasible, then the unavoidable impacts must be mitigated and a DBESP is required.

The Study Area contains the Quincy Channel and two ephemeral drainage ditches artificially constructed to collect road and agricultural runoff. These drainage features qualify as MSHCP Riparian/Riverine areas. As such, a total of 2.73 acres of MSHCP Riparian/Riverine areas occur within the Study Area, of which 2.71 acres is riverine and 0.02-acre is riparian [Exhibit 9 – MSHCP Riparian/Riverine Areas Map]. The riverine areas are dominated by ruderal, weedy vegetation, which is not suitable habitat for Riparian/Riverine associated sensitive species such as least Bell's vireo or western yellow-billed cuckoo. Riparian areas on site are too small to support Riparian/Riverine associated sensitive species and are not viable habitat.

The proposed Project would permanently impact approximately 0.57 acre of MSHCP riverine areas [Exhibit 12]. No temporary impacts would occur.

No vernal or seasonal pools are present within the Study Area. The Study Area is a maintained agricultural field that lacked ponding features upon multiple visits within a week of rainfall. This lack of vernal pool habitat precludes the occurrence of any listed fairy shrimp species.

The Project will not impact the burrowing owl as no burrowing owl were detected or identified on site during 2020 focused surveys.

3.4 Mitigation/Equivalency

Riparian/Riverine Mitigation

The following is proposed to mitigate unavoidable impacts to 0.57 acre of MSHCP riverine areas, none of which support riparian habitat:

1. The purchase of 0.57 acre of re-establishment credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank; *and*

2. The purchase of 0.57 acre of rehabilitation credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank;

In the event that compensatory mitigation credits are not available from the Riverpark Mitigation Bank at the time of proposed work commencement, the Applicant will enter into an agreement to purchase rehabilitation credits from the Santa Ana River Watershed In-Lieu Fee Program (SARW-ILFP) at a 2:1 mitigation-to-impact ratio. The compensatory mitigation would consist of the rehabilitation of riparian habitat within the Santa Ana River Watershed. It is understood that this mitigation proposal through the SARW-ILFP would constitute permittee-responsible mitigation at would require an amendment to the DBESP.

Burrowing Owl Mitigation

As a mitigation measure for burrowing owl, the developer will conduct a burrowing owl pre-construction survey 30 days or less from the commencement of initial ground disturbance.

3.4.1 Direct Effects/Infeasibility of Avoidance

Direct effects are those effects that can be expected from direct removal of and disturbances to the land and resources. For this report, the term *permanent impact* is defined as that portion of the resource that will be permanently developed/removed. All impacts proposed by the Project will be permanent. The Project will not result in any temporary impacts.

Direct effects will occur to 0.57 acre of MSHCP riverine areas (none of which support MSHCP riparian habitat) within the Study Area. A total of 3,570 linear feet of roadside ditch will be permanently impacted. No impact to Quincy Channel will occur.

As part of the Project, both Eucalyptus Avenue and Redlands Boulevard will be widened within the site. As these ditches are roadside ditches adjacent to both Eucalyptus Avenue and Redlands Boulevard, these impacts will eliminate both roadside ditches within the Study Area and place them in a pipe. These impacts are unavoidable due to the location of each ditch and proposed road improvements. Flows will still be discharged to the same place, but in a pipe instead of the roadside ditches.

It should also be noted that the Study Area has been disturbed and utilized for dry farming (agricultural production) for over 50 years. As a result, the above-referenced MSHCP riparian/riverine resources on site exhibit low function and value as compared to the provision of compensatory mitigation at a local mitigation bank or in-lieu fee program as described below.

The purchase of compensatory re-establishment and rehabilitation mitigation credits from the Riverpark Mitigation Bank at a 1:1 mitigation to impact ratio for both re-establishment and rehabilitation (totaling 2:1 mitigation) will be considered superior mitigation as compared to the preservation of 0.57 acre of roadside ditches which have been in agricultural production for over 50 years. As noted above, the riverine features to be impacted consist of two roadside ditches. No riparian habitat or riverine habitat within Quincy Channel will be impacted. The proposed re-establishment and rehabilitation credits will consist of riparian habitat areas that will represent habitat functions that would be superior to the existing conditions at the Project site.

The Project team's mitigation proposal consists of the following:

1) The purchase of 0.57 acre of re-establishment credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank; *and*

2) The purchase of 0.57 acre of rehabilitation credits (a 1:1 mitigation-to-impact ratio) from the Riverpark Mitigation Bank;

In the event that compensatory mitigation credits are not available from the Riverpark Mitigation Bank at the time of proposed work commencement, the Applicant will enter into an agreement to purchase rehabilitation credits from the SARW-ILFP at a 2:1 mitigation-to-impact ratio. The compensatory mitigation would consist of the rehabilitation of riparian habitat within the Santa Ana River Watershed. It is understood that this mitigation proposal through the SARW-ILFP would constitute permittee-responsible mitigation at would require an amendment to the DBESP. No mitigation for burrowing owl is necessary as no owls are on site.

3.4.2 Indirect Effects

Indirect effects are those effects that give rise to delayed, secondary effects. Examples of indirect effects include fragmentation, increased levels of environmental toxins, plant and wildlife dispersal interruption, increased risk of fire, construction noise, and invasion of non-native animals and plants, which stresses or alters competition among natives. Indirect effects are those that can be assumed to increase mortality, reduce productivity, and/or reduce the functions and values of natural open space for native species.

The Project Site and its surroundings have been under agricultural operation for more than 50 years and it is not a wildlife movement corridor; rather, the area is already fragmented by construction of other warehouse/commercial buildings, the SR 60 Freeway, and rural residential housing. The development of a warehouse building and its associated improvements will not result in further fragmentation than what already exists, and it will not result in a lower function and value of natural open space for native species or other effects associated with such natural open space.

Finally, the Project is not located adjacent to the MSHCP Conservation Area; therefore, it is not subject to the Urban/Wildland Interface Guidelines. The Project will not result in adverse indirect effects to special-status resources.

