Section 3.0 Errata

3.1 INTRODUCTION TO THE ERRATA

In accordance with Section 15132 of the CEQA Guidelines, the FEIR for the Beaumont Summit Station Project includes the DEIR, dated April 2022, as well as any proposed revisions or changes to the DEIR.

The changes to the DEIR do not affect the overall conclusions of the environmental document, and instead represent changes to the DEIR to provide clarification, amplification and/or insignificant modifications, as needed as a result of public comments on the DEIR, or due to additional information received during the public review period. These clarifications and corrections do not warrant recirculation of the DEIR pursuant to CEQA Guidelines Section 15088.5.

None of the changes or information provided in the comments identify a new significant environmental impact, a substantial increase in the severity of an environmental impact for which mitigation is not proposed, or a new feasible alternative or mitigation measure that would clearly lessen significant environmental impacts but is not adopted. In addition, the changes do not reflect a fundamentally flawed or conclusory DEIR.

Changes to the DEIR are listed by Section, page, paragraph, etc. to best guide the reader to the revision. Changes are identified as follows:

- Deletions are indicated by ~~strikeout text.~~
- Additions are indicated by <u>underlined text.</u>

3.2 CHANGES TO THE DRAFT EIR

Page 1-20, Update to Resource Impact 4.7-1

Resource Impact
Impact 4.7-1 Would the Project generate GHG emissions, either directly or indirectly, that could have a significant impact on the environment? <u>Would the Project generate GHG emissions, either directly or indirectly, that could have a significant cumulative impact on the environment?</u>

Page 1-23, Update to Resource Impact 4.11-1 and Level of Significance

Resource Impact	Level of Significance
Impact 4.1-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local	Less than Significant Impact

Resource Impact	Level of Significance
general plan or noise ordinance, or applicable standards of other agencies? Cumulative?	 Significant Unavoidable Impact

Page 2-1, First Paragraph, Last Sentence

This Project entails the construction and operation of e-commerce, commercial, open space, and residential development divided amongst five parcels, on approximately 188 ~~200~~ acres of land within the northwestern portion of the City.

Page 4-5, Update to Third Paragraph, Last Sentence

The 5~~3~~4 cumulative projects are listed below in **Table 4-1, Cumulative Projects.**

Page 4-8, Update to Table 4-1.

Project #	Description	Land Use	Quantity	Units
54	Potrero Logistics Center Warehouse Project	High-Cube Warehouse	577,920	KSF

Page 4.3-21, Last Paragraph

MM BIO-2 A qualified biologist will conduct a pre-construction presence/absence survey for burrowing owls ~~within~~ between 30 and 60 days prior to site disturbance. Additional pre-construction focused surveys for burrowing owls will be conducted within three days prior to site disturbance including vegetation clearing. If the pre-construction surveys confirm occupied burrowing owl. habitat, or if burrowing owls are detected after the Project has started, then construction activities shall be halted immediately. If burrowing owls are documented on-site, ~~the owls will be relocated/excluded from the site outside of the breeding season following accepted protocols, as specified in the MSHCP.~~ CDFW will be notified within 48-hours of detection and the take of active nests will be avoided. To avoid take of active nests, a qualified biologist will develop a Burrowing Owl Plan that describes avoidance, relocation, monitoring, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Burrowing Owl Plan will be reviewed by the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the Western Riverside County Regional Conservation Authority.

Page 4.3-22, Second Paragraph

MM BIO-3 To ensure compliance with California Fish and Game Code sections 3503, 3503.5, and 3513 and to avoid potential impacts to nesting birds, v~~V~~egetation clearing and ground disturbing activities ~~should~~shall be conducted outside of the bird nesting season ~~(February 1 through August 31)~~. If avoidance of the nesting season is not feasible, then a qualified biologist will conduct a nesting bird survey within three days prior to any disturbance of the site, including but not limited to vegetation clearing, disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests depending on the level of activity within the buffer and species observed, and the buffer areas shall be avoided until the nests are no longer occupied, and the juvenile birds can survive independently from the nests.

During construction activities, the qualified biologist shall continue biological monitoring activities at a frequency recommended by the qualified biologist using their best professional judgment. If nesting birds are detected, avoidance and minimization measures may be adjusted and construction activities stopped or redirected by the qualified biologist using their best professional judgment to avoid Take of nesting birds.

Page 4.3-23, Additional sentence to last paragraph before MM BIO-4

Additionally, as a condition of the MSHCP, avoided land areas will be conserved as part of the proposed project. As such, implementation of MMs BIO-5 and MM BIO-6 are also required:

Page 4.3-24, Second Paragraph

MM BIO-4 Prior to any ground-disturbing activity near jurisdictional aquatic resources, applicable permits shall be obtained through the Corps, RWQCB, and CDFW for impacts on jurisdictional aquatic resources. The Applicant shall implement/comply with all permit conditions and mitigation measures required by the resource agencies. Compensatory mitigation to offset impacts on jurisdictional aquatic resources may be implemented through on-site or off-site, permittee-responsible mitigation, in-lieu fee (ILF) program or mitigation bank credit purchase, or a combination of these options depending on availability.

The proposed compensatory mitigation strategy is as follows, for a total 3:1 mitigation ratio:

1. Purchase of 4.82 credits (2:1 mitigation ratio) from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed ILF Program), as available; AND
2. An additional 1:1 mitigation via one of the following measures, dependent on negotiations with the resource agencies during the permit evaluation process:

a. On-site preservation, including enhancement and revegetation within Specific Plan Planning Area 3, with a focus on removal of invasive tree of heaven (*Ailanthus altissima*) and replanting with native species such as mulefat (*Baccharis salicifolia*) and other appropriate species, OR

b. Purchase of 2.41 credits (1:1 mitigation ratio) from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed ILF Program), as available.

The Corps, RWQCB, and CDFW will make final determinations regarding compensatory mitigation requirements during the permit evaluation process. If mitigation credits are not available at the Santa Ana River Watershed ILF Program, purchase of credits at an alternative mitigation bank will be pursued in consultation with the regulatory agencies during the aquatic resources permitting process. Additionally, if on-site enhancement is pursued, an enhancement and revegetation plan will be developed in consultation with the regulatory agencies during the aquatic resources permitting process.

~~**MM BIO-4**~~ ~~Prior to any ground-disturbing activity near jurisdictional features, applicable permits shall be obtained through the USACE, RWQCB, and CDFW for impacts on jurisdictional features. Based on the results of the aquatic resources delineation for the proposed Project, the proposed Project would permanently impact 0.25 acre of USACE-jurisdictional non-wetland waters of the U.S. and RWQCB-jurisdictional non-wetland waters of the State (i.e., NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3A, NWW-3B, and NWW-3B1). Additionally, the proposed Project would permanently impact 2.17 acres of CDFW-jurisdictional vegetated streambed (i.e., NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3A, NWW-3B, and NWW-3B1) and 0.24 acre of CDFW-jurisdictional riparian habitat (i.e., NWW-2A and NWW-3B). The Project applicant shall be obligated to implement/comply with the permit conditions and mitigation measures required by the resource agencies regarding impacts on their respective jurisdictions.~~

~~A minimum 1:1 mitigation ratio (0.25 acre USACE/0.25 acre RWQCB/2.41 acres CDFW) is typically required, though ratios may be higher. Compensatory mitigation to offset impacts to jurisdictional aquatic resources may be implemented through off-site, permittee-responsible mitigation, in-lieu fee program or mitigation bank credit purchase (e.g., Riverpark Mitigation Bank), or a combination of these options depending on availability. The proposed mitigation strategy is the purchase of 4.82 re-establishment and/or rehabilitation credits (2:1 mitigation ratio) from the Riverpark Mitigation Bank. The regulatory agencies will make the final determination of the final compensatory mitigation requirements during the permit evaluation process. Prior to issuance of a grading permit, the Project applicant will provide the City of Beaumont with purchase confirmation.~~

Page 4.3-24, Third New Paragraph

MM BIO-5 The proposed Project is an MSHCP Covered Activity and subject to the MSHCP implementation procedures. Prior to adoption and approval of the DEIR, the City of Beaumont will ensure full implementation of the Western Riverside County Multiple Species Habitat Conservation Plan for the Project, which includes, but is not limited to, sending a Determination of Biologically Equivalent or Superior Preservation to the California Department of Fish and Wildlife and the US Fish and Wildlife Service for a 60-day review and response period prior to the City approving the DBESP and finalizing the DEIR.

Page 4.3-24, Fourth New Paragraph

MM BIO-6 Avoided riparian/riverine areas, and associated functions and values, will be conserved through the use of deed restrictions, conservation easement, or other appropriate mechanisms.

Page 4.4-16, First Paragraph, First Sentence

MM CUL-1 A qualified archaeological monitor who meets U.S. Secretary of the Interior Standards (SOI) will be present during Project-related ground-disturbing activities in undisturbed native sediments.

MM CUL-2 In the event that potentially significant cultural materials are encountered during Project-related ground-disturbing activities, all work will be halted in the vicinity of the discovery until a qualified archaeologist who meets U.S. Secretary of the Interior Standards (SOI) can visit the site of discovery and assess the significance of the archaeological resource.

Page 4.6-20, First Paragraph

MM GEO-1 **Settlement Monitoring Program.** A Settlement Monitoring Program would be implemented, as required by the City of Beaumont Engineering Department, consisting of the surveying of surface monuments to monitor settlement of alluvial soils left in-place and/or proposed fills deeper than 30 feet (design plus remedial grading). Survey monument readings for both deep fill areas and for fill over compressible natural ground (Qal) should be conducted following the completion of fill placement. Survey monument locations should be selected by the geotechnical consultant. Survey readings should be taken weekly for the first month and on a weekly basis thereafter until vertical movement of the fill mass achieve 90 percent of primary compression, begin secondary compression or the estimated remaining settlement is less than one inch. Construction of proposed structures would not commence until approved by the geotechnical consultant based on the results of the settlement monitoring. Survey benchmarks used for the monitoring would be confirmed with the geotechnical consultant prior to initial readings being performed.

Foundation and Grading Plan Review. New retaining walls with maximum heights of up to 50± feet would be constructed as part of the new development. Additional review of the global stability of the proposed site grading be performed by SCG once more detailed rough grading plans become available. An additional subsurface exploration may be required to evaluate the geotechnical design considerations of the retaining wall and new slope configurations, as determined by a qualified geologist.

Over excavation. Benching of the sidewalls would be required during fill placement. The horizontal extent of the benching should be sufficient to reduce the inclination of the native fill contact to 3h:1v or flatter. Following completion of the over excavations, the subgrade would be evaluated by the geotechnical engineer to verify its suitability to serve as the structural fill subgrade. Some localized areas of deeper excavation may be required if loose, porous, or low-density materials are encountered at the base of the over excavation. Materials suitable to serve as the structural fill subgrade within the building area should consist of moderate strength alluvial soils which possess an in-situ density equal to at least 85 percent of the ASTM D-1557 maximum dry density. These materials would be moisture conditioned to 0 to 4 percent above optimum moisture content prior to placement of any new fill soils. The previously excavated soils may then be replaced as compacted structural fill.

Page 4.7-48, Table 4.7-8 Goal 10

SCAG Goals		Compliance	
GOAL	Promote conservation of natural and agricultural lands and restoration of habitats.	~~N/A:~~ Consistent:	This Project is located on ~~previously disturbed land and is not located on agricultural lands.~~ land that is identified as "Farmland of Local Importance," "Grazing Land," and "Other Land." Although the Project would convert agricultural land for non-agricultural uses, the identified agricultural land is not considered as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. However, the Project would conserve natural lands within the Project's proposed open space area and ensure the conservation and restoration of habitats through mitigation efforts.

Page 4.8-23, Sixth Paragraph

MM HAZ-1 The Project Applicant shall have a Soil Management Plan prepared by a qualified geologist prior to issuance of a building permit ~~prior to the redevelopment of the site~~. The Soil Management Plan shall provide guidelines for grading and construction projects at the Project site. At a minimum, the Soil Management Plan shall provide a site-specific health and safety plan, excavation boundary site map, and a series of cross-sections of the Project site.

Page 4.10-33, Table 4.10-2 Goal 10

RTP/SCS Strategies	Project Consistency
10. Promote conservation of natural and agricultural lands and restoration of habitats	**Consistent**: The Project site is located within an existing semi-urban area designated for residential development through the Sunny-Cal SP. ~~There are no designated agricultural lands or farmlands in the area or habitat restoration areas.~~ The Project site is on land identified as "Farmland of Local Importance," "Grazing Land," and "Other Land." Although the Project would convert agricultural land for non-agricultural uses, the identified agricultural land is not considered significant under CEQA. However, the Project would conserve natural lands within the Project's proposed open space area and ensure the conservation and restoration of habitats through mitigation efforts.

Page 4.11-32, Additional Bullet Point

- Brookside Avenue from Oak View Drive to Beaumont Avenue. Noise levels would be 60.1 at 100 feet from roadway centerline. However, noise levels would not exceed the conditionally acceptable standard of 70 dBA. Impacts along this segment would be less than significant.

Page 5-5, Last Paragraph

Refer to **Section 4.1, Aesthetics** through **Section 4.18, Wildfire** of this EIR. ~~No cumulative impacts were discovered during the analysis of the Project.~~ The environmental impact analyses ~~design features and objectives of the Project were concluded as having~~ concluded that the Project ~~has the~~ would potentially ~~to~~ create significant unavoidable impacts to air quality, greenhouse gas emissions, noise, and transportation analyses. Despite the implementation of feasible ~~M~~mitigation measures, standards conditions, and project design features ~~is proposed in each case to minimize the potential of these impacts. However~~, these impacts could not be minimized to a less than significant level. Therefore, impacts related to air quality, greenhouse gas emissions, noise, and transportation would remain significant and unavoidable.

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Appendix C1: Biological Resources Assessment



BEAUMONT SUMMIT STATION BIOLOGICAL RESOURCES AND MSHCP CONSISTENCY REPORT

Beaumont, California

February 4, 2022
Revised July 5, 2022

Prepared for:
Kimley-Horn
401 B Street, Suite 600
San Diego, CA 92101
(619) 234-9411

Prepared by:
Rocks Biological Consulting
4312 Rialto Street
San Diego, CA 92107
(619) 701-6798

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Moved down [1]: Figure 3B. → RWQCB Aquatic Resources¶

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APPENDICES

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Appendix B. Plant and Wildlife Species Observed

Appendix C. Beaumont Summit Station Least Bell's Vireo Protocol Survey Report

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Appendix E. Beaumont Summit Station Aquatic Resources Delineation Report (ARDR)

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1 EXECUTIVE SUMMARY

This report presents the results of a biological resource assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis conducted by Rocks Biological Consulting (RBC) for the Beaumont Summit Station Project (project or proposed project) in the City of Beaumont, Riverside County, California. The approximately 191-acre project site has been historically used for agricultural purposes and is highly disturbed; the majority of the site supports non-native grassland or is developed. Limited native habitat, primarily within small drainages, occurs on the western portion of the site.

The site is not located within any MSHCP Cellgroups or Criteria Cells and is not subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or Joint Project Review (JPR) processes. The project is identified as occurring within a regional MSHCP Survey Area for Marvin's onion (*Allium marvinii*), many-stemmed dudleya (*Dudleya multicaulis*), and burrowing owl. RBC conducted protocol presence/absence surveys for burrowing owl (*Athene cunicularia*) and least Bell's vireo (*Vireo bellii pusillus*) in 2021. Habitat assessments and focused surveys were performed also for many-stemmed dudleya and Marvin's onion in 2021.

Survey results for burrowing owl were negative. For least Bell's vireo, one individual male was detected within a drainage in the southwestern portion of the project during surveys one and two of the eight focused surveys. No female vireo or nesting was observed and based on its absence in surveys three through eight, the male appears to have been moving through the area temporarily. The drainage where the vireo was observed is not within the project impact area; however, potential noise and adjacency impacts may occur if the species colonizes the drainage prior to construction. Mitigation is proposed in order to reduce potential least Bell's vireo impacts to less than significant. Survey results for many-stemmed dudleya and Marvin's onion were negative, and the site does not support suitable habitat for these species.

The project site supports drainages expected to be considered jurisdictional under the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW).

The project site supports riparian/riverine habitat and would be consistent with the goals/objectives of the MSHCP with the implementation of the proposed avoidance and mitigation measures included in this report, pending a Determination of Biologically Equivalent or Superior Preservation (DBESP).

Impacts to vegetation communities and potential impacts to special-status animal species will be mitigated to below a level of significance through payment of the MSHCP Local Development Mitigation Fees. Impacts to Corps-, RWQCB-, and CDFW-jurisdictional resources along with impacts to MSHCP riparian/riverine areas shall be mitigated at a 3:1 mitigation ratio through the purchase of 4.82 mitigation bank credits (a 2:1 mitigation ratio) from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed In-Lieu Fee [ILF] Program), as available; and an additional 1:1 mitigation through either on-site preservation, with a focus on removal of invasive species and replanting with native species, or the purchase of 2.41 acres/credits from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed ILF

Deleted: re-establishment and/or rehabilitation

Program), as available. The Corps, RWQCB, and CDFW will make final determinations regarding compensatory mitigation requirements during the permit evaluation process.

Deleted: the Riverpark Mitigation Bank located within the San Jacinto watershed

2 INTRODUCTION

The purpose of this Biological Resources and MSHCP Consistency Report is to summarize the biological data for the proposed project and to document the project's consistency with the goals and objectives of the Western Riverside County MSHCP. The proposed project consists of the development of approximately 156 acres of e-commerce and commercial facilities on the 191-acre site. The project does not include any covered roads or covered public access activities under the MSHCP.

2.1 PROJECT AREA

The Beaumont Summit Station Specific Plan (a comprehensive amendment of the Sunny-Cal Specific Plan that includes the proposed project) site is in the northwestern portion of the City of Beaumont, California (Figure 1). The project site is approximately 191 acres located south of Cherry Valley Boulevard, north of Brookside Avenue, and east of Interstate 10 (I-10). The current zoning for the project site is Specific Plan. All proposed changes associated with the project are located within areas previously annexed to the City of Beaumont by Local Agency Formation Commission (LAFCO). The following Assessor Parcel Numbers (APNs) are associated with the project site: 407-230-22, -23, -24, -25, -26, -27, -28, 407-190-016, and 407-190-017.

The project site contains primarily vacant land within the western and southern portions of the project. The central and eastern portions of the project site are developed, including multiple concrete foundations and several outbuildings that supported former poultry and egg farm operations. The topography of the project site slopes gently downward to the west.

2.2 PROJECT DESCRIPTION

2.2.1 PROJECT BACKGROUND

In August 2007, the City of Beaumont (City) adopted the Sunny-Cal Specific Plan (Specific Plan), which included the approval of 560 single-family residential dwelling units with lot sizes ranging from 7,000 to 20,000 square feet on approximately 200 acres in the City of Beaumont. The overall gross density of the Sunny-Cal Specific Plan was 2.8 dwelling units (du) per acre (ac). The Specific Plan included four planning areas, pocket parks, trails, open space, circulation, and a neighborhood park. The Specific Plan was accompanied by a General Plan Amendment, Pre-zoning, LAFCO Annexation, and a Development Agreement. The City also certified the Sunny-Cal Specific Plan EIR in August 2007. The Sunny-Cal Specific Plan EIR provided CEQA level analysis for the Specific Plan, General Plan Amendment, Pre-zoning, LAFCO Annexation, and the Development Agreement associated with the Sunny-Cal Specific Plan. The Sunny-Cal Specific Plan EIR was challenged in 2007 and was upheld by the California Court of Appeals in 2010.

The majority of the Specific Plan area was annexed from the County of Riverside to the City of Beaumont in 2017. Although the Specific Plan Project was approved by the City of Beaumont and LAFCO, no development has occurred on the project site. The Beaumont Summit Station Specific Plan represents the amendments to the original Specific Plan which are described below in Section 2.2.2 and are the subject of the analysis of this Biological Resources and MSCHP Consistency Report.

2.2.2 PROJECT DESCRIPTION

The proposed project includes a General Plan Amendment, Specific Plan Amendment, Tentative Parcel Map, Plot Plan Approval, and a Development Agreement. The project site is divided into five parcels, with Parcels 1, 2, and 3 (Specific Plan Planning Area 1) designated for e-commerce uses with supporting office; the project proposes to amend the existing General Plan designation from Single-Family Residential to Industrial to allow for these uses. Parcels 1, 2, and 3 are proposed to be developed with three separate e-commerce buildings, as follows:

- Building 1: 985,860 square feet
- Building 2: 1,213,235 square feet
- Building 3: 358,370 square feet

Parcel 4 (Specific Plan Planning Area 2) would include the development of up to 150,000 square feet of commercial uses; the project proposes to amend the existing General Plan designation from Single-Family Residential to General Commercial for Parcel 4 to allow for these uses:

- Four-story hotel: 100,000 square feet (220 hotel rooms)
- Restaurant: 25,000 square feet
- Retail: 25,000 square feet

Parcel 5 (Specific Plan Planning Area 3) would remain as open space. The existing General Plan designation of Single Family Residential would be amended to Open Space. The proposed project would also include various on-site and off-site improvements including roadway improvements, utility connections, and rights-of-way to support the project. The amendments to the Specific Plan are summarized in Table 1, below.

Table 1. Existing and Proposed Land Use within the Beaumont Summit Station Project

Land Use	Sunny-Cal Specific Plan (2007)		Beaumont Summit Station Specific Plan (Specific Plan amendments) (2021)	
Low Density Residential	158.65 acres	560 dwelling units	15.09 acres	41 units
E-Commerce	--	--	138.63 acres	2,648,530 sf
Commercial Hotel Retail Restaurant	--	--	12.85 acres	24,217 sf 25,750 sf 10,954 sf
Open Space Park/Trail Buffer/Open Space	21.15 acres 8.71 acres		0 acres 28.88 acres	
Road	9.8 acres		4.55 acres	
Total	200 acres		200 acres	

The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (California Department of Toxic Substances Control list of various hazardous sites).

2.3 GENERAL SETTING

The northern perimeter of the project site is bounded by Cherry Valley Boulevard, with active construction occurring immediately north of the roadway. To the east of the project site are rural residential buildings as well as agricultural land uses. The western portion of the project site is surrounded by undeveloped vacant land which is further bounded by I-10. The southern side of the project site is surrounded by Brookside Avenue; beyond Brookside Avenue is residential development in the form of single and multi-family home communities.

2.4 REGULATORY FRAMEWORK

Federal, state, and local agencies have established several regulations to protect and conserve biological resources. The descriptions below provide a brief overview of agency regulations that may be applicable to the project. The regulating agencies make the final determination as to what types of permits are required.

Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (ESA; 16 U.S.C. § 1531 et seq.), as amended, provides for listing of endangered and threatened species of plants and animals and designation of critical habitat for listed species. The ESA regulates the “take” of any endangered fish or wildlife species, per Section 9. As development is proposed, the responsible agency or individual landowner is required to consult with the U. S. Fish and Wildlife Service (USFWS) to assess potential impacts on listed species (including plants) or their critical habitat, pursuant to Sections 7 and 10 of the ESA. USFWS is required to make a determination as to the extent of impact a project would have on a particular species. If it is determined that potential impacts on a species would likely occur, measures to avoid or reduce such impacts must be identified. USFWS may issue an incidental take statement, following consultation and the issuance of a Biological Opinion. This allows for take of the species that is incidental to another authorized activity, provided that the action will not adversely affect the existence of the species. Section 10 of the ESA provides for issuance of incidental take permits to non-federal parties with the development of a habitat conservation plan (HCP); Section 7 provides for permitting of federal projects.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 U.S.C. § 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and listed at 50 Code of Federal Regulations (CFR) 10.13. The USFWS enforces the MBTA, which prohibits “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird, or attempt such actions, except as permitted by regulation.

Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.), the Corps is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S. (including wetlands), which include those waters listed in 33 CFR 328.3 (51 Federal Register [FR] 41217, November 13, 1986; 53 FR 20764, June 6, 1988) and further defined by the 2001 *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* (SWANCC; 531 U.S. 159) decision and the 2006 *Rapanos v. United States* (547 U.S. 715) decision. The Corps, with oversight from the U.S. Environmental Protection Agency (USEPA), has the principal authority to issue CWA Section 404 permits. The Corps would require a Standard Individual Permit (SIP) for more than minimal impacts to waters of the U.S. as determined by the Corps. Projects with minimal individual and cumulative adverse effects on the environment may meet the conditions of an existing Nationwide Permit (NWP).

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A Water Quality Certification or waiver pursuant to Section 401 of the CWA (33 U.S.C. § 1341) is required for all Section 404 permitted actions. The RWQCB, a division of the State Water Resources Control Board (SWRCB), provides oversight of the Section 401 certification process in California. The RWQCB is required to provide Water Quality Certification for licenses or permits that authorize an activity that may result in a discharge from a point source into a waters of the U.S. Water Quality Certification authorization "is limited to assuring that a discharge from a Federally licensed or permitted activity will comply with water quality requirements" (40 CFR 121.3).

Deleted: must certify "that there is a reasonable assurance that the activity will be conducted in a manner which will not violate water quality standards" (40 CFR 121.2(a)(3)). Water Quality Certifications must be based on the findings that a proposed discharge will comply with applicable water quality standards.

The National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the U.S. under Section 402 of the CWA (33 U.S.C. § 1342).

State Regulations

California Environmental Quality Act

The California Environmental Quality Act (CEQA; California Public Resources Code § 21000 et seq.) was established in 1970 as California's counterpart to the National Environmental Policy Act (NEPA). CEQA requires state and local agencies to identify significant environmental impacts of their actions and to avoid or mitigate those impacts, where feasible.

CEQA applies to certain activities of state and local public agencies. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a "project." A project is an activity undertaken by a public agency or a private activity, which must receive some discretionary approval (meaning that the agency has the authority to deny the requested permit or approval) from a government agency that may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.

California Endangered Species Act and Natural Community Conservation Planning Act

The California Endangered Species Act of 1984 (CESA; California Fish and Game Code [CFGC] § 2050 et seq.), in combination with the California Native Plant Protection Act of 1977 (CFGC § 1900 et seq.), regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the state. California also lists species of special concern based on limited distribution; declining populations; diminishing habitat; or unusual scientific, recreational, or educational value. The California Department of Fish and Wildlife (CDFW) is responsible for assessing development projects for their potential to impact listed species and their habitats. State-listed special-status species are addressed through the issuance of a 2081 permit (Memorandum of Understanding).

In 1991, the California Natural Community Conservation Planning (NCCP) Act (CFGC § 2800 et seq.) was approved and the NCCP Coastal Sage Scrub program was initiated in Southern California. The NCCP program was established “to provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth.” The NCCP Act encourages preparation of plans that address habitat conservation and management on an ecosystem basis rather than one species or habitat at a time.

California Fish and Game Code Sections 1600-1602

Pursuant to Division 2, Chapter 6, Section 1602 of the CFGC, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. A Notification of Lake or Streambed Alteration must be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake” (CFGC § 1602). CDFW has jurisdiction over riparian habitats associated with watercourses and wetland habitats supported by a river, lake, or stream. Jurisdictional waters are delineated by the outer edge of riparian vegetation (i.e., drip line) or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources (e.g., riparian or wetland areas not supported by a river, lake, or stream). CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alteration Agreement.

California Fish and Game Code Sections 3503, 3511, 3513, 3801, 4700, 5050, and 5515

CDFW protects and manages fish, wildlife, and native plant resources within California. The California Fish and Game Commission and/or CDFW are responsible for issuing permits for the take or possession of protected species. The following sections of the CFGC address protected species: Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish). In addition, the protection of birds of prey is provided for in Sections 3503, 3513, and 3800 of the CFGC.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code § 13000 et seq.) provides for statewide coordination of water quality regulations. The SWRCB was established as the statewide authority and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis. The RWQCBs have primary responsibility for protecting water quality in California. As discussed above, the RWQCBs regulate discharges to surface waters under the CWA. In addition, the RWQCBs are responsible for administering the Porter-Cologne Water Quality Control Act.

Pursuant to the Porter-Cologne Water Quality Control Act, the state is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if a Section 404 permit is not required for the activity. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

Regional and Local Plans

Western Riverside MSHCP

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 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 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); animal species (burrowing owl, mammals, amphibians, and invertebrates) identified by survey areas (MSHCP Volume I, Section 6.3.2); and species associated with riparian/riverine areas and vernal pool habitats, including least Bell’s vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), western yellow-billed cuckoo (*Coccyzus americanus*), and three species of 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 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.

3 METHODS

On April 22 and May 12, 2021, RBC biologists surveyed the project site and conducted vegetation mapping, a general biological survey, and habitat assessments for special-status plant and wildlife species, including species associated with MSHCP survey areas and MSHCP-designated riparian/riverine and vernal pool habitats.

Additionally, RBC regulatory specialists conducted an initial jurisdictional assessment of the project site including a 100-foot buffer on April 22, 2021 and a formal aquatic resources delineation on June 3 and 7, 2021 to identify any areas that may be considered jurisdictional under the Corps pursuant to Section 404 of the CWA; the RWQCB pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act; and the CDFW pursuant to Division 2, Chapter 6, Section 1600 – 1602 of the CFGC to comply with CEQA and MSHCP requirements. RBC regulatory specialists also assessed the project site for MSHCP-designated riparian/riverine and vernal pool habitats, as defined by Section 6.1.2 of the MSHCP, during the formal aquatic resources delineation.

3.1 DATABASE SEARCH

Prior to conducting field surveys, existing information regarding biological resources present or potentially present within the project area was obtained through a review of pertinent literature and databases, including, but not limited to:

- CDFW California Natural Diversity Database (CNDDB; CDFW 2021a)
- California Native Plant Society (CNPS) Electronic Inventory (CNPS 2021)
- USFWS Special-status Species Database (USFWS 2021a)
- USFWS IPaC Database (USFWS 2021b)
- National Wetlands Inventory (NWI) Database (USFWS 2021c)
- Natural Resources Conservation Service (NRCS) Soils Survey Database (NRCS 2021)
- Regional Conservation Authority (RCA) MSHCP Information Map (RCA 2021a)
- USGS National Hydrography Dataset (NHD) (USGS 2020)

The CNDDB and USFWS database queries were conducted for the project site plus a 1-mile radius. The CNPS Electronic Inventory search was conducted for the USGS 7.5' El Casco quadrangle for an elevation range of approximately 2,400 to 2,600 feet above mean sea level (amsl). The potential for special-status species, including MSHCP covered species, to occur within the project site was refined by considering the habitat affinities of each species, field habitat assessments, vegetation mapping, and knowledge of local biological resources.

3.2 RCA MSHCP INFORMATION MAP QUERY

The RCA MSCHP Information Map was used to compare the project footprint against any mapped survey or conservation areas as established in the MSHCP. These areas include Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Species Survey Areas (CASSA); Burrowing Owl, Mammals, Amphibians, and Invertebrate survey areas (MSHCP

Volume I, Section 6.3.2); and Cellgroups and Criteria Cells. Per compliance with the MSHCP, the project would require habitat assessments and/or focused surveys according to this query and compliance with additional project review processes as prescribed by Criteria Cells.

3.3 VEGETATION MAPPING AND GENERAL BIOLOGICAL SURVEYS

RBC biologists conducted vegetation mapping in the field to provide a baseline of the biological resources that occur or have the potential to occur within the project site on April 22, 2021 (Figure 2). RBC conducted vegetation mapping by walking throughout the project site and mapping vegetation communities on aerial photographs at a 1:2400 scale (1 inch = 200 feet).

The extent of each habitat type (delineated as a habitat polygon on the vegetation maps) was calculated using the ArcGIS Collector Geographic Information System (GIS). Habitats were classified based on the dominant and characteristic plant species in accordance with vegetation community classifications outlined in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) and consistent with MSHCP vegetation mapping classification.

RBC biologists conducted a general biological survey for plants and wildlife concurrently with vegetation mapping on April 22, 2021. Photos taken during the general biological survey are provided in Appendix A. Plant species encountered during the field survey were identified and recorded in field notebooks. Plant species that could not be identified were brought to the laboratory for identification using the dichotomous keys in the Jepson Manual (Baldwin et al. 2012) and following the taxonomic treatment of the Jepson Manual with input from the Western Riverside County Annotated Checklist (Roberts 2004). A complete list of the vascular plant species observed during all site visits to the project site is presented in Appendix B.

Wildlife species were documented during the field survey by sight, calls, tracks, scat, or other signs, and were recorded in field notebooks. Binoculars (10X42 magnification) were used to aid in the identification of wildlife. In addition to species observed during the surveys, RBC assessed the expected wildlife use of the project site based on known habitat preferences of local species and knowledge of their biogeographic distribution in the region. A complete list of wildlife species observed during all visits to the project site is presented in Appendix B; scientific and common names of wildlife follow CDFW's Special Animals List (CDFW 2021b).

3.4 SPECIAL-STATUS SPECIES SURVEYS

The locations of observed biological resources designated as special-status by the USFWS, CDFW, CNPS, and/or the MSHCP, were recorded in field notebooks, on aerial maps, and/or using the geographic information system (GIS) application ArcGIS Collector.

MARVIN'S ONION AND MANY-STEMMED DUDLEYA HABITAT ASSESSMENT & SURVEYS

The RCA MSHCP Information Map revealed that the project is located within a NEPSSA for Marvin's onion and many-stemmed dudleya (RCA 2021a). On April 22 and May 12, 2021 RBC qualified botanists assessed the suitability of habitat within the project site to support MSHCP Narrow Endemic species Marvin's onion and many-stemmed dudleya and surveyed the site for each species. The project site was walked and assessed for the presence of suitable habitat and species. The surrounding 100-foot buffer was surveyed via binoculars for the potential to support special-status floral species.

BURROWING OWL SURVEYS

The RCA MSHCP Information Map revealed that the project is located within a MSHCP Burrowing Owl Survey Area (RCA 2021a). RBC assessed the project site for suitable burrowing owl habitat on April 22, 2021 in accordance with the Western Riverside MSHCP Burrowing Owl Survey Instructions (RCA 2005). As a result, RBC conducted protocol burrowing owl surveys during the breeding season (March 1 to August 31). RBC biologists conducted four surveys between May 12, 2021 and July 6, 2021 (Appendix C). Surveys were not conducted during rain, dense fog, or when high winds were greater than 20 miles per hour.

RBC biologists walked transects spaced 7-20 meters (20-60 feet) apart through suitable burrowing owl habitat within the project site plus a 500-foot buffer. RBC biologists used binoculars (10x42) to scan the survey area for owls, active and potential burrows, and/or sign of owls. RBC examined all suitable burrows for sign, including feathers, pellets, excrement (e.g., scat and whitewash), and prey remains. RBC considered burrows to be active if a burrowing owl was observed at or near the entrance or if evidence of recent sign was present. Biologists documented all suitable burrows in ArcGIS Collector.

LEAST BELL’S VIREO SURVEYS

On April 22, 2021 RBC assessed the project site for species associated with riparian/riverine and vernal pool habitat as defined by Volume 1, Section 6.1.2 of the MSHCP; USFWS protocol-level surveys for least Bell’s vireo were initiated on the same day following the observation of an individual least Bell’s vireo male in the southwestern drainage. Based on this siting, protocol surveys for the species were conducted thereafter to determine the status of the species on-site (Appendix D). RBC conducted protocol surveys within suitable riparian habitat in the western portion of the project site, as well as a 500-foot buffer. Surveys were completed between April 22, 2021 and July 16, 2021. RBC conducted the surveys in accordance with the USFWS Least Bell’s Vireo Survey Guidelines (USFWS 2001).

3.5 AQUATIC RESOURCES DELINEATION

RBC conducted a formal aquatic resources delineation per the Corps, RWQCB, and CDFW regulations, guidelines, and protocols on June 3 and 7, 2021 to identify any areas that may be considered jurisdictional under the Corps pursuant to Section 404 of the CWA, the RWQCB pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act, and the CDFW pursuant to Section 1602 of the CFGC (Appendix E).

Prior to the formal aquatic resources delineation, field maps were created using GIS and a color aerial photograph at a 1:150 scale. RBC also reviewed USGS NHD (USGS 2020) and topography data, USFWS NWI data (USFWS 2021c), and NRCS soils data (NRCS 2021; Appendix F) to further determine the potential locations of aquatic resources within the project site and the surrounding 100-foot buffer. RBC also utilized Google Earth Pro to assess current and historic presence or absence of flows and/or ponding in the project site and buffer (Google Earth Pro 2021).

Staff evaluated all areas with depressions, drainage patterns, wetland vegetation, and/or riparian vegetation within the project site and buffer for potential jurisdictional status, with focus on the presence of defined channels and/or wetland vegetation, riparian vegetation, soils, and hydrology.

Lateral limits of potential non-wetland waters of the U.S. for the Corps and the RWQCB were identified using field indicators of an Ordinary High Water Mark (OHWM) as outlined in *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (Corps 2008a). Additionally, staff examined potential Corps and RWQCB jurisdictional wetland areas using the routine determination methods set forth in Part IV, Section D, Subsection 2 of the 1987 *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), the *2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0* (Corps 2008b), and The State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021).

CDFW potential jurisdictional boundaries were determined based on the presence of lake and/or streambed and riparian habitat or wetland areas supported by (i.e., adjacent or connected to) a lake or streambed, based on the definition of streambed as outlined at 14 California Code of Regulations (CCR) § 1.72 and in the 1987 *Rutherford v. State of California* decision (188 Cal. App. 3d 1268).

Complete methods are presented in the *Beaumont Summit Station Aquatic Resources Delineation Report* (Beaumont Summit Station ARDR; RBC 2022a; Appendix E).

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4 RESULTS

4.1 PHYSICAL SETTING

The project site is composed of nine parcels that support several upland and wetland vegetation communities. On-site elevations range from approximately 2,400 to 2,600 feet amsl. Seven soil types occur on-site varying in percent slopes (Appendix F).

The flat areas of the project site are primarily dominated non-native grassland and developed habitats. The canyons and drainages within the project site are composed primarily of mulefat thickets and non-native riparian, with some occurrences of Riversidean sage scrub. Surrounding land uses include open space, agriculture, and residential development. The non-native grassland in the northern and southern portions of the project appear to be regularly disked.

4.2 VEGETATION COMMUNITIES AND LAND USES

The project site supports ten vegetation communities and other land covers, as classified in accordance with Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) and consistent with the MSHCP vegetation mapping classification (Table 2). Vegetation within the project site is predominantly comprised of non-native grassland.

Table 2. Summary of Vegetation within the Beaumont Summit Station Project Site

Vegetation Community/Land Use	Project Site (acres)
Upland	
Chamise Chaparral	>0.01
Developed	48.70
Disturbed	1.50
Eucalyptus Woodland	0.12
Non-native Grassland	134.54
Riversidean Sage Scrub	0.24
Torrey's Scrub Oak Stands	1.10
Riparian	
Blue Elderberry Stands	0.30
Mulefat Scrub	2.14
Non-native Riparian	2.32
Total	190.99[1]

[1] Acreages summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

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Upland Vegetation Communities

Chamise Chaparral

This chaparral vegetation community (>0.01 acre) is overwhelmingly dominated by chamise (*Adenostoma fasciculatum*). Within the project site, the chamise chaparral contains some individuals of California buckwheat (*Eriogonum fasciculatum*) and it occurs along the northwestern project boundary. Chamise chaparral continues as patches within non-native grassland west of the project.

Developed

Developed land (48.70 acres) within the project site does not support native vegetation and includes human-made structures. Within the project site, developed habitat includes the buildings and paved surfaces associated with the former agricultural operations.

Disturbed

Disturbed land (1.50 acres) is typically classified as land on which the native vegetation has been significantly altered by agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of a plant association (e.g. disturbed Riversidean sage scrub). Disturbed habitat is typically found in vacant lots, along roadsides, within construction staging areas, and in abandoned fields. The habitat is typically dominated by non-native annual species and perennial broadleaf species. Disturbed habitat on the project site occurs within the gravel driveways and staging areas that support the sparse growth of non-native grasses and forbaceous species. A few Mexican fan palms (*Washingtonia robusta*) also occur within the driveway near the eastern entrance to the project site off of Cherry Valley Boulevard.

Eucalyptus Woodland

Eucalyptus woodland (*Eucalyptus* spp.) habitat (0.12 acre) ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species produces a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. A large stand of eucalyptus woodland occurs west of the project site towards I-10; the eastern extent of the large stand occurs along the western border of the project site.

Non-native Grassland

The non-native grassland within the project site (134.54 acres) is dominated by ripgut grass (*Bromus diandrus*) but also contains occurrences of other non-native grass and forbaceous species such as red brome (*Bromus rubens*), Mediterranean barley (*Hordeum marinum*), and short-pod mustard (*Hirschfeldia incana*). Rigid fiddleneck (*Amsinckia menziesii*) was observed within the non-native grassland habitat growing out of the topographical depressions in the western portion of project site. The project site is frequently mowed and had been grazed in the past using cattle, keeping non-native grasses and ruderal species fairly low to the ground. Non-native grassland occurs throughout much of the project site.

Riversidean Sage Scrub

Riversidean sage scrub (0.24 acre) is a form of coastal sage scrub found in Riverside County consisting of low, soft shrubs. The project site supports small patches of Riversidean sage scrub that are dominated by California sagebrush (*Artemisia californica*) and California buckwheat and contain non-native grasses between shrubs. Riversidean sage scrub is found in the southwestern portion of the project site and off-site along the southern project boundary.

Torrey's Scrub Oak Stands

Mature individuals of Torrey's scrub oak (*Quercus x acutidens*) form distinct stands (1.10 acres) occurring along the upper banks of canyons and drainages within the western portion of the project. Torrey's scrub oak is a small oak tree and on-site Torrey's scrub oak do not exceed 25 feet in height. Non-native grasses occur as the understory between individual trees. The stands of Torrey's scrub oak within the project site do not represent a specific vegetation community (e.g., scrub oak chaparral), but are a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat.

Riparian Vegetation Communities

Blue Elderberry Stands

Individual stands of blue elderberry (*Sambucus nigra* ssp. *caerulea*) occur within the project site (0.30 acre). Blue elderberry is a tall woody shrub that can grow up to 25 feet tall. The blue elderberry trees within the project site do not represent a specific vegetation community, rather a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat. Blue elderberry is not a hydrophytic, or wetland-exclusive, plant species; it can be found growing in both upland and riparian habitats. However, this stand of trees is included in the riparian community discussion for the purposes of this analysis due to its location exclusively within the drainages in the project site.

Mulefat Scrub

Mulefat scrub (2.14 acres) consists of mulefat (*Baccharis salicifolia*) as the dominant or co-dominant species within a continuous shrub canopy or thicket. A few isolated, individual willows (*Salix* spp.) also occur within the continuous mulefat scrub. The herbaceous layer is typically sparse. The mulefat scrub within the project site is approximately 10-15 feet in height and co-occurs with the blue elderberry stands and non-native riparian vegetation within the canyons and drainages in the southwest.

Non-native Riparian

This habitat includes densely vegetated riparian thickets dominated by non-native, invasive species. Within the project site, non-native riparian habitat (2.32 acres) consists of a monotypic stands of tree of heaven (*Ailanthus altissima*), occurring within the drainages in the southwestern portion of the project. Tree of heaven are large trees with some individuals exceeding 30 feet in height. Virtually no understory occurs within the stands of tree of heaven that occur within the project site.

4.3 PLANTS AND WILDLIFE

The project area supports a low diversity of vegetation communities and plant species diversity. A total of 29 plant species (46 percent native, 54 percent non-native) were observed during project biological surveys (Appendix B). A total of 43 bird species, one reptile species, two mammal species, and one invertebrate species were observed or presumed present based on track and/or scat (Appendix B). Twilight/nighttime surveys were not conducted, therefore crepuscular and nocturnal animals are likely under-represented in the project species list; however, habitat assessments were performed for all special-status species to ensure that any potentially-present rare species are adequately addressed herein.

Special-status biological resources are those defined as follows:

1) Species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened/endangered population sizes;
2) Species and habitat types recognized by local and regional resource agencies as sensitive;
3) Habitat areas or vegetation communities that are unique, are of relatively limited distribution, or are of particular value to wildlife;
4) Wildlife corridors and habitat linkages; and/or
5) Biological resources that may or may not be considered sensitive, but are regulated under local, state, and/or federal laws.

For the purposes of this report, species are considered to have special-status if they meet one or more of the following criteria:

- Listed or considered for listing or proposed for listing under the ESA or CESA (CDFW 2021b; USFWS 2021a)
- Included on the CDFW Special Animals List (CDFW 2021a)
- CDFW Species of Special Concern (CDFW 2021a)
- CDFW Fully Protected Species (CDFW 2021a)
- Listed as having a California Rare Plant Rank (CRPR; formerly CNPS List, CNPS 2021)
- Western Riverside MSHCP Section 9.2 Covered Species List (RCA 2003)

4.3.1 NARROW ENDEMIC AND FEDERALLY/STATE LISTED PLANT SPECIES

The project site occurs within the NEPSSA for Marvin's onion and many-stemmed dudleya, which are MSHCP narrow endemic plant species. A habitat assessment and focused survey for both Marvin's onion and many-stemmed dudleya was conducted on April 22, 2021 and a second focused survey was conducted on May 12, 2021. No suitable habitat for these species was observed within the project site and no occurrences of either species was observed. The potential for these plants to occur is further addressed in Table 3. No other MSCHP narrow endemic plant species were identified within or immediately adjacent to the project site or have the potential to occur within the project site.

No federally or state listed threatened or endangered plants were observed during general biological surveys and none have a moderate or high potential to occur on the project site based on the lack of suitable habitats. Additionally, there are no records of federally or state listed species occurring within or immediately adjacent to the project site.

Table 3. Assessment of Narrow Endemic Plant Species Potential to Occur within the Project

Species	Status	Habitat Description	Potential to Occur
Many-stemmed dudleya (*Dudleya multicaulis*)	WRC, CRPR 1B.2	Perennial herb. Blooms Apr-July. Coastal sage scrub, chaparral, valley grassland. Elevation 50-855 ft.	No potential to occur. Sage scrub habitat on-site is minimal, and the site occurs outside the species' elevation range. Additionally, species was not observed during surveys (RBC 2021).
Yucaipa onion (*Allium marvinii*)	WRC, CRPR 1B.2	Perennial bulbiferous herb. Blooms Jan-July. Chaparral. 2,495-3,495 ft.	No potential to occur. No suitable chaparral habitat on-site and was not observed during surveys (RBC 2021).

California Rare Plant Rank (CRPR)
1B: rare, threatened, or endangered in California and elsewhere

CRPR Threat Ranks
0.1: Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2: Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

FE: Endangered Species Act (ESA) Federally Endangered Species
FT: ESA Federally Threatened Species
SE: California Endangered Species Act (CESA) State Endangered Species
ST: CESA Federally Threatened Species
SSC: California Species of Special Concern
WRC: Western Riverside County MSHCP-covered species

4.3.2 NON-FEDERALLY/STATE LISTED SPECIAL-STATUS PLANT SPECIES

Other special-status plant species include those that are California Species of Special Concern (SSC) or are a CRPR List 1 or 2 (CNPS 2021). The CRPR system was created by the CNPS, which is a statewide resource conservation organization that has developed an inventory of California's sensitive plant species. The CRPR system is recognized by the CDFW and essentially serves as an early warning list of potential candidate species for threatened or endangered status. The CRPR system is categorized as outlined in Table 4.

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No non-federally/state listed plant species have a moderate or high potential to occur on the project site based on the lack of suitable habitats. Non-federally/state-listed special-status plants with the potential to occur on site are provided in Table 5. Additionally, there are no records of non-federally or state listed special status species occurring within or immediately adjacent to the project site.

Table 4. California Rare Plant Rank (CRPR) Definitions

California Rare Plant Rank (CRPR)	1A	presumed extirpated in California and rare or extinct elsewhere
	1B	rare, threatened, or endangered in California and elsewhere
	2A	presumed extirpated in California but more common elsewhere
	2B	rare, threatened, or endangered in California but more common elsewhere
	3	plants for which more information needed
	4	plants of limited distribution
CRPR Threat Ranks	0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
	0.2	Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
	0.3	Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Table 5. Assessment of Special-Status Plant Species Potential to Occur within the Project

Species	**Status**	**Habitat Description**	**Potential to Occur**
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	WRC, CRPR 1B.1	Annual herb. Blooms Feb-June. Marshes and swamps, playas, vernal pools. Elevation 5-4,005 ft.	No potential to occur. No suitable marsh or vernal pool habitat on-site.
Horn's milk-vetch (*Astragalus hornii* var. *hornii*)	CRPR 1B.1	Annual herb. Blooms May-Oct. Alkali sink, wetland-riparian.	No potential to occur. No alkali sink habitat on-site.
Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegeri*)	WRC, CRPR 1B.1	Perennial shrub. Blooms Dec-June. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation 1,200-3,200 ft.	Low. Grassland habitat on-site is highly disturbed and scrub habitat is minimal.
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	WRC, CRPR 1B.1	Annual herb. Blooms Apr-June. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation 900-4,005 ft.	Low. Grassland habitat on-site is highly disturbed and scrub habitat is minimal.

Species	Status	Habitat Description	Potential to Occur
San Bernardino aster (*Symphyotrichum defoliatum*)	CRPR 1B.2	Perennial rhizomatous herb. Blooms July-Nov. Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grasslands. Elevation 5-6,695 ft.	Low. Grassland habitat on-site is highly disturbed and scrub habitat is minimal.
Smooth tarplant (*Centromadia pungens* ssp. *laevis*)	WRC, CRPR 1B.1	Annual herb. Blooms Apr-Sep. Shadscale scrub, alkali sink, valley grassland. Elevation 330- 2,000 ft.	No potential to occur. Grassland habitat on-site is highly disturbed, and the site occurs outside the species elevation range.
Spiny-hair blazing star (*Mentzelia tricuspis*)	CRPR 2B.1	Annual herb. Blooms Mar-May. Creosote bush scrub.	No potential to occur. No creosote bush scrub on-site.

California Rare Plant Rank (CRPR)
1B: rare, threatened, or endangered in California and elsewhere

CRPR Threat Ranks
0.1: Seriously threatened in California (*over 80% of occurrences threatened / high degree and immediacy of threat*)
0.2: Moderately threatened in California (*20-80% occurrences threatened / moderate degree and immediacy of threat*)

FE: Endangered Species Act (ESA) Federally Endangered Species
FT: ESA Federally Threatened Species
SE: California Endangered Species Act (CESA) State Endangered Species
ST: CESA Federally Threatened Species
SSC: California Species of Special Concern
WRC: Western Riverside County MSHCP-covered species

4.3.3 FEDERALLY/STATE LISTED WILDLIFE SPECIES

One federally and state endangered species, least bell's vireo (*Vireo bellii pusillus*), was detected during protocol-level surveys the project site; the results of the protocol least Bell's vireo are discussed below (Figure 2). No other federally or state listed wildlife species were documented on or adjacent to the site during the various biological surveys or are expected to occur based on the disturbed nature of the site and limited native habitat. CNDDB and USFWS database results do not identify federally or state listed wildlife within or immediately adjacent to the project site. Historical occurrences of Stephens' kangaroo rat (*Dipodomys stephensi*), coastal Californica gnatcatcher (*Polioptila californica californica*), southwestern willow flycatcher, southern rubber boa (*Charina umbratica*), and crotch bumble bee (*Bombus crotchii*) have been recorded within one to three miles of the project site (Figure 4A and 4B; CDFW 2021a, USFWS 2021a) but none of these species are expected on site due to the lack of suitable habitat (Table 6). No other federally or state listed species have potential to occur on the project site.

No USFWS designated critical habitat occurs within or immediately adjacent the project site, or within three miles of the project site (Figure 4B).

Table 6. Assessment of Federally/State Listed Wildlife Species Potential to Occur within the Project Site

Species	**Status**	**Habitat Description**	**Potential to Occur**
INVERTEBRATES			
Crotch bumble bee (*Bombus crotchii*)	SCE	Arid shrublands and grasslands in coastal and foothill areas of southern California. Nectar plants include milkweeds, buckwheat, and lupines.	Low to moderate potential to occur. Suitable arid grassland and shrubland present on site; however nectar plants limited.
REPTILES			
Southern rubber boa (*Charina umbratica*)	WRC, ST	Found in oak and conifer forests at elevations between 5,00 and 8,00 feet.	Low. Suitable habitat and elevations not present.
BIRDS			
Coastal California gnatcatcher (*Polioptila californica californica*)	WRC, FT, SSC	Found in sage scrub habitats, often on slopes. Nests in shrubs including sagebrush, buckwheat, and sage.	Low. Although Riversidean sage scrub is present on site, habitat is extremely limited and fragmented, and not of adequate size/quality to support this species.
Least Bell's vireo (*Vireo bellii pusillus*)	WRC, FE (when nesting); SE (when nesting)	Riparian woodland with understory of dense young willows or mulefat and willow canopy. Nests often placed along internal or external edges of riparian thickets.	Individual male observed during early focused surveys during 2021 biological surveys (surveys 1 and 2 of 8 focused surveys). No females or nesting observed.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	WRC, FE, SE (when nesting)	Found in dense riparian woodlands and forests. Often nests on or near lakes, streams, and rivers.	Very low to no potential. Suitable dense riparian forest habitat not present.
Western yellow-billed cuckoo (Coccyzus americanus)	WRC, FT, SE	Found in wooded riparian habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. Nests in willows with deep understory foliage with nearby cottonwood forests for foraging.	Very low to no potential. Suitable dense riparian forest habitat not present.

Species	Status	Habitat Description	Potential to Occur
MAMMALS			
Stephens' kangaroo rat (*Dipodomys stephensi*)	WRC, FE; ST	Habitats include annual grassland and coastal sage scrub with sparse shrub cover. Commonly in association with *Eriogonum fasciculatum*, *Artemisia californica*, and *Erodium cicutarium*, in areas with loose, friable, well-drained soil, and flat or gently rolling terrain.	Low potential to occur. Grassland habitat present; however, burrow consistent with this species not observed during 2021 biological surveys.
FE: Federally Endangered (FE) Species under the Endangered Species Act FT: Federally Threatened (FT) Species under the Endangered Species Act SE: State Endangered (SE) under the California Endangered Species Act SCE: State candidate for Endangered under the California Endangered Species Act ST: State Threatened (ST) under the California Endangered Species Act FP: California Department of Fish and Wildlife Fully Protected (FP) Species SSC: California Department of Fish and Wildlife Species of Special Concern (SSC) WL: California Department of Fish and Wildlife Watch List (WL) Species			

Least Bell's Vireo

Suitable habitat for least Bell's vireo within the project site is primarily composed of mulefat scrub and non-native riparian vegetation. An individual male least Bell's vireo was observed in mulefat scrub within a drainage in the southwestern portion of the site during the first two of eight focused surveys, on April 22 and May 6, 2021 (Figure 2). The individual was observed foraging and moving frequently along the mulefat canopy. The lack of observations following the first two least Bell's vireo surveys suggests that this bird was an early season migrant that did not establish a nesting territory within the project area. No female vireo or active nests were detected during protocol surveys. Complete results from the protocol least Bell's vireo survey are included as Appendix C.

Least bell's vireo is covered under the MSHCP as it is also associated with MSCHP riparian/riverine habitat.

4.3.4 NON-FEDERALLY/STATE LISTED SPECIAL-STATUS WILDLIFE SPECIES

The non-federally/state listed special-status wildlife species observed on site during biological surveys include coastal whiptail (*Aspidoscelis tigris stejnegeri*s), California horned lark (*Eremophila alpestris actia*), cooper's hawk (*Accipiter cooperii*), yellow warbler (*Setophaga petechia)*, and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*); these species are also MSCHP-covered species. No other non-federally/state listed special-status wildlife species were observed during biological surveys. Wildlife species observed during the field survey are presented in Appendix B.

The non-federally/state listed special-status wildlife species with moderate to high potential to occur include orange-throated whiptail (*Aspidoscelis hyperythra*), southern California legless lizard (*Anniella stebbinsi*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius* *ludovicianus*), white-tailed kite (*Elanus leucurus*), and yellow-breasted chat (*Icteria virens*). All of these species are covered species under the MSHCP with the exception of southern California legless lizard. Special-status wildlife species with potential to occur on the project site are assessed in Table 7.

Table 7. Assessment of Special-Status Wildlife Species Potential to Occur within the Project Site

Species	Status	Habitat Description	Potential to Occur
AMPHIBIANS			
Western spadefoot (*Spea hammondii*)	WRC, SSC	Temporary ponds, vernal pools, and backwaters of flowing creeks, as well as adjacent upland habitats such as grasslands and coastal sage scrub for burrowing.	Low to moderate potential to occur. Suitable riparian habitats and adjacent upland habitats are limited.
REPTILES			
Coastal whiptail (*Aspidoscelis tigris stejnegeri*)	WRC, SSC	A variety of rocky, sandy, dry habitats including sage scrub, chaparral, woodlands on friable loose soil.	Present. Observed during 2021 biological surveys.
Coast horned lizard (*Phrynosoma blainvillii*)	WRC, SSC	A variety of habitats including sage scrub, chaparral, and coniferous and broadleaf woodlands. Found on sandy or friable soils with open scrub. Requires open areas, bushes, and fine loose soil.	Low potential to occur. Suitable habitats are not present on site; and species is more common near the coast.
Orange-throated whiptail (*Aspidoscelis hyperythra*)	WRC, WL	A variety of habitats including sage scrub, chaparral, and coniferous and broadleaf woodlands. Found on sandy or friable soils with open scrub.	Moderate potential to occur. Suitable scrub and woodland habitats present.
Southern California legless lizard (*Anniella stebbinsi*)	SSC	A variety of habitats including scrublands, woodlands, and sandy washes. This species requires moisture near the ground surface and is often found under plant litter or debris.	Moderate potential to occur. Suitable woodland and sandy wash habitat present on site.

Species	Status	Habitat Description	Potential to Occur
BIRDS			
Burrowing owl (*Athene cunicularia*)	WRC, SSC (at burrowing sites & some wintering sites)	Found in grasslands and open scrub from the coast to foothills. Strongly associated with California ground squirrel (*Otospermophilus beecheyi*) and other fossorial mammal burrows.	Not present. Species not observed during focused 2021 surveys, however suitable grasslands and open scrub habitat with ground squirrel burrows present on site.
California horned lark (*Eremophila alpestris actia*)	WRC, WL	Found from coastal deserts and grasslands to alpine dwarf-shrub habitat above treeline. Also seen in coniferous or chaparral habitats.	Present. Species observed on site during 2021 biological surveys.
Cooper's hawk (*Accipiter cooperii*)	WRC, WL (when nesting)	Usually in oak woodlands but occasionally in willow or eucalyptus woodlands.	Present. Species observed on site during 2021 biological surveys.
Golden eagle (*Aquila chrysaetos*)	WRC, FP, WL (when nesting and wintering)	Found in arid scrublands and grasslands. Requires cliffs to nest.	Low. Suitable cliff habitat required to nest or roost is not present on site or immediately adjacent.
Loggerhead shrike (*Lanius ludovicianus*)	WRC, SSC (when nesting)	Found within grassland, chaparral, desert, and desert edge scrub, particularly near dense vegetation used for nesting.	Moderate potential to occur. Suitable foraging habitat is present on site.
Purple martin (*Progne subis*)	WRC, SSC (when nesting)	Found in forests and woodlands and desert areas. Requires nesting cavities.	Low potential to occur.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	WRC, WL	Found in arid, moderate to steep rocky terrain with scattered shrub and grass cover.	Low potential to occur. Suitable steep rocky terrain not present.
White-tailed kite (*Elanus leucurus*)	WRC, FP (when nesting)	Found in a variety of habitats including grasslands, marshes, and rangelands. Nests in large trees.	Moderate potential to occur. Suitable open grassland habitat with suitable nesting trees present on site.
Yellow warbler (*Setophaga petechia*)	WRC, SSC (when nesting)	Nests in riparian habitats and bordering habitats often containing willows, cottonwoods, and sycamore trees.	Present. Species observed on site during 2021 biological surveys.

Species	Status	Habitat Description	Potential to Occur
Yellow-breasted chat (*Icteria virens*)	WRC, SSC (when nesting)	Nests in dense riparian habitats and adjacent habitats often containing mulefat and willows.	Moderate potential to occur. Suitable mulefat scrub habitat present on site.
MAMMALS			
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)	WRC, SSC	Found in low elevation grassland, alluvial sage scrub, and coastal sage scrub. Requires friable soils for burrowing.	Low potential to occur. Alluvial sage scrub not present; however, grassland and Riversidean sage scrub habitat present. Sign was not observed during 2021 project biological surveys.
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	WRC, SSC	Found in desert scrub and rocky areas with sandy soils suitable for burrowing. Forages on seeds of forbs, grasses, and shrubs.	Low potential to occur. Desert scrub and rocky habitat not present on site.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	WRC, SSC	Habitats include early stages of chaparral, open coastal sage scrub, and grasslands near the edges of brush. Uses open land but requires some shrubs for cover.	Present. Species observed on site during 2021 biological surveys.
Southern grasshopper mouse (*Onychomys torridus ramona*)	SSC	Occurs primarily in desert scrub habitats. Habitats with low open and semi-open scrubs habitats including coastal sage scrub, mixed chaparral, low sagebrush, riparian scrub, and annual grassland with scattered shrubs, are less frequently inhabited by this species.	Low potential to occur. Although grassland and scrub habitats are present on site, suitable desert habitat with friable soils are lacking.

FE: Federally Endangered (FE) Species under the Endangered Species Act
FT: Federally Threatened (FT) Species under the Endangered Species Act
SE: State Endangered (SE) under the California Endangered Species Act
SCE: State candidate for Endangered under the California Endangered Species Act
ST: State Threatened (ST) under the California Endangered Species Act
FP: California Department of Fish and Wildlife Fully Protected (FP) Species
SSC: California Department of Fish and Wildlife Species of Special Concern (SSC)
WL: California Department of Fish and Wildlife Watch List (WL) Species

Burrowing Owl

The RCA MSHCP Information Map revealed that the project is located within the MSHCP Burrowing Owl Survey Area. Suitable burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation (Zarn 1974). Suitable burrowing owl habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of burrowing owl habitat; both natural and artificial burrows provide protection, shelter, and nests for burrowing owl (Henny and Blus 1981). Burrowing owl typically use burrows made by rodents, such as ground squirrels or badgers, but may also use human-made structures, such as concrete culverts; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement.

Suitable habitat for burrowing owl was observed within the project site. California ground squirrels (*Otospermophilus beecheyi*), colonial burrows and burrows of a suitable size to support burrowing owl were observed throughout the non-native grassland within the project site. Therefore, protocol burrowing owl surveys were conducted during the breeding season (March 1 to August 31) in accordance with the MSHCP. California ground squirrels were active during all surveys, although increased activity was observed along the southern portion of the project site. Although the project site has moderate potential to support burrowing owl, no burrowing owl(s) or burrowing owl sign were observed on site during the protocol surveys. The results of the protocol burrowing owl surveys are included as Appendix D.

4.4 JURISDICTIONAL AQUATIC RESOURCES

Potential Corps-, RWQCB-, and CDFW-jurisdictional resources (Non-Wetland Water [NWW-]1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1) occur on site (Figures 3A to 3C; Appendix E).

The project site supports approximately 0.78 acre (7,026 linear feet) of potential non-wetland waters of the U.S. jurisdictional by the Corps (Table 8, Figure 3A) and approximately 7.51 acres (7,026 linear feet) of vegetated streambed and 0.97 acre of riparian habitat jurisdictional by the CDFW (Table 9, Figure 3B). Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project (Santa Ana RWQCB 2022), the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat). As such, the project site supports approximately 7.51 acres (7,026 linear feet) of potential non-wetland waters of the State and 0.97 acre of associated riparian habitat jurisdictional by the RWQCB (Table 10, Figure 3C). Further details are presented in the Beaumont Summit Station ARDR (RBC 2022a; Appendix E).

Table 8. Aquatic Resource Summary Table: Corps

Aquatic Resource Name	Cowardin Code	Active Channel Width Range (Feet)	Presence of OHWM/ Wetland	Dominant Vegetation[1]	Location (lat, long)	Acre(s)	Linear Feet
NWW-1	R6	4 – 6	Yes/No	Non-native Grassland	33.965908, -117.025153	0.01	71
NWW-1A	R6	6 – 6	Yes/No	Non-native Grassland	33.966006, -117.025084	0.01	73
NWW-2	R6	3 – 4	Yes/No	Non-native Grassland	33.964929, -117.023925	0.08	905

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Aquatic Resource Name	Cowardin Code	Active Channel Width Range (Feet)	Presence of OHWM/ Wetland	Dominant Vegetation[1]	Location (lat, long)	Acre(s)	Linear Feet
NWW-2A	R6	1 – 2	Yes/No	Mulefat Scrub	33.964977, -117.022656	<0.01	168
NWW-2B	R6	3 – 3	Yes/No	Non-native Grassland	33.965185, -117.022994	0.01	175
NWW-2C	R6	3 – 3	Yes/No	Non-native Grassland	33.964845, -117.023224	0.01	109
NWW-3	R6	4 – 8	Yes/No	Non-native Grassland	33.962391, -117.021747	0.37	2,553
NWW-3A	R6	3 – 6	Yes/No	Non-native Grassland	33.962760, -117.018132	0.15	1,290
NWW-3B	R6	4 – 4	Yes/No	Mulefat Scrub	33.963540, -117.022834	0.12	1,273
NWW-3B1	R6	1 – 4	Yes/No	Non-native Grassland	33.964055, -117.021934	0.03	409
					Total[2]	0.78	7,026

[1] See Figure 2 for all vegetation communities present within each aquatic resource.

[2] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

Table 9. Aquatic Resource Summary Table: CDFW

Aquatic Resource Name	Aquatic Resource Type	Vegetation Community	Width Range[1] (Feet)	Location (lat, long)	Acre(s)	Linear Feet[2]
NWW-1	Vegetated Streambed	Non-native Grassland	9 – 21	33.965912, -117.025153	0.02	71
NWW-1A	Vegetated Streambed	Non-native Grassland	8 – 30	33.966014, -117.025085	0.03	73
NWW-2	Vegetated Streambed	Non-native Grassland	15 – 60	33.964951, -117.023674	0.63	905
		Torrey's Scrub Oak		33.964834, -117.024985	0.08	
NWW-2A	Vegetated Streambed	Mulefat Scrub	1 – 2	33.964970, -117.022752	<0.01	168
		Non-native Grassland		33.965173, -117.023011	<0.01	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.964966, -117.022542	0.03	–
NWW-2B	Vegetated Streambed	Non-native Grassland	9 – 49	33.964825, -117.023223	0.08	175
NWW-2C	Vegetated Streambed	Non-native Grassland	20 – 47	33.962269, -117.020283	0.07	109

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Aquatic Resource Name	Aquatic Resource Type	Vegetation Community	Width Range[1] (Feet)	Location (lat, long)	Acre(s)	Linear Feet[2]
NWW-3	Vegetated Streambed	Non-native Grassland	12 – 140	33.962377, -117.022101	2.35	2,553
		Mulefat Scrub		33.962547, -117.021943	0.88	
		Eucalyptus Woodland		33.963045, -117.023804	<0.01	
		Non-native Riparian		33.961260, -117.018464	1.02	
		Blue Elderberry Stands		33.963695, -117.025272	0.11	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.962322, -117.022037	0.03	–
		Non-native Riparian		33.962170, -117.020330	0.65	
		Blue Elderberry		33.961528, -117.018718	0.04	
NWW-3A	Vegetated Streambed	Non-native Grassland	6 – 65	33.963610, -117.020925	0.87	1,290
		Blue Elderberry		33.962783, -117.018163	0.14	
	Riparian Habitat[3]	Blue Elderberry	N/A	33.962425, -117.019001	0.01	–
NWW-3B	Vegetated Streambed	Non-native Grassland	20 – 70	33.963566, -117.022903	0.36	1,273
		Mulefat Scrub		33.963562, -117.023254	0.61	
		Riversidean Sage Scrub		33.963522, -117.022922	0.07	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.963617, -117.022422	0.21	–
NWW-3B1	Vegetated Streambed	Non-native Grassland	5 – 30	33.964098, -117.021923	0.18	409
				Total[4]	8.48	7,026

[1] *Corresponds with the approximate stream bank widths observed during delineation. Width range accounts for entirety of streambed delineated, not individual vegetation communities.*

[2] *Linear feet not calculated for individual aquatic resource type and vegetation community (including riparian habitat that occurs outside of delineated streambed) to avoid redundant linear foot calculation where such areas overlap.*

[3] *Occurs outside of delineated streambed.*

[4] *Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.*

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Table 10. Aquatic Resource Summary Table: RWQCB

Aquatic Resource Name	Aquatic Resource Type[1]	Cowardin Code	Active Channel Width Range (Feet)[2]	Presence of OHWM/ Wetland	Dominant Vegetation[3]	Location (lat, long)	Acre(s)	Linear Feet[4]
NWW-1	Non-Wetland Water	R6	9 – 21	Yes/No	Non-native Grassland	33.965911, -117.025160	0.02	71
NWW-1A	Non-Wetland Water	R6	8 – 30	Yes/No	Non-native Grassland	33.966014, -117.025085	0.03	73
NWW-2	Non-Wetland Water	R6	15 – 60	Yes/No	Non-native Grassland	33.964934, -117.023860	0.71	905
NWW-2A	Non-Wetland Water	R6	1 – 2	Yes/No	Mulefat Scrub	33.964970, -117.022603	<0.01	168
	Riparian Habitat[5]	RP	N/A	None	Mulefat Scrub	33.964966, -117.022542	0.03	–
NWW-2B	Non-Wetland Water	R6	9 – 49	Yes/No	Non-native Grassland	33.965173, -117.023011	0.08	175
NWW-2C	Non-Wetland Water	R6	20 – 47	Yes/No	Non-native Grassland	33.964825, -117.023223	0.07	109
NWW-3	Non-Wetland Water	R6	12 – 140	Yes/No	Non-native Grassland	33.962631, -117.022409	4.36	2,553
	Riparian Habitat[5]	RP	N/A	None	Non-native Riparian	33.962302, -117.021813[6]	0.72	–
NWW-3A	Non-Wetland Water	R6	6 – 65	Yes/No	Non-native Grassland	33.962732, -117.018281	1.01	1,290
	Riparian Habitat[5]	RP	N/A	None	Blue Elderberry	33.962362, -117.019172	0.01	–
NWW-3B	Non-Wetland Water	R6	20 – 70	Yes/No	Mulefat Scrub	33.963595, -117.022740	1.04	1,273
	Riparian Habitat[5]	RP	N/A	None	Mulefat Scrub	33.963610, -117.020925	0.21	–
NWW-3B1	Non-Wetland Water	R6	5 – 30	Yes/No	Non-native Grassland	33.964098, -117.021923	0.18	409
						Total[7]	8.48	7,026

[1] Based on comments provided by the Santa Ana RWQCB, the RWQCB has asserted jurisdiction beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat).

[2] Based on comments provided by the Santa Ana RWQCB, the widths of RWQCB-jurisdictional non-wetland waters correspond with the approximate CDFW stream bank widths observed during delineation (i.e., to the top of the channel banks).

[3] See Figure 2 for all vegetation communities present within each aquatic resource.

[4] Linear feet not calculated for riparian habitat that occurs outside of non-wetland waters to avoid redundant linear foot calculations where such areas overlap.

[5] Based on comments provided by the Santa Ana RWQCB, RWQCB jurisdiction extends beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of channel banks and associated riparian habitat). This riparian habitat occurs outside of the delineated non-wetland water (i.e., the top of channel banks).

[6] Representative coordinates of riparian habitat associated with NWW-3. See Figure 3C for all riparian habitat associated with NWW-3.

[7] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

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The project site supports five swales (Swale [S-]1 through S-5) that are not expected to be jurisdictional by the Corps, RWQCB, or CDFW since they did not display an observable OHWM, bed and bank, or other evidence of conveying regular flows on site. The project site also supports five basins (Basin [B-]1 through B-5) that are not expected to be jurisdictional by the Corps, RWQCB, or CDFW since they did not display an observable OHWM or bed and bank and did not meet the appropriate wetland parameters, and instead displayed cracked soils and some concavity within the otherwise flat landscape indicative of a basin. The project site supports eight severely incised erosional features (Erosional Feature [EF-]1 through EF-8) that are not expected to be jurisdictional by the Corps, RWQCB, or CDFW since they did not display an observable OHWM or defined bed and bank and do not convey flows downstream. The project site also supports one abandoned ditch (Ditch [D-]1) that is not expected to be jurisdictional by the Corps, RWQCB, or CDFW since it displayed a break in bank slope but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other OHWM indicators.

Complete results are presented under separate cover in the Beaumont Summit Station ARDR (RBC 2022a; Appendix E).

4.5 MSHCP RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

The project site supports several drainages and riparian areas that meet the MSHCP definition of riparian/riverine areas; the project site does not support areas that meet the MHSCP definition of a vernal pool.

The on-site drainages and associated tributaries (NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1; Figure 3B), further described as potentially CDFW-jurisdictional resources above in Section 4.4, meet the MSHCP definition of riparian/riverine areas as they contain freshwater flow during “a portion of the year,” specifically after rain events (RCA 2003). Based on the field observations in April and June 2021, the on-site drainages and associated tributaries are expected to convey ephemeral flows (i.e., only in direct response to precipitation). NWW-3 also receives runoff from development south of the review area that is collected and conveyed on site through a culverted storm drain outlet. Note that previously, the on-site drainages and associated tributaries also received runoff from the former on-site agricultural operations (poultry and livestock farm). Based on field observations and a review of Google Earth aerial imagery, USGS NHD data, and USFWS NWI data, flows from NWW-1, NWW-2, and NWW-3 likely continue off site and downstream, flowing into a feature mapped by the USGS NHD as an ephemeral stream that continues for approximately 4 miles until transitioning to an unnamed tributary for approximately 7.5 miles, then connecting with the San Timoteo Wash. The San Timoteo Wash then continues for approximately 6.6 miles before outletting into the Santa Ana River, which ultimately discharges into the Pacific Ocean (USGS 2020).

Additionally, NWW-2A, NWW-3, NWW-3A, and NWW-3B support riparian habitat dominated by trees or shrubs “which occur close to or which depend upon soil moisture from a nearby fresh water source” (MSHCP 2003). Specifically, NWW-2A, NWW-3, and NWW-3B support mulefat scrub; NWW-3 supports non-native riparian habitat that is dominated by the invasive tree-of-

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heaven; and NWW-3 and NWW-3A support blue elderberry stands (Figure 3B). Therefore, the features which are described as CDFW-jurisdictional riparian habitat meet the definition of MSHCP riparian habitat. Additionally, the mulefat scrub within and adjacent to NWW-3 and NWW-3B provide suitable habitat for least Bell's vireo, an MSHCP riparian/riverine wildlife species.

The area of non-native riparian habitat located south of and not adjacent to NWW-3 (0.67 acre) and the small areas of mulefat scrub located south and east of and not adjacent to NWW-3B (0.38 acre) (Figure 5), do not receive "freshwater flow during all or a portion of the year" as they are not located within or directly adjacent to a drainage (RCA 2003). Additionally, these areas are dominated by tree-of-heaven (Facultative Upland [FACU]) and mulefat (Facultative [FAC]), respectively, which are not trees or shrubs that "depend upon soil moisture from a nearby fresh water source" (RCA 2003). Therefore, these areas do not fit the MSHCP definition of a riparian/riverine area.

S-1 through S-5, EF-1 through EF-8, D-1, and B1 through B-5, further described above in Section 4.5, do not meet the MSHCP definition of a riparian/riverine area, as they did not appear to convey or receive flows, and therefore do not receive "freshwater flow during all or a portion of the year" (RCA 2003). Additionally, they are dominated by non-native grassland vegetation and do not "contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source" (RCA 2003).

No areas within the project site meet the MSHCP definition of a vernal pool. Although B-1 through B-5 are located within concave areas dominated by non-native grassland vegetation during the drier portion of the growing season, obligate hydrophytes and facultative wetland plant species do not dominate these basins during the wet season based on field surveys, the known history of the project site, and a review of historic aerial imagery. Specifically, no obligate hydrophytes were observed within the basins during the April 22, 2021 field survey. Although a few mulefat (FAC) and tree tobacco (*Nicotiana glauca*; FAC) were observed within several of the basins, the vegetation was dominated by non-native grasses. Additionally, sometime between 1976 and 1996, a former poultry farm began developing B-1 through B-5 for use as settling basins to hold manure from chickens, pigs, and cattle, a use that would not support establishment of vernal pools. Based on the USDA NRCS, the basins are dominated by Ramona sandy loam, 5 to 8 percent slopes, eroded; terrace escarpments; and Ramona sandy loam, 2 to 5 percent slopes, eroded (Appendix F), soils that are not indicative of a vernal pool. RBC sampled soils within B-4 within an area exhibiting cracked soils and no hydric soil parameters (Appendix F) during the formal aquatic resources delineation on June 7, 2021, which was representative of the conditions within B-1, B-2, B-3, and B-5.