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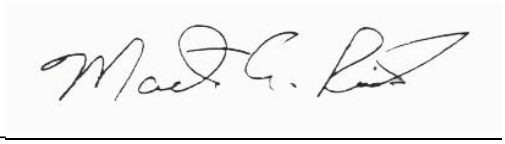
5.0 CERTIFICATION

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

Signed:  Date: July 8, 2020

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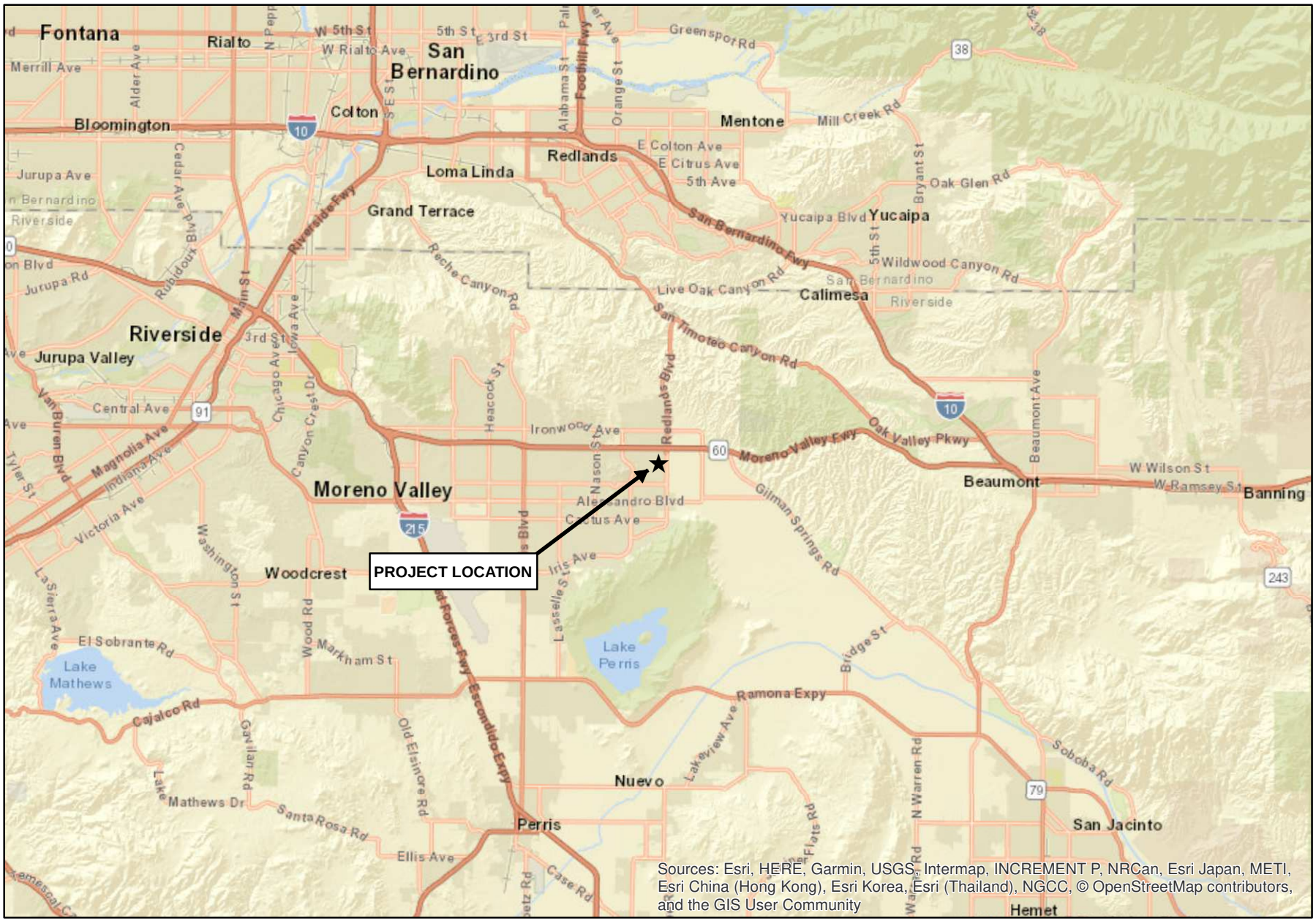