Additional details regarding the conditions on site are provided in the Beaumont Summit Station ARDR (RBC 2022a; Appendix E).

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5 IMPACTS

Direct impacts are caused by the project and occur at the same time and place as the project. Any alteration, disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Direct impacts would include direct losses to native habitats, potential jurisdictional waters, wetlands, and special-status species; and diverting natural surface water flows. Direct impacts on wildlife could include injury, death, and/or harassment of listed and/or special-status species. Direct impacts could also include the destruction of habitats necessary for species breeding, feeding, or sheltering. Direct impacts on plants can include crushing of adult plants, bulbs, or seeds.

Indirect impacts can result from project-related activities where biological resources are affected in a manner that is not direct. Indirect impacts may occur later in time or at a place that is farther removed in distance from the project than direct impacts, but indirect impacts are still reasonably foreseeable and attributable to project-related activities. Examples include habitat fragmentation; elevated noise, dust, and lighting levels; changes in hydrology, runoff, and sedimentation; decreased water quality; soil compaction; increased human activity; and the introduction of invasive wildlife (domestic cats and dogs) and plants (weeds).

Cumulative impacts refer to incremental individual environmental effects of two or more projects when considered together. Such impacts taken individually may be minor but are collectively significant in light of regional impacts.

CEQA Guidelines Form J thresholds of significance have been used to determine whether project implementation would result in a significant direct, indirect, and/or cumulative impact. These thresholds are based on Appendix G of the state CEQA Guidelines (CCR Title 14, Division 6, Chapter 3, Sections 15000–15387). A significant biological resources impact would occur if the project would:

- 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 CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy, or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan.

5.1 IMPACTS ON NATIVE VEGETATION

The proposed project will primarily result in permanent impacts on upland vegetation communities and land uses, including 103.80 acres of non-native grassland and 48.37 acres of developed land (Figure 5, Table 11). Additional habitats will be directly affected by the project and include impacts on >0.01 acre of chamise chaparral, 1.50 acres of disturbed land, 0.10 acre of eucalyptus woodland, 1.14 acres of mulefat scrub, 0.23 acre of Riversidean sage scrub, and 1.09 acres of Torrey's scrub oak stands. Chamise chaparral and Riversidean sage scrub are native communities that are common, widespread, and abundant in the state. Mulefat scrub is not considered a sensitive vegetation community by CDFW; however, this habitat is part of jurisdictional resources on-site and is protected as outlined in section 5.7 below. Torrey's scrub oak is not identified by state or federal agencies as a sensitive species or habitat; however, because this vegetation is mapped unusually due to its monocultural characteristics, it is being treated as scrub oak chaparral for the purposes of this impact analysis.

Eucalyptus woodland and non-native grassland are common naturalized vegetation communities. Additionally, disturbed habitat will be impacted; this land cover type provides minimal biological value. The developed habitat provides minimal-to-no biological value.

Table 11. Beaumont Summit Station Project Site Vegetation Communities/Land Use Impacts

Vegetation Community/Land Use	Project Site Impacts (acres)
Upland	
Chamise Chaparral	>0.01
Developed	48.37
Disturbed	1.50
Eucalyptus Woodland	0.10
Non-native Grassland	103.80
Riversidean Sage Scrub	0.23
Torrey's Scrub Oak Stands	1.09
Riparian	
Mulefat Scrub	1.14
Total	156.23[1]

[1] *Acreages summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.*

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Although impacts on native vegetation communities will occur with project implementation, such impacts can be offset through payment of MSHCP Local Development Mitigation Fees (Section 6.1) that would be used to acquire and maintain high-quality habitat within the MSHCP Reserve. With payment of such fees, impacts on native vegetation communities would be less than significant.

5.2 IMPACTS ON MSHCP NARROW ENDEMIC OR FEDERALLY/STATE LISTED PLANT SPECIES

The proposed project will not impact federally and/or state listed or MSHCP Narrow Endemic Plant species as none are present or have moderate to high potential to occur within the project site.

5.3 IMPACTS ON NON-LISTED SPECIAL-STATUS PLANT SPECIES

The proposed project will not impact special-status plants as none are present or have a moderate to high potential to occur within the project site.

5.4 IMPACTS ON FEDERALLY/STATE LISTED WILDLIFE SPECIES

An individual male Least Bell's vireo was detected within the mulefat scrub in the western portion of the project site during early protocol-level surveys (i.e., surveys one and two of eight protocol surveys). However, least Bell's vireo was not detected during the remaining protocol-level surveys (Appendix C). This species still has moderate to high potential to occur within the project due to the presence of suitable habitat. This project would result in the removal of suitable mulefat scrub habitat (2.14 acres) which could result in significant impacts to least Bell's vireo. Additionally, suitable mulefat scrub and non-native riparian habitat occurs south of to the grading footprint (Figure 5). Project specific measure MM-3 details the strategy to avoid vegetation removal during the bird breeding season. With the implementation of this measure, impacts to least Bell's vireo would be less than significant.

The proposed project will not impact any other federally and/or state listed wildlife species as no other species are present or have potential to occur on site.

5.5 IMPACTS ON NON-LISTED SPECIAL-STATUS WILDLIFE SPECIES

The non-listed special status wildlife species detected on-site during all biological surveys includes coastal whiptail, California horned lark, cooper's hawk, yellow warbler, and San Diego black-tailed jackrabbit. The project also has moderate to high potential to support orange-throated whiptail, loggerhead shrike, white-tailed kite, and yellow-breasted chat. The project would result in habitat loss for each of this species. However, these species are considered adequately covered under the MSHCP and with payment of MSHCP Local Development Mitigation Fees (Section 6.1) to mitigate impacts on native vegetation, impacts on these species would be considered less than significant.

Southern California legless lizard is a California Species of Special concern that has moderate potential to occur within the project due to the presence of suitable habitat and is not covered under the MSHCP. A majority of the moderately suitable habitat for southern California legless lizard within the project site occurs within the drainage south of the grading footprint, which will be avoided during construction of the proposed project. However, the proposed project would result in removal of some suitable habitat within the smaller drainages in the northeast portion of the site, which would be adverse. Payment of MSHCP Local Development Mitigation Fees (Section 6.1) provides habitat-based mitigation within the plan area for all wildlife and plant species, including MSHCP-covered species and Species of Special Concern, impacted due to the loss of suitable habitat from covered projects. As such, loss of habitat for Species of Special Concern will be offset through this habitat-based mitigation under the MSHCP such that the loss of habitat resulting from the proposed project would not constitute significant impacts. These species are considered adequately covered under the MSHCP; habitat-based impacts on non-listed special-status wildlife species would be less than significant, conditional upon satisfaction of previous mitigation requirements.

Although not detected during protocol surveys, the project site has moderate potential to support burrowing owl which is a California Species of Special Concern (Appendix D). To avoid impacts on burrowing owl, a pre-construction survey will be required pursuant to the MSHCP. Through compliance with the MSHCP guidelines and MM-1 (Section 6.2), impacts on burrowing owls would be less than significant.

5.6 IMPACTS ON NESTING BIRDS

The proposed project has the potential to impact active bird nests if vegetation is removed or ground disturbing activities are initiated during the nesting season (February 1 to August 31). All habitat and land cover within the project site has the potential to support nesting birds. The tree and shrub communities have the potential to support a variety of sensitive and non-sensitive avian species. The non-native grassland and disturbed habitats have the potential to support ground nesting species, such as western meadowlark (*Sturnella neglecta*) and California horned lark. Even the developed portions of the project still have the potential to support non-sensitive species such as house finch (*Haemorhous mexicanus*). Impacts on nesting birds are prohibited by the MBTA and California Fish and Game Code. Project-specific measure MM-2 which will avoid project impacts on nesting birds is identified in Section 6.3 of this report. With the implementation of this measure, impacts on nesting birds would be less than significant.

5.7 IMPACTS ON JURISDICTIONAL AQUATIC RESOURCES

Based upon the results of the Beaumont Summit Station ARDR (RBC 2022a; Appendix E), the proposed project would permanently impact approximately 0.25 acre (3,072 linear feet) of non-wetland waters of the U.S. jurisdictional by the Corps (Table 12; Figure 5) and 2.17 acres (3,072 linear feet) of vegetated streambed and 0.24 acre of associated riparian habitat jurisdictional by the CDFW (Table 13; Figure 5). Additionally, based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project (Santa Ana RWQCB 2022), the proposed project would permanently impact approximately 2.17 acres (3,072 linear feet) of non-wetland waters of the State and 0.24 acre of associated riparian habitat jurisdictional by the RWQCB (Table 14; Figure 5).

Permitting through the Corps, RWQCB, and CDFW would be required for impacts on non-wetland waters of the U.S. jurisdictional by the Corps, non-wetland waters of the State jurisdictional by the RWQCB, and vegetated streambed and associated riparian habitat jurisdictional by the CDFW. The project applicant will be responsible for acquiring the necessary authorizations required by the regulatory agencies and associated compensatory mitigation requirements, if applicable.

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Table 12. Potential Corps Aquatic Resource Impacts

Aquatic Resource Name	Project Site Impacts (acres)	Project Site Impacts (linear feet)
NWW-1	0.01	71
NWW-1A	0.01	73
NWW-2	0.08	905
NWW-2A	<0.01	168
NWW-2B	0.01	175
NWW-2C	0.01	109
NWW-3	0.00	0
NWW-3A	0.01	133
NWW-3B	0.09	1,030
NWW-3B1	0.03	409
Total[1]	0.25	3,072

[1] *Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.*

Table 13. Potential CDFW Aquatic Resource Impacts

Aquatic Resource Name	Aquatic Resource Type	Project Site Impacts (acres)	Project Site Impacts (linear feet)[1]
NWW-1	Vegetated Streambed	0.02	71
NWW-1A	Vegetated Streambed	0.03	73
NWW-2	Vegetated Streambed	0.71	905
NWW-2A	Vegetated Streambed	<0.01	168
	Riparian Habitat[2]	0.03	–
NWW-2B	Vegetated Streambed	0.08	175
NWW-2C	Vegetated Streambed	0.07	109
NWW-3	Vegetated Streambed	0.00	0
	Riparian Habitat[2]	0.00	–
NWW-3A	Vegetated Streambed	0.06	133
	Riparian Habitat[2]	0.00	–
NWW-3B	Vegetated Streambed	1.00	1,030
	Riparian Habitat[2]	0.21	–

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Aquatic Resource Name	Aquatic Resource Type	Project Site Impacts (acres)	Project Site Impacts (linear feet)[1]
NWW-3B1	Vegetated Streambed	0.18	409
	Total[3]	2.41	3,072

[1] Linear feet not calculated for individual aquatic resource type and vegetation community (including riparian habitat that occurs outside of delineated streambed) to avoid redundant linear foot calculation where such areas overlap.

[2] Occurs outside of delineated streambed.

[3] Acreages and linear feet summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

Table 14. Potential RWQCB Aquatic Resource Impacts

Aquatic Resource Name	Aquatic Resource Type[1]	Project Site Impacts (acres)	Project Site Impacts (linear feet)[2]
NWW-1	Non-Wetland Water	0.02	71
NWW-1A	Non-Wetland Water	0.03	73
NWW-2	Non-Wetland Water	0.71	905
NWW-2A	Non-Wetland Water	<0.01	168
	Riparian Habitat[3]	0.03	–
NWW-2B	Non-Wetland Water	0.08	175
NWW-2C	Non-Wetland Water	0.07	109
NWW-3	Non-Wetland Water	0.00	0
	Riparian Habitat[3]	0.00	–
NWW-3A	Non-Wetland Water	0.06	133
	Riparian Habitat[3]	0.00	–
NWW-3B	Non-Wetland Water	1.00	1,030
	Riparian Habitat[3]	0.21	–
NWW-3B1	Non-Wetland Water	0.18	409
	Total[4]	2.41	3,072

[1] Based on comments provided by the Santa Ana RWQCB, the RWQCB has asserted jurisdiction beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat).

[2] Linear feet not calculated for riparian habitat that occurs outside of non-wetland waters to avoid redundant linear foot calculations where such areas overlap.

[3] Based on comments provided by the Santa Ana RWQCB, RWQCB jurisdiction extends beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of channel banks and associated riparian habitat). This riparian habitat occurs outside of the delineated non-wetland water (i.e., the top of channel banks).

[4] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

5.8 IMPACTS ON MSHCP RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

MSHCP riparian/riverine areas, as defined by Section 4.5, occur on the project site. The project's CDFW-jurisdictional vegetated streambed meets the definition of MSHCP riverine and

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the CDFW-jurisdictional riparian habitat meets the definition of MSHCP riparian habitat; impacts on CDFW-jurisdictional resources are equal to impacts on MSHCP riparian/riverine. Therefore, the proposed project would permanently impact 2.41 acres of MSHCP riparian/riverine resources. Per the MSHCP, if the proposed project cannot avoid riparian/riverine habitat, a DBESP Analysis would be required to propose mitigation to replace the lost functions and values of MSHCP riparian/riverine resources and demonstrate equivalent or superior function and value of the resources. RBC completed the *Beaumont Summit Station Project DBESP Report* in July 2022 (RBC 2022b).

5.9 IMPACTS ON WILDLIFE CORRIDORS

The Project site is situated at the northern end of the City of Beaumont and occurs immediately north of a developed residential area. Though undeveloped land occurs to the north of the site, nearby areas to the west and immediately south are highly developed. The site is not identified as a wildlife corridor or criteria area in the MSHCP and does not serve as a regional wildlife corridor. The drainages in the southwest portion of the site likely serve as minor local wildlife corridors and avian 'stepping stone' corridors. The largest drainage (Planning Area 3) would not be developed as part of the Project so it would continue to function as a local wildlife corridor. Significant impacts on wildlife corridors are not anticipated with project implementation.

5.10 IMPACTS ON LOCAL POLICIES AND ORDINANCES

Implementation of the Project would be subject to all applicable Federal, State, regional, and local policies and regulations related to the protection of biological resources as outlined in herein. The project would be constructed in compliance with the requirements of the Beaumont General Plan and the Beaumont Municipal Code. The Beaumont General Plan provides goals and policies for the conservation of biological resources. Goal 8.5 calls for a City that preserves and enhances its natural resources and Policy 8.5.1 calls for the minimization of the loss of sensitive species and critical habitat areas in areas planned for future development.

Pursuant to Unincorporated Riverside County Ordinance No. 499 (as amended though 499.11), "No person, firm, corporation, public district, public agency or political subdivision shall remove or severely trim any tree planted in the right of way of any County highway without first obtaining a permit from the County Transportation Director to do so". No street trees occur within the project site that would be considered a County highway or County road tree. As such, no impacts on trees protected under Ordinance No. 499.11 are expected with project implementation.

Chapter 12.24 of the Riverside County Code of Ordinances also includes regulations related to tree removal (County of Riverside 2016). According to the Unincorporated Riverside County Ordinance No. 559 (as amended through 559.7), the removal of living native trees on parcels or property greater than 0.5 acre in size, located in the unincorporated Riverside County, and above 5,000 feet amsl requires a permit. The project site elevation is below 5,000 feet amsl; as such, this ordinance is not applicable and no impacts on trees protected under Riverside County Ordinance No. 559 would occur with project implementation.

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Commented [ET9R8]: Melanie- I updated this to match the way we bring up the ARDR & BTR in the DBESP.. is that sufficient for this paragraph? I didn't want to dive into when it'll be finalized, submitted, etc.

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The City does not have a tree preservation policy or ordinance; however, an application and approval from the City is required for any removal of front yard/street tree or trees. As described above, no street trees occur on site and no residential structures and associated front yards occur on site. There are occasional trees near the outbuildings at the east of the site; however, these do not appear to meet the definition of street or yard trees. As such, the project would comply with City of Beaumont requirements and no street tree approvals would be required, as no impacts to such resources would occur with project implementation.

Based on compliance with all local policies and ordinances, impacts are considered to be less than significant, and no mitigation is required.

5.11 INDIRECT IMPACTS ON BIOLOGICAL RESOURCES

In the context of biological resources, indirect impacts are those effects associated with developing areas adjacent to native open space. Potential indirect effects associated with development include water quality impacts from site drainage into adjacent open space/downstream aquatic resources; lighting effects; noise effects; invasive plant species from landscaping; and effects from human access into adjacent open space, such as recreational activities (including off-road vehicles and hiking), pets, dumping, etc. Temporary, indirect effects may also occur as a result of construction-related activities.

Volume I, Section 6.1.4 of the MSHCP (Urban/Wildland Interface Guidelines) identifies guidelines that 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 proposed project is not located in proximity to any MSHCP Conservation Areas. As such, the proposed project will not result in significant indirect effects on biological resources. Furthermore, the Urban/Wildland Interface Guidelines do not apply to the proposed project.

5.12 CUMULATIVE IMPACTS ON 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. The project site is relatively disturbed and does not support significant stands of native vegetation, with the possible exception of the riparian habitat in the southwestern portion of the site which will remain undeveloped. Further, the project will be fully compliant with the regional MSHCP which protects biological resources regionally such that cumulative impacts within the plan area are avoided. As such, the proposed project will not result in significant cumulative effects.

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6 MITIGATION AND AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for actual or potential impacts on biological resources.

6.1 DEVELOPMENT FEES

Implementation of the proposed project will require payment of MSHCP Local Development Mitigation Fees. Based on the local development mitigation fee schedule for fiscal year 2022 (effective July 1, 2021 – December 31, 2021), fees would be $11,982/acre for commercial and industrial development and $2,935/acre for low-density residential (RCA 2021c).

6.2 BURROWING OWL

Because the project is located within the MSHCP Burrowing Owl Survey Area, focused surveys for burrowing owl were performed. Burrowing owls and/or burrowing owl sign were not observed at the project site during protocol-level surveys. However, due to the presence of suitable habitat on site, pre-construction surveys will be required.

Pursuant to MSHCP Objective 6 for burrowing owls, projects are required to conduct pre-construction presence/absence surveys for burrowing owls within the MSHCP Burrowing Owl Survey Area where suitable habitat is present. As such, the following mitigation and avoidance measure (MM) is recommended to avoid direct impacts on burrowing owls. Note that the mitigation language outlined below is based on DEIR input from CDFW and differs slightly from 2012 CDFW take avoidance guidance; we concur that the revised survey timing will adequately avoid take.

> **MM-1** – A qualified biologist will conduct a pre-construction presence/absence survey for burrowing owls between 30 and 60 days prior to site disturbance. Additional pre-construction focused surveys for burrowing owls will be conducted within three days prior to site disturbance including vegetation clearing. If the pre-construction surveys confirm occupied burrowing owl habitat, or if burrowing owls are detected after the project has started, then construction activities shall be halted immediately. If burrowing owls are documented on site, CDFW will be notified within 48-hours of detection and the take of active nests will be avoided. To avoid take of active nests, a qualified biologist will develop a Burrowing Owl Plan that describes avoidance, relocation, monitoring, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrowing sites and details on proposed buffers if avoiding the burrowing owls or information on the adjacent or nearby suitable habitat avoidable to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Burrowing Owl Plan will be reviewed by CDFW, USFWS, and the Western Riverside County Regional Conservation Authority.

6.3 NESTING BIRDS

As noted above, the project site has the potential to support nesting birds in trees or on the ground. To avoid impacts on nesting birds, the following measure is recommended:

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MM-2 – To ensure compliance with CFGC § 3503, 3503.5, and 3513 and to avoid potential impacts to nesting birds, vegetation clearing and ground disturbing activities shall be conducted outside of the bird nesting season. If avoidance of the nesting season is not feasible, then a qualified biologist will conduct a nesting bird survey within three days prior to any disturbance of the site, including but not limited to vegetation clearing, disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests depending on the level of activity within the buffer and species observed, and the buffer areas shall be avoided until the nests are no longer occupied, and the juvenile birds can survive independently from the nests.

During construction activities, the qualified biologist shall continue biological monitoring activities at a frequency recommended by the qualified biologist using their best professional judgement. If nesting birds are detected, avoidance and minimization measures may be adjusted and construction activities stopped or redirected by the qualified biologist using their best professional judgement to avoid Take of nesting birds.

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6.4 LEAST BELL'S VIREO

The project supports suitable riparian habitat for least Bell's vireo, a state and federally listed as endangered species and an MSHCP covered species. The breeding season for this species extends from about March 15 through August 31, with peak nesting activity occurring in April, although it can continue to the first week of July. An individual male least Bell's vireo male was observed during 2021 surveys within a drainage in the southwestern portion of the project site; the observation site was immediately south of proposed project development.

To avoid potential project impacts on nesting least Bell's vireo, the following mitigation and avoidance measures are required:

MM-3 – Project activities shall not be initiated within 100 feet of any least Bell's vireo suitable habitat area(s) during the species' breeding season (March 15-August 31) unless a negative USFWS protocol survey has been conducted within one year of construction kickoff and findings were negative.

If groundbreaking activities occur outside the least Bell's vireo nesting season (i.e., September 16-March 14), a qualified biologist shall perform a presence/absence survey within suitable habitat on-site, and shall continue these surveys on a monthly basis, especially as breeding season commences.

If least Bell's vireo nesting is discovered, either during protocol surveys, monthly presence/absence surveys, or incidentally, no project activities shall occur within 300 feet of any least Bell's vireo nest site until it has been confirmed that the young have fledged, and the nest is no longer active. A qualified biologist shall always be present when construction crews are working within 1/8 mile surrounding an identified least Bell's vireo nest site to ensure that the birds do not react unfavorably to project activities. If the qualified biologist observes signs of agitation stemming from project activities, the activities shall cease and not resume until the birds' behavior normalizes. If the birds continue to exhibit signs of agitation, project activities shall be adjusted to avoid impacts on nesting least Bell's vireo. Additionally, in the presence of least Bell's vireo nests, noise level from project activities shall not to exceed 65 dBA at the edge of occupied habitat. If this is not possible, a noise barrier shall be constructed to avoid adverse impacts to any least Bell's vireo nest/s.

During the least Bell's vireo breeding season, artificial light shall not be cast into suitable habitat when night work is occurring.

A qualified biologist shall conduct a training session for project personnel prior to grading in conformance with MSCHP best management practices requirements. The training shall include a description of least Bells vireo and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.

6.5 JURISDICTIONAL AQUATIC RESOURCES MITIGATION

As noted above, the proposed project would permanently impact 0.25 acre of non-wetland waters of the U.S. jurisdictional by the Corps and 2.17 acres of vegetated streambed and 0.24 acre of riparian habitat jurisdictional by the CDFW. Furthermore, based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project (Santa Ana RWQCB 2022), the proposed project would permanently impact 2.17 acres of non-wetland waters of the State and 0.24 acre of associated riparian habitat jurisdictional by the RWQCB. Impacts on Corps-, RWQCB-, and CDFW-jurisdictional aquatic resources would require Section 404 authorization from the Corps, a Section 401 Water Quality Certification from the RWQCB, and a Streambed Alteration Agreement from the CDFW. Additionally, compensatory mitigation may be required by the regulatory agencies to offset the proposed project impacts. With implementation of the following mitigation measure, impacts on Corps-, RWQCB-, and CDFW-jurisdictional waters would be reduced to less than significant. The following mitigation for jurisdictional aquatic resources is required:

MM-4 – Prior to any ground-disturbing activity near jurisdictional aquatic resources, applicable permits shall be obtained through the Corps, RWQCB, and CDFW for impacts on jurisdictional aquatic resources. The Applicant shall implement/comply with all permit conditions and mitigation measures required by the resource agencies. Compensatory mitigation to offset impacts on jurisdictional aquatic resources may be implemented through on-site or off-site, permittee-responsible mitigation, in-lieu fee (ILF) program or mitigation bank credit purchase, or a combination of these options depending on availability.

The proposed compensatory mitigation strategy is as follows, for a total 3:1 mitigation ratio:

1. Purchase of 4.82 credits (2:1 mitigation ratio) from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed ILF Program), as available; AND
2. An additional 1:1 mitigation via one of the following measures, dependent on negotiations with the resource agencies during the permit evaluation process:
    a. On-site preservation, including enhancement and revegetation within Specific Plan Planning Area 3, with a focus on removal of invasive tree of heaven (*Ailanthus altissima*) and replanting with native species such as mulefat (*Baccharis salicifolia*) and other appropriate species, OR

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A minimum 1:1 mitigation ratio (0.25 acre Corps/0.25 acre RWQCB/2.41 acres CDFW) is typically required, though ratios may be higher. …

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b. Purchase of 2.41 credits (1:1 mitigation ratio) from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed ILF Program), as available.

The Corps, RWQCB and CDFW will make final determination regarding compensatory mitigation requirements during the permit evaluation process. If mitigation credits are not available at the Santa Ana River Watershed ILF Program, purchase of credits at an alternative mitigation bank will be pursued in consultation with the regulatory agencies during the aquatic resources permitting process. Additionally, if on-site enhancement is pursued, an enhancement and revegetation plan will be developed in consultation with the regulatory agencies during the aquatic resources permitting process.

6.6 MSHCP MITIGATION

As noted above, MSHCP riparian/riverine areas, as defined by Section 4.5, occur on the project site. The proposed project would permanently impact 2.41 acres of MSHCP riparian/riverine resources. Preparation of a project-specific DBESP is required for conformance with MSHCP riparian/riverine requirements. Additionally, as a condition of the MSHCP, avoided land areas will be conserved as part of the proposed project. As such, the following mitigation and avoidance measures are required:

MM-5 – The proposed project is an MSHCP Covered Activity and subject to the MSHCP implementation procedures. Prior to approval of final grading permits, the City of Beaumont will ensure full implementation of the Western Riverside County MSHCP for the project, which includes, but is not limited to, sending a Determination of Biologically Equivalent or Superior Preservation (DBESP) to CDFW and USFWS for a 60-day review and response period.

MM-6 – Avoided MSHCP riparian/riverine areas, and associated functions and values, will be conserved through the use of a legal instrument such as deed restrictions, a conservation easement, or other appropriate mechanisms.

7 MSHCP CONSISTENCY ANALYSIS

The purpose of this section is to provide an analysis of the proposed project's compliance with biological aspects of the Western Riverside County MSHCP. Specifically, this analysis evaluates the proposed project's consistency with MSHCP Reserve assembly requirements, Section 7.3 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), Section 7.4 (Protection of Narrow Endemic Plant Species), Section 7.5 (Guidelines Pertaining to the Urban/Wildlands Interface), and Section 7.6 (Additional Survey Needs and Procedures).

7.1 RELATIONSHIP OF THE PROJECT SITE TO THE MSHCP

The project site is not located within a Cellgroup or Criteria Area. As such, the project is not subject to the HANS or JPR processes. The project site is located within the NEPSSA for Marvin's onion and multi-stemmed dudleya, as well as the MSHCP Burrowing Owl Survey Area but is not located within the Criteria Area Plant Species Survey Areas, Mammal, Invertebrate, or Amphibian Survey Areas.

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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 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.

7.2 PROJECT RELATIONSHIP TO RESERVE ASSEMBLY

The project site is not located within the MSHCP Criteria Area. As such, the project site is not targeted for conservation by the MSHCP to meet Reserve Assembly goals. The proposed project is not subject to the HANS or JPR processes.

7.3 PROTECTION OF RIPARIAN/RIVERINE AREAS AND VERNAL POOLS AND ASSOCIATED SPECIES

Riparian/riverine areas are defined by the MSHCP as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with freshwater flow during all or a portion of the year (RCA 2003)."

Based on the formal aquatic resources delineation conducted on June 3 and June 7, 2021, the project site supports approximately 8.48 acres of MSHCP riparian/riverine areas associated with NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 (Section 5.8). Because the CDFW jurisdictional resources within the project site meet the definition of MSHCP riparian/riverine, impacts to CDFW jurisdictional resources are equal to impacts to MSHCP riparian/riverine. Therefore, the proposed project would permanently impact 2.41 acres of MSHCP riparian/riverine resources.

Per the MSHCP, if the proposed project cannot avoid riparian/riverine habitat, a DBESP Analysis would be required to propose mitigation to replace the lost functions and values of MSHCP riparian/riverine resources and demonstrate equivalent or superior function and value of the resources. If the proposed project will impact MSHCP riparian/riverine resources, a complete DBESP Analysis is required to be consistent with the MSHCP. This analysis was completed in the *Beaumont Summit Station Project DBESP Report* (RBC 2022b).

Please note that a male least Bell's vireo was observed during protocol vireo surveys one and two (of eight surveys) in an area of habitat that meets the definition of an MSCHP riverine resource; however, no females or nesting were observed. The riparian habitat within the project site lacks a dense understory and canopy suitable for the MSHCP riparian/riverine wildlife species southwestern willow flycatcher and western yellow-billed cuckoo; there is very low to no potential for the project site to support these species. The project site does not support vernal pools and therefore does not support vernal pool species. No other riparian/riverine or vernal pool associated species are anticipated on-site based on lack of suitable habitat; please refer to Tables 5-7 for detailed species analyses.

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7.4 PROTECTION OF NARROW ENDEMIC PLANTS

Volume I, Section 6.1.3 of the MSHCP requires that within identified Narrow Endemic Plant Species Survey Area, site-specific focused surveys for Narrow Endemic Plant Species will be required for all public and private projects where appropriate soils and habitat are present.

The project site is located within a NEPSSA, which identifies the target species Marvin's onion and many-stemmed dudleya. The project site does not contain appropriate soils or suitable habitat for these species, and therefore the project will not impact Narrow Endemic Plants; please refer to Table 5 for detailed species analyses.

The proposed project will be consistent with Volume I, Section 6.1.3 of the MSHCP.

7.5 GUIDELINES PERTAINING TO THE URBAN/WILDLAND INTERFACE

The MSHCP Urban/Wildland Interface Guidelines are intended to address indirect impacts associated with locating development in proximity to the MSHCP Conservation Area. The proposed project is not located in proximity to the MSHCP Conservation Area, and therefore the Urban/Wildland Guidelines do not apply to the project.

7.6 ADDITIONAL SURVEY NEEDS AND PROCEDURES

Volume I, Section 6.3.2 of the MSHCP requires habitat assessments and focused surveys for projects located within the Criteria Area Plant Species Survey Areas, Burrowing Owl, Mammal, Amphibian, and Invertebrate Survey Areas. The project site is located with the MSHCP Burrowing Owl Survey Area, and NEPSSA for Marvin's onion and many-stemmed dudleya, but not the Criteria Area Plant Species Survey Areas, Mammal, Amphibian, or Invertebrate Survey Areas. As described in Section 4, the site does not support suitable habitat for Narrow Endemic Plant Species Marvin's onion or many-stemmed dudleya, and these species were not detected during 2021 surveys. A focused burrowing owl survey was conducted in 2021 and was negative; however, suitable habitat for this species occurs on the project site. As noted above in Section 6.1 of this report, pre-construction burrowing owl surveys will be required to comply with MSHCP Objective 6 for burrowing owls. With the implementation of this measure, the proposed project will be consistent with Volume I, Section 6.3.2 of the MSHCP. As described in Section 6.5, a project DBESP is also required in order to conform with MSHCP riparian/riverine requirements. This analysis was completed in the *Beaumont Summit Station Project DBESP Report* (RBC 2022b).

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7.7 CONCLUSION OF MSHCP CONSISTENCY

The proposed project will be consistent with the biological requirements of 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), Section 6.3.2 (Additional Survey Needs and Procedures), and MSHCP Reserve assembly requirements. The proposed project will be consistent with the goals/objectives of the MSHCP with the implementation of the proposed mitigation and avoidance measures described in Section 6 of this report.

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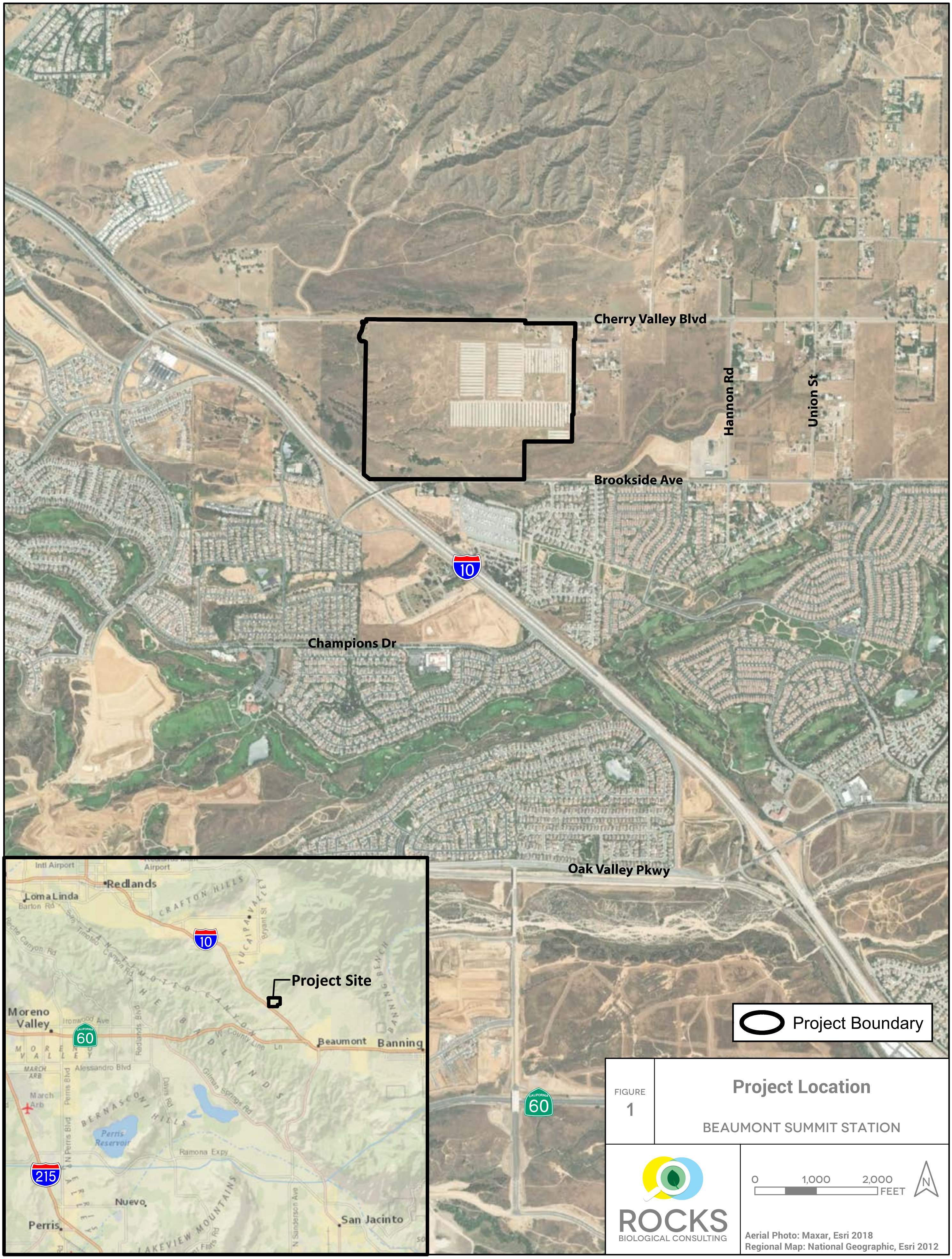
Cherry Valley Blvd
Hannon Rd
Union St
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60
Redlands
Loma Linda
Moreno Valley
Project Site
Beaumont
Banning
Perris Reservoir
215
Nuevo
Perris
San Jacinto
Project Boundary
FIGURE
1
Project Location
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Regional Map: National Geographic, Esri 2012

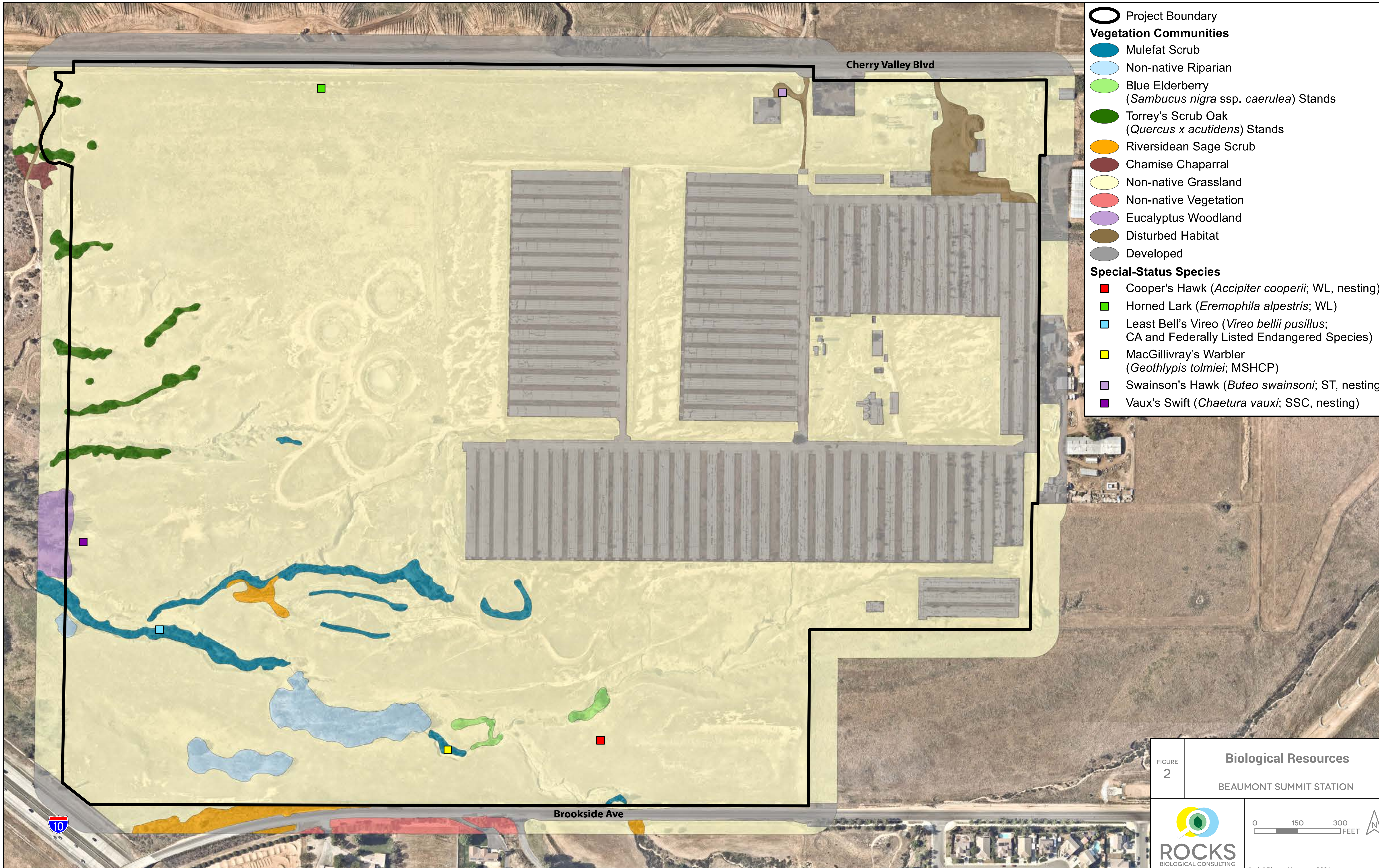
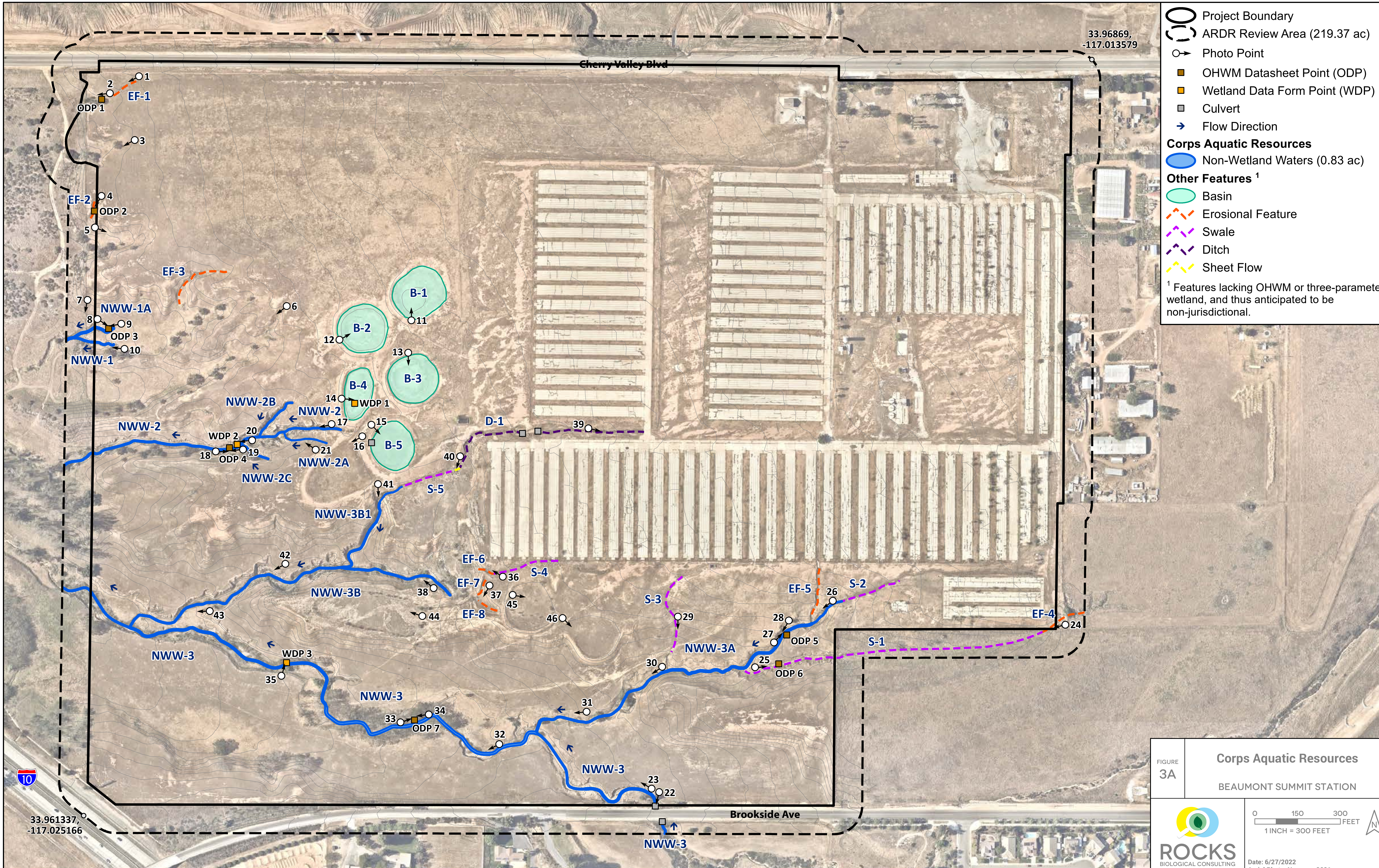


FIGURE 2

Biological Resources

BEAUMONT SUMMIT STATION


Project Boundary
ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
Corps Aquatic Resources
Non-Wetland Waters (0.83 ac)
Other Features [1]
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
[1] Features lacking OHWM or three-parameter wetland, and thus anticipated to be non-jurisdictional.
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Cherry Valley Blvd
Brookside Ave
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EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
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ODP 3
ODP 4
ODP 5
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ODP 7
WDP 1
WDP 2
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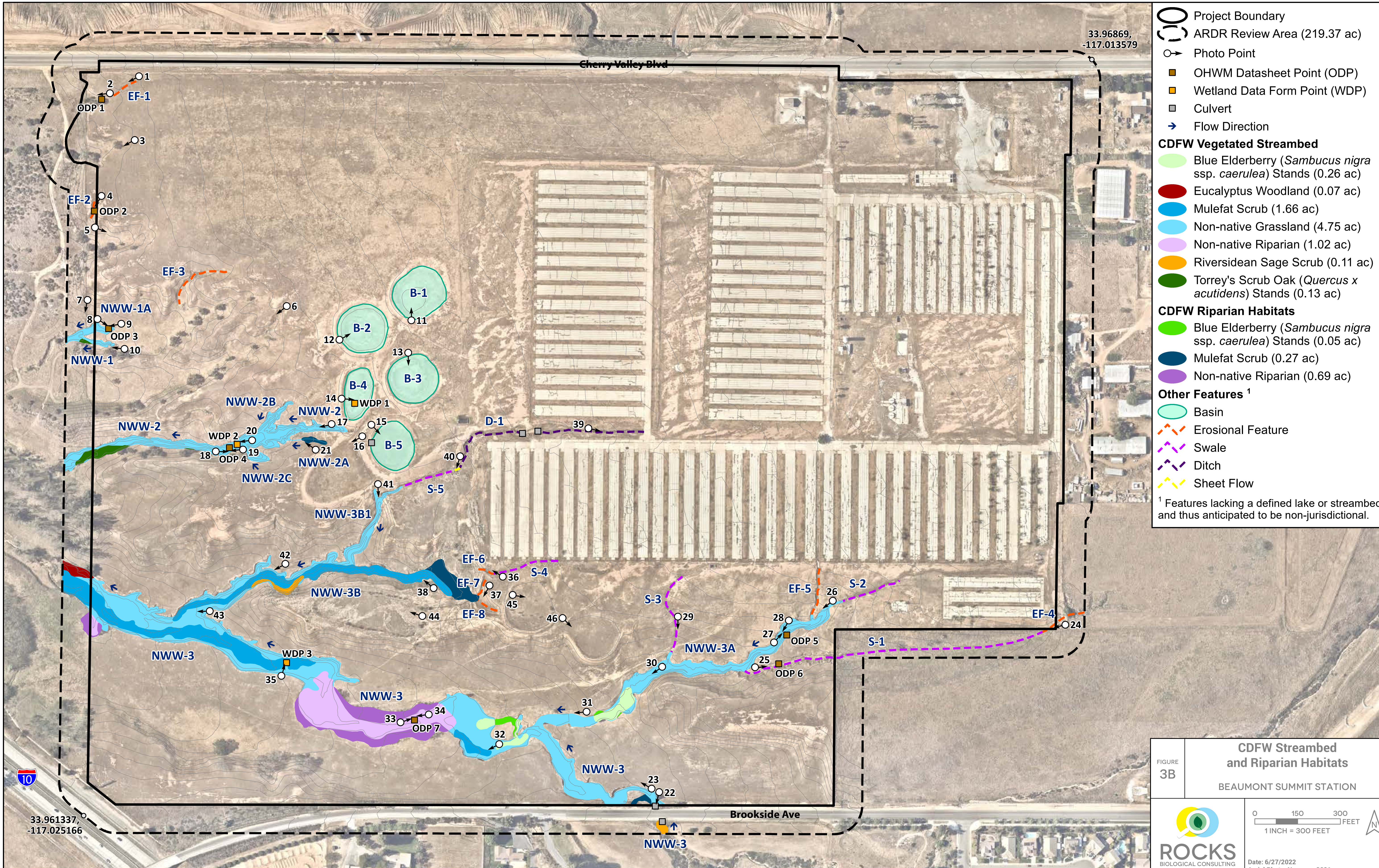
FIGURE
3A
Corps Aquatic Resources
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0 150 300 FEET
1 INCH = 300 FEET
N
Date: 6/27/2022
Aerial Photo: Nearmap 2021


Project Boundary
ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
CDFW Vegetated Streambed
Blue Elderberry (Sambucus nigra ssp. caerulea) Stands (0.26 ac)
Eucalyptus Woodland (0.07 ac)
Mulefat Scrub (1.66 ac)
Non-native Grassland (4.75 ac)
Non-native Riparian (1.02 ac)
Riversidean Sage Scrub (0.11 ac)
Torrey's Scrub Oak (Quercus x acutidens) Stands (0.13 ac)
CDFW Riparian Habitats
Blue Elderberry (Sambucus nigra ssp. caerulea) Stands (0.05 ac)
Mulefat Scrub (0.27 ac)
Non-native Riparian (0.69 ac)
Other Features 1
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
1 Features lacking a defined lake or streambed, and thus anticipated to be non-jurisdictional.
Cherry Valley Blvd
Brookside Ave
33.96869, -117.013579
33.961337, -117.025166
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
ODP 1
ODP 2
ODP 3
ODP 4
ODP 5
ODP 6
ODP 7
WDP 1
WDP 2
WDP 3
B-1
B-2
B-3
B-4
B-5
D-1
S-1
S-2
S-3
S-4
S-5
NWW-1
NWW-1A
NWW-2
NWW-2A
NWW-2B
NWW-2C
NWW-3
NWW-3A
NWW-3B
NWW-3B1
10
FIGURE 3B
CDFW Streambed and Riparian Habitats
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 150 300 FEET
1 INCH = 300 FEET
Date: 6/27/2022
Aerial Photo: Nearmap 2021

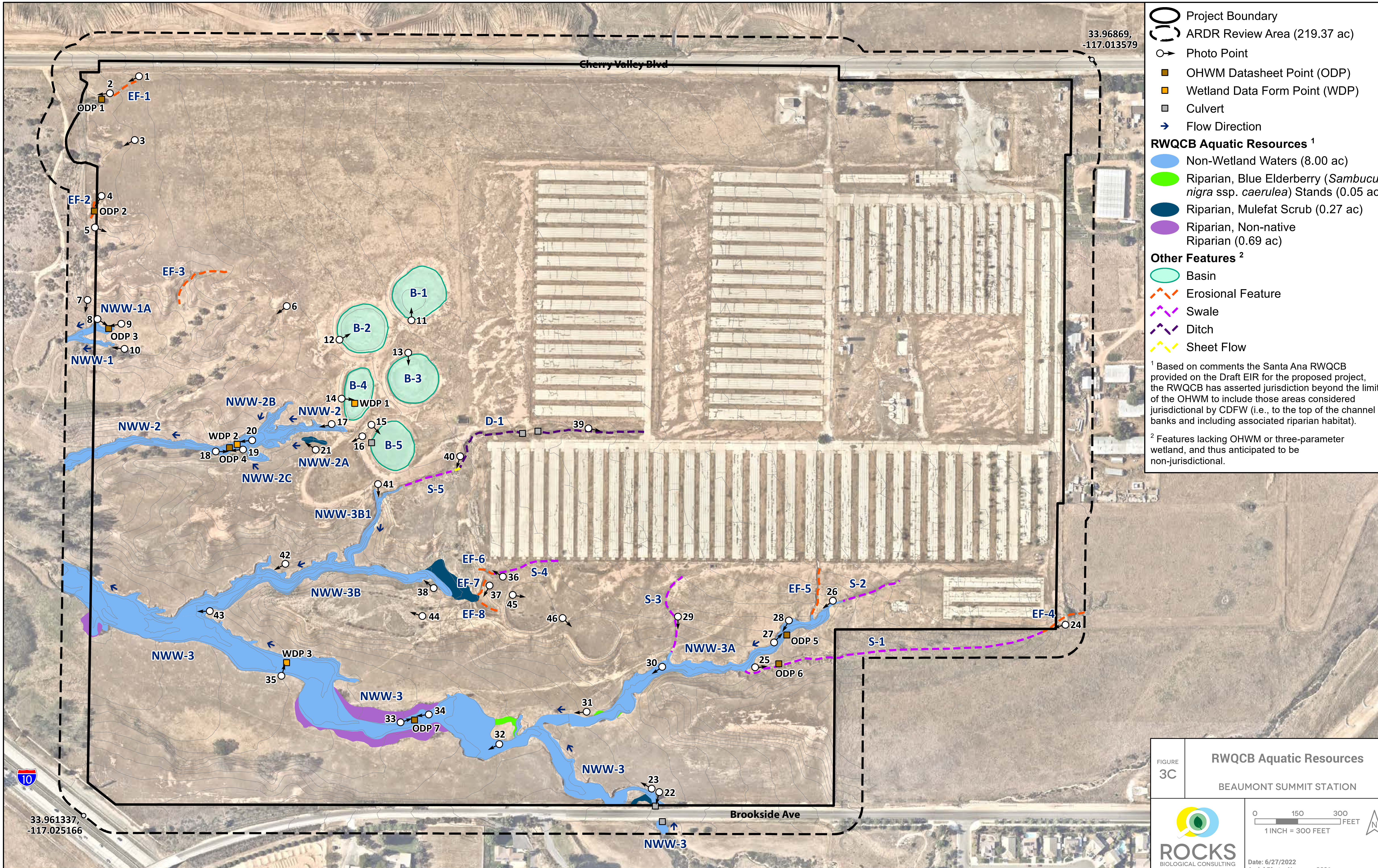
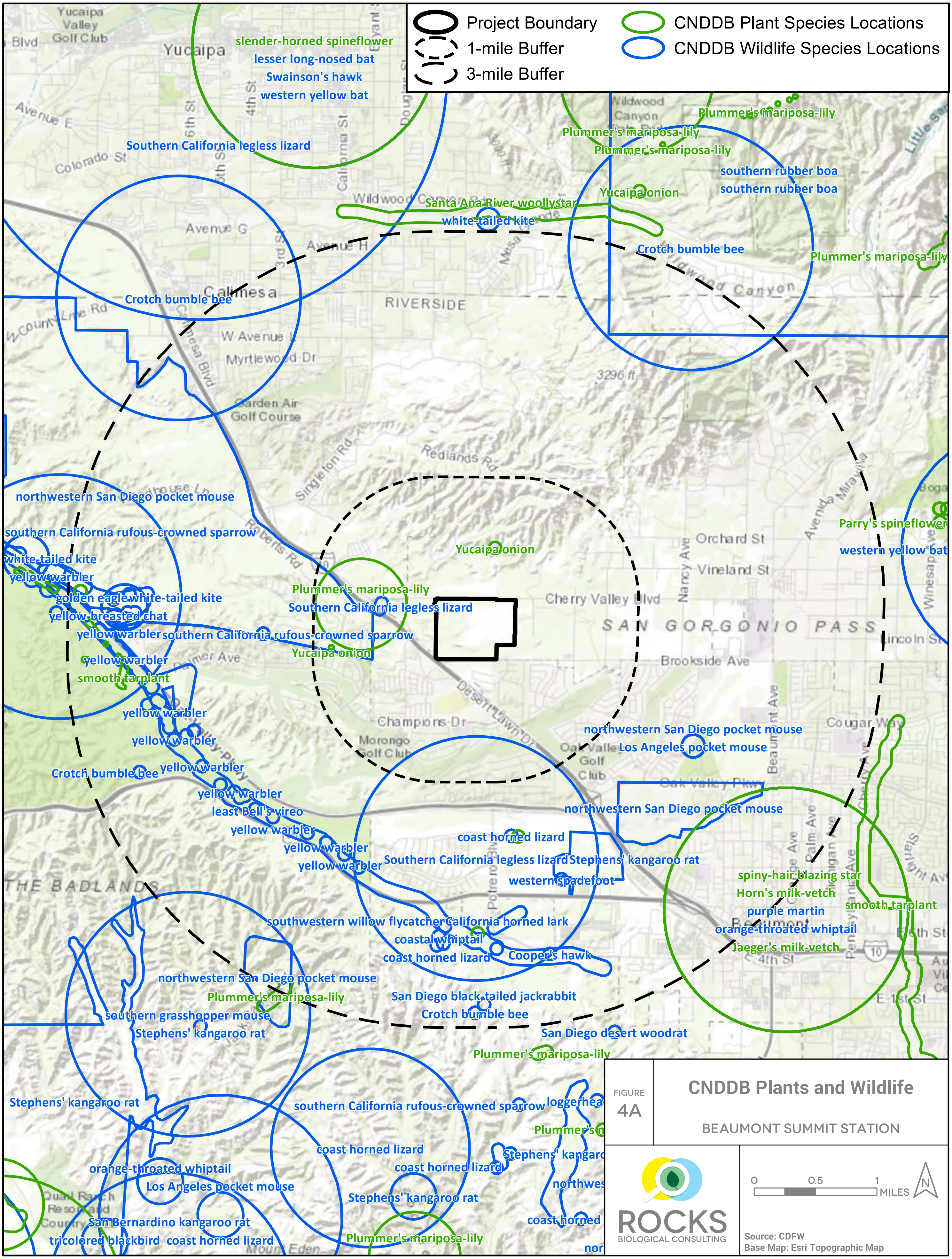
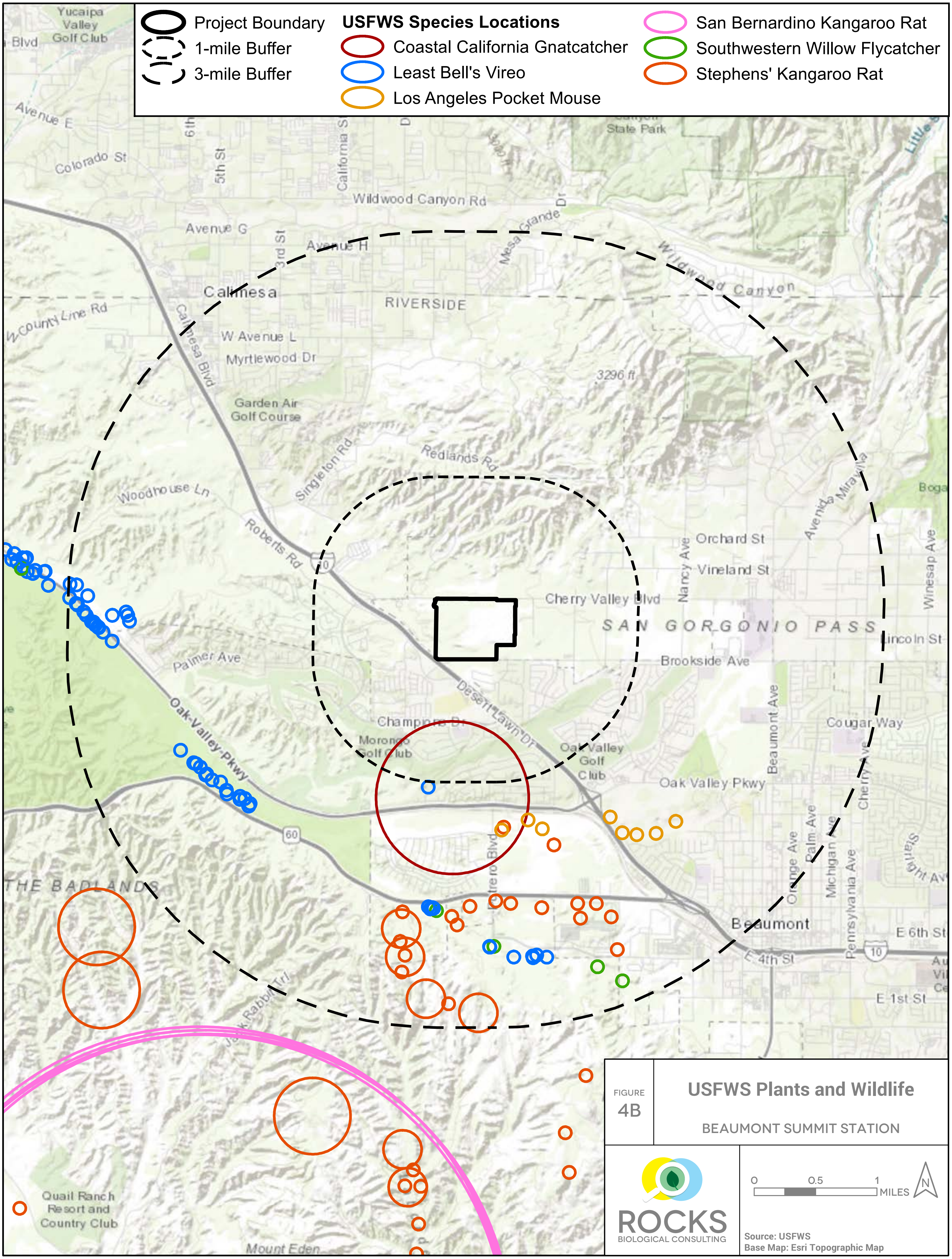
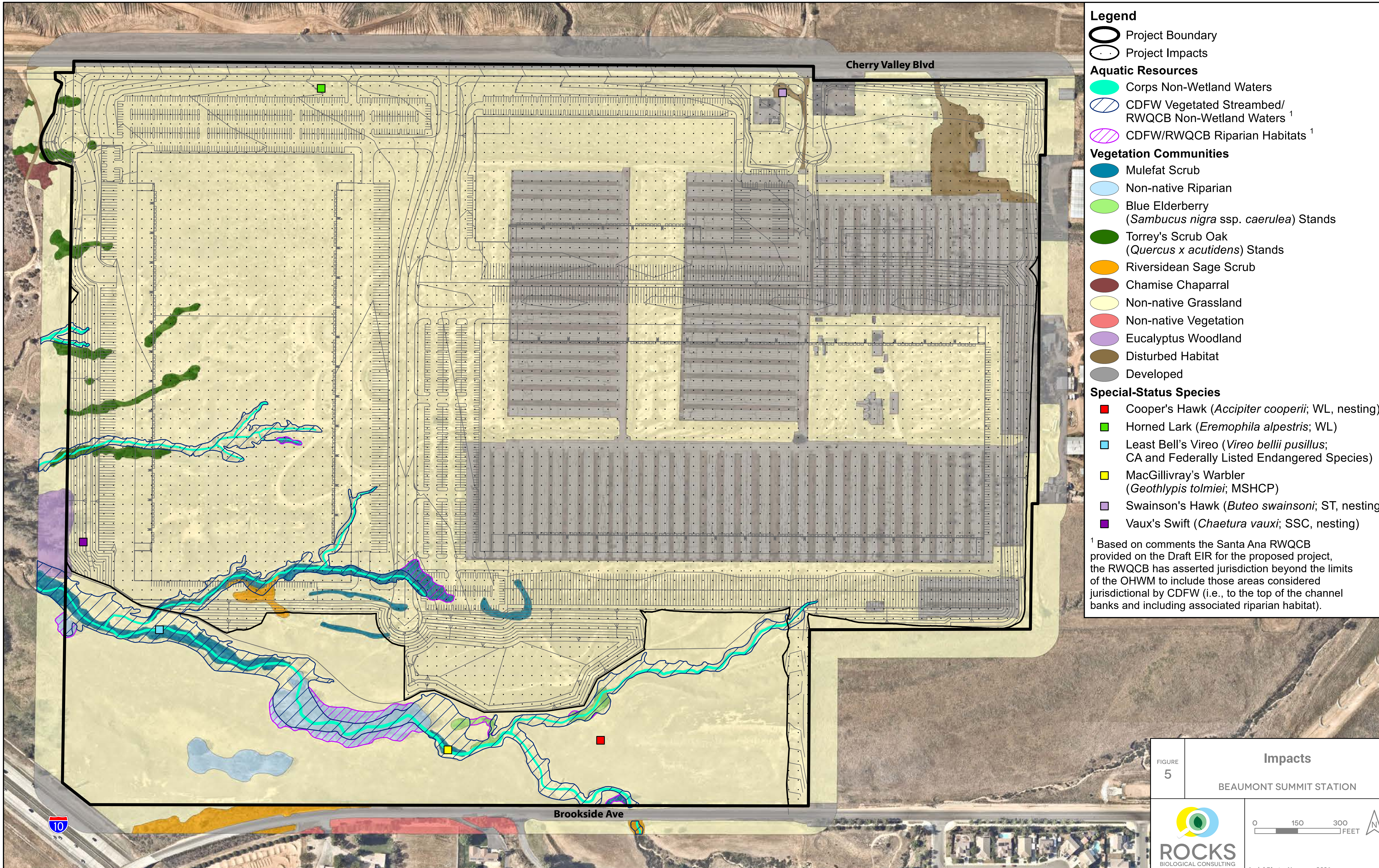


FIGURE 3C
RWQCB Aquatic Resources
BEAUMONT SUMMIT STATION


Project Boundary
1-mile Buffer
3-mile Buffer
CNDDB Plant Species Locations
CNDDB Wildlife Species Locations
slender-horned spineflower
lesser long-nosed bat
Swainson's hawk
western yellow bat
Southern California legless lizard
Plummer's mariposa-lily
southern rubber boa
Yucaipa onion
Santa Ana River woollystar
white-tailed kite
Crotch bumble bee
northwestern San Diego pocket mouse
southern California rufous-crowned sparrow
yellow warbler
golden eagle
yellow-breasted chat
smooth tarplant
Parry's spineflower
Los Angeles pocket mouse
least Bell's vireo
coast horned lizard
Stephens' kangaroo rat
western spadefoot
southwestern willow flycatcher
California horned lark
coastal whiptail
Cooper's hawk
spiny-hair blazing star
Horn's milk-vetch
purple martin
orange-throated whiptail
Jaeger's milk-vetch
San Diego black-tailed jackrabbit
southern grasshopper mouse
San Diego desert woodrat
San Bernardino kangaroo rat
tricolored blackbird
Yucaipa
Calimesa
RIVERSIDE
SAN GORGONIO PASS
THE BADLANDS
Beaumont
FIGURE
4A
CNDDB Plants and Wildlife
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0
0.5
1
MILES
N
Source: CDFW
Base Map: Esri Topographic Map


Project Boundary
1-mile Buffer
3-mile Buffer
USFWS Species Locations
Coastal California Gnatcatcher
Least Bell's Vireo
Los Angeles Pocket Mouse
San Bernardino Kangaroo Rat
Southwestern Willow Flycatcher
Stephens' Kangaroo Rat
Yucaipa Valley Golf Club
Avenue E
Colorado St
5th St
6th
California St
Wildwood Canyon Rd
Avenue G
3rd St
Avenue H
Mesa Grande Dr
Wildwood Canyon
State Park
Calimesa
RIVERSIDE
W County Line Rd
Calimesa Blvd
W Avenue L
Myrtlewood Dr
3296 ft
Garden Air Golf Course
Singleton Rd
Redlands Rd
Woodhouse Ln
Roberts Rd
10
Orchard St
Vineland St
Nancy Ave
Avenida Miravilla
Winesap Ave
Cherry Valley Blvd
SAN GORGONIO PASS
Lincoln St
Palmer Ave
Brookside Ave
Desert Lawn Dr
Champions Dr
Morongo Golf Club
Oak Valley Golf Club
Oak-Valley-Pkwy
Oak Valley Pkwy
Beaumont Ave
Cougar Way
60
Potrero Blvd
THE BADLANDS
Orange Ave
Palm Ave
Michigan Ave
Pennsylvania Ave
Beaumont
E 6th St
E 4th St
E 1st St
Jack Rabbit Trl
Quail Ranch Resort and Country Club
Mount Eden
FIGURE 4B
USFWS Plants and Wildlife
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 0.5 1 MILES
N
Source: USFWS
Base Map: Esri Topographic Map



Legend
Project Boundary
Project Impacts
Aquatic Resources
Corps Non-Wetland Waters
CDFW Vegetated Streambed/ RWQCB Non-Wetland Waters [1]
CDFW/RWQCB Riparian Habitats [1]
Vegetation Communities
Mulefat Scrub
Non-native Riparian
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands
Torrey's Scrub Oak (*Quercus x acutidens*) Stands
Riversidean Sage Scrub
Chamise Chaparral
Non-native Grassland
Non-native Vegetation
Eucalyptus Woodland
Disturbed Habitat
Developed
Special-Status Species
Cooper's Hawk (*Accipiter cooperii*; WL, nesting)
Horned Lark (*Eremophila alpestris*; WL)
Least Bell's Vireo (*Vireo bellii pusillus*; CA and Federally Listed Endangered Species)
MacGillivray's Warbler (*Geothlypis tolmiei*; MSHCP)
Swainson's Hawk (*Buteo swainsoni*; ST, nesting)
Vaux's Swift (*Chaetura vauxi*; SSC, nesting)
[1] Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat).
Cherry Valley Blvd
Brookside Ave
10
FIGURE 5
Impacts
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 150 300 FEET
N
Aerial Photo: Nearmap 2021

Appendix C2: Aquatic Resources Delineation Report

ROCKS

BIOLOGICAL CONSULTING

BEAUMONT SUMMIT STATION AQUATIC RESOURCES DELINEATION REPORT

Riverside County, California

July 1, 2022

Prepared for:
Exeter Cherry Valley Land, LLC
5060 North 40th Street, Suite 108
Phoenix, AZ 85018
(708) 341-9821

Prepared by:
Rocks Biological Consulting
4312 Rialto Street
San Diego, CA 92107
(619) 701-6798

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APPENDICES

Appendix A. Checklist: Minimum Standards for Acceptance of Aquatic Resource Delineation Reports
Appendix B. Jurisdictional Determination Request Forms
Appendix C. Applicable Aquatic Resource Protection Regulations
Appendix D. Recent and Historic Aerials Analysis
Appendix E. Arid West Wetland Determination Data Forms and Ephemeral and Intermittent Streams OHWM Datasheets
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1 INTRODUCTION

On behalf of Exeter Cherry Valley Land, LLC, Rocks Biological Consulting (RBC) conducted a formal aquatic resources delineation for the Beaumont Summit Station review area, composed of 219.37 acres (Figure 1), to identify areas that may be considered jurisdictional under the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act; the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act; and the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code. The information provided in this aquatic resources delineation report (ARDR) is necessary to define the presence or absence of aquatic resources within the review area. This ARDR can also be used by the agencies to inform the jurisidictional status of delineated aquatic resources and by the applicant and agencies to assess conformance with state and federal regulations and to estimate potential impacts and associated permitting requirements. Furthermore, the information contained in this report is in compliance with the Corps Los Angeles District's *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Minimum Standards; Corps 2017). Appendix A provides a checklist to ensure compliance with the Minimum Standards.

This ARDR also serves as a request for the Corps to complete a Preliminary Jurisdictional Determination (PJD) based on the information provided in this report. Appendix B provides the required forms associated with the PJD request.

2 SITE DESCRIPTION, LANDSCAPE SETTING

2.1 LOCATION

The review area is located south of Cherry Valley Boulevard, north of Brookside Avenue, and east/northeast of Interstate (I-) 10, within the City of Beaumont, Riverside County, California (Figure 1). The review area is bounded by undeveloped land to the north and west, rural residences with livestock pens to the east, and residential development to the south. The latitude and longitude of the approximate center of the review area is 33.965141, -117.019732. The review area sits on Township 2 South, Range 1 West, and Section 30 within the El Casco 7.5-minute quadrangle, as mapped by the U.S. Geological Survey (USGS; Figure 2).

2.2 TOPOGRAPHY

The review area is primarily flat with elevations ranging from approximately 2,403 to 2,584 feet above mean sea level (amsl), with areas of lower topography within the drainages on the south and southwestern portions of the review area and between rolling hills along the northwestern boundary of the review area (Figure 2). Drainage patterns on site trend east to west following a gradual decrease in elevation in the same direction.

2.3 WATERSHED

The review area is within the Santa Ana Hydrologic Unit Code (HUC) 8 (18070203), San Timoteo Wash HUC 10 (1807020304), and San Timoteo Canyon-San Timoteo Wash HUC 12 (180702030403) watersheds (Figure 3). In addition to the watersheds defined by the USGS and commonly used by the Corps, the RWQCB also defines watershed boundaries by Hydrologic Units (HUs). The majority of the review area is within the Santa Ana Basin, the Santa Ana River HU, and the Beaumont Hydrologic Subarea (Santa Ana Regional Water Quality Control Board [Santa Ana RWQCB] 1986; Santa Ana RWQCB 2019).

3 METHODS

3.1 PRE-FIELD REVIEW

Prior to the on-site delineation, field maps were created using a Geographic Information System (GIS) and a color aerial photograph at a 1:150 scale. RBC staff also reviewed USGS National Hydrography Dataset (NHD) and topography data (Figure 2), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data (Figure 4), and Natural Resources Conservation Service (NRCS) soils data (Figure 4) to further determine the potential locations of aquatic resources within the review area. RBC also utilized Google Earth to assess current and historic presence or absence of flows and/or ponding in the review area (Google Earth Pro 2021). RBC also reviewed the 2004 *Delineation of Jurisdictional Waters and Wetlands Sunny-Cal Specific Plan Project, City of Beaumont, Riverside County, California* (Sunny-Cal JD Report; Michael Brandman Associates 2004) and the 2006 *Recirculated Draft Environmental Impact Report Sunny-Cal Specific Plan, Annexation, And Sphere of Influence Amendment, SCH# 2004121092* (Sunny-Cal Specific Plan Draft EIR; Michael Brandman Associates 2006).

3.2 ON-SITE DELINEATION AND MAPPING

RBC regulatory specialists Sarah Krejca and Chelsea Polevy conducted an initial jurisdictional assessment field visit on April 22, 2021 and an aquatic resources delineation field visit on June 3, 2021. RBC regulatory specialist Sarah Krejca and Shanti Santulli conducted an additional aquatic resources delineation field visit on June 7, 2021. Field conditions during these field visits are provided below in Table 1.

Table 1. Field Conditions

Date	Survey Time Start – End	Temperature (ºF) Start – End	Wind Speed Range (miles per hour) Start – End	Cloud Cover (%) Start – End
4/22/2021	0745 – 1315	48 – 61	0 to 5 – 5 to 8	100 – 100
6/03/2021	0730 – 1500	67 – 92	0 to 1 – 10 to 15	0 – 0
6/07/2021	0815 – 1245	52 – 62	2 to 5 – 5 to 10	100 – 90

Figure 1 and Figures 5A to 5C depict the 219.37-acre review area. RBC regulatory specialist Sarah Krejca also completed a Streamflow Duration Assessment Method (SDAM) survey during the June 3 and June 7, 2021 field visits.

Areas with depressions, drainage patterns, and/or wetland vegetation within the review area were evaluated, with focus on the presence of defined channels and/or wetland vegetation, soils, and hydrology.

While in the field, potential aquatic resources were recorded using a hand-held Global Positioning System (GPS) unit with a level of accuracy ranging from 8 to 24 feet. RBC staff refined the data using aerial photographs and topographic maps with one-foot contours to ensure accuracy.

All figures generated for this ARDR follow the Corps' Updated Map and Drawing Standards for the South Pacific Division Regulatory Program (Corps 2016).

The below subsections provide the aquatic resources delineation methods used per agency; Appendix C provides additional details regarding the agencies' applicable regulations and guidance associated with this ARDR.

3.2.1 CORPS

Ordinary High Water Mark Delineation

Aquatic resources with a defined ordinary high water mark (OHWM) would be considered potential non-wetland waters of the U.S. Corps regulations at 33 Code of Federal Regulations (CFR) 329.11 define an OHWM as "the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas" (51 Federal Register [FR] 41251, November 13, 1986). RBC staff used guidance provided in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (OHWM Field Guide; Corps 2008a) and Regulatory Guidance Letter (RGL) 05-05 to estimate the extent of an OHWM in the field where applicable. For each feature exhibiting the potential presence of an OHWM, RBC completed a 2010 Arid West Ephemeral and Intermittent Streams OHWM Datasheet following the guidance provided in the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (OHWM Datasheet; Corps 2010). Per the 2010 OHWM Datasheet, common indicators of an OHWM include a break in slope (i.e., abrupt cut in bank slope created by hydrogeomorphic processes across the landscape), changes in average sediment texture between floodplain units (i.e., low-flow, active floodplain, low terrace), and changes in vegetation species and/or cover between floodplain units.

Wetland Delineation

Field staff examined potential wetland waters of the U.S. using the routine determination methods set forth in Part IV, Section D, Subsection 2 of the Corps 1987 *Wetland Delineation Manual* (Wetland Manual; Environmental Laboratory 1987) and the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0* (Arid West Supplement; Corps 2008b) where potential wetland conditions occur within the review area (e.g., areas with depressions, drainage patterns, and/or wetland vegetation where flooding or ponding could occur to create wetland conditions). Areas that meet the three parameters per the Arid West Supplement (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology, following methods set forth in the Wetland Manual and Arid West Supplement) would be considered wetland waters of the U.S. RBC staff base wetland plant indicator status (i.e., Obligate [OBL], occurs 99+% in wetlands; Facultative Wetland [FACW], occurs 67-99% in wetlands; Facultative [FAC], occurs 34-66% in wetlands; Facultative Upland [FACU], occurs 1-33% in wetlands; Upland [UPL], occurs

99+% in uplands; and Not Listed [NL], considered UPL for wetland delineation purposes) on the *National Wetland Plant List* (NWPL; Corps 2018) and hydric soils indicators on *Field Indicators of Hydric Soils in the United States, Version 8.2* (NRCS 2018a). Soil chromas were identified in the field according to *Munsell Soil-Color Charts with Genuine Munsell Color Chips* (Munsell Color 2015) and per the Wetland Manual and Arid West Supplement. Plants identified at wetland delineation sampling locations were identified according to *The Jepson Manual: Vascular Plants of California, 2nd edition* (Baldwin et al. 2012) and nomenclature followed Jepson eFlora (Jepson Flora Project 2019).