Source: ESRI World Street Map

N

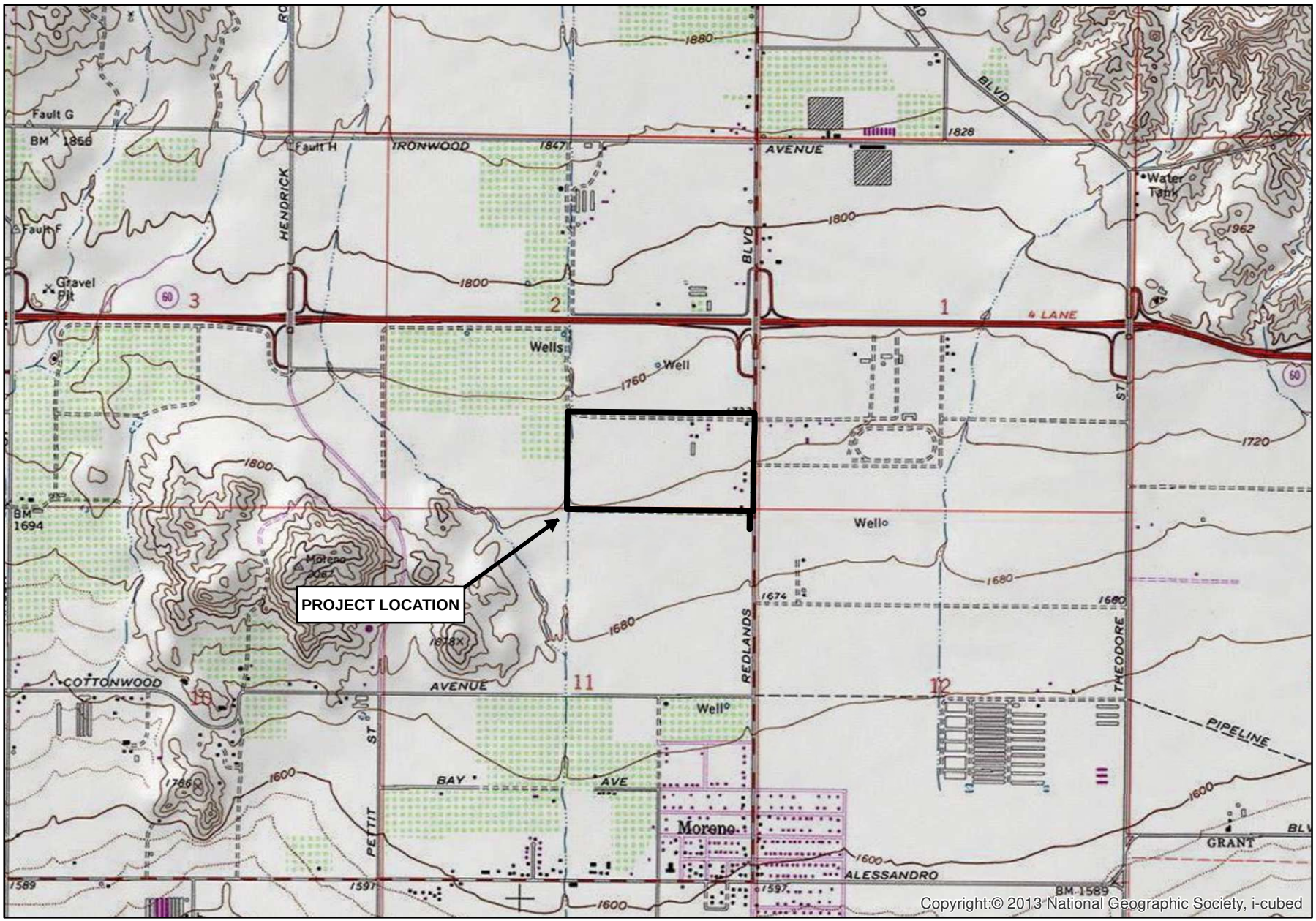
0 2 4 8 Miles

MORENO VALLEY TRADE CENTER

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Sunnymead, CA quadrangle

N

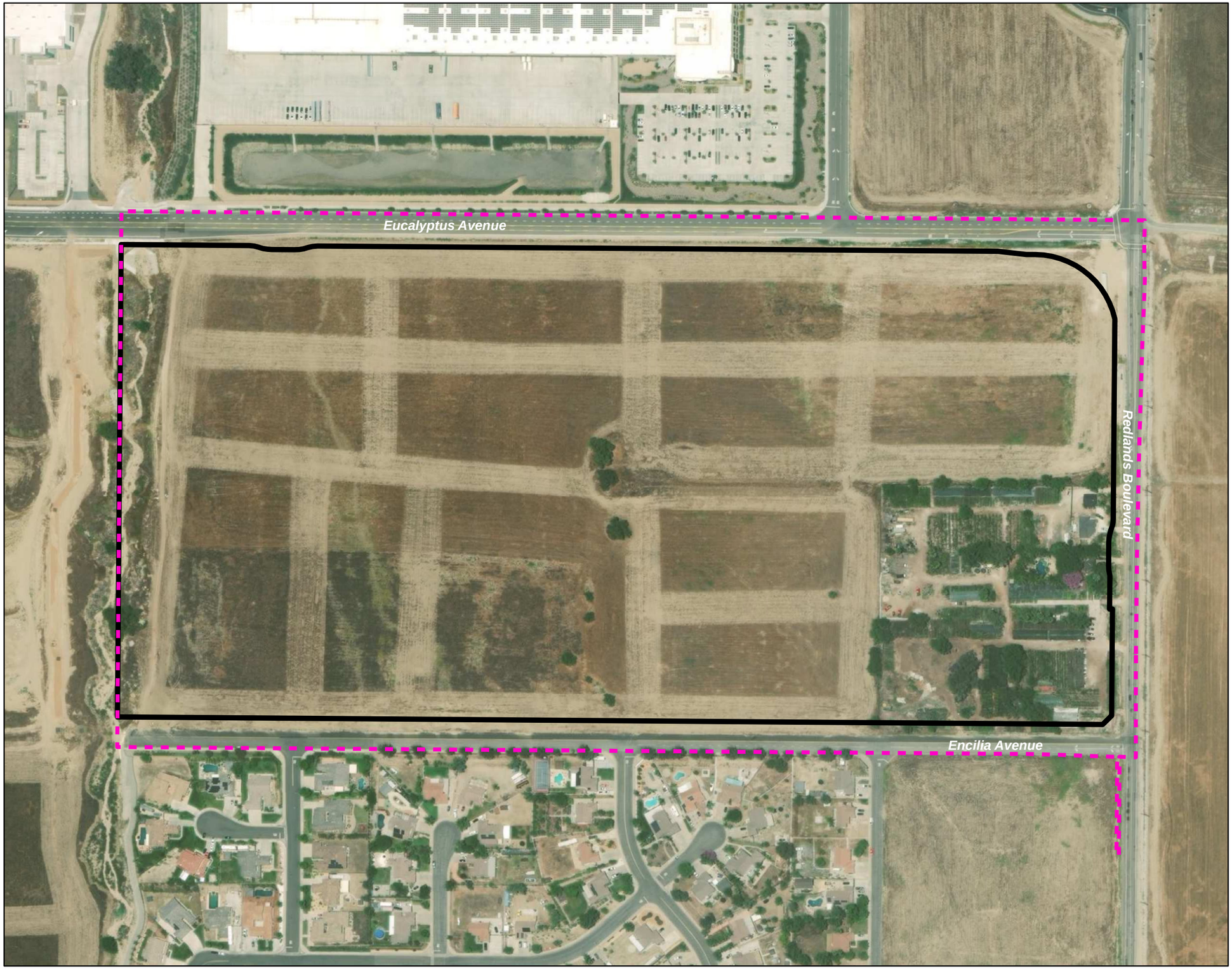
0 1,000 2,000 4,000 Feet

MORENO VALLEY TRADE CENTER

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Project Boundary

Study Area

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

MORENO VALLEY TRADE CENTER