3.2.2 RWQCB

Ordinary High Water Mark Delineation

The State Water Resources Control Board (SWRCB) and RWQCBs do not have regulations or guidance on defining the extent of non-wetland waters of the State. As such, field staff identified the lateral limits of potential non-wetland waters of the State using the same methods for determining an OHWM per the Corps as described in Section 3.2.1 as they have generally been considered coincident.

Wetland Delineation

The State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (the Procedures; SWRCB 2021) defines wetland waters of the State. The Procedures were adopted on April 2, 2019; went into effect on May 28, 2020; and were revised on April 6, 2021. As detailed in the Procedures, the SWRCB and RWQCBs define a wetland as follows: “An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation” (SWRCB 2021).

The Procedures provide that RWQCBs shall rely on a wetland delineation from a final ARDR verified by the Corps to determine the extent of wetland waters of the State. If any potential wetland areas have not been delineated in a final ARDR verified by the Corps, the limits of such potential wetland waters of the State shall be identified using the same wetland delineation methods per the Corps as described in Section 3.2.1, except that a lack of vegetation (i.e., less than 5 percent areal coverage of plants during the peak of the growing season) does not preclude an area from meeting the definition of a wetland waters of the State (SWRCB 2021).

3.2.3 CDFW

Lake, Streambed, and Associated Riparian and Wetland Habitat Delineation

CDFW jurisdiction relies on the presence of a lake and/or streambed and associated riparian or wetland habitat. Lakes include “natural lakes or man-made reservoirs” (14 California Code of Regulations [CCR] § 1.56). CDFW regulations define a streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (14 CCR § 1.72). The 1987 *Rutherford v. State of California* (188 Cal. App. 3d

1268) decision further provided that a streambed is the “channel of a water course; the depression between the banks worn by the regular and usual flow of the water.” A streambed includes the “[a]rea extending between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including sand bars which may exist between the foot of said banks….” (188 Cal. App. 3d 1268). The bank is defined as “the slope or elevation of land that bounds the bed of the stream in a permanent or long-standing way, and that confines the stream water up to its highest level” (*The People v. Phillip Wright Osborn*, 116 Cal. App. 4th 764).

Riparian habitat refers to vegetation and habitat associated with a stream. CDFW-jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream. Isolated riparian habitat (i.e., where riparian vegetation does not appear associated with an ephemeral wash) is not considered CDFW-jurisdictional.

CDFW follows the USFWS wetland definition and classification system, which defines a wetland as transitional land between terrestrial and aquatic systems having one or more of the following attributes: “(1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year” (USFWS 1979). A wetland is presumed when all three attributes are present; if less than three attributes are present the presumption of a wetland must be supported by “the demonstrable use of wetland areas by wetland associated fish or wildlife resources, related biological activity, and wetland habitat values” (California Fish and Game Commission [CFGC] 1994).

Potential CDFW-jurisdictional wetland boundaries were determined based on the presence of wetland areas supported by a lake or streambed. Wetland delineation methods to determine the presence of one or more wetland attributes included the same methods per the Corps as described in Section 3.2.1.

Based on the above, potential CDFW-jurisdictional aquatic resources delineated included lakes and/or streambeds and their associated riparian and wetland habitats. Field staff delineated the lateral extent of potential CDFW jurisdiction to be “bank to bank” for a streambed or to the “dripline” of riparian habitat and/or wetland boundary, if present.

4 SITE ALTERATIONS, CURRENT AND PAST LAND USE

RBC staff reviewed Google Earth Pro (Google Earth 2021), the University of California – Santa Barbara (UCSB; UCSB n.d.) database, the 2006 *Sunny-Cal Specific Plan Draft EIR* (Michael Brandman Associates 2006), and the 2004 *Sunny-Cal JD Report* (Michael Brandman Associates 2004) to assess historic and ongoing land uses within the review area.

Based on a review of Google Earth Pro and the UCSB database, various potentially jurisdictional features (e.g., Non-Wetland Water [NWW-] 2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 per Section 6 below) occurred within their current locations in the review area at least as far back as May 1938 (i.e., the earliest aerial image available; Appendix D). Agriculture fields or farming operations are also visible on historic aerials as far back as May 1938 and are primarily concentrated in the northeastern portion of the review area until around June 1980 (UCSB n.d.; Appendix D). By September 1996, farming operations were expanded further into the center of the review area through the construction of several large poultry sheds (UCSB n.d.; Appendix

D). Based on a review of the 2004 *Sunny-Cal JD Report*, the review area encompasses the previously active Sunny-Cal Poultry Farm, which contained operations buildings, employee housing, and poultry sheds, and housed other livestock such as pigs and cattle (Michael Brandman Associates 2004). Per historic aerials, runoff from these developments may have resulted in the creation of various ditches, erosional features, and swales (further described in Section 6 below; Appendix D). Remains of these developments, such as shed and building foundations, exist to this day. Furthermore, per the 2004 *Sunny-Cal JD Report*, the former poultry farm developed various human-made settling basins throughout the review area which were utilized as manure holding areas (e.g., Basin [B-] 1, B-2, B-3, B-4, and B-5, per Section 6 below; Michael Brandman Associates 2004). These basins were established between September 1996 and December 2003 (UCSB n.d.; Appendix D). Normal circumstances were assumed to be present within the review area.

The *Sunny-Cal Specific Plan Draft EIR* determined four drainages within the review area to be Corps- and CDFW-jurisdictional (Michael Brandman Associates 2006) within the general locations of NWW-2, NWW-2B, NWW-3, NWW-3B, NWW-3B1, and portions of NWW-3A, further discussed in Section 6 below. Furthermore, the associated Sunny Cal Egg Ranch Specific Plan (Tract 36583) Project was previously permitted and mitigated under various regulatory approvals in 2015-2016 (CWA Section 404 Nationwide Permit 29 and 43 [File No. SPL-2014-00601-JEM]; CWA Section 401 Water Quality Certification [SARWQCB Project No. 332014-20]; and CDFW SAA No. 1600-2014-0180-R6 [Revision 2]) and included permanent impacts to waters of the U.S./State and streambed/riparian habitat; however, the Sunny Cal Egg Ranch Specific Plan (Tract 36583) Project did not move forward and the previously permitted impacts did not occur. Furthermore, site ownership and project design has changed. As such, this ARDR supercedes previous delineations for review area and will be used to support future permitting associated with the Beaumont Summit Station Project.

The following sections provide additional details regarding site alterations and land use specific to on-site soils, hydrology, and vegetation based on available data and the site visit.

4.1 SOILS

Based on the NRCS soils data map (Figure 4), seven soil map units, outlined below in Table 2, occur within the review area:

Table 2. Soil Mapped within Review Area

Soil Map Unit	Soil Series/Unit	Geomorphic Surface	Taxonomic Class	NRCS Hydric Status
Greenfield sandy loam, 2 to 8 percent slopes, eroded	Greenfield	Alluvial fans, terraces	Coarse-loamy, mixed, active, thermic Typic Haploxeralfs	No
Greenfield sandy loam, 8 to 15 percent slopes, eroded	Greenfield	Alluvial fans, terraces	Coarse-loamy, mixed, active, thermic Typic Haploxeralfs	No
Ramona sandy loam, 2 to 5 percent slopes, eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No

Soil Map Unit	Soil Series/Unit	Geomorphic Surface	Taxonomic Class	NRCS Hydric Status
Ramona sandy loam, 5 to 8 percent slopes, eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No
Ramona sandy loam, 8 to 15 percent slopes, severely eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No
Ramona sandy loam, 15 to 25 percent slopes, severely eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No
Terrace escarpments	N/A	Terraces	N/A	No

The National Technical Committee for Hydric Soils defines hydric soils; *Changes in Hydric Soils Database Selection Criteria* (77 FR 12234) outlines the current four hydric soil criteria. The NRCS does not list any of the soil map units within the review area as hydric.

The soils outlined above in Table 2 are further described below per the USDA's *NRCS Official Soil Series Description and Series Classification* database (NRCS 2018b) and the USDA's *Soil Survey of Western Riverside Area, California* (1971):

Greenfield sandy loam, 2 to 8 percent slopes, eroded – The Greenfield series consists of deep, well-drained soils that formed in moderately coarse and coarse alluvium derived from granitic rock and other mixed rock sources. Greenfield soils have slow to medium runoff, moderately rapid permeability, and slopes ranging from 0 to 30 percent. These soils occur on alluvial fans and terraces at elevations of 100 to 3,500 feet amsl. Greenfield soil is used for production of field, forage, and fruit crops and also for growing grain and pasture. Uncultivated areas consist of annual grasses, forbs, some shrubs, and some oak trees. The NRCS does not list Greenfield sandy loam, 2 to 8 percent slopes, eroded, which occurs on site, as hydric.

Greenfield sandy loam, 8 to 15 percent slopes, eroded – The Greenfield series consists of deep, well-drained soils that formed in moderately coarse and coarse alluvium derived from granitic rock and other mixed rock sources. Greenfield soils have slow to medium runoff, moderately rapid permeability, and slopes ranging from 0 to 30 percent. These soils occur on alluvial fans and terraces at elevations of 100 to 3,500 feet amsl. Greenfield soil is used for production of field, forage, and fruit crops and also for growing grain and pasture. Uncultivated areas consist of annual grasses, forbs, some shrubs, and some oak trees. The NRCS does not list Greenfield sandy loam, 8 to 15 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 2 to 5 percent slopes, eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 2 to 5 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 5 to 8 percent slopes, eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 5 to 8 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 8 to 15 percent slopes, severely eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 8 to 15 percent slopes, severely eroded, which occurs on site, as hydric.

Ramona sandy loam, 15 to 25 percent slopes, severely eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 15 to 25 percent slopes, severely eroded, which occurs on site, as hydric.

Terrace escarpments – Terrace escarpments consist of variable alluvium on terraces or gullies derived from granite, gabbro, metamorphosed sandstone, sandstone, or mica-schist. Slopes range from 30 to 75 percent. Vegetation is sparse and includes annual grasses, salvia (*Salvia* sp.), flat-top buckwheat (*Eriogonum fasciculatum*), and chamise (*Adenostoma fasciculatum*). Areas of terrace escarpments are used primarily for watershed and as wildlife habitat. The NRCS does not list terrace escarpments, which occurs on site, as hydric.

As stated in the Arid West Supplement, RBC used the hydric soils list as a tool and made final hydric soils determinations based on field-collected data at representative wetland delineation sample points deemed appropriate on site as recorded on the attached Arid West Wetland Determination Data Forms (Appendix E) discussed further in Section 6.1.

4.2 HYDROLOGY

Per the review of on-line data sources, USGS NHD maps one “Stream/River” (ephemeral) in the western portion of the review area, one “Stream/River” (ephemeral) in the southern portion of the review area, and six “Reservoirs” in the central and western portions of the review area (Figure 2; USGS 2020). USFWS NWI maps one feature with a designation of “Riverine” in the southern portion of the review area (Figure 4; USFWS 2019). USFWS NWI classifies the onsite feature as Riverine, R4SBA, indicating that the feature is an intermittent (R4) streambed (SB) that temporarily floods (A). However, based on field observations in April and June 2021, the on-site features are expected to convey ephemeral flows (i.e., only in direct response to precipitation).

The primary known hydrologic source for the observed on-site drainages and "reservoirs," discussed further below, is direct precipitation only. The southern USGS NHD and USFWS NWI feature also receives runoff from development south of the review area that is collected and conveyed on site through a culverted storm drain outlet that flows north under Brookside Avenue. Previously, on-site drainages also received runoff from the former on-site agricultural operations (poultry and livestock farm) and the on-site "reservoirs" were used as settling basins to hold manure from chicken, pigs, and cows.

Based on field observations, the on-site USGS NHD feature within the western portion of the review area travels west, then continues off site. The USGS NHD and USFWS NWI feature within the southern portion of the review area enters the review area then drains through two culvert outlets under Brookside Avenue, travels northwest, then continues off site. The USGS NHD maps the two features as converging just west of the review area and continuing as an ephemeral stream for approximately 4 miles until transitioning to an intermittent stream for approximately 7.5 miles, then connecting with the San Timoteo Wash. The San Timoteo Wash then continues for approximately 6.6 miles before outletting into the Santa Ana River, which ultimately discharges into the Pacific Ocean (USGS 2020).

4.3 VEGETATION

Table 3 provides vegetation community acreages within the review area based on vegetation mapping conducted by RBC biologists on April 22, 2021 (Figure 6). The review area primarily consists of non-native grassland. The vegetation community classifications generally follow Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and are consistent with the *Western Riverside County Multiple Species Habitat Conservation Plan* (MSHCP; Dudek & Associates, Inc. 2003) vegetation mapping classification.

Table 3. Vegetation Communities within Review Area

Vegetation Community/Land Cover Type	Acre(s)[1]
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands	0.31
Chamise Chaparral	0.19
Developed	61.66
Disturbed Habitat	1.59
Eucalyptus Woodland	0.80
Mulefat Scrub	2.32
Non-native Grassland	146.83
Non-native Riparian	2.37
Non-native Vegetation	0.81
Riversidean Sage Scrub	1.12

Vegetation Community/Land Cover Type	Acre(s)[1]
Torrey's Scrub Oak (*Quercus x acutidens*) Stands	1.37
Total	219.37

[1] Acreages summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

Blue Elderberry Stands

Individual stands of blue elderberry (*Sambucus nigra* ssp. *caerulea*) occur within the review area (0.31 acre). Blue elderberry is a tall woody shrub that can grow up to 25 feet tall. The blue elderberry trees within the review area do not represent a specific vegetation community, rather a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat.

Chamise Chaparral

Chamise chaparral is overwhelmingly dominated by chamise. Chamise chaparral within the review area (0.19 acre) contains some individuals of California buckwheat and occurs along the northwestern review area boundary. Chamise chaparral continues as patches within non-native grassland west of the review area.

Developed

Developed land does not support native vegetation and includes human-made structures. Developed land within the review area (61.66 acres) includes buildings and paved surfaces associated with the former agricultural operations.

Disturbed Habitat

Disturbed habitat is typically classified as land on which the native vegetation has been significantly altered by agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of a plant association (e.g. disturbed Riversidean sage scrub). Disturbed habitat is typically found in vacant lots, along roadsides, within construction staging areas, and in abandoned fields. The habitat is typically dominated by non-native annual species and perennial broadleaf species. Disturbed habitat within the review area (1.59 acres) occurs within the gravel driveways and staging areas that support the sparse growth of non-native grasses and forbaceous species.

Eucalyptus Woodland

Eucalyptus woodland (*Eucalyptus* spp.) habitat ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species produce a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. A large stand of eucalyptus woodland occurs along the western border of the review area (0.80 acre).

Mulefat Scrub

Mulefat scrub consists of mulefat (*Baccharis salicifolia*) as the dominant or co-dominant species within a continuous shrub canopy or thicket. A few isolated, individual willows (*Salix* spp.) also occur within the continuous mulefat scrub. The herbaceous layer is typically sparse. Mulefat scrub within the review area (2.32 acres) is approximately 10-15 feet in height and co-occurs with the blue elderberry stands and non-native riparian vegetation within the canyons and drainages in the southwest.

Non-native Grassland

Non-native grassland within the review area is dominated by ripgut brome (*Bromus diandrus*) but also contains occurrences of other non-native grass and forbaceous species such as red brome (*Bromus rubens*), Mediterranean barley (*Hordeum marinum*), and short-pod mustard (*Hirschfeldia incana*). Rigid fiddleneck (*Amsinckia menziesii*) was observed within the non-native grassland habitat growing out of the topographical depressions in the western portion of review area. The review area is frequently mowed and was previously grazed using cattle, keeping non-native grasses and ruderal species fairly low to the ground. Non-native grassland (146.83 acres) occurs throughout much of the review area.

Non-native Riparian

Non-native riparian habitat includes densely vegetated riparian thickets dominated by non-native, invasive species. Non-native riparian habitat within the review area (2.37 acres) consists of monotypic stands of tree of heaven (*Ailanthus altissima*), occurring within the drainages in the southwestern portion of the review area. Tree of heaven are large trees with some individuals exceeding 30 feet in height. Virtually no understory occurs within the stands of tree of heaven that occur within the review area.

Non-native Vegetation

Non-native vegetation refers to areas where non-native ornamentals and landscaping have been installed. Non-native vegetation within the review area (0.81 acre) occurs just south of Brookside Avenue and is dominated by tree of heaven and pine trees (*Pinus* sp.)

Riversidean Sage Scrub

Riversidean sage scrub (1.12 acres) is a form of coastal sage scrub found in Riverside County consisting of low, soft shrubs. The review area supports small patches of Riversidean sage scrub that are dominated by California sagebrush (*Artemisia californica*) and California buckwheat and contain non-native grasses between shrubs. Riversidean sage scrub is found in the southwestern portion of the review area and along the southern review area boundary.

Torrey's Scrub Oak Stands

Mature individuals of Torrey's scrub oak (*Quercus x acutidens*) form distinct stands (1.37 acres) occurring along the upper banks of canyons and drainages within the western portion of the review area. Torrey's scrub oak is a small oak tree and on-site Torrey's scrub oak do not exceed 25 feet in height. Non-native grasses occur as the understory between individual trees. The stands of Torrey's scrub oak within the review area do not represent a specific vegetation community (e.g., scrub oak chaparral), but are a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat.

5 PRECIPITATION DATA AND ANALYSIS

RBC utilized the NRCS Agricultural Applied Climate Information System (AgACIS) database for the Beaumont 2.5 NW station (approximately 0.7 mile southeast) to access pre-site visit precipitation data (NRCS 2021), as shown in Table 4.

RBC also utilized the Corps' Antecedent Precipitation Tool (APT) to assess whether or not the delineation date occurred in a drier, average, or wetter than normal period for the review area (Corps 2020). The Corps created the APT to assist with determining "typical year" precipitation conditions for a review area (i.e., the normal periodic range of precipitation and other climate variables for the waterbody). Additionally, the APT can also generally inform the regulatory agencies whether or not normal hydrologic/climatic conditions were on site at the time of the site visit and assist with completion of the Wetland Determination Data Forms (Appendix E).

5.1 PRECIPITATION SUMMARY

Table 4 describes the estimated monthly total precipitation for the review area from June 2020 to May 2021 to provide the pertinent pre-site visit precipitation data from the NRCS database for the Beaumont 2.5 NW, California NWS station (NRCS 2021).

Table 4. Precipitation Data for June 2020 to May 2021

	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Monthly Total Precipitation (inch[es])	0.11	0.00	0.00	0.00	T*	0.70	1.26	2.48	0.15	1.94	0.13	M[1]

[1]Per AgACIS database: "Values of 'M' indicate missing data and 'T' indicates a trace."

5.2 ANTECEDENT PRECIPITATION TOOL DATA

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from -10 (extremely dry) to +10 (extremely wet) (National Oceanic and Atmospheric Administration [NOAA] 2020) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (i.e., Arid West Supplement). The antecedent precipitation condition is classified as drier than normal with an antecedent runoff condition (ARC) score less than 10; normal with an ARC score between 10 to 14; or wetter than normal with an ARC score greater than 14 (Corps 2000).

Table 5 summarizes the key data extrapolated from the APT output to compare the current year 30-day rolling total to the averaged 30-year normal for the weather stations with comprehensive historical data within 30 miles of the review area: estimated drought conditions, wet or dry season determination, ARC score, and antecedent precipitation condition. The APT output provided in Appendix F and summarized in Table 5, noted a PDSI Class of "severe drought" on April 22, 2021 and "extreme drought" on June 3, 2021 and June 7, 2021 for the review area; the precipitation and climatic conditions were classified as "drier than normal" on April 22, 2021 and "normal" on

June 3, 2021 and June 7, 2021 for the review area based on the 30-day rolling totals for the three months preceding the field survey dates. Field staff considered the drought conditions during the field delineation, evaluated how the drought conditions could affect the data collected on the Arid West Wetland Determination Data Forms and Ephemeral and Intermittent Streams OHWM Datasheets (Appendix E), and used recent and historic aerials to ensure appropriate representation of the extent of the on-site aquatic features for this ARDR despite 2021 drought conditions.

Table 5. Antecedent Precipitation Tool Data for the Review Area

Field Survey Date	PDSI Value	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
4/22/2021	-3.99	Severe drought	Dry season	9	Drier than normal
6/03/2021	-4.98	Extreme drought	Dry season	10	Normal conditions
6/07/2021	-4.98	Extreme drought	Dry season	11	Normal conditions

6 DESCRIPTION OF OBSERVED POTENTIAL AQUATIC RESOURCES

The following descriptions of observed potential aquatic resources within the review area document the presence or absence of aquatic resource indicators per the methods discussed in Section 3. The subsections below are intended to be reviewed independently under each agency's purview unless otherwise directed in the text (i.e., the aquatic resource description is the same between two or more agencies) given the various regulatory definitions and standards per each agency.

Appendix G provides site photographs of the features within the review area; all figures in the Figure 5 series display representative photo points.

6.1 CORPS WETLAND WATERS OF THE U.S.

RBC collected data at three representative Wetland Data Form Points (WDP) within the review area, one within NWW-2 (see *Non-Wetland Water 2* in Section 6.2 below), one within NWW-3 (see *Non-Wetland Water 3* in Section 6.2 below), and one within B-4 (see *Basins 1 – 5* in Section 6.6 below), to determine the presence or absence of jurisdictional wetland waters of the U.S. (Figure 5A; Appendix E). The delineated aquatic features on site did not meet the appropriate wetland parameters to qualify as wetland waters of the U.S. based on the data collected during the field delineation, as discussed further in Section 6.2.

6.2 CORPS NON-WETLAND WATERS OF THE U.S.

Non-Wetland Water 1

NWW-1 is a vegetated, earthen-bottom drainage that occurs within the far western portion of the review area (Figure 5A). Specifically, NWW-1 is an approximately 175-linear foot feature within an area of non-native grassland, the upstream extent of which appeared severely incised and erosional. After approximately 145 linear feet, NWW-1 converges with NWW-1A (see *Non-Wetland*

Water 1A below) before continuing off site and downstream, and exhibiting a more defined bed and bank with established vegetation along the banks.

OHWM Datasheet Point (ODP) 3 (see *Non-Wetland Water 1A* below) represents the OHWM within NWW-1 given the similar conditions observed within NWW-1A; similarily, WDP 2 (see *Non-Wetland Water 2* below) provides representative wetland delineation data for NWW-1 given the similar conditions observed within NWW 2. The estimated OHWM within NWW-1 measured approximately four feet wide until NWW-1 converged with NWW-1A, at which point the OHWM increased to approximately six feet wide.

Non-Wetland Water 1A

NWW-1A is a vegetated, earthen-bottom drainage that occurs withn the far western portion of the review area and is a tributary of NWW-1 (Figure 5A). Specifically, NWW-1A is an approximately 156-linear foot feature within an area of non-native grassland that, similar to NWW-1, originates as a severely incised and erosional feature.

An OHWM delineation was conducted within the drainage to confirm the presence or absence of OHWM indicators. ODP 3 confirmed the presence of the following OHWM indicators within NWW-1A: a faint break in bank slope and change in vegetation cover between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 3). WDP 2 (see *Non-Wetland Water 2* below) was representative of the conditions in NWW-1A. Based on the data collected, the estimated OHWM measured approximately six feet wide throughout the extent of NWW-1A.

Non-Wetland Water 2

NWW-2 is a vegetated, earthen-bottom drainage that travels through the western portion of the review area, south of NWW-1 (Figure 5A). Specifically, NWW-2 is an approximately 1,018-linear foot feature within an area of non-native grassland that initiates just west of B-4 (see *Basin 4* below). After approximately 200 linear feet, NWW-2 converges with NWW-2A (see *Non-Wetland Water 2A* below), then flows approximately 90 linear feet before converging with NWW-2B (see *Non-Wetland Water 2B* below) after which NWW-2 continues an additional 70 linear feet before converging with NWW-2C (see *Non-Wetland Water 2C* below). After converging with NWW-2C, NWW-2 flows approximately 658 linear feet before continuing off site and downstream.

A wetland and OHWM delineation were conducted within NWW-2 to confirm the presence or absence of wetland parameters and/or OHWM indicators. ODP 4 confirmed the presence of the following OHWM indicators within NWW-2: a break in bank slope and change in vegetation cover between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 4). Based on the data collected, the estimated OHWM ranged from three feet to four feet wide throughout the extent of NWW-2.

WDP 2 was taken within a vegetated area dominated by blue elderberry (FACU), mulefat (FAC), false brome (*Brachypodium distachyon*; NL/UPL), and ripgut brome (NL/UPL). WDP 2 did not meet the hydrophytic vegetation, hydric soil, or wetland hydrology parameters (Figure 5A; Appendix E, WDP 2).

Non-Wetland Water 2A

NWW-2A is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5A). Specifically, NWW-2A displays a faint OHWM and flows for approximately 168 linear feet through a small area dominated by mulefat and non-native grasses before converging with NWW-2 (see *Non-Wetland Water 2* above).

ODP 4 (see *Non-Wetland Water 2* above) was representative of the OHWM in NWW-2A. WDP 2 (see *Non-Wetland Water 2* above) was representative of the conditions in NWW-2A. Based on the data collected, the estimated OHWM ranged from one foot to two feet wide.

Non-Wetland Water 2B

NWW-2B is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5A). Specifically, NWW-2B travels for approximately 175 linear feet through an area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2* above).

ODP 4 (see *Non-Wetland Water 2* above) represents the OHWM within NWW-2B given the similar conditions observed within NWW-2; similarily, WDP 2 (see *Non-Wetland Water 2* above) provides representative wetland delineation data for NWW-2B given the similar conditions observed within NWW 2. Based on the data collected, the estimated OHWM measured approximately three feet wide.

Non-Wetland Water 2C

NWW-2C is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5A). Specifically, NWW-2C flows for approximately 109 linear feet through a small area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2* above).

ODP 4 (see *Non-Wetland Water 2* above) represents the OHWM within NWW-2C given the similar conditions observed within NWW-2; WDP 2 (see *Non-Wetland Water 2* above) also provides representative wetland delineation data for NWW-2C. Based on the data collected, the estimated OHWM measured approximately three feet wide.

Non-Wetland Water 3

NWW-3 is a vegetated, earthen-bottom drainage that flows through the southern portion of the review area (Figure 5A). Specifically, NWW-3 is an approximately 2,710-linear foot feature that enters the southern boundary of the review area then immediately flows through two culvert outlets under Brookside Avenue. After exiting the culverts, NWW-3 continues northwest for approximately 600 linear feet through an area of non-native grassland, before converging with NWW-3A (see *Non-Wetland Water 3A* below). NWW-3 then flows northwest for approximately 1,740 linear feet through areas of non-native grassland, mulefat scrub, blue elderberry stands, and non-native riparian, until converging with NWW-3B (see *Non-Wetland Water 3B* below). After converging with NWW-3B, NWW-3 flows west approximately 370 linear feet before continuing off site and downstream.

A wetland and OHWM delineation were conducted within NWW-3 to confirm the presence or absence of wetland parameters and/or OHWM indicators. ODP 7 confirmed the presence of the following OHWM indicators within NWW-3: a faint break in slope, change in average sediment texture, change in vegetation cover, and change in vegetation species between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 7). Based on the data collected, the estimated OHWM ranged from four feet to eight feet wide throughout the extent of NWW-3.

WDP 3 was taken within a sparsely vegetated area dominated by mulefat (FAC). WDP 3 met the hydrophytic vegetation parameter; however, WDP 3 did not meet the hydric soil or wetland hydrology parameters (Figure 5A; Appendix E, WDP 3).

Non-Wetland Water 3A

NWW-3A is a vegetated, earthen-bottom drainage that occurs within the southern portion of the review area, east of NWW-3, and is a tributary to NWW-3 (Figure 5A). NWW-3A likely resulted from runoff from former agricultural fields in the northeast corner of the review area and adjacent fields to the east of the review area, based on a review of historic aerials (Appendix D). Furthermore, NWW-3A appeared to have previously convey surface flows/runoff downslope from the former farming operations within the review area, based on its location just south of the former poultry sheds and a review of historic aerials (Appendix D). Specifically, NWW-3A is an approximately 1,290-linear foot feature that originates at the western extent of Swale (S-) 1 (see *Swales 1– 5* below) and eventually converges with NWW-3 (see *Non-Wetland Water 3* above).

An OHWM delineation was conducted within the drainage to confirm the presence or absence of OHWM indicators. ODP 5 confirmed the presence of the following OHWM indicators within NWW-3A: a break in bank slope, change in average sediment texture, and change in vegetation cover between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 5). WDP 3 (see *Non-Wetland Water 3* above) was representative of the conditions in NWW-3A.

Based on the data collected, the estimated OHWM ranged from approximately three feet to six feet wide throughout the extent of NWW-3A.

Non-Wetland Water 3B

NWW-3B is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area, directly west of what remains of the former poultry sheds (Figure 5A). NWW-3B is a tributary to NWW-3 that likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B appeared to previously convey surface flows/runoff from the former farming operations within the review area (Appendix D). Specifically, NWW-3B is an approximately 1,273-linear foot feature that originates just west of the western extent of Erosional Feature (EF-) 8 (see *Erosional Features 1 – 8* below), then travels approximately 393 linear feet before converging with NWW-3B1 (see *Non-Wetland Water 3B1* below), then continues another 880 linear feet before converging with NWW-3 (see *Non-Wetland Water 3* above).

ODP 5 (see *Non-Wetland Water 3A* above) provides representative data for the OHWM in NWW-3B given similar conditiosn wihtin the two features. WDP 3 (see *Non-Wetland Water 3* above) provides representative wetland delineation data in NWW-3B. Based on the data collected, the estimated OHWM measured approximately four feet wide throughout the extent of NWW-3B.

Non-Wetland Water 3B1

NWW-3B1 is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-3B (Figure 5A). NWW-3B1 likely also resulted from runoff from former agricultural fields in the northeast corner of the review area, based a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B1 appeared to previously convey surface flows/runoff from the former farming operations within the review area. Specifically, NWW-3B1 is an approximately 409-linear foot feature that originates at the western extent of S-5 (see *Swales 1 – 5* below), then drains south/southwest as it gradually widens before converging with NWW-3B (see *Non-Wetland Water 3B* above).

Data collected at ODP 5 (see *Non-Wetland Water 3A* above) represents of the OHWM observed within NWW-3B1. WDP 3 (see *Non-Wetland Water 3* above) also provides wetland delineation data in NWW-3B1. Based on the data collected, the estimated OHWM ranged from approximately one foot to four feet wide.

6.3 CDFW STREAMBED AND ASSOCIATED RIPARIAN AND WETLAND HABITATS

As outlined in Section 6.1, RBC collected data at three representative WDPs within the review area to determine the presence or absence of potential CDFW-jurisdictional wetlands (Figure 5B; Appendix E). The delineated aquatic features on site did not meet the appropriate wetland parameters to qualify as CDFW-jurisdictional wetlands based on the data collected during the field delineation.

Figure 5B displays the estimated extent of streambed, delineated based on the top of the channel banks, and associated riparian habitat within the review area; Table 7 provides additional details.

Non-Wetland Water 1: Vegetated Streambed

NWW-1 is a heavily vegetated, earthen-bottom drainage that occurs within the far western portion of the review area (Figure 5B). Specifically, NWW-1 is an approximately 175-linear foot feature ranging from approximately nine feet to 21 feet wide from bank to bank, within an area of non-native grassland, the upstream extent of which appeared severly incised and erosional. After approximately 145 linear feet, NWW-1 converges with NWW-1A (see *Non-Wetland Water 1A*: *Vegetated Streambed* below) before continuing off site and downstream, and exhibiting a more defined bed and bank with established vegetation along the banks. The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 1A: Vegetated Streambed

NWW-1A is a heavily vegetated, earthen-bottom drainage that occurs withn the far western portion of the review area and is a tributary of NWW-1 (Figure 5B). Specifically, NWW-1A is an approximately 156-linear foot feature ranging from approximately eight feet to 30 feet wide from bank to bank, within an area of non-native grassland that, similar to NWW-1, originates as a severely incised and erosional feature. The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 2: Vegetated Streambed

NWW-2 is a vegetated, earthen-bottom drainage that travels through the western portion of the review area, south of NWW-1 (Figure 5B). Specifically, NWW-2 is an approximately 1,018-linear foot feature ranging from approximately 15 feet to 60 feet wide from bank to bank, within an area of non-native grassland that initiates just west of B-4 (see *Basin 4* below). After approximately 200 linear feet, NWW-2 converges with NWW-2A (see *Non-Wetland Water 2A: Vegetated Streambed* below), then continues approximately 90 linear feet before converging with NWW-2B (see *Non-Wetland Water 2B: Vegetated Streambed* below), and travels an additional 70 linear feet before converging with NWW-2C (see *Non-Wetland Water 2C: Vegetated Streambed* below). After converging with NWW-2C, NWW-2 flows west approximately 658 linear feet before continuing off site and downstream. The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 2A: Vegetated Streambed

NWW-2A is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5B). NWW-2A likely resulted from runoff from the former agricultural operations, based on field observations and a review of historic aerials (Appendix D). Specifically, NWW-2A displays a faint streambed measuring approximately one foot to two feet wide from bank to bank, and flows for approximately 168 linear feet through a small area dominated by mulefat and non-native grasses before converging with NWW-2 (see *Non-Wetland Water 2: Vegetated Streambed* above). The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL), as well as mulefat (FAC).

Non-Wetland Water 2A: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-2A streambed includes mulefat scrub (Figure 5B).

Non-Wetland Water 2B: Vegetated Streambed

NWW-2B is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5B). Specifically, NWW-2B ranges from approximately nine feet to 49 feet wide from bank to bank and travels for approximately 175 linear feet through an area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2: Vegetated Streambed* above). The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL), as well as mulefat (FAC).

Non-Wetland Water 2C: Vegetated Streambed

NWW-2C is a vegetated earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5B). Specifically, NWW-2C ranges from approximately 20 feet to 47 feet wide from bank to bank and flows northwest for approximately 109 linear feet through a small area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2: Vegetated Streambed* above). The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL), as well as mulefat (FAC).

Non-Wetland Water 3: Vegetated Streambed

NWW-3 is a vegetated, earthen-bottom drainage that flows through the southern portion of the review area (Figure 5B). Specifically, NWW-3 is an approximately 2,710-linear foot that ranges from approximately 12 feet to 140 feet wide from bank to bank. NWW-3 enters the southern boundary of the review area then immediately drains through two culvert outlets under Brookside Avenue. After exiting the culverts, NWW-3 travels northwest for approximately 600 linear feet through an area of non-native grassland, before converging with NWW-3A (see *Non-Wetland Water 3A* below). NWW-3 then continues northwest for approximately 1,740 linear feet through areas of non-native grassland, mulefat scrub, blue elderberry stands, and non-native riparian, until converging with NWW-3B (see *Non-Wetland Water 3B: Vegetated Streambed* below). After converging with NWW-3B, NWW-3 flows west approximately 370 linear feet before continuing off site and downstream. The streambed is generally dominated by dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), shortpod mustard (NL/UPL), and horehound (*Marrubium vulgare*; FACU).

Non-Wetland Water 3: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-3 streambed includes mulefat scrub, non-native riparian (dominated by tree of heaven [FACU]), and blue elderberry stands (Figure 5B).

Non-Wetland Water 3A: Vegetated Streambed

NWW-3A is a vegetated, earthen-bottom drainage that occurs within the southern portion of the review area, east of NWW-3, and is a tributary to NWW-3 (Figure 5B). NWW-3A likely resulted from runoff from former agricultural fields within the northeast corner of the review area and adjacent fields to the east of the review area, based on a review of historic aerials (Appendix D). Furthermore, NWW-3A appeared to have previously convey surface flows/runoff downslope from the former farming operations within the review area, based on its location just south of the former poultry sheds and a review of historic aerials (Appendix D). Specifically, NWW-3A is an approximately 1,290-linear foot feature ranging from approximately six feet to 65 feet wide from bank to bank that originates at the western extent of S-1 (see *Swales 1 – 5* below) and eventually flows into NWW-3 (see *Non-Wetland Water 3: Vegetated Streambed* above). The streambed is generally dominated by ripgut brome (NL/UPL), false brome (NL/UPL), shortpod mustard (NL/UPL), and horehound (FACU).

Non-Wetland Water 3A: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-3A streambed includes blue elderbery stands (Figure 5B).

Non-Wetland Water 3B: Vegetated Streambed

NWW-3B is a vegetated earthen-bottom drainage that occurs within the western portion of the review area, directly west of what remains of the former poultry sheds (Figure 5B). NWW-3B is a tributary to NWW-3 that likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B appeared to previously convey surface flows/runoff from the former farming operations within the review area. Specifically, NWW-

3B is an approximately 1,273-linear foot feature ranging from approximately 20 feet to 70 feet wide from bank to bank that originates just west of the western extent of EF-8 (see *Erosional Features 1 – 8* below), then flows west approximately 393 linear feet before converging with NWW-3B1 (see *Non-Wetland Water 3B1: Vegetated Streambed* below), then travels another 880 linear feet before converging with NWW-3 (see *Non-Wetland Water 3: Vegetated Streambed* above). The streambed is generally dominated by ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 3B: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-3B streambed includes mulefat scrub (Figure 5B).

Non-Wetland Water 3B1: Vegetated Streambed

NWW-3B1 is a vegetated earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-3B (Figure 5B). NWW-3B1 likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B1 appeared to previously convey surface flows/runoff from the former farming operations within the review area. Specifically, NWW-3B1 is an approximately 409-linear foot feature ranging from approximately five feet to 30 feet wide from bank to bank that originates at the western extent of S-5 (see *Swales 1 – 5* below), then continues south/southwest as it gradually widens before converging with NWW-3B (see *Non-Wetland Water 3B: Vegetated Streambed* above). The streambed is generally dominated by ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

6.4 RWQCB WETLAND WATERS OF THE STATE

As outlined in Section 6.1, RBC collected data at three representative WDPs within the review area to determine the presence or absence of jurisdictional wetland waters of the State (Figure 5C; Appendix E). The delineated aquatic features on site did not meet the appropriate wetland parameters to qualify as wetland waters of the State based on the data collected during the field delineation.