Aerial Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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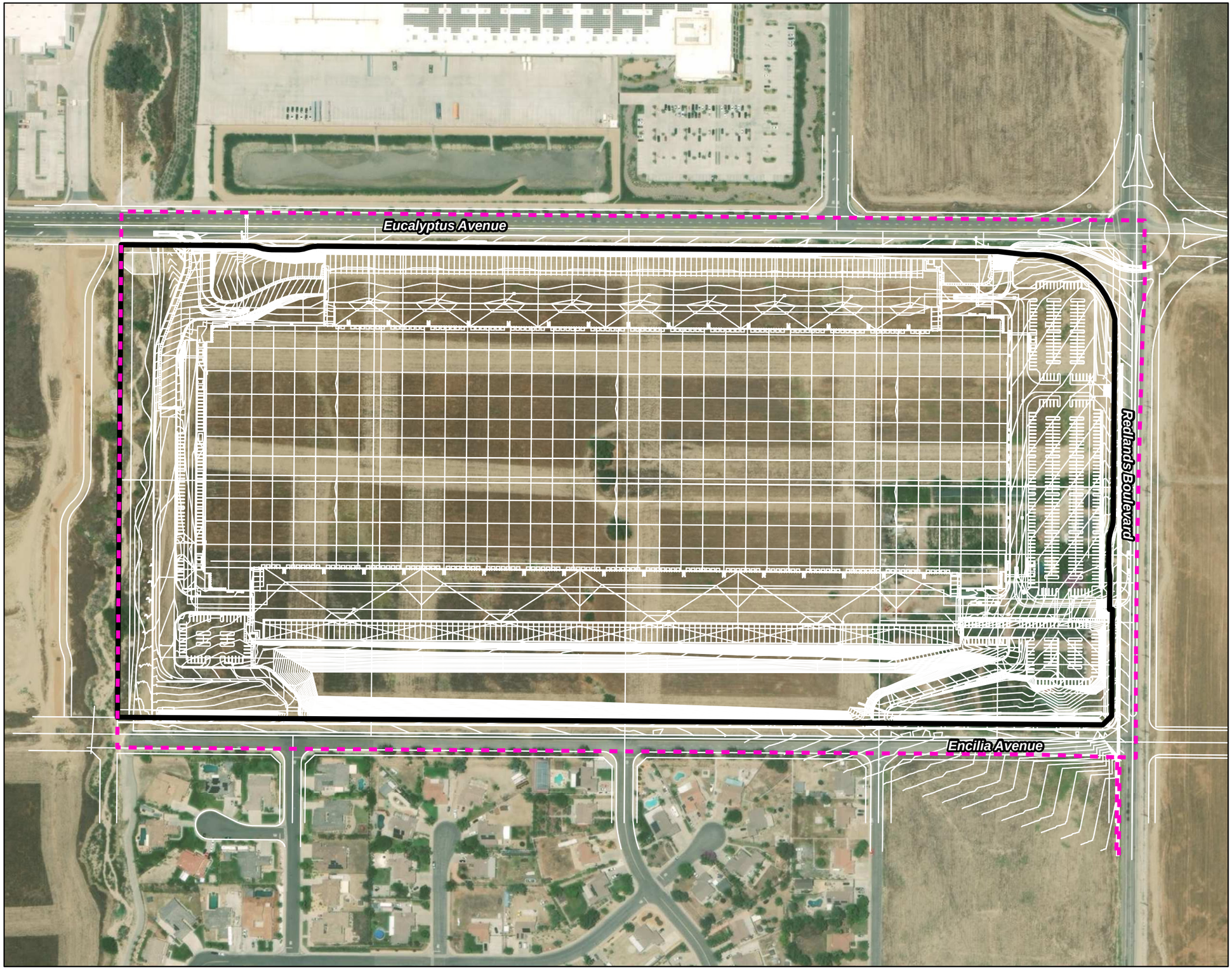

Project Boundary

Study Area

Project Site Plan

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0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

MORENO VALLEY TRADE CENTER

Site Plan Map

GLENN LUKOS ASSOCIATES

Exhibit 4

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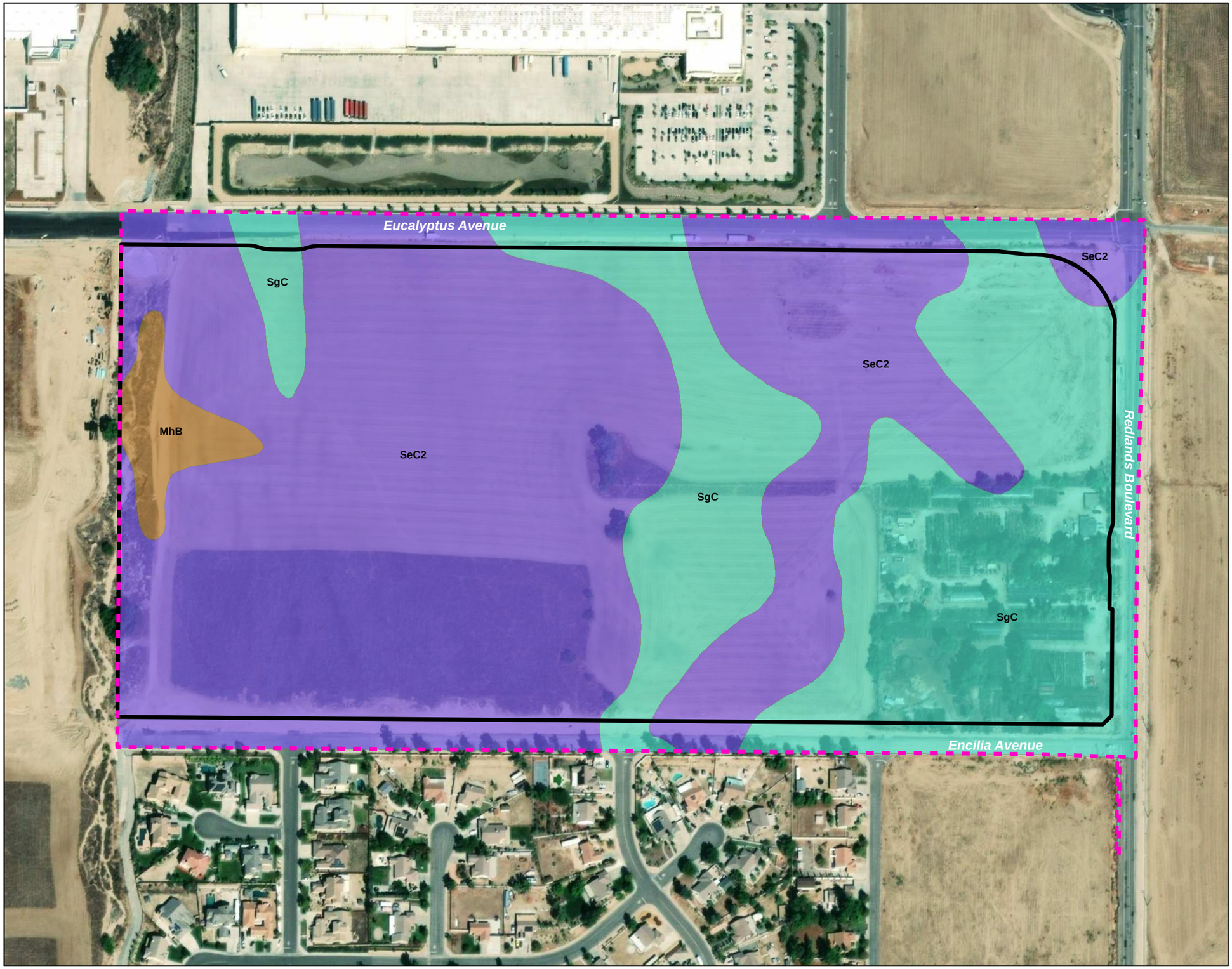