6.5 RWQCB NON-WETLAND WATERS OF THE STATE

Field staff identified the lateral limits of potential non-wetland waters of the State using the same methods for determining an OHWM per the Corps as described in Section 3.2.1. as they have generally been considered coincident; however, based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project (Santa Ana RWQCB 2022), the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat). As such, RWQCB non-wetland boundaries are the same boundaries defined as CDFW-jurisdictional streambed and associated riparian habitat for the review area.

Figure 5C displays the estimated extent of RWQCB non-wetland waters within the review area; Table 8 provides additional details.

Non-Wetland Water 1: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-1 are the same boundaries defined for NWW-1 described in Section 6.3 above (*Non-Wetland Water 1: Vegetated Streambed*).

Non-Wetland Water 1A: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-1A are the same boundaries defined for NWW-1A described in Section 6.3 above (*Non-Wetland Water 1A: Vegetated Streambed*).

Non-Wetland Water 2: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2 are the same boundaries defined for NWW-2 described in Section 6.3 above (*Non-Wetland Water 2: Vegetated Streambed*).

Non-Wetland Water 2A: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2A are the same boundaries defined for NWW-2A described in Section 6.3 above (*Non-Wetland Water 2A: Vegetated Streambed*).

Non-Wetland Water 2A: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-2A as described in Section 6.3 above (*Non-Wetland Water 2A: Riparian Habitat*).

Non-Wetland Water 2B: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2B are the same boundaries defined for NWW-2B described in Section 6.3 above (*Non-Wetland Water 2B: Vegetated Streambed*).

Non-Wetland Water 2C: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2C are the same boundaries defined for NWW-2C described in Section 6.3 above (*Non-Wetland Water 2C: Vegetated Streambed*).

Non-Wetland Water 3: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3 are the same boundaries defined for NWW-3 described in Section 6.3 above (*Non-Wetland Water 3: Vegetated Streambed*).

Non-Wetland Water 3: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-3 as described in Section 6.3 above (*Non-Wetland Water 3: Riparian Habitat*).

Non-Wetland Water 3A: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3A are the same boundaries defined for NWW-3A described in Section 6.3 above (*Non-Wetland Water 3A: Vegetated Streambed*).

Non-Wetland Water 3A: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-3A as described in Section 6.3 above (*Non-Wetland Water 3A: Riparian Habitat*).

Non-Wetland Water 3B: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3B are the same boundaries defined for NWW-3B described in Section 6.3 above (*Non-Wetland Water 3B: Vegetated Streambed*).

Non-Wetland Water 3B: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-3B as described in Section 6.3 above (*Non-Wetland Water 3B: Riparian Habitat*).

Non-Wetland Water 3B1: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3B1 are the same boundaries defined for NWW-3B1 described in Section 6.3 above (*Non-Wetland Water 3B1: Vegetated Streambed*).

6.6 OTHER FEATURES

Field staff further investigated several areas with potential aquatic resource indicators, including basins, swales, erosional features, and an abandoned ditch as described below. Additionally, ODP 1 was taken within a lower topographic area between two gentle slopes (Figures 5A to 5C; Appendix E, ODP 1). This lower topographic area and other similar areas within the review area (See Appendix G, Photos 2, 3, 5, and 6) did not display an OHWM or exhibit bed and bank indicators, and did not appear to convey surface flows. As discussed in Section 4, the review area has been heavily manipulated and disturbed since at least 1938 based on review of historic aerials (Appendix D); many of the features discussed below are expected to be a result of the consistent manipulation of the review area.

Furthermore, the features discussed in this section are not discussed further in this ARDR as they are not anticipated to be jurisdictional under the Corps, RWQCB, or CDFW regulations, policy, and/or guidance based on the information provided in this section. An approved jurisdictional determination (AJD) can be provided under separate cover if required to confirm the features discussed below are not waters of the U.S.

Swales 1 – 5

Five swales (S-1 through S-5; Figures 5A to 5C) were observed during the field delineation that did not display an observable OHWM, bed and bank, or other evidence of conveying regular flows on site. These disturbed swale features also did not appear to convey flows to downstream aquatic resources via observed flow patterns, culverts, or other flow paths. A summary of the observed swales are provided below.

S-1 is a slightly concave drainage area located in the southeastern corner of the review area that eventually converges with NWW-3A at its western extent. S-1 did not display an observable OHWM or bed and bank and instead appeared to convey surface flows from EF-4, which historically conveyed runoff from former agricultural fields in the neighboring properties east of the review area (Appendix D). ODP 6, taken in an area of non-native grassland, did not show evidence of a break in slope or a defined bed and bank between the swale and adjacent uplands. Additionally, ODP 6 did not contain a change in sediment texture, change in vegetation species or cover, or any other OHWM indicators between the swale and the adjacent upland area (Figures 5A to 5C; Appendix E, ODP 6). Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-2 is a slightly concave drainage area located in the southeastern portion of the review area, north of S-1, that converges with NWW-3A at its western extent. S-2 likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, S-2 appeared to have previously conveyed surface flows/runoff from the former farming operations within the review area based on its location just south of the former locations of the poultry sheds and a review of historic aerials (Appendix D). The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-2. Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-3 is a slightly concave drainage area located in the southeastern portion of the review area, west of S-1 and S-2, that converges with NWW-3A at its southern extent. S-3 appeared to have previously conveyed surface flows/runoff downslope from the former farming operations, based on its location just south of the former locations of the poultry sheds and a review of historic aerials (Appendix D). The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-3. Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-4 is a slightly concave drainage area located in the central portion of the review area, east of NWW-3B, that converges with EF-6 at its western extent. S-4 appeared to have previously conveyed surface flows/runoff from the former farming operations, based on its location just south of the former locations of the poultry sheds and a review of historic aerials (Appendix D). The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-4. Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-5 is a concave drainage area located in the central portion of the review area, just west of Ditch (D-) 1 (see *Ditch 1* below), that converges with NWW-3B1 at its western extent. S-5 appeared to have previously conveyed surface flows/runoff from an abandoned ditch (D-1) associated with the former agricultural operations. The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-5. Thus, this swale was determined to not have an OHWM or defined bed and bank.

Basins 1 – 5

Five basins (B-1 through B-5; Figures 5A to 5C) that occur within the western portion of the review area did not display an observable OHWM or bed and bank and instead displayed cracked soils and some concavity within the otherwise flat landscape indicative of a basin. As discussed previously in Section 4, the former poultry farm developed B-1 through B-5 for use as settling basins to hold manure from chicken, pigs, and cows. Four additional areas were investigated as potential basins, based on the appearance of ponding water and/or possible concavity during a review of recent and historic aerials (Appendix D). These areas (see Appendix G, Photos 16, 37, 44, 45, and 46) were determined to not qualify as basins, based on a lack of cracked soils and concavity.

Wetland delineation data was collected within B-4 within a small stand of mulefat (FAC) to confirm the presence or absence of wetland parameters. WDP 1 met the wetland hydrology parameter based on the presence of surface soil cracks; however, WDP 1 did not meet the hydrophytic vegetation or hydric soil parameters (Figures 5A to 5C; Appendix E, WDP 1). WDP 1 was representative of the wetland conditions for B-1, B-2, B-3, and B-5.

Erosional Features 1 – 8

Eight erosional features (EF-1 through EF-8; Figures 5A to 5C) were observed during the field delineation that did not display an observable OHWM or defined bed and bank, and were severely incised. A summary of the observed erosional features are provided below.

EF-1 is an incised erosional feature located in the northwestern corner of the review area. EF-1 abruptly starts and stops within the otherwise flat landscape. EF-1 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank.

EF-2 and EF-3 are deeply incised gullies/erosional features located south of EF-1, in the northwestern portion of the review area. Similar to EF-1, EF-2 and EF-3 also abruptly start and stop within the review area. ODP 2, taken in an area of non-native grassland within EF-2, exhibited a slight break in bank slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other OHWM indicators (Figures 5A to 5C; Appendix E, ODP 2). The conditions and vegetation observed at EF-2 were similar to and representative of the conditions and vegetation observed at EF-3. Thus, these erosional features wer determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within the gullies and the abrupt stop to the features, EF-2 and EF-3 appear to no longer receive flows and do not convey flows downstream.

EF-4 is a gully/erosional feature located in the southeastern corner of the review area. EF-4 appears to initiate just to the east of the review area and appeared to previously convey runoff from former agricultural fields in the neighboring properties east of the review area (Appendix D). EF-4 continues for a short distance before dissipating and becoming swale-like (see *Swales 1 – 5* above). EF-4 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-4 and the quick transition into S-1, EF-

4 appears to no longer receive flows or receive flows very infrequently, and does not convey flows downstream.

EF-5 is a slightly incised erosional feature located in the southeastern portion of the review area. EF-5 appears to have conveyed runoff downslope from the previous poultry farm operations, due to its location just south of the former locations of the poultry sheds. EF-5 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-5, EF-5 appears to no longer receive flows.

EF-6 is a sharply incised gully/erosional feature located in the central portion of the review area, just west of S-4 (see *Swales 1 – 5* above). EF-6 appears to have conveyed runoff from the previous poultry farm operations, due to its location just south of the former locations of the poultry sheds and the presence of a black pipe where EF-6 initiates, that is assumed to have outletted discharge from the former farming operations. EF-6 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-6, EF-6 appears to no longer receive flows and does not convey flows downstream into NWW-3B.

EF-7 is a gully/erosional feature located in the central portion of the review area, just south of EF-6, that connects to EF-8. Similar to EF-6, EF-7 appears to have conveyed runoff from the previous poultry farm operations, due to its location just south of the former locations of the poultry sheds and the presence of a black pipe where EF-7 initiates, that is assumed to have outletted discharge from the former farming operations. It appeared that EF-7 previously discharged into EF-8, which was a slightly less incised erosional feature. EF-7 and EF-8 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, these erosional features were determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-7 and EF-8, these erosional features appear to no longer receive flows and do not convey flows downstream into NWW-3B.

Ditch 1

D-1 (Figures 5A to 5C) is an earthen-bottom ditch that is located in the center of the review area, within the former locations of the poultry sheds. D-1, which is located within an area of non-native grassland, appears to have initiated as runoff from underneath a concrete slab associated with the poultry sheds, then continues west before traveling through a culverted pipe and becoming more incised at several points before abruptly terminating (see Appendix G, Photo 40). Based on the established vegetation and a review of historic aerials (Appendix D), D-1 is an abandoned ditch that was created between May 2002 and June 2003 to convey runoff away from the poultry sheds. D-1 displayed a break in bank slope but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Vegetation within the ditch was well established and contained some refuse from the former agricultural operations, indicating that this ditch likely no longer receives flows and does not convey flows downstream into NWW-3B1.

7 DEVIATION FROM NWI AND NHD

The delineated extent of NWW-3 generally occurs within the area mapped by the USFWS NWI as "Riverine" and the area mapped by the NRCS NHD as an ephemeral "Stream/River" in the southern portion of the review area. However, although the NWI designates this aquatic resource as intermittent (R4), based on field observations in April and June 2021, NWW-3 is expected to convey ephemeral flows (i.e., only in direct response to precipitation). The delineated extent of NWW-2 generally occurs within the area mapped by the NRCS NHD as an ephemeral "Stream/River" in the western portion of the review area. The delineated extent of B-1, B-2, B-3, B-4, and B-5 generally occur within five of the areas mapped by the NRCS NHD as "Reservoir"; two additional areas mapped by the NRCS NHD as "Reservoir" were inspected but were determined to not qualify as reservoirs based on a lack of cracked soils and concavity (see *Basins 1 – 5* above). USGS NHD and USFWS NWI do not map any additional aquatic resources within the review area.

8 RESULTS AND CONCLUSIONS

The results provided in this section include the extent of delineated aquatic resources within the review area based on observed field indicators of potential waters of the U.S., waters of the State, and CDFW streambed and associated wetland and/or riparian habitat per the methodologies discussed in Section 3.

This section, however, does not analyze the Corps' jurisdictional status of the delineated features per the current regulations, guidance, and standard operating procedures. A jurisdictional analysis for an AJD, along with the applicable JD request forms, will be provided under separate cover to the Corps.

8.1 CORPS

NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 displayed clear indicators of an OHWM, such as a break in bank slope, change in average sediment texture, and change in vegetation species and cover between the drainage and adjacent uplands (Figure 5A). However, these features did not meet the three wetland parameters.

As such, NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 may be considered non-wetland waters of the U.S. given the presence of an OHWM. Approximately 0.83 acre (7,483 linear feet) of potential non-wetland waters of the U.S. associated with NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 occur within the review area, as further detailed in Table 6 and as shown on Figure 5A. The ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is included as Appendix I.

Table 6. Aquatic Resource Summary: Corps

Aquatic Resource Name	Cowardin Code	Active Channel Width Range (Feet)	Observed OHWM Indicators[1]	Observed Wetland Parameters[2]	Presence of OHWM/ Wetland	Dominant Vegetation[3]	Location (lat, long)	Acre(s)	Linear Feet
NWW-1	R6	4 – 6	CVC, BBS; see NWW-1A[4]	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.965908, -117.025153	0.02	175
NWW-1A	R6	6 – 6	CVC, BBS	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.966006, -117.025084	0.02	156
NWW-2	R6	3 – 4	CVC, BBS	None	Yes/No	Non-native Grassland; See WDP 2	33.964929, -117.023925	0.09	1,018
NWW-2A	R6	1 – 2	CVC, BBS; see NWW-2[4]	None; see NWW-2[5]	Yes/No	Mulefat Scrub; See WDP 3	33.964977, -117.022656	<0.01	168
NWW-2B	R6	3 – 3	CVC, BBS; see NWW-2[4]	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.965185, -117.022994	0.01	175
NWW-2C	R6	3 – 3	CVC, BBS; see NWW-2[4]	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.964845, -117.023224	0.01	109
NWW-3	R6	4 – 8	CAST, CVS, CVC, BBS	HV	Yes/No	Mulefat Scrub; See WDP 3	33.962391, -117.021747	0.39	2,710
NWW-3A	R6	3 – 6	CAST, CVS, BBS	HV; see NWW-3[5]	Yes/No	Non-native Grassland; See WDP 2	33.962760, -117.018132	0.15	1,290
NWW-3B	R6	4 – 4	CAST, CVS, BBS; see NWW-3A[4]	HV; see NWW-3[5]	Yes/No	Mulefat Scrub; See WDP 3	33.963540, -117.022834	0.12	1,273
NWW-3B1	R6	1 – 4	CAST, CVS, BBS; see NWW-3A[4]	HV; see NWW-3[5]	Yes/No	Non-native Grassland; See WDP 2	33.964055, -117.021934	0.03	409
							Total[6]	**0.83**	**7,483**

[1] OHWM Indicators: CAST = Change in average sediment texture; CVS = Change in vegetation species; CVC = Change in vegetation cover; BBS = Break in bank slope
[2] Wetland Indicators: HV = Hydrophytic vegetation
[3] See Figure 6 for all vegetation communities present within each aquatic resource.
[4] Based on a representative ODP taken within an aquatic resource with similar conditions.
[5] Based on a representative WDP taken within an aquatic resource with similar conditions.
[6] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

8.2 CDFW

NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 qualify as CDFW streambed with associated riparian habitat.

Approximately 8.00 acres (7,483 linear feet) of vegetated streambed and 1.01 acres of associated riparian habitat occur within the review area, as further detailed in Table 7 and as shown on Figure 5B.

Table 7. Aquatic Resource Summary: CDFW

Aquatic Resource Name	Aquatic Resource Type	Vegetation Community	Width Range[1] (Feet)	Location (lat, long)	Acre(s)	Linear Feet[2]
NWW-1	Vegetated Streambed	Non-native Grassland	9 – 21	33.965912, -117.025153	0.06	175
		Torrey's Scrub Oak		33.965905, -117.025193	0.01	
NWW-1A	Vegetated Streambed	Non-native Grassland	8 – 30	33.966014, -117.025085	0.07	156
NWW-2	Vegetated Streambed	Non-native Grassland	15 – 60	33.964951, -117.023674	0.71	1,018
		Torrey's Scrub Oak		33.964834, -117.024985	0.12	
NWW-2A	Vegetated Streambed	Non-native Grassland	1 – 2	33.965173, -117.023011	<0.01	168
		Mulefat Scrub		33.964970, -117.022752	<0.01	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.964966, -117.022542	0.03	–
NWW-2B	Vegetated Streambed	Non-native Grassland	9 – 49	33.964825, -117.023223	0.08	175
NWW-2C	Vegetated Streambed	Non-native Grassland	20 – 47	33.962269, -117.020283	0.07	109
NWW-3	Vegetated Streambed	Non-native Grassland	12 – 140	33.962377, -117.022101	2.37	2,710
		Mulefat Scrub		33.962547, -117.021943	1.05	
		Eucalyptus Woodland		33.963045, -117.023804	0.07	
		Non-native Riparian		33.961260, -117.018464	1.02	
		Blue Elderberry		33.963695, -117.025272	0.11	
		Riversidean Sage Scrub		33.962362, -117.019172	0.03	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.962322, -117.022037	0.03	–
		Non-native Riparian		33.962170, -117.020330	0.69	

Aquatic Resource Name	Aquatic Resource Type	Vegetation Community	Width Range[1] (Feet)	Location (lat, long)	Acre(s)	Linear Feet[2]
		Blue Elderberry		33.961528, -117.018718	0.04	
NWW-3A	Vegetated Streambed	Non-native Grassland	6 – 65	33.963610, -117.020925	0.87	1,290
		Blue Elderberry		33.962783, -117.018163	0.14	
	Riparian Habitat[3]	Blue Elderberry	N/A	33.962425, -117.019001	0.01	—
NWW-3B	Vegetated Streambed	Non-native Grassland	20 – 70	33.963566, -117.022903	0.36	1,273
		Mulefat Scrub		33.963562, -117.023254	0.61	
		Riversidean Sage Scrub		33.963522, -117.022922	0.07	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.963617, -117.022422	0.21	—
NWW-3B1	Vegetated Streambed	Non-native Grassland	5 – 30	33.964098, -117.021923	0.18	409
				Total[4]	**9.01**	**7,483**

[1] Corresponds with the approximate stream bank widths observed during delineation. Width range accounts for entirety of streambed delineated, not individual vegetation communities.
[2] Linear feet not calculated for individual aquatic resource type and vegetation community (including riparian habitat that occurs outside of delineated streambed) to avoid redundant linear foot calculation where such areas overlap.
[3] Occurs outside of delineated streambed.
[4] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

8.3 RWQCB

NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 displayed clear indicators of an OHWM, such as a break in bank slope, change in average sediment texture, and change in vegetation species and cover between the drainage and adjacent uplands (Appendix E). However, based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project (Santa Ana RWQCB 2022), the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat). As such, NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1, to the top of the channel banks and including associated riparian habitat, may be considered waters of the State (Figure 5C). These features did not meet the three wetland parameters.

Approximately 8.00 acres (7,483 linear feet) of potential non-wetland waters of the State and 1.01 acres of associated riparian habitat occur within the review area, as further detailed in Table 8 and as shown on Figure 5C.

Table 8. Aquatic Resource Summary: RWQCB

Aquatic Resource Name	Aquatic Resource Type[1]	Cowardin Code	Active Channel Width Range (Feet)[2]	Observed Wetland Parameters[3]	Presence of OHWM/ Wetland	Dominant Vegetation[4]	Location (lat, long)	Acre(s)	Linear Feet[5]
NWW-1	Non-Wetland Water	R6	9 – 21	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.965911, -117.025160	0.07	175
NWW-1A	Non-Wetland Water	R6	8 – 30	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.966014, -117.025085	0.07	156
NWW-2	Non-Wetland Water	R6	15 – 60	None	Yes/No	Non-native Grassland; See WDP 2	33.964934, -117.023860	0.82	1,018
NWW-2A	Non-Wetland Water	R6	1 – 2	None; see NWW-2[6]	Yes/No	Mulefat Scrub; See WDP 3	33.964970, -117.022603	<0.01	168
	Riparian Habitat[7]	RP	N/A	None	No/No	Mulefat Scrub	33.964966, -117.022542	0.03	—
NWW-2B	Non-Wetland Water	R6	9 – 49	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.965173, -117.023011	0.08	175
NWW-2C	Non-Wetland Water	R6	20 – 47	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.964825, -117.023223	0.07	109
NWW-3	Non-Wetland Water	R6	12 – 140	HV	Yes/No	Non-native Grassland; See WDP 3	33.962631, -117.022409	4.66	2,710
	Riparian Habitat[7]	RP	N/A	None	No/No	Non-native Riparian	33.962302, -117.021813[8]	0.76	—
NWW-3A	Non-Wetland Water	R6	6 – 65	HV; see NWW-3[6]	Yes/No	Non-native Grassland; See WDP 2	33.962732, -117.018281	1.01	1,290
	Riparian Habitat[7]	RP	N/A	None	No/No	Blue Elderberry	33.962362, -117.019172	0.01	—
NWW-3B	Non-Wetland Water	R6	20 – 70	HV; see NWW-3[6]	Yes/No	Mulefat Scrub; See WDP 3	33.963595, -117.022740	1.04	1,273
	Riparian Habitat[7]	RP	N/A	None	No/No	Mulefat Scrub	33.963610, -117.020925	0.21	—
NWW-3B1	Non-Wetland Water	R6	5 – 30	HV; see NWW-3[6]	Yes/No	Non-native Grassland; See WDP 2	33.964098, -117.021923	0.18	409
							Total[9]	**9.01**	**7,483**

[1] Based on comments provided by the Santa Ana RWQCB, the RWQCB has asserted jurisdiction beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat).
[2] Based on comments provided by the Santa Ana RWQCB, the widths of RWQCB-jurisdictional non-wetland waters correspond with the approximate CDFW stream bank widths observed during delineation (i.e., to the top of the channel banks).
[3] Wetland Indicators: HV = Hydrophytic vegetation
[4] See Figure 6 for all vegetation communities present within each aquatic resource.
[5] Linear feet not calculated for riparian habitat that occurs outside of non-wetland waters to avoid redundant linear foot calculation where such areas overlap.
[6] Based on a representative WDP taken within an aquatic resource with similar conditions.

[7] Based on comments provided by the Santa Ana RWQCB, RWQCB jurisdiction extends beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and associated riparian habitat). This riparian habitat occurs outside of the delineated non-wetland water (i.e., the top of channel banks).
[8] Representative coordinates of riparian habitat associated with NWW-3. See Figure 5C for all riparian habitat associated with NWW-3.
[9] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

8.4 DISCLAIMER STATEMENT

The aquatic resources acreages and linear feet estimated in this section represent the existing conditions during the time of the field surveys. Please note that the applicable agencies will make final jurisdictional determinations. RBC recommends early coordination with the resource agencies to determine the final jurisdictional boundaries, applicable permitting processes, compensatory mitigation requirements, and other potential permitting issues specific to the proposed work within the review area. Agency representatives may request to access the site to field-verify the results of this ARDR with the applicant, or a designated representative.

The information provided in this report should remain valid for up to five years from the date of the field effort for the jurisdictional delineation unless site conditions change substantially, or a regulatory agency requires an updated report.

9 CONTACT INFORMATION

Applicant/Land Owner:

Andrew Greybar

Exeter Cherry Valley Land, LLC

5060 North 40th Street, Suite 108

Phoenix, AZ 85018

andrew.greybar@eqtexeter.com

708-341-9821

Agent:

Shanti Santulli

Rocks Biological Consulting

4312 Rialto Street

San Diego, CA 92107

shanti@rocksbio.com

619-674-8067

Agency access to the review area can be coordinated with the applicant and/or agent upon request.

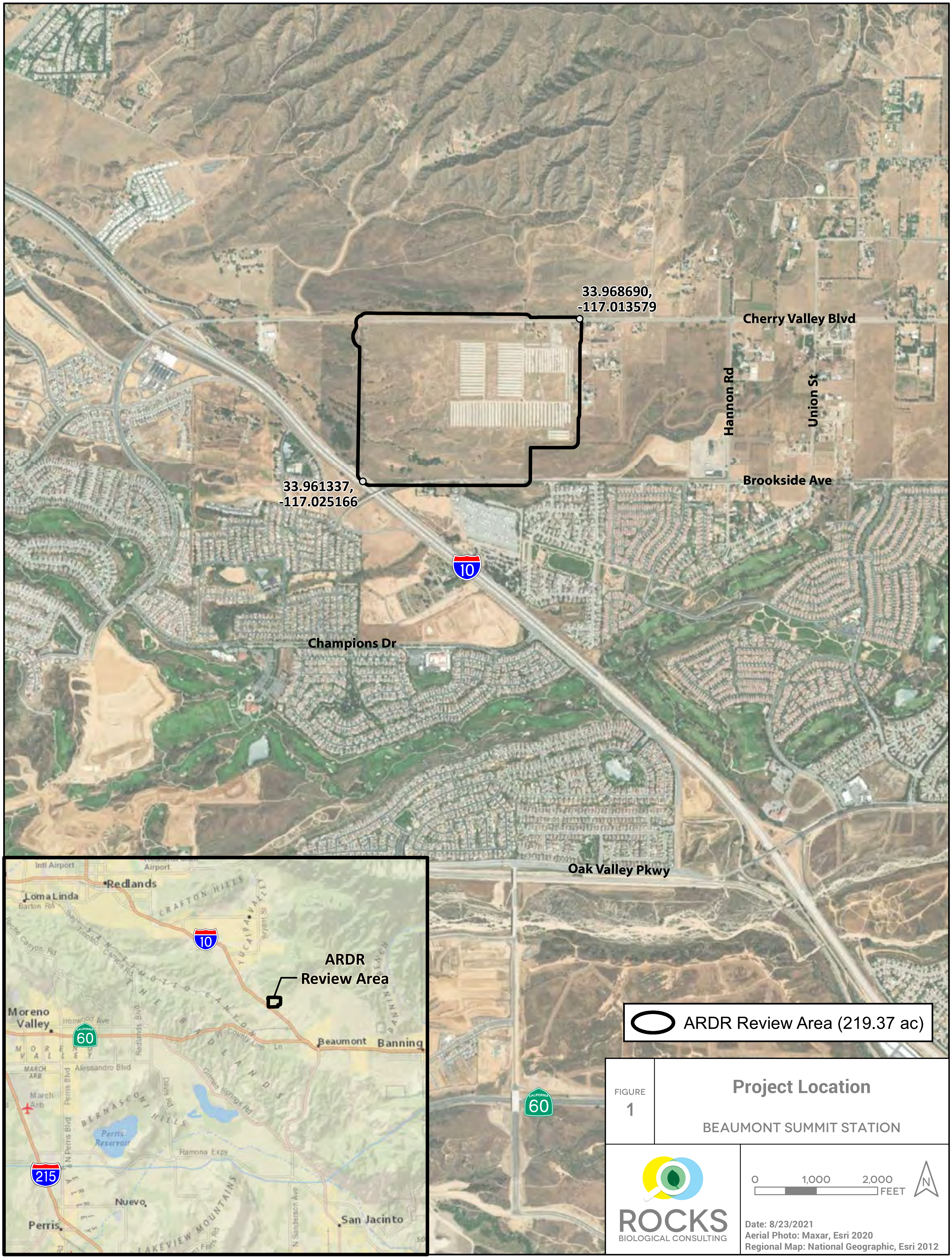
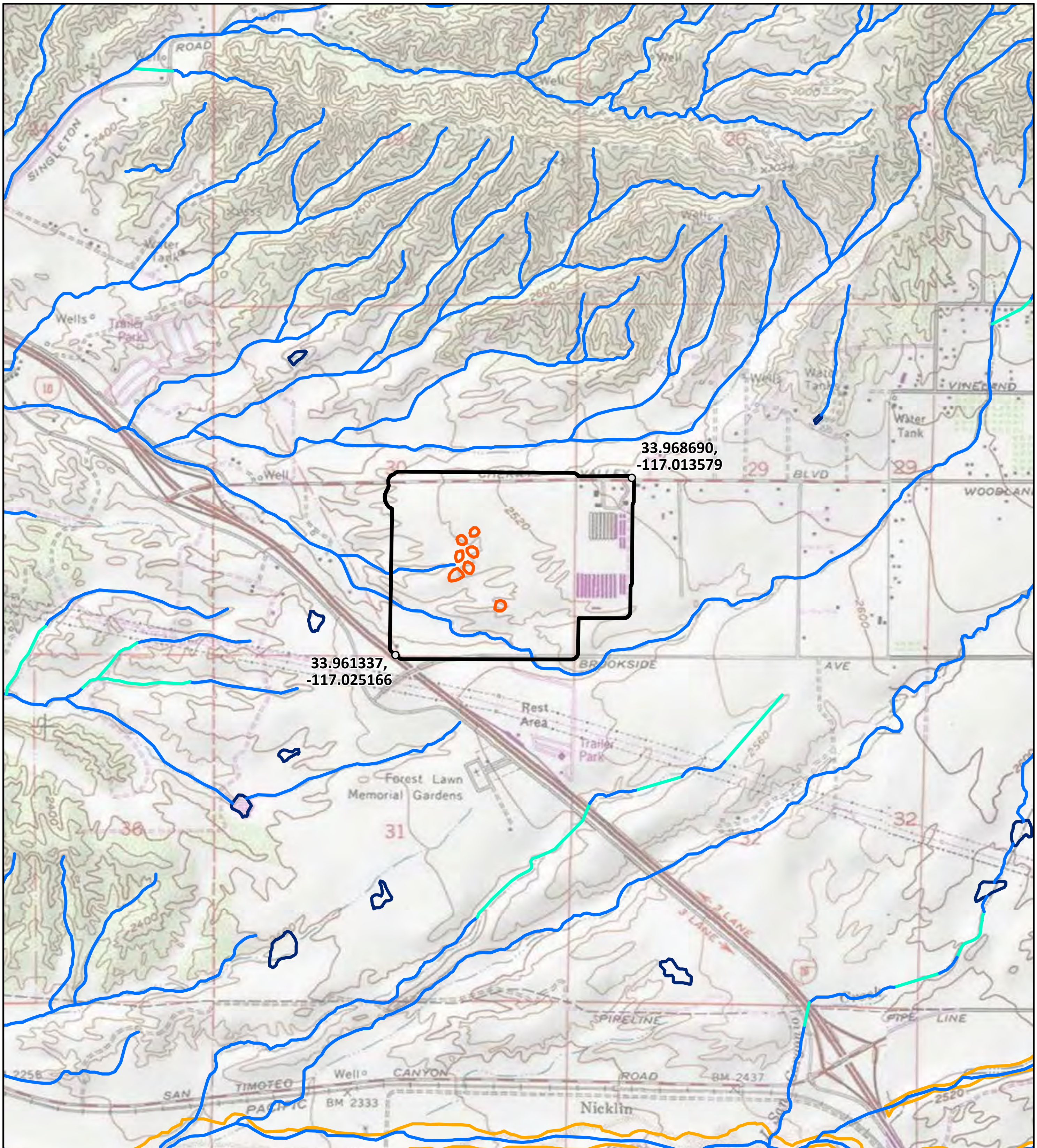


FIGURE 1

Project Location

BEAUMONT SUMMIT STATION

Date: 8/23/2021
Aerial Photo: Maxar, Esri 2020
Regional Map: National Geographic, Esri 2012



- ARDR Review Area

National Hydrography Dataset (NHD)

- Stream/River
- Connector
- Wash
- Reservoir
- Lake/Pond

FIGURE 2

USGS Topo and NHD

BEAUMONT SUMMIT STATION

ROCKS
BIOLOGICAL CONSULTING

0 1,000 2,000 FEET

N

Date: 8/23/2021
Source: USGS NHD 2020
USGS 7.5' Quadrangles (El Casco);
T2S, R1W, S29-31, San Jacinto/
San Gorgonio Land Grant

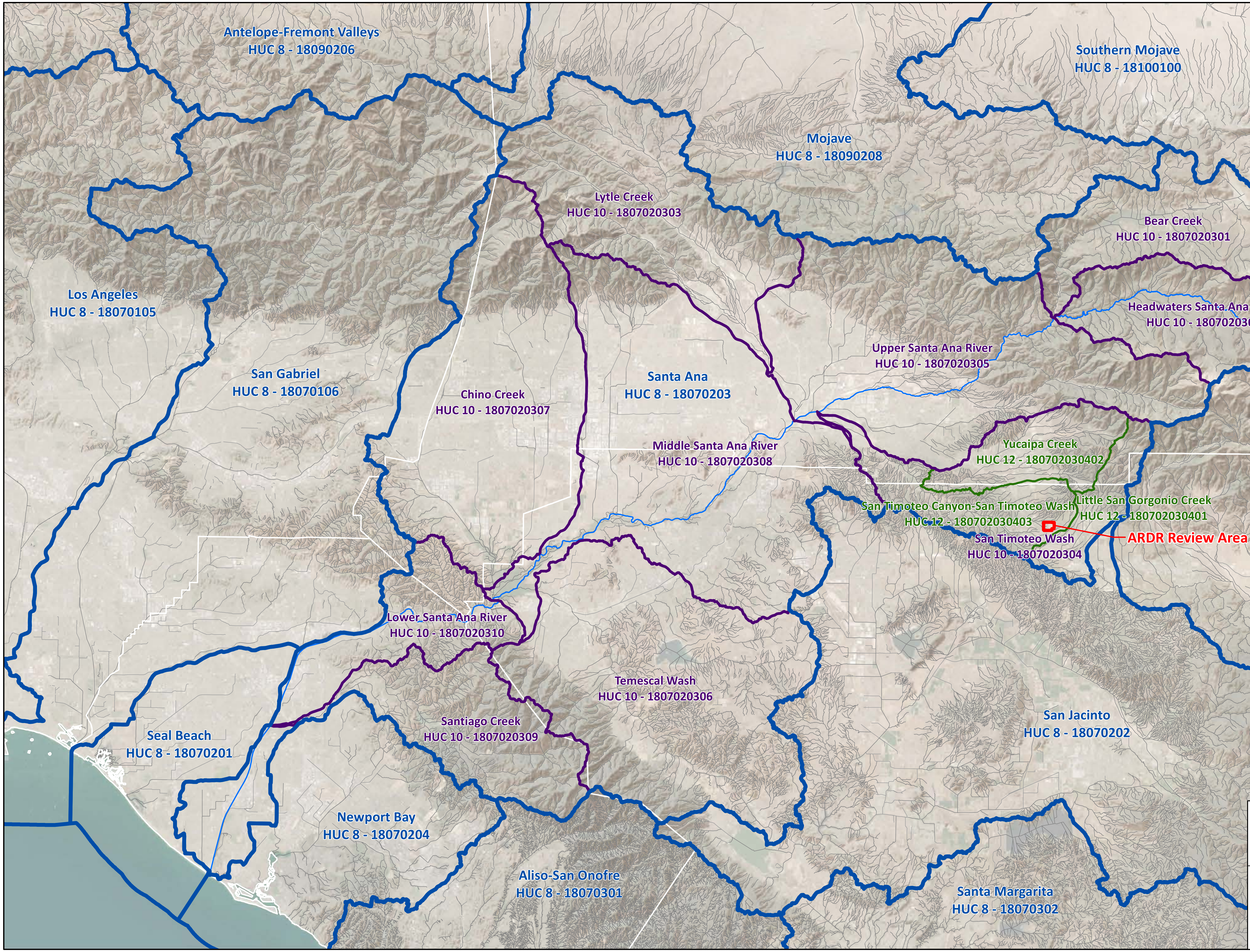


FIGURE 3

Watershed

BEAUMONT SUMMIT STATION

0 3 6 MILES

N

ROCKS BIOLOGICAL CONSULTING

Date: 8/23/2021
Aerial Photo: Maxar, Esri 2020
Source: USGS NHD 2020

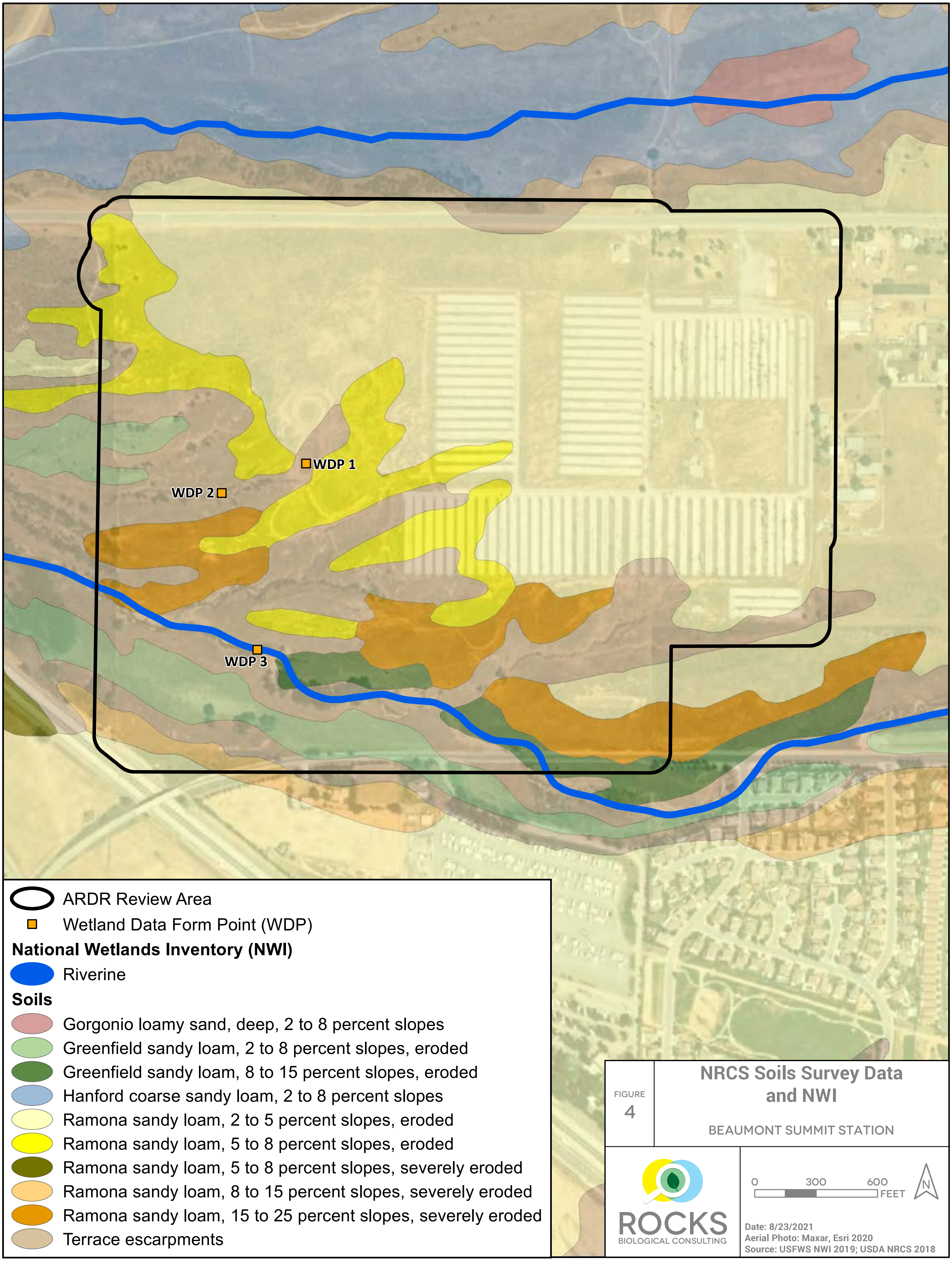
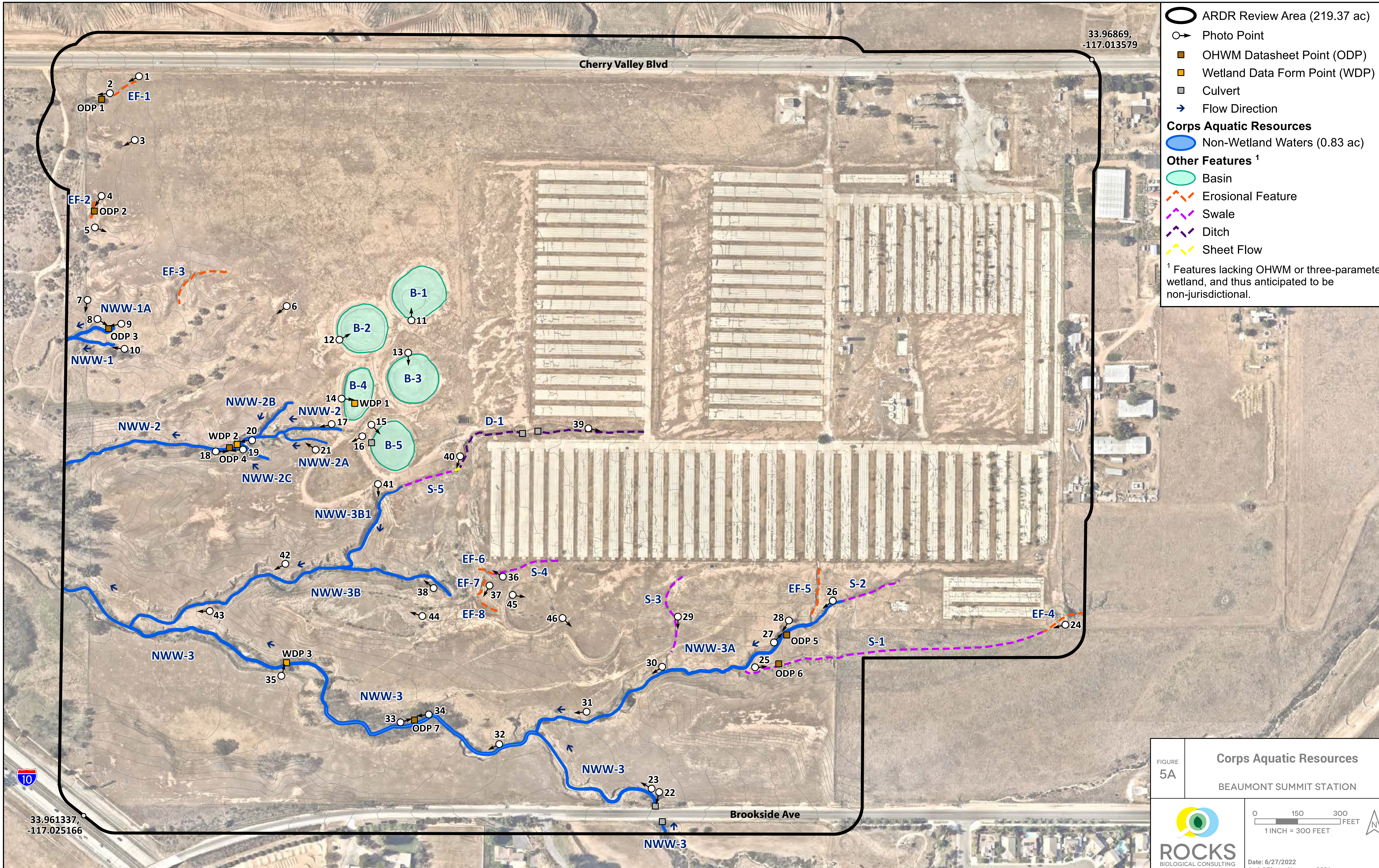