Project Boundary

Study Area

MhB - Metz loamy fine sand, sandy loam substratum, 0 to 5 per cent slopes

SeC2 - San Emigdio fine sandy loam, 2 to 8 percent slopes, eroded

SgC - San Emigdio loam, 2 to 8 percent slopes

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: May 26, 2020

MORENO VALLEY TRADE CENTER

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 5

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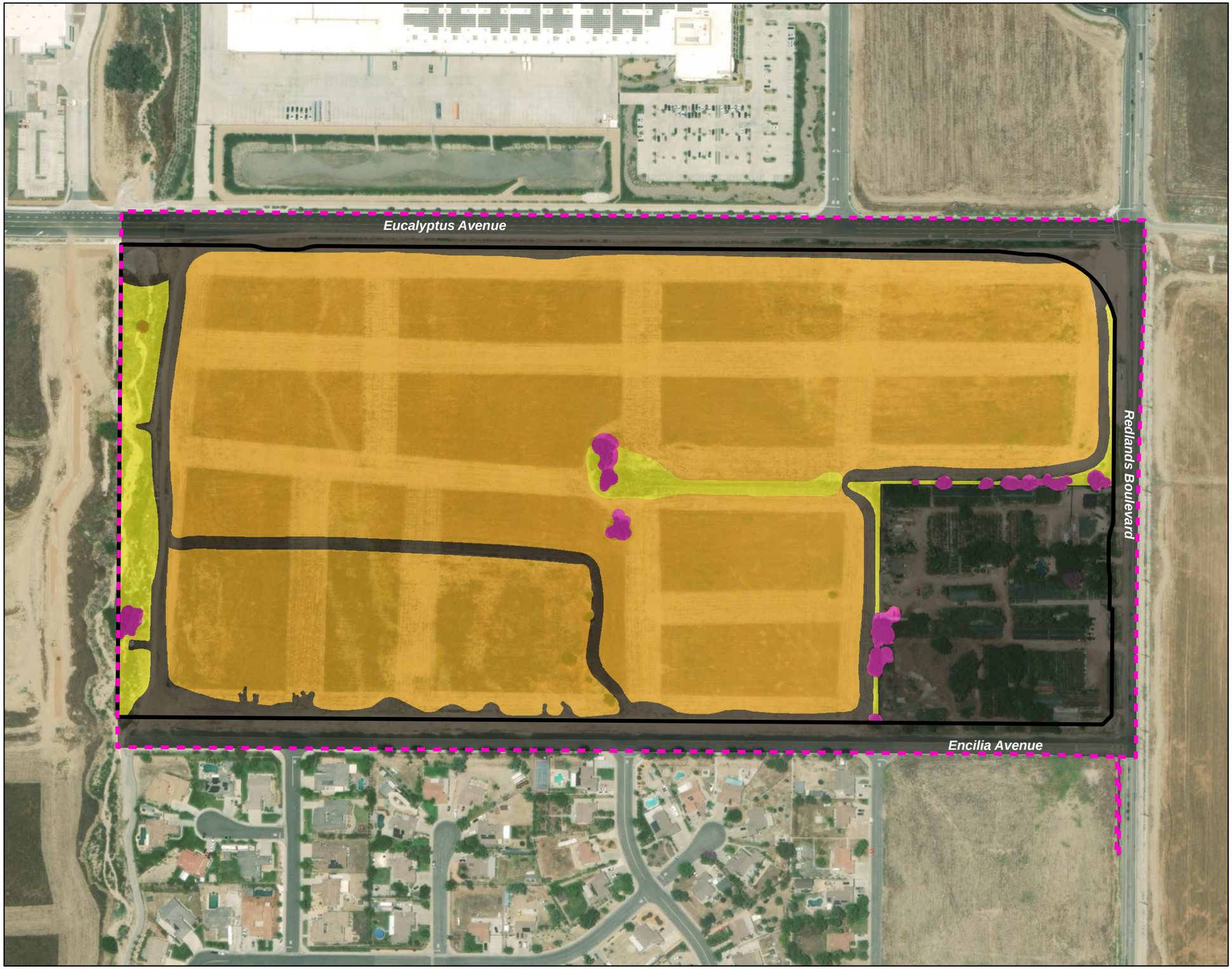

Project Boundary

Study Area

Ornamental

Ruderal

Disturbed/Ruderal

Disturbed/Developed

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

MORENO VALLEY TRADE CENTER

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 6

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Photograph 1: Photo depicting the disturbed nature of the site where areas had been recently disked per annual maintenance.

Photograph 2: Photo depicts the disturbed/ruderal vegetation with ornamental trees in the background.

Photograph 3: Photo of Quincy Channel from the southwestern portion of the site.

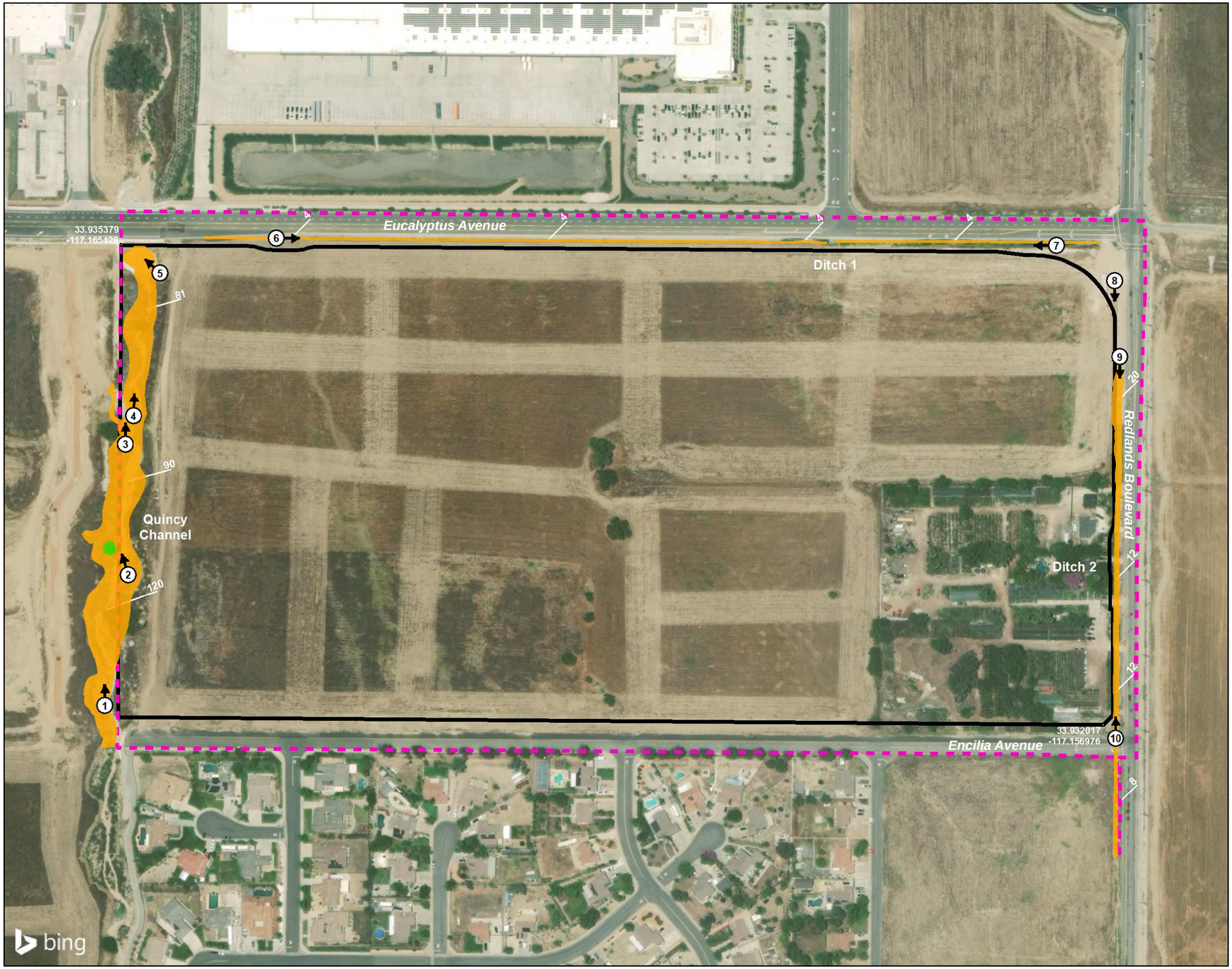
Photograph 4: Photo of Drainage Ditch 2 running parallel to Redlands Boulevard. Note the lack of vegetation.

GLENN LUKOS ASSOCIATES

Exhibit 7

MORENO VALLEY TRADE CENTER

Site Photographs



Project Boundary

Study Area / Impact Footprint

MSHCP Riparian

MSHCP Riverine

4 Width of Feature in Feet

① Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

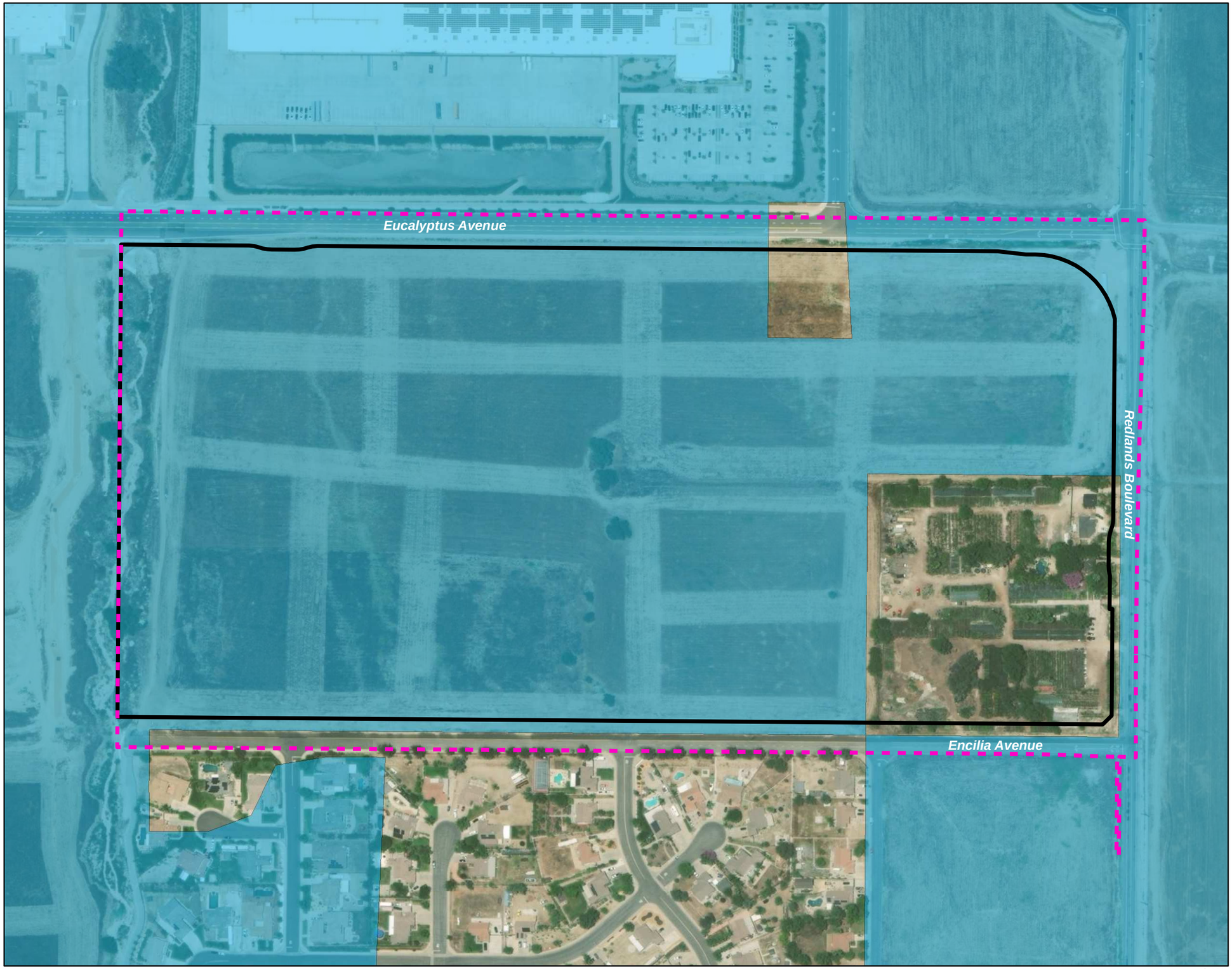
MORENO VALLEY TRADE CENTER

MSHCP Riparian/Riverine Map

GLENN LUKOS ASSOCIATES

Exhibit 8

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\DelineationGIS\REV1\1459-1_JD_REV1_MSHCP.mxd