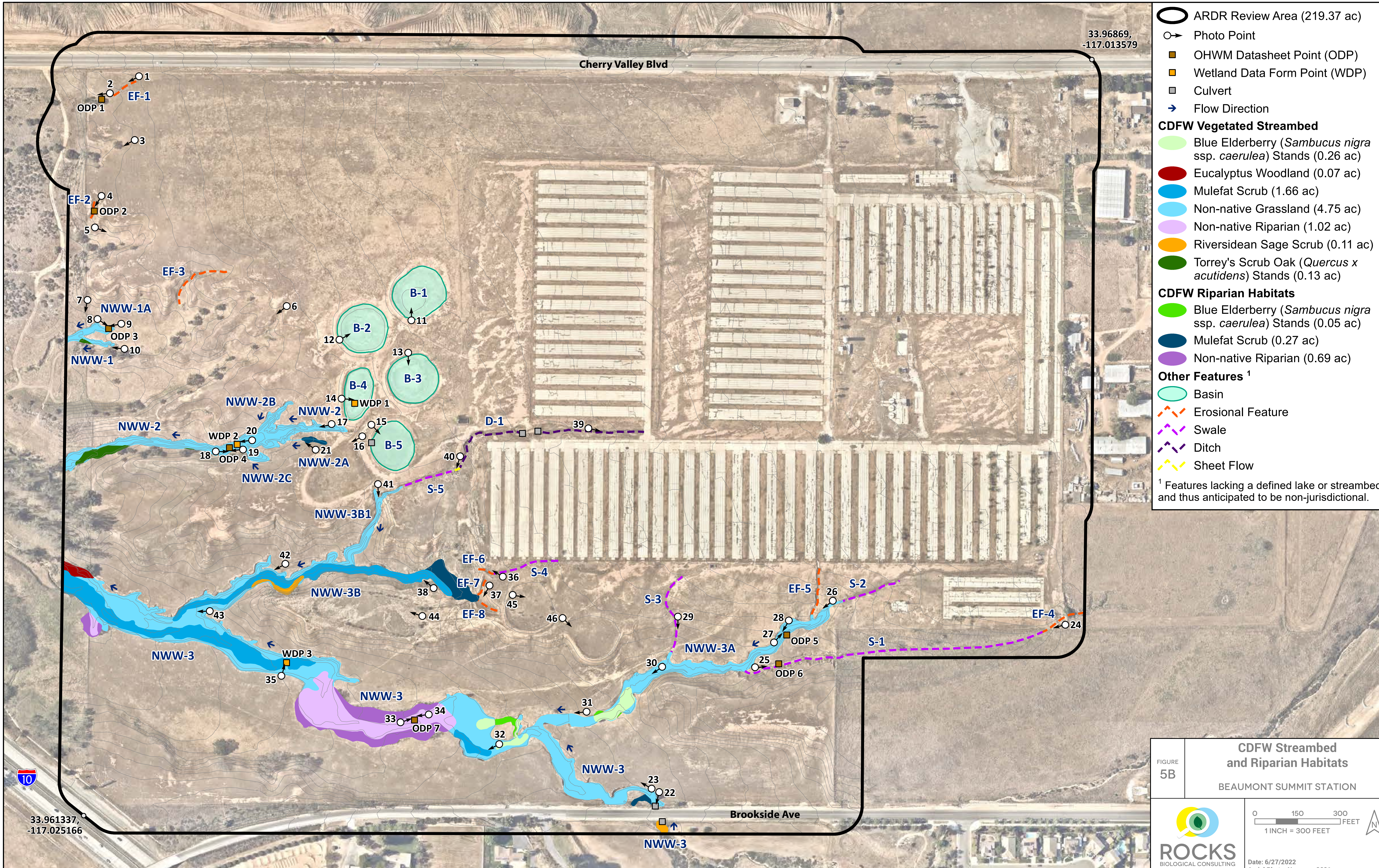
FIGURE 4

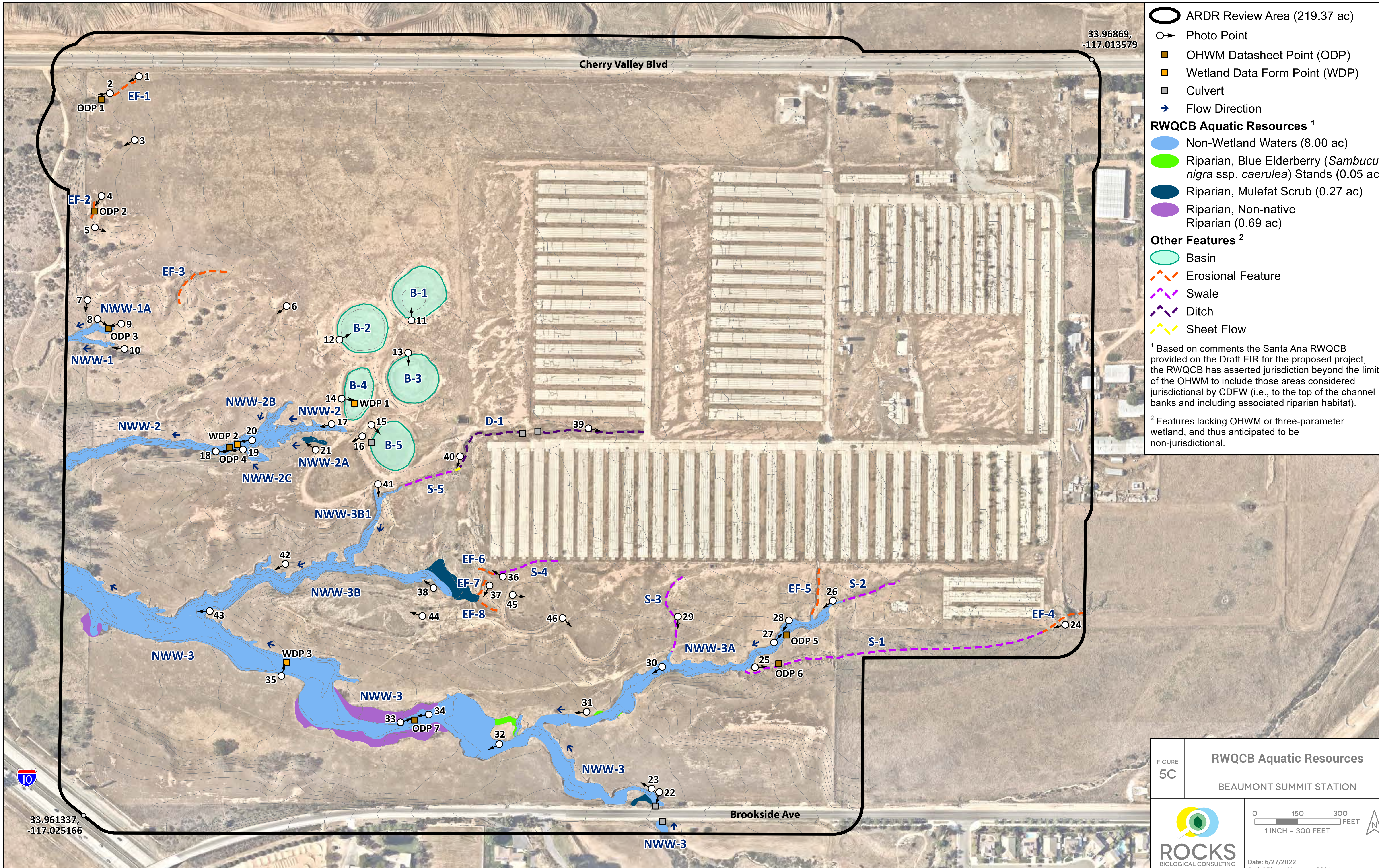
NRCS Soils Survey Data and NWI

BEAUMONT SUMMIT STATION

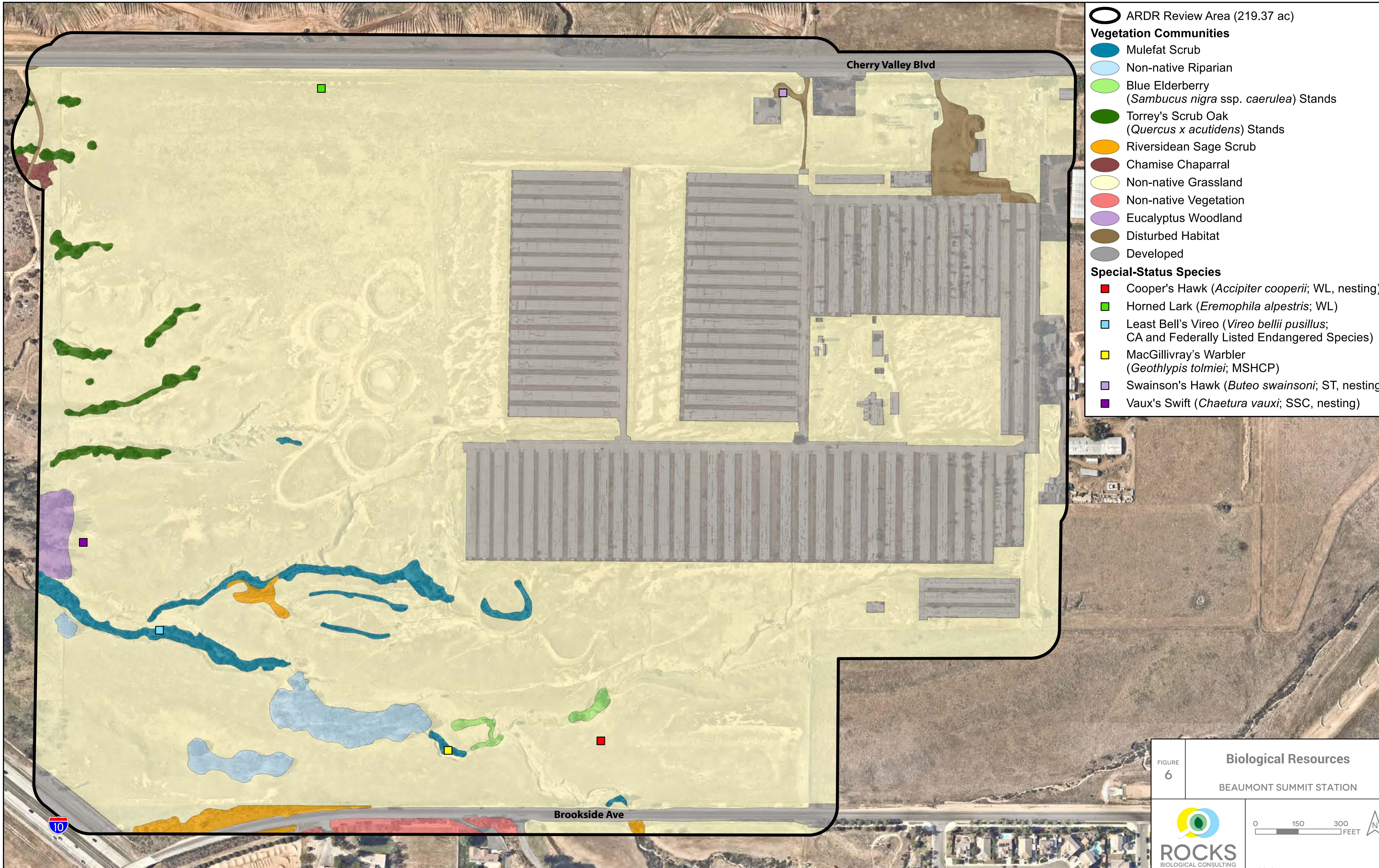
Date: 8/23/2021
Aerial Photo: Maxar, Esri 2020
Source: USFWS NWI 2019; USDA NRCS 2018


ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
Corps Aquatic Resources
Non-Wetland Waters (0.83 ac)
Other Features [1]
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
[1] Features lacking OHWM or three-parameter wetland, and thus anticipated to be non-jurisdictional.
Cherry Valley Blvd
Brookside Ave
33.96869,
-117.013579
33.961337,
-117.025166
10
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
ODP 1
ODP 2
ODP 3
ODP 4
ODP 5
ODP 6
ODP 7
WDP 1
WDP 2
WDP 3
NWW-1
NWW-1A
NWW-2
NWW-2A
NWW-2B
NWW-2C
NWW-3
NWW-3A
NWW-3B
NWW-3B1
B-1
B-2
B-3
B-4
B-5
D-1
S-1
S-2
S-3
S-4
S-5
FIGURE
5A
Corps Aquatic Resources
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0
150
300
FEET
1 INCH = 300 FEET
N
Date: 6/27/2022
Aerial Photo: Nearmap 2021


ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
CDFW Vegetated Streambed
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands (0.26 ac)
Eucalyptus Woodland (0.07 ac)
Mulefat Scrub (1.66 ac)
Non-native Grassland (4.75 ac)
Non-native Riparian (1.02 ac)
Riversidean Sage Scrub (0.11 ac)
Torrey's Scrub Oak (*Quercus x acutidens*) Stands (0.13 ac)
CDFW Riparian Habitats
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands (0.05 ac)
Mulefat Scrub (0.27 ac)
Non-native Riparian (0.69 ac)
Other Features [1]
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
[1] Features lacking a defined lake or streambed, and thus anticipated to be non-jurisdictional.
Cherry Valley Blvd
Brookside Ave
33.96869, -117.013579
33.961337, -117.025166
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
ODP 1
ODP 2
ODP 3
ODP 4
ODP 5
ODP 6
ODP 7
WDP 1
WDP 2
WDP 3
NWW-1
NWW-1A
NWW-2
NWW-2A
NWW-2B
NWW-2C
NWW-3
NWW-3A
NWW-3B
NWW-3B1
B-1
B-2
B-3
B-4
B-5
D-1
S-1
S-2
S-3
S-4
S-5
10
FIGURE 5B
CDFW Streambed and Riparian Habitats
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 150 300 FEET
1 INCH = 300 FEET
Date: 6/27/2022
Aerial Photo: Nearmap 2021



ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
RWQCB Aquatic Resources [1]
Non-Wetland Waters (8.00 ac)
Riparian, Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands (0.05 ac)
Riparian, Mulefat Scrub (0.27 ac)
Riparian, Non-native Riparian (0.69 ac)
Other Features [2]
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
[1] Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat).
[2] Features lacking OHWM or three-parameter wetland, and thus anticipated to be non-jurisdictional.
Cherry Valley Blvd
Brookside Ave
33.96869, -117.013579
33.961337, -117.025166
10
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
ODP 1
ODP 2
ODP 3
ODP 4
ODP 5
ODP 6
ODP 7
WDP 1
WDP 2
WDP 3
NWW-1
NWW-1A
NWW-2
NWW-2A
NWW-2B
NWW-2C
NWW-3
NWW-3A
NWW-3B
NWW-3B1
B-1
B-2
B-3
B-4
B-5
D-1
S-1
S-2
S-3
S-4
S-5
FIGURE 5C
RWQCB Aquatic Resources
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 150 300 FEET
1 INCH = 300 FEET
Date: 6/27/2022
Aerial Photo: Nearmap 2021


ARDR Review Area (219.37 ac)
Vegetation Communities
Mulefat Scrub
Non-native Riparian
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands
Torrey's Scrub Oak (*Quercus x acutidens*) Stands
Riversidean Sage Scrub
Chamise Chaparral
Non-native Grassland
Non-native Vegetation
Eucalyptus Woodland
Disturbed Habitat
Developed
Special-Status Species
Cooper's Hawk (*Accipiter cooperii*; WL, nesting)
Horned Lark (*Eremophila alpestris*; WL)
Least Bell's Vireo (*Vireo bellii pusillus*; CA and Federally Listed Endangered Species)
MacGillivray's Warbler (*Geothlypis tolmiei*; MSHCP)
Swainson's Hawk (*Buteo swainsoni*; ST, nesting)
Vaux's Swift (*Chaetura vauxi*; SSC, nesting)
Cherry Valley Blvd
Brookside Ave
10
FIGURE 6
Biological Resources
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0 150 300 FEET
N
Aerial Photo: Nearmap 2021

APPENDIX A

CHECKLIST: MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS

APPENDIX A. CHECKLIST: MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS, LOS ANGELES DISTRICT REGULATORY DIVISION, USACE, MARCH 16, 2017

REPORT SECTION/ PAGE NUMBER	MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS	ADDITIONAL NOTES
Section 1; Appendix B	1. JD REQUEST AND FORMS: ☑ A cover letter indicating whether you are requesting a jurisdictional determination (JD)*. ☑ If you are requesting a JD, you must complete, sign, and return the Request for Corps Jurisdictional Determination (JD) sheet. ☑ For preliminary jurisdictional determinations the Preliminary Jurisdictional Determination Form must be signed and submitted.	
Section 9	2. CONTACT INFORMATION: Contact information for the ☑ applicant(s), ☑ property owner(s), and ☑ agent(s).	
N/A	3. SITE ACCESS: If the property owner or their representatives will not accompany the Corps to the site, a signed statement from the property owner(s) allowing Corps personnel to enter the property and to collect samples during normal business hours. If the property lacks direct access by public roads (in other words, access requires passage through private property not owned by the applicant), the owner or proponent must obtain permission from the adjacent property owner(s) to provide access for Corps personnel.	Property owner and/or representatives will accompany the Corps for a site visit upon request.
Section 2.1	4. LOCATION: ☑ Directions to the survey area, ☐ an address (if available) and ☑ one or more set of geographic coordinates expressed in decimal degrees.	
Section 3.2.1	5. DELINEATION MANUAL CONFIRMATION: ☑ A statement confirming the delineation has been conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and applicable regional supplement(s). ☑ The regional supplement(s) used must be identified. ☑ For OHWM delineations, a statement must be included confirming the use of the OHWM field guide or that it is not applicable.	
Section 6	6. AQUATIC RESOURCE(S) DESCRIPTION: ☑ A narrative describing all aquatic resources on-site and an explanation of the mapped boundaries and any complex transition zones. ☑ If the site contains resources that only meet one or two of the three wetland criteria or do not exhibit a clear OHWM, describe the rationale for their inclusion or exclusion from the delineation. ☑ Also explain if any erosional features, upland swales, ditches and other potential aquatic features were considered but not included in the delineation.	
Figures 1 and 5A; Section 6; Table 6	7. AQUATIC RESOURCE MAPPING AND ACREAGE: ☑ Map of the outside survey boundary, ☑ total extent of aquatic and proposed non-aquatic features, ☑ type of feature(s) (waters of the United States or wetland), and include ☑ the total acreage for each polygon.	
Section 3.2; Table 1	8. FIELD WORK DATES: ☑ Date(s) field work was completed.	
Table 6	9. AQUATIC RESOURCE TABLE: A table listing all aquatic resources. The table must include ☑ the name of each aquatic resource (actual or arbitrary), ☑ its Cowardin type, ☑ acreage, ☑ summary of OHWM/wetland presence, ☑ dominant vegetation for each, and ☑ location (latitude/longitude in decimal degrees). ☑ For linear features, the table must show both acreage and linear feet as well as channel measurements (active channel width).	
Section 4; Tables 1, 4, and 5; Appendices F and G	10. FIELD CONDITIONS: A description of existing field conditions, including ☑ current land use, ☑ normal conditions, ☑ flood/drought conditions, ☐ irrigation practices, ☑ past or recent manipulation to the site, and ☐ characteristics considered atypical (for criteria see OHWM and wetland supplement guides). ☑ Include WETS tables or pre-site visit precipitation data as appropriate: https://www.wcc.nrcs.usda.gov/climate/wets_doc.html.*	N/A for unchecked; APT data provided in

		lieu of WETS tables
Section 4.2	11. HYDROLOGY: ☑ A discussion of the hydrology at the site, including ☑ all known surface or subsurface sources, ☑ drainage gradients, ☑ downstream connections to the nearest traditional navigable waterway or interstate water, and ☑ any influence from manmade water sources such as irrigation.	
N/A	12. REMOTE SENSING: ☐ If remote sensing was used in the delineation, provide an explanation of how it was used and include the name, date and source of the tools and data used and copies of the maps/photographs.	N/A
Section 4.1; Table 2; Figure 4; Appendix G	13. SOILS: ☑ Soil descriptions, ☑ soil map(s), ☑ soil photos, and ☑ a discussion of hydric soils (for wetland delineations only).	
Figure 2	14. USGS QUADRANGLE: ☑ A site location map on a 7.5-minute USGS quadrangle. The map must provide ☑ the name of the USGS quadrangle, ☑ Section, ☑ Township, ☑ Range, and ☑ the latitude and longitude in decimal degree format.	
Appendix I	15. BULK UPLOAD FORM: ☑ For sites with 3 or more separate aquatic features a completed copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet must be submitted.	
Figure 5 series	16. FIGURES: ☑ Map(s) of all delineated aquatic resources in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program.	
Figure 5 series and Appendix G	17. SITE PHOTOGRAPHS: ☑ Ground photographs showing representative aquatic resource sites (or lack of), ☑ as well as an accompanying map of photo-points and table of photographic information (see Final Map and Drawing Standards for the South Pacific Division Regulatory Program item no. 8 a-c).	
Appendix E	18. DATA FORMS: ☑ Completed data forms including all essential information to make a jurisdictional determination [e.g. 2006 Wetland Determination Data Form -- Arid West Supplement; 2010 Arid West Ephemeral and Intermittent Streams OHWM Datasheet].	
Section 3	19. METHODS: ☑ A description of the methods used to survey the aquatic resource boundaries. ☑ If GPS data is used, the level of accuracy must be included. Ideally, the GPS equipment should have the capability of sub-meter (<=1 meter) level horizontal accuracy.	
Appendix J	20. GIS DATA: ☑ Digital data for the site, aquatic resource boundaries, and data point locations must be provided in a geographic information system (GIS) format, preferably either ESRI shapefiles or Geodatabase format, but GoogleEarth KMZ or KML files may be acceptable non-complex projects. Each GIS data file must be accompanied by a metadata file containing the appropriate geographic coordinate system, projection, datum, and labeling description. If GIS data is unavailable or otherwise cannot be produced and the Corps determines a site visit is necessary, the aquatic resource boundaries should be physically marked with numbered flags or stakes to facilitate verification by the Corps.	

APPENDIX B

JURISDICTIONAL DETERMINATION REQUEST FORMS

Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: District Name Here

- I am requesting a JD on property located at: South of Cherry Valley Blvd., north of Brookside Ave., and east/northeast of I-10
  (Street Address)
  City/Township/Parish: Beaumont County: Riverside State: CA
  Acreage of Parcel/Review Area for JD: 215.96
  Section: 30 Township: 2 S Range: 1 W
  Latitude (decimal degrees): 33.965141 Longitude (decimal degrees): -117.019732
  (For linear projects, please include the center point of the proposed alignment.)
- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- ✔ I currently own this property. ___ I plan to purchase this property.
  ___ I am an agent/consultant acting on behalf of the requestor.
  ___ Other (please explain): ______________________.
- Reason for request: (check as many as applicable)
  ___ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
  ___ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
  ___ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
  ✔ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
  ___ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
  ___ A Corps JD is required in order to obtain my local/state authorization.
  ___ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
  ___ I believe that the site may be comprised entirely of dry land.
  ___ Other: ______________________
- Type of determination being requested:
  ___ I am requesting an approved JD.
  ✔ I am requesting a preliminary JD.
  ___ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
  ___ I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

*Signature: ______________________ Date: ______________

- Typed or printed name: Andrew Greybar
  Company name: Exeter Cherry Valley Land, LLC
  Address: 5060 North 40th Street, Suite 108
  Phoenix, AZ 85018
  Daytime phone no.: 708-341-9821
  Email address: andrew.greybar@eqtexeter.com

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Appendix 2 - **PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM**

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD:

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Andrew Greybar, Exeter Cherry Valley Land, LLC 5060 North 40th Street, Suite 108 Phoenix, AZ 85018

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Los Angeles District

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: CA County/parish/borough: Riverside City: Beaumont

Center coordinates of site (lat/long in degree decimal format):

Lat.: 33.965141 Long.: -117.019732

Universal Transverse Mercator: 11S 498177.05m E 3758291.07m N

Name of nearest waterbody: San Timoteo Wash

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
		SEE	ATTACHED		

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: 2022 ARDR, prepared by Rocks Biological Consulting.
- [x] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [ ] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale: __________.
- [ ] Data sheets prepared by the Corps: __________.
- [ ] Corps navigable waters' study: __________.
- [x] U.S. Geological Survey Hydrologic Atlas: 2022 ARDR, Figure 2; USGS NHD 2020.
  - [x] USGS NHD data.
  - [x] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: USGS 7.5-minute El Casco quad.
- [x] Natural Resources Conservation Service Soil Survey. Citation: 2022 ARDR, Figure 4; USDA NRCS 2018.
- [x] National wetlands inventory map(s). Cite name: 2022 ARDR, Figure 4; USFWS NWI 2019.
- [ ] State/local wetland inventory map(s): __________.
- [ ] FEMA/FIRM maps: __________.
- [ ] 100-year Floodplain Elevation is: __________.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): See 2022 ARDR, Figures 1& 5A-C (Maxar, Esri 2020, National Geographic, Esri 2012, Nearmap 2021), Appendix D, Recent and Historic Aerials.
  or [x] Other (Name & Date): See 2022 ARDR Appendix G, Site Photographs.
- [ ] Previous determination(s). File no. and date of response letter: __________.
- [x] Other information (please specify): 2022 ARDR, prepared by Rocks Biological Consulting.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

____
Signature and date of Regulatory staff member completing PJD

____
Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resources (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
NWW-1	33.965908	-117.025153	0.02 ac/175 ln ft	Non-wetland waters	Section 404
NWW-1A	33.966006	-117.025084	0.02 ac/156 ln ft	Non-wetland waters	Section 404
NWW-2	33.964929	-117.023925	0.09 ac/1,018 ln ft	Non-wetland waters	Section 404
NWW-2A	33.964977	-117.022656	<0.01 ac/168 ln ft	Non-wetland waters	Section 404
NWW-2B	33.965185	-117.022994	0.01 ac/175 ln ft	Non-wetland waters	Section 404
NWW-2C	33.964845	-117.023224	0.01 ac/109 ln ft	Non-wetland waters	Section 404
NWW-3	33.962391	-117.021747	0.39 ac/2,710 ln ft	Non-wetland waters	Section 404
NWW-3A	33.962760	-117.018132	0.15 ac/1,290 ln ft	Non-wetland waters	Section 404
NWW-3B	33.963540	-117.022834	0.12 ac/1,273 ln ft	Non-wetland waters	Section 404
NWW-3B1	33.964055	-117.021934	0.03 ac/409 ln ft	Non-wetland waters	Section 404

APPENDIX C

APPLICABLE AQUATIC RESOURCE PROTECTION REGULATIONS

APPENDIX C. APPLICABLE AQUATIC RESOURCE PROTECTION REGULATIONS

Several regulations have been established by federal, state, and local agencies to protect and conserve aquatic resources. The descriptions below provide a brief overview of agency regulations that may be applicable to the project.

Executive Order 11990

Executive Order 11990 aims to avoid direct or indirect impacts on wetlands from federal or federally approved projects when a practicable alternative is available. If wetland impacts cannot be avoided, all practicable measures to minimize harm must be included.

Clean Water Act

Pursuant to Section 404 of the Clean Water Act (33 U.S. Code [USC] § 1251 et seq.; CWA), the U.S. Army Corps of Engineers (Corps) is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S. (including wetlands), which include those waters listed in 33 Code of Federal Regulations (CFR) 328.3 (51 Federal Register [FR] 41217, November 13, 1986; 53 FR 20764, June 6, 1988) and further defined by the 2001 *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* (SWANCC; 531 U.S. 159) decision and the 2006 *Rapanos v. United States* (547 U.S. 715) decision. The Corps, with oversight from the U.S. Environmental Protection Agency (USEPA), has the principal authority to issue CWA Section 404 permits. The Corps would require a Standard Individual Permit (SIP) for more than minimal impacts to waters of the U.S. as determined by the Corps. Projects with minimal individual and cumulative adverse effects on the environment may meet the conditions of an existing Nationwide Permit (NWP).

A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for all Section 404 permitted actions. The Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board (SWRCB), provides oversight of the Section 401 certification process in California. The RWQCB is required to provide Water Quality Certification for licenses or permits that authorize an activity that may result in a discharge from a point source into a waters of the U.S. Water Quality Certification authorization "is limited to assuring that a discharge from a Federally licensed or permitted activity will comply with water quality requirements" (40 CFR 121.3).

The National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the U.S. under Section 402 of the CWA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) provides for statewide coordination of water quality regulations. The SWRCB was established as the statewide authority and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis. The RWQCBs have primary responsibility for protecting water quality in California. As discussed above, the RWQCBs regulate discharges to surface waters under the CWA. In addition, the RWQCBs are responsible for administering the Porter-Cologne Water Quality Control Act.

Pursuant to the Porter-Cologne Water Quality Control Act, the state is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if a Section 404 permit is not required for the activity. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

California Fish and Game Code Section 1600-1602

Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Game Code (CFGC), California Department of Fish and Wildlife (CDFW) regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. A Notification of Lake or Streambed Alteration must be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” CDFW has jurisdiction over riparian habitats associated with watercourses and wetland habitats supported by a river, lake, or stream. Jurisdictional waters are delineated by the outer edge of riparian vegetation (i.e., drip line) or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources (e.g., riparian or wetland areas not supported by a river, lake, or stream). CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and applicant is the Lake or Streambed Alteration Agreement.