Project Boundary

Study Area

Burrowing Owl Survey Area

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

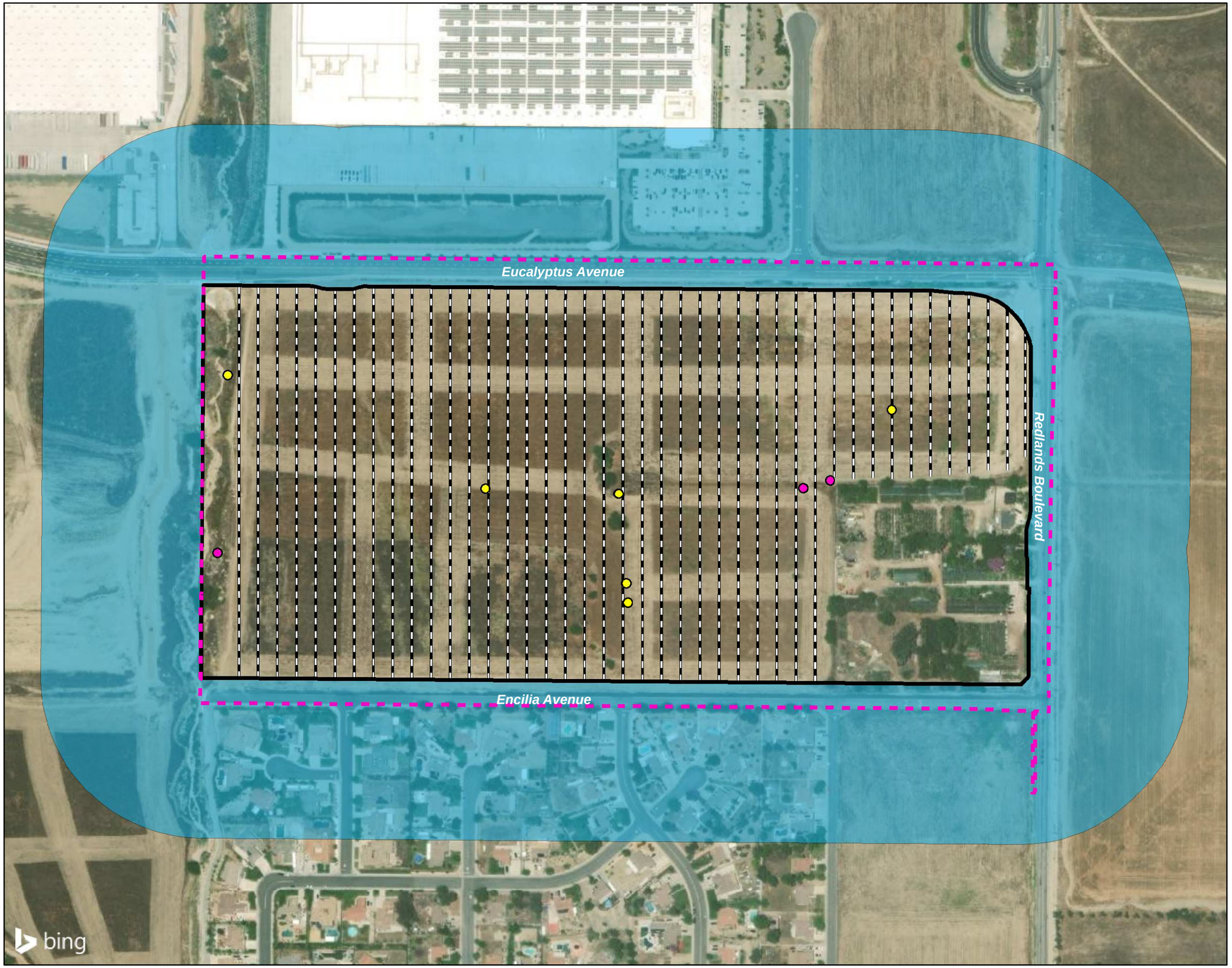
MORENO VALLEY TRADE CENTER

MSHCP Overlay Map

GLENN LUKOS ASSOCIATES

Exhibit 9

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\MSHCP_GIS\1459-1_MSHCPOverlay.mxd



Project Boundary

Study Area

500' Buffer Area

Transects

Burrow

Burrow Complex

N

0 150 300 600

Feet

1 inch = 300 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

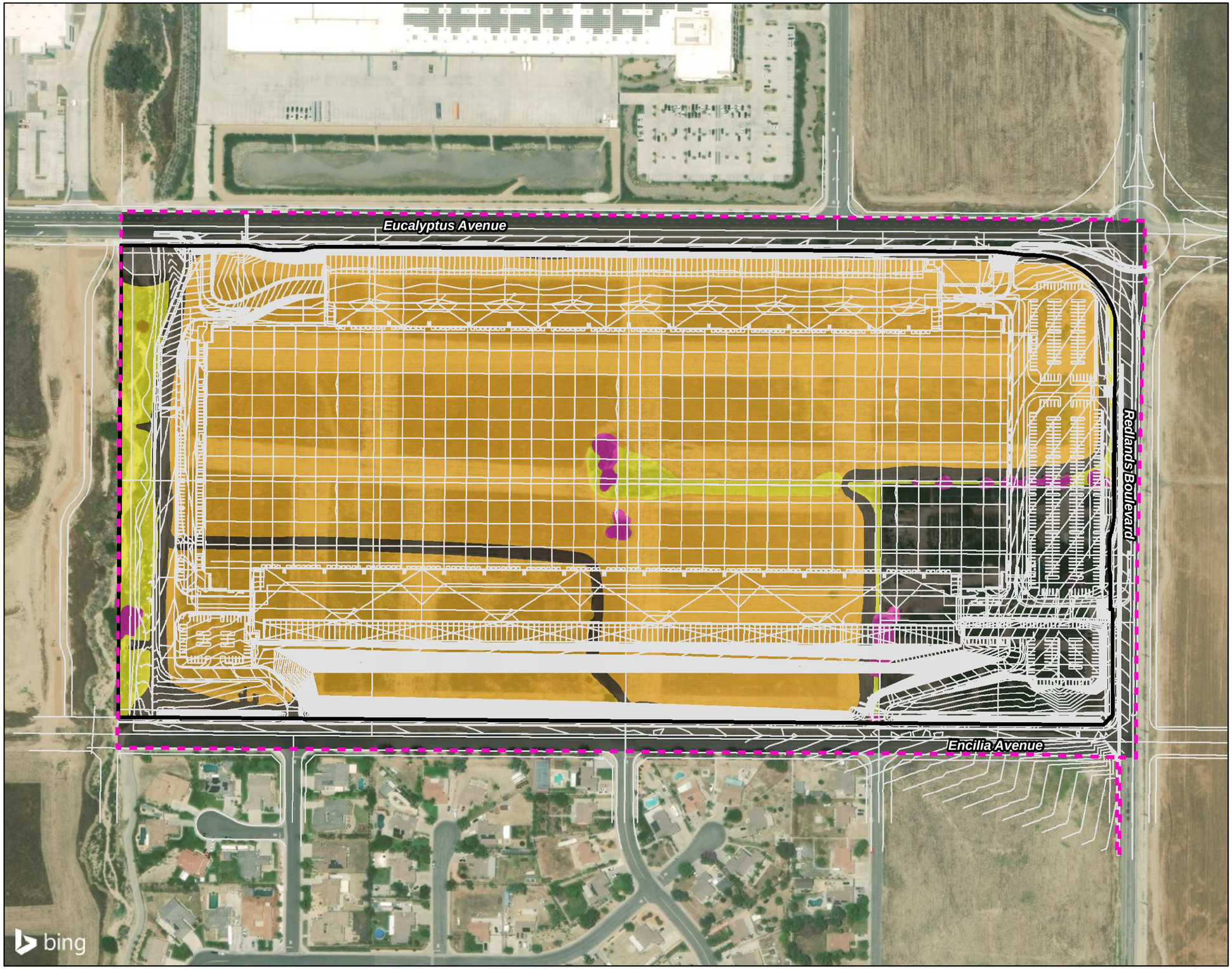
MORENO VALLEY TRADE CENTER

Burrowing Owl Map

GLENN LUKOS ASSOCIATES

Exhibit 10

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\BUOW_GIS\1459-1_BUOW.mxd



Project Boundary

Study Area

Project Site Plan

Ornamental

Ruderal

Disturbed/Ruderal

Disturbed/Developed

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

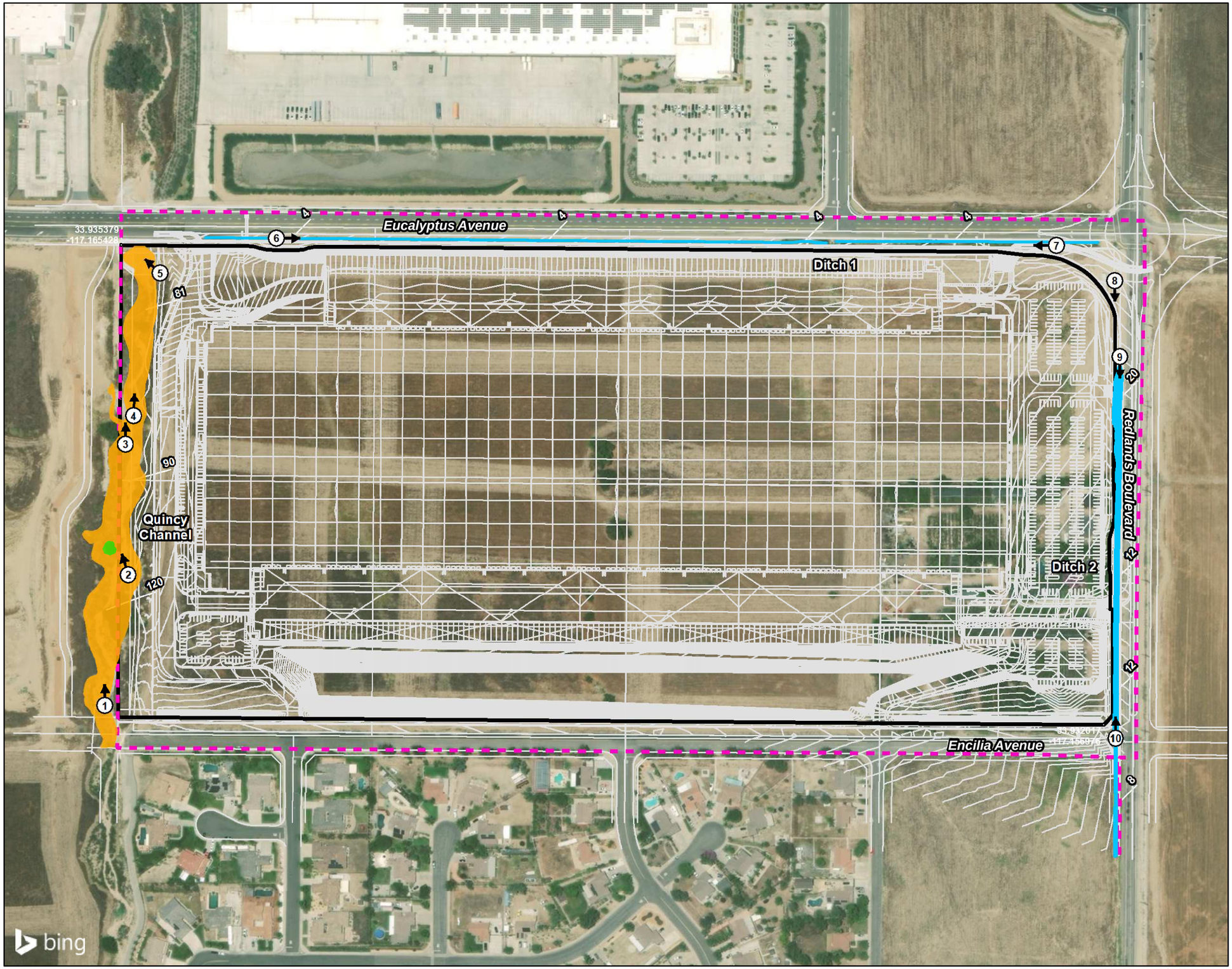
MORENO VALLEY TRADE CENTER

Vegetation Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 11

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_Vegetation.mxd



Project Boundary

Study Area

Project Site Plan

Avoided MSHCP Riparian

Avoided MSHCP Riverine

Impacted MSHCP Riverine

4 Width of Feature in Feet

1 Photo Location

N

0 125 250 500

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 7, 2020

MORENO VALLEY TRADE CENTER

MSHCP Riparian/Riverine Impact Map

GLENN LUKOS ASSOCIATES

Exhibit 12

X:\1100 AFTER THE REST\1459-01HILL\1459-1_GIS\ImpactsGIS\1459-1_Impacts_JD_REV1_MSHCP.mxd