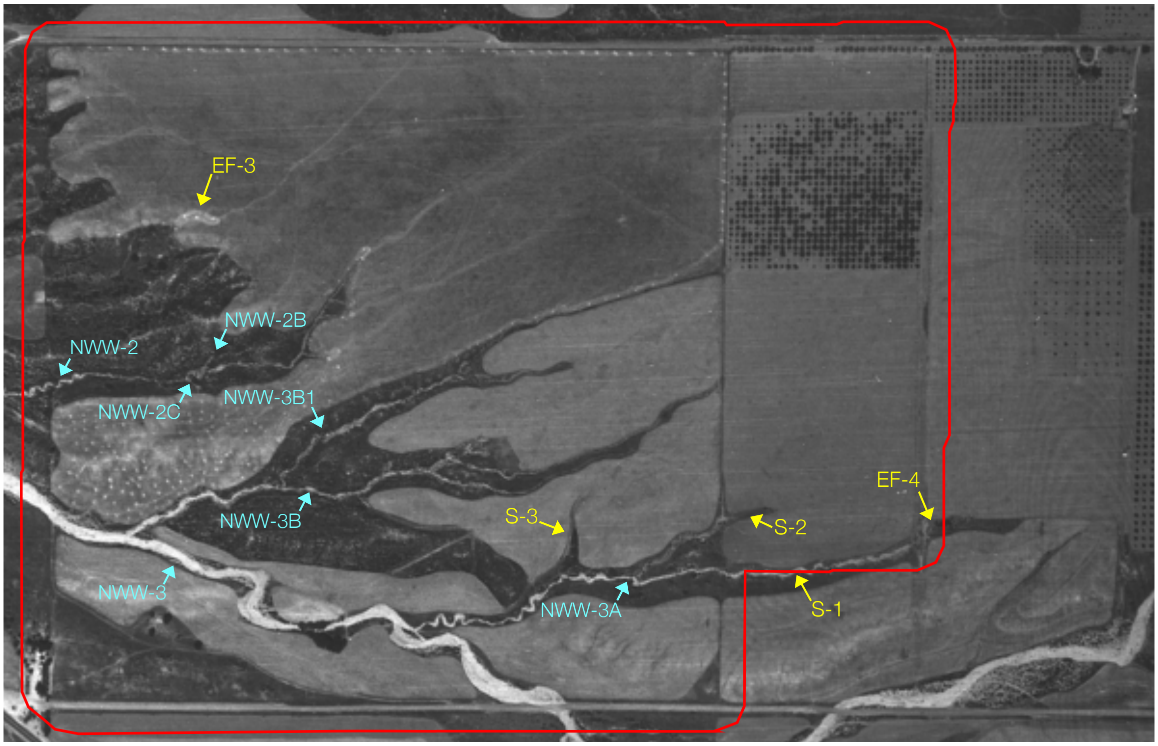
APPENDIX D

RECENT AND HISTORIC AERIALS ANALYSIS

Appendix D

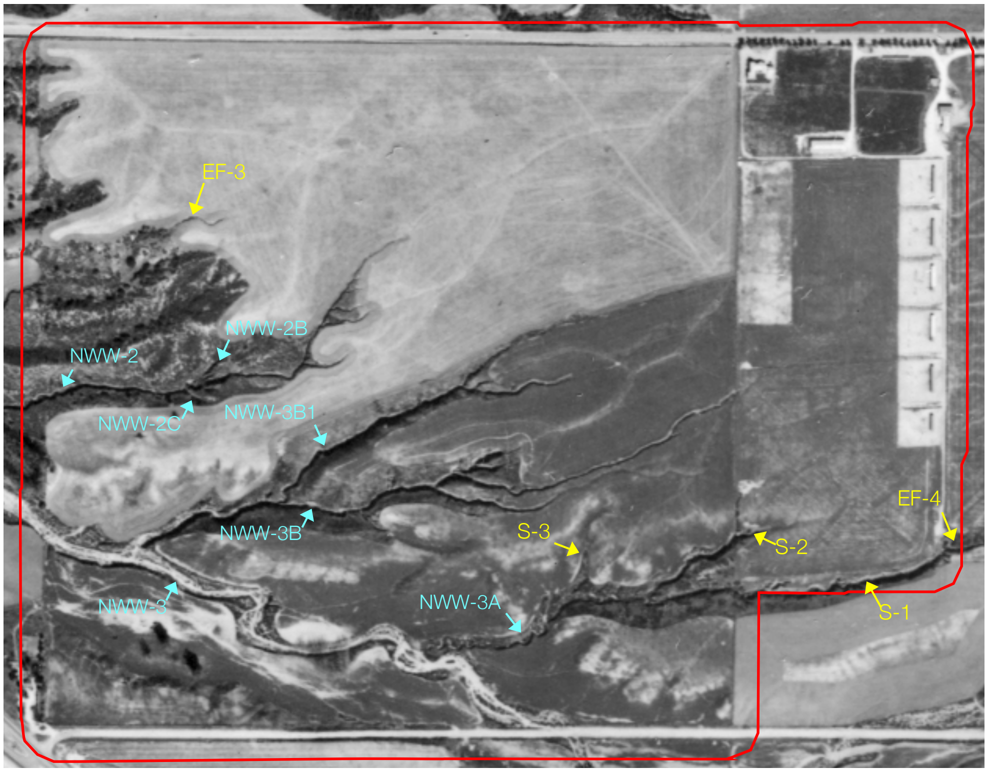
Recent and Historic Aerials Analysis

Source: Google Earth Pro and University of California – Santa Barbara



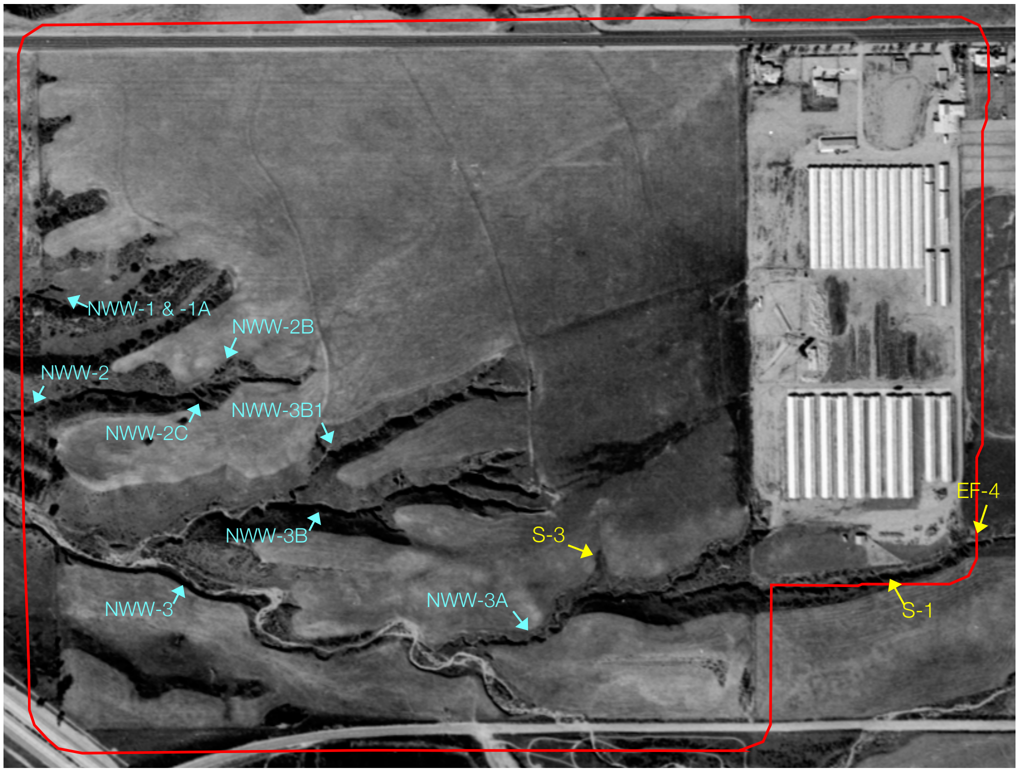
May 1938 – Agriculture fields are present on the northeast corner of the review area. The review area appears to be regularly mowed as distinguishable by the contrast in color between areas of higher elevation and lower topographical areas between hill slopes and along drainage features (see northwest corner and southern segment of the review area). Non-Wetland Water (NWW)-2B, NWW-2C, NWW-3, and NWW-3A are visible on the May 1938 aerial in their current locations. NWW-2, NWW-3B, and NWW-3B1 are also visible on the aerial in their current locations; however, each feature extends further east/northeast across the review area. NWW-3A, NWW-3B, and NWW-3B1 appear to receive runoff from the agriculture fields in the northeast corner of the review area. NWW-3A also appears to receive runoff from the agricultural fields east of the review area. NWW-1, NWW-1A, and NWW-2A are not distinguishable in the May 1938 aerial.

Erosional Feature (EF)-1 and EF-2 are not apparent. EF-3 is evident and appears to receive some runoff from Cherry Valley Boulevard. Some potential inundation or vegetation is visible in the current location of EF-4. The area appears to receive runoff from agricultural fields in the adjacent properties east of the review area. EF-5 through EF-8 are not yet present. Basin (B)-1 through B-5 are not yet present and evidence of potential ponding in their present-day locations is not visible. Swale (S)-1 is evident and more defined on the May 1938 aerial. Some potential inundation or vegetation appears in the current extent of S-2 and S-3. Ditch (D)-1, S-4, and S-5 are not yet present.



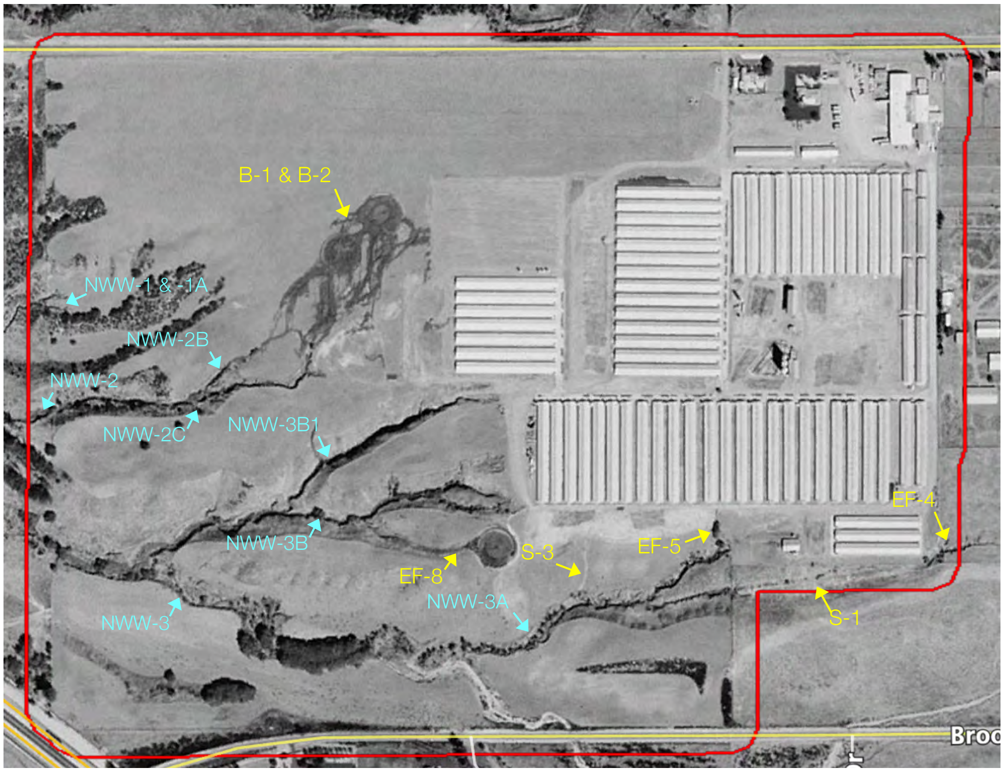
February 1953 – The agriculture fields were removed from the northeast corner and some structures were constructed along the eastern review area boundary between May 1938 and February 1953. The review area continues to appear to be regularly mowed (see northern segment and northwest corner of the review area). NWW-2B, NWW-2C, NWW-3, and NWW-3A are visible on the February 1953 aerial in their current locations. NWW-2, NWW-3B, and NWW-3B1 are also visible on the aerial in their current locations; however, each feature extends further east/northeast across the review area. NWW-1, NWW-1A, and NWW-2A are not distinguishable in the February 1953 aerial.

EF-1 and EF-2 are not apparent. EF-3 and EF-4 are evident and visible on the February 1953 aerial. EF-5 through EF-8 are not yet present. B-1 through B-5 are not yet present and evidence of potential ponding in their present-day locations is not visible. S-1 through S-3 are evident and more defined on the February 1953 aerial. D-1, S-4, and S-5 are not yet present.



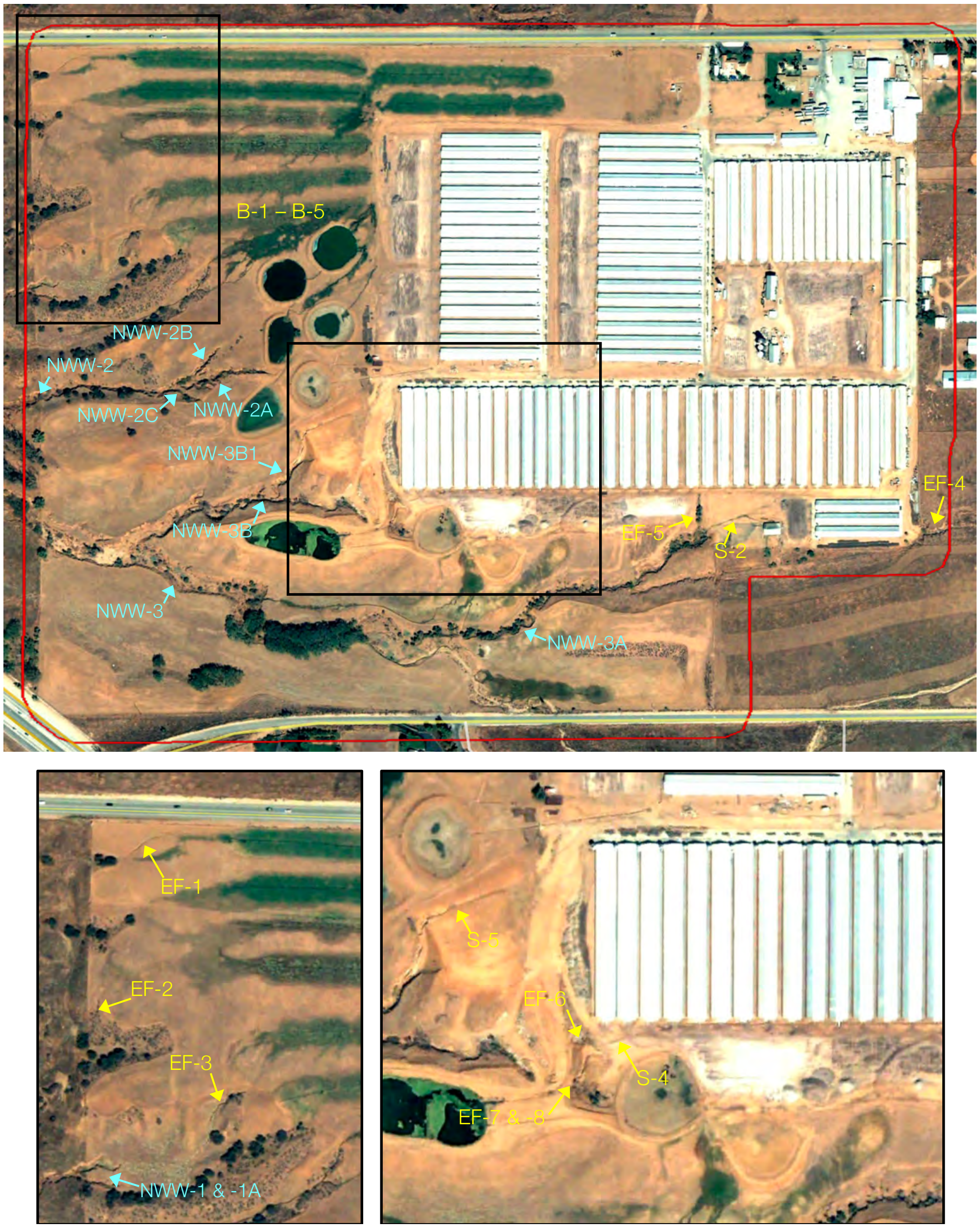
February 1976 – Farming operations within the review area began sometime between February 1953 and February 1976 with the construction of various poultry sheds in the northeast portion of the review area. Remains of these developments, such as the shed concrete foundations, exist to this day. NWW-1, NWW-1A, NWW-2C, and NWW-3 are visible on the aerial in their current locations. NWW-2B is evident but less distinguishable in the February 1976 aerial. The review area continues to appear to be regularly mowed and, along with the initiation of farming operations, likely resulted in the significant reduction of the furthermost east/northeast extents of NWW-2, NWW-3A, NWW-3B, and NWW-3B1 between February 1953 and 1976. NWW-2A is not distinguishable in the February 1976 aerial.

EF-1 and EF-2 are not apparent. EF-3 is no longer evident in the February 1976 aerial and was likely mowed between February 1953 and 1976. EF-4 is evident while EF-5 through EF-8 are still not yet present. B-1 through B-5 are not yet present and evidence of potential ponding in their present-day locations is not visible. S-1 is evident in the February 1976 aerial; however, S-1 is becoming less distinguishable. S-2 is no longer present as the new farming operations extend into S-2's previous location. Some evidence of S-3 is visible; however, the feature is less defined. D-1, S-4, and S-5 are not yet present.



September 1996 – Farming operations within the review area continue to expand between February 1976 and September 1996 with the development of more poultry sheds in the center of the review area. Additionally, various ponding basins (i.e., B-1 and B-2) were developed within the review area during this time. Remains of these developments and site modifications exist to this day. B-1 and B-2 appear to drain runoff into NWW-2 and NWW-2B. Furthermore, an unnamed basin in the center of the review area drains into NWW-3B. The drainage between the unnamed basin and NWW-3B accounts for a portion of present-day NWW-3B and EF-8. NWW-1, NWW-1A, NWW-3, and NWW-3A are visible on the aerial in their current locations and extents. NWW-2C is evident but less distinguishable in the September 1996 aerial. The review area still appears to be regularly mowed. The expanding farming operations contribute to further reduction of NWW-3B and NWW-3B1. NWW-2A is not distinguishable in the September 1996 aerial.

EF-1 through EF-3 are not apparent. EF-4 is still defined and visible. EF-5 is now visible and appears to receive runoff from the newly constructed poultry sheds. B-3 through B-5 are not visible/present in September 1996. S-1 is evident in the September 1996 aerial but appears to be losing further definition. Some evidence of S-3 is visible; however, the feature is less distinguishable. D-1, S-4, and S-5 are not visible.

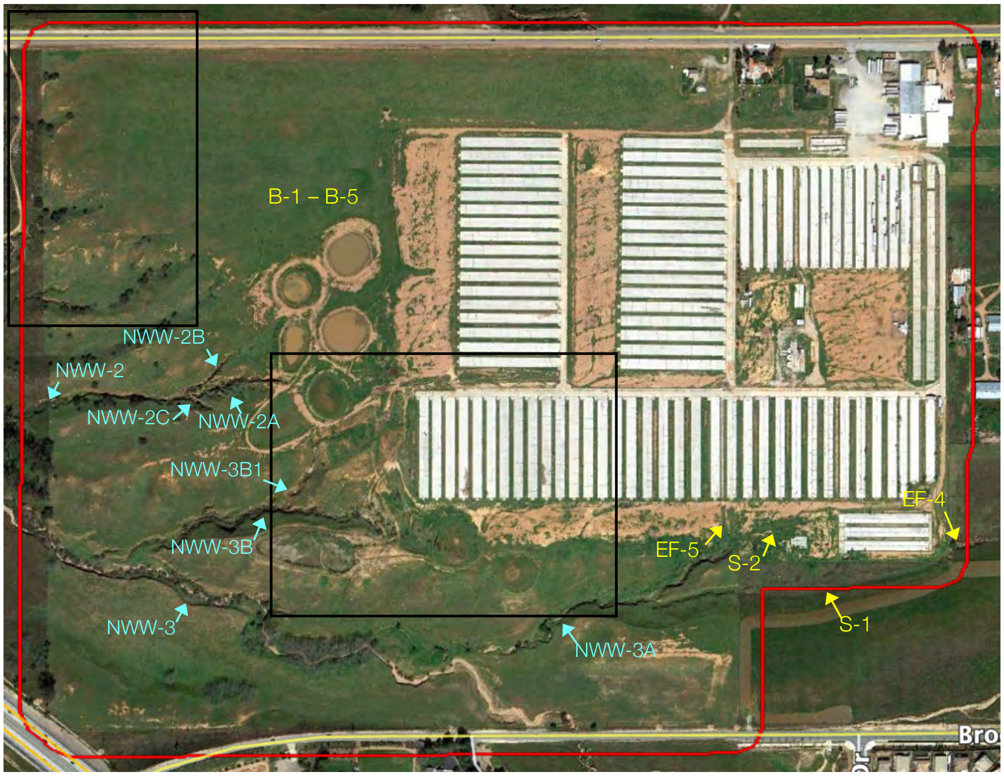


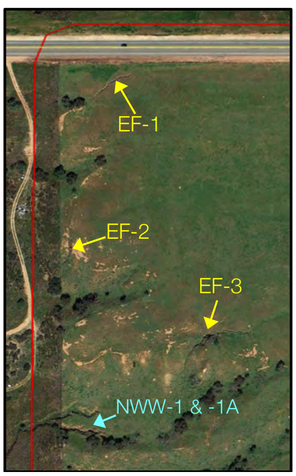
October 2003 – Farming operations within the review area continue to expand between September 1996 and October 2003 with the construction of more poultry sheds in the center of the review area. Additionally, more ponding basins (i.e., B-3 through B-5 and various other unnamed basins) were developed during this time. Remains of these developments and site modifications exist to this day. B-1 and B-2 are still present; however, no longer appear to drain runoff into NWW-2 and NWW-2B. Furthermore, NWW-3B no longer appears to receive flows from the unnamed basin in the center of the review area. NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, and NWW-3A are visible on the aerial in their current locations. The expanding farming operations continue to contribute to further reductions of NWW-3B and NWW-3B1. By October 2003, NWW-3B and NWW-3B1 were reduced to their current extents. NWW-2A is primarily only visible near its convergence with NWW-2.

EF-1 through EF-3 are visible and appear to receive runoff from a new irrigation system within the review area. EF-4 is evident, and EF-5 still appears to receive runoff from the poultry sheds. S-1 is further indistinguishable and appears to likely contain the same characteristics as those observed present-day (i.e., no break in slope or a defined bed and bank between the swale and adjacent uplands). S-2 has reemerged and appears to receive runoff from farming operation buildings. The expansion of the poultry sheds appears to result in S-4 and EF-6 becoming slightly apparent and S-5, EF-7, and EF-8 being visible in their current locations and extents. S-3 and D-1 are not yet apparent.

January 2006 – Various poultry sheds throughout the review area were demolished sometime between October 2003 and January 2006. The remaining shed concrete foundations visible in the January 2006 aerial exist to this day. NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 are visible in their current locations and extents. NWW-2A is primarily only visible near its convergence with NWW-2.

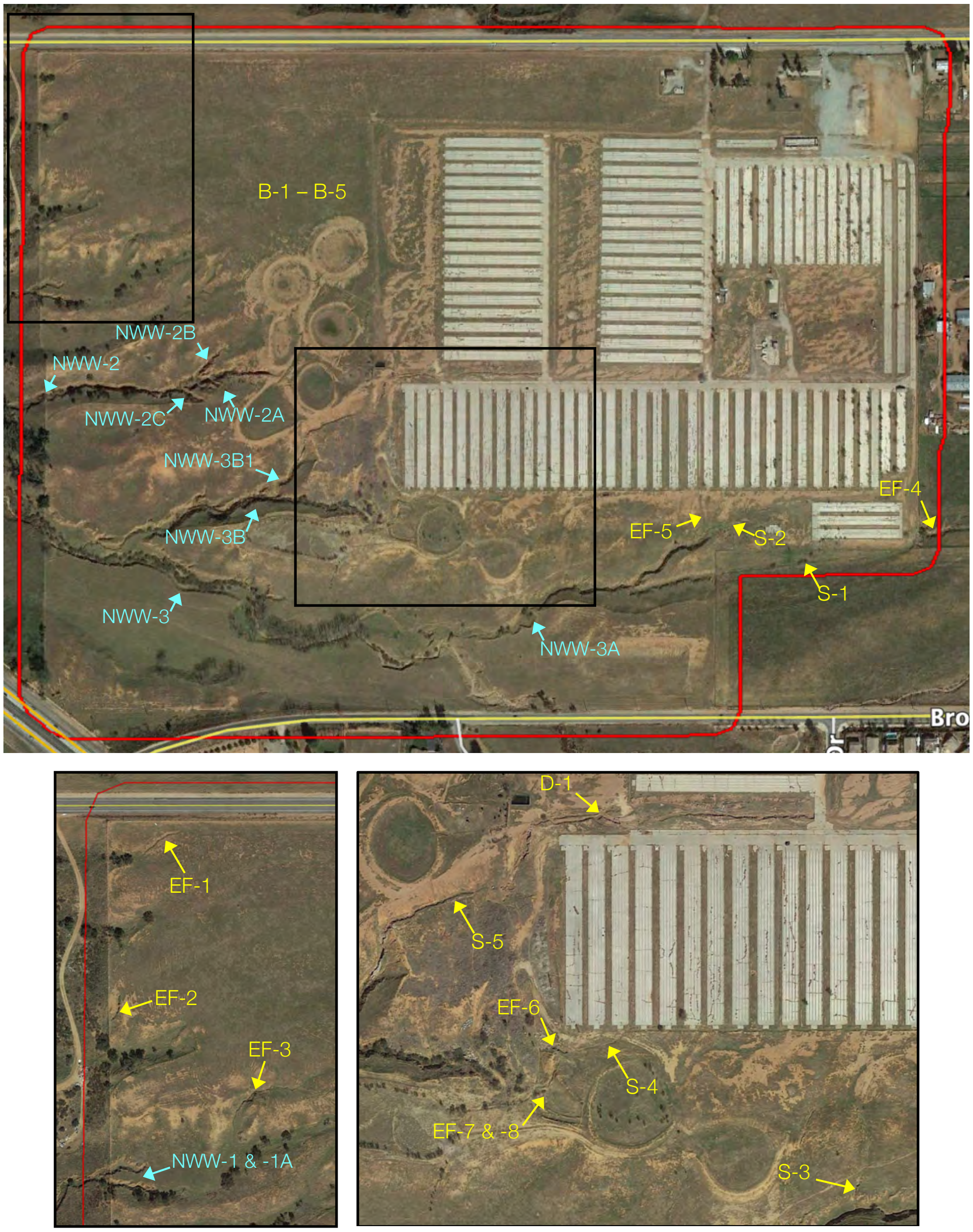
B-1 through B5 and EF-1 through EF-4 are visible in their current locations. EF-5 and S-2 continue to receive runoff downslope from the farming operations. S-1 is still only defined by the slight concave topography and lacks any other distinguishable features. S-3 has reemerged and is slightly visible in the January 2006 aerial. Active farming activities between October 2003 and January 2006 likely resulted in further defining S-4, S-5, and EF-6 through EF-8. D-1 is now fully evident in the January 2006 aerial. The northernmost poultry sheds appear to create downslope runoff which defined and created D-1 between October 2003 and January 2006.





March 2011 – Based on GoogleEarth aerials, the last remaining poultry sheds throughout the review area were removed between January 2006 and August 2006. By March 2011, NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 are visible in their current locations and extents. NWW-2A is primarily only visible near its convergence with NWW-2.

B-1 through B5 and EF-1 through EF-4 are visible in their current locations. EF-5 and S-2 are less distinguishable in the May 2011 aerial, likely a result from the total removal of farming operations within the review area. S-1 is still only apparent by the slight concave topography and lacks any other distinguishable features. The end of farming operations also likely contributed to the significant reduction of S-3 between January 2006 and March 2011. S-3 is only slightly evident near its convergence with NWW-3A. EF-6 through EF-8 and S-4 are also less distinguishable in the March 2011 aerial. S-5 and D-1 are still evident in the March 2011 aerial.



February 2018 – Based on GoogleEarth aerials, the last remaining farming operation buildings located in the northeastern corner were removed between October 2016 and February 2018. By February 2018, NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 are visible in their current locations and extents. NWW-2A is primarily only visible near its convergence with NWW-2.

B-1 through B5 and EF-1 through EF-4 are visible in their current locations. EF-5 and S-2 are less distinguishable in the February 2018 aerial. S-1 is still only defined by the slight concave topography and lacks any other distinguishable features. S-3 is still only slightly evident near its convergence with NWW-3A. EF-6 through EF-8 and S-4 are also less distinguishable. S-5 and D-1 are still evident in the March 2011 aerial.

APPENDIX E

ARID WEST WETLAND DETERMINATION DATA FORMS AND EPHEMERAL AND INTERMITTENT STREAMS OHWM DATASHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont Summit Station City/County: Beaumont Sampling Date: 06/07/2021

Applicant/Owner: Exeter Cherry Valley Land, LLC State: CA Sampling Point: WDP 1

Investigator(s): Shanti Santulli, Sarah Krejca, Ian Hirschler Section, Township, Range: T2S, R1W, S30

Landform (hillslope, terrace, etc.): In basin (constructed) Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): LRR C - Mediterranean California Lat: 33.965328 Long: -117.022071 Datum: WGS 84

Soil Map Unit Name: Terrace escarpments NWI classification: None

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

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

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

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

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

Remarks:

Sample point taken within constructed earthen basin, near three individual mulefat. Drought conditions per APT (i.e., atypical hydrologic conditions/naturally problematic); however, wetland hydrology parameter still met based on presence of surface soil cracks.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: N/A)			
1. N/A			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 10-foot radius)			
1. Baccharis salicifolia	25%	Yes	FAC
2.			
3.			
4.			
5.			
= Total Cover	25%		
Herb Stratum (Plot size: 5-foot radius)			
1. Hirschfeldia incana	15%	Yes	NL/UPL
2. Polygonum aviculare	3%	No	FAC
3. Croton setiger	2%	No	NL/UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	20%		
Woody Vine Stratum (Plot size: N/A)			
1. N/A			
2.			
= Total Cover	N/A		

% Bare Ground in Herb Stratum 80% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	28	x 3 = 84
FACU species	0	x 4 = 0
UPL species	17	x 5 = 85
Column Totals:	45 (A)	169 (B)

Prevalence Index = B/A = 3.76

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ___ No ✔

Remarks:

Sample point taken near three individual mulefat within area mapped as non-native grassland.

SOIL

Sampling Point: WDP 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5 YR 4/3	100%	N/A	N/A	N/A	N/A	Clay loam	No evidence of redox observed.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Shovel refusal - compact soils

Depth (inches): 7 inches

Hydric Soil Present? Yes ______ No ✔

Remarks:

Soil moistened with spray bottle to record soil color. Uniform soil throughout. No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ______	No ✔	Depth (inches): N/A
Water Table Present?	Yes ______	No ✔	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ______	No ✔	Depth (inches): N/A

Wetland Hydrology Present? Yes ✔ No ______

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

N/A

Remarks:

Abandoned farm/stock pond that may still collect water during rains but no other wetland hydrology indicators observed beyond soil surface cracks. Did not meet FAC-Neutral Test.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont Summit Station City/County: Beaumont Sampling Date: 06/07/2021

Applicant/Owner: Exeter Cherry Valley Land, LLC State: CA Sampling Point: WDP 2

Investigator(s): Sarah Krejca, Shanti Santulli Section, Township, Range: T2S, R1W, S30

Landform (hillslope, terrace, etc.): In channel Local relief (concave, convex, none): Slightly concave Slope (%): 1-3%

Subregion (LRR): LRR C - Mediterranean California Lat: 32.964923 Long: -117.023427 Datum: WGS 84

Soil Map Unit Name: Terrace escarpments NWI classification: None

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

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

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

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

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

Remarks:

Sample point taken within earthen channel. Drought conditions per APT (i.e., atypical hydrologic conditions/naturally problematic); no hydrology indicators observed. However, sampling point within ephemeral channel not anticipated to function as wetland - hydrophytic vegetation and hydric soils also not observed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Sambucus nigra	5%	Yes	FACU
2.			
3.			
4.			
	5% = Total Cover		
Sapling/Shrub Stratum (Plot size: 10-foot radius)			
1. Baccharis salicifolia	25%	Yes	FAC
2.			
3.			
4.			
5.			
	25% = Total Cover		
Herb Stratum (Plot size: 5-foot radius)			
1. Brachypodium distachyon	35%	Yes	NL/UPL
2. Bromus diandrus	25%	Yes	NL/UPL
3. Hirschfeldia incana	15%	No	NL/UPL
4. Marrubium vulgare	5%	No	FACU
5.			
6.			
7.			
8.			
	80% = Total Cover		
Woody Vine Stratum (Plot size: N/A)			
1. N/A			
2.			
	N/A = Total Cover		

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	10	x 4 =	40
UPL species	75	x 5 =	375
Column Totals:	110 (A)		490 (B)

Prevalence Index = B/A = 4.45

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ___ No ✔

Remarks:

Sample point taken within area mapped as non-native grassland.

SOIL

Sampling Point: WDP 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-11	10 YR 3/3	100%	N/A	N/A	N/A	N/A	Loam	No evidence of redox observed.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Shovel refusal - compact soils

Depth (inches): 11 inches

Hydric Soil Present? Yes ______ No ✔

Remarks:

Soil moistened with spray bottle to record soil color. Uniform soil throughout. No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ______ No ✔ Depth (inches): N/A
Water Table Present? Yes ______ No ✔ Depth (inches): N/A
Saturation Present? (includes capillary fringe) Yes ______ No ✔ Depth (inches): N/A

Wetland Hydrology Present? Yes ______ No ✔

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

N/A

Remarks:

Did not meet FAC-Neutral Test. No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont Summit Station City/County: Beaumont Sampling Date: 06/07/2021

Applicant/Owner: Exeter Cherry Valley Land, LLC State: CA Sampling Point: WDP 3

Investigator(s): Sarah Krejca, Shanti Santulli, Ian Hirschler Section, Township, Range: T2S, R1W, S30

Landform (hillslope, terrace, etc.): In channel Local relief (concave, convex, none): Slightly concave Slope (%): 1-2%

Subregion (LRR): LRR C - Mediterranean California Lat: 33.962825 Long: -117.022836 Datum: WGS 84

Soil Map Unit Name: Terrace escarpments NWI classification: Riverine

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No ___
Hydric Soil Present?	Yes ___	No ✔
Wetland Hydrology Present?	Yes ___	No ✔

Is the Sampled Area within a Wetland? Yes ___ No ✔

Remarks:

Sample point taken within earthen channel. Drought conditions per APT (i.e., atypical hydrologic conditions/naturally problematic); hydrophytic vegetation parameter still met at sampling point, but no hydric soils or wetland hydrology. Sampling point within ephemeral stream not anticipated to function as wetland despite presence of mulefat (FAC).

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: N/A)			
1. N/A			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 5-foot radius)			
1. Baccharis salicifolia	10%	Yes	FAC
2.			
3.			
4.			
5.			
= Total Cover	10%		
Herb Stratum (Plot size: N/A)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover			
Woody Vine Stratum (Plot size: N/A)			
1. N/A			
2.			
= Total Cover	N/A		

% Bare Ground in Herb Stratum 97% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks:

Sample point taken within area mapped as mulefat scrub. Less than 5% herbaceous cover (approximately 3%), therefore, per AW manual, no herb stratum. 5-foot radius plot size used for sapling/shrub stratum to only account for vegetation within area with same soil and hydrologic conditions (i.e., within the channel).

SOIL

Sampling Point: WDP 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 4/3	100%	N/A	N/A	N/A	N/A	Sand	No evidence of redox observed.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Shovel refusal - compact soils

Depth (inches): 16 inches

Hydric Soil Present? Yes ______ No ✔

Remarks:

Soil moistened with spray bottle to record soil color. Uniform soil throughout. No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ______ No ✔ Depth (inches): N/A

Water Table Present? Yes ______ No ✔ Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes ______ No ✔ Depth (inches): N/A

Wetland Hydrology Present? Yes ______ No ✔

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

N/A

Remarks:

Did not meet FAC-Neutral Test. No wetland hydrology indicators observed.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 1
Investigator(s): Chelsea Polevy, Sarah Krejca
Date: 06/03/2021
Time: 0815
Town: Beaumont
State: CA
Photo begin file#: 2
Photo end file#: 2

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Beaumont Summit Station Aquatic Resource Delineation Report Review Area

Projection: WGS 84
Datum: NAD 83
Coordinates: 33.968238, -117.025022

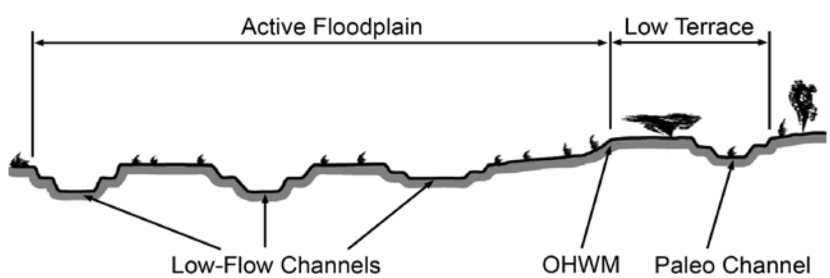
Potential anthropogenic influences on the channel system:
Surrounding area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm. Lower topographic area between two gentle slopes, just south of developed road (Cherry Valley Boulevard).

Checklist of resources (if available):

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

Hydrogeomorphic Floodplain Units

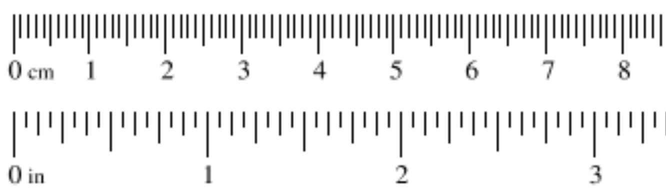


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 1 **Date:** 06/03/2021 **Time:** 0815

Cross section drawing:

OHWM

GPS point: 33.968238, -117.025022

Indicators:

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

Comments:
Lower topographic area did not exhibit bed and bank indicators; no change in sediment texture or break in slope; vegetation did not differ from lower topographic area to adjacent slopes (dominated by non-native grassland and scrub oak). Data was collected during a drought year; however, historic aerials and previous delineation note consistent conditions.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:

Project ID: Beaumont Summit Station **Cross section ID:** ODP 1 **Date:** 06/03/2021 **Time:** 0815

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station **Project Number:** N/A **Stream:** ODP 2 **Investigator(s):** Chelsea Polevy, Sarah Krejca	**Date:** 06/03/2021 **Time:** 0830 **Town:** Beaumont **State:** CA **Photo begin file#:** 4 **Photo end file#:** 4
Y ☑ / N ☐ Do normal circumstances exist on the site? Y ☑ / N ☐ Is the site significantly disturbed?	**Location Details:** Beaumont Summit Station Aquatic Resource Delineation Report Review Area **Projection:** WGS 84 **Datum:** NAD 83 **Coordinates:** 33.967162, -117.025097

Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

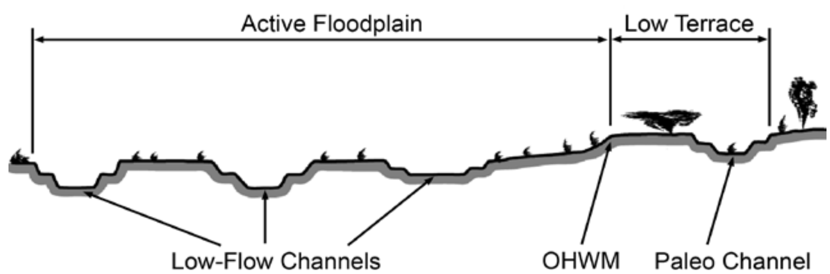
Brief site description:
Disturbed site formerly used as ranch/poultry farm; gully/erosional feature adjacent to western site boundary. Highly incised area.

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

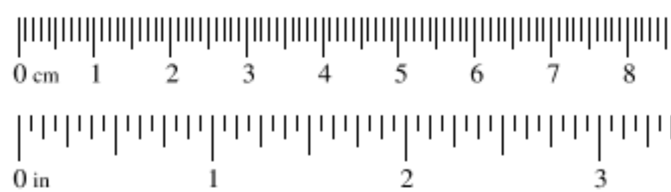


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

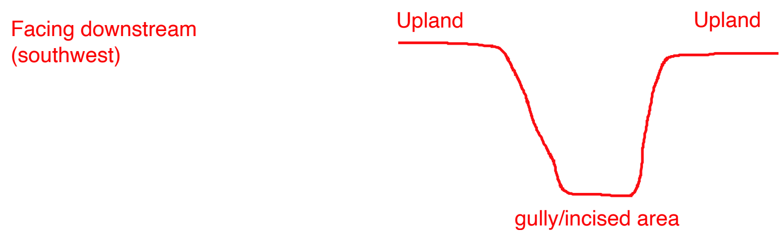
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 2 **Date:** 06/03/2021 **Time:** 0830

Cross section drawing:



OHWM

GPS point: 33.967162, -117.025097

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________
- ☐ Other: ____________

Comments:
Gully/erosional feature that exhibited a slight break in bank slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other OHWM indicators. Gully and surrounding upland were both heavily vegetated with non-native grasses.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:

Project ID: Beaumont Summit Station **Cross section ID:** ODP 2 **Date:** 06/03/2021 **Time:** 0830

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Date: 06/03/2021
Time: 0915
Project Number: N/A
Town: Beaumont
State: CA
Stream: ODP 3
Photo begin file#: 8
Photo end file#: 9
Investigator(s): Chelsea Polevy, Sarah Krejca

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Beaumont Summit Station Aquatic Resource Delineation Report Review Area

Projection: WGS 84
Datum: NAD 83
Coordinates: 33.966030, -117.024921

Potential anthropogenic influences on the channel system:
Surrounding area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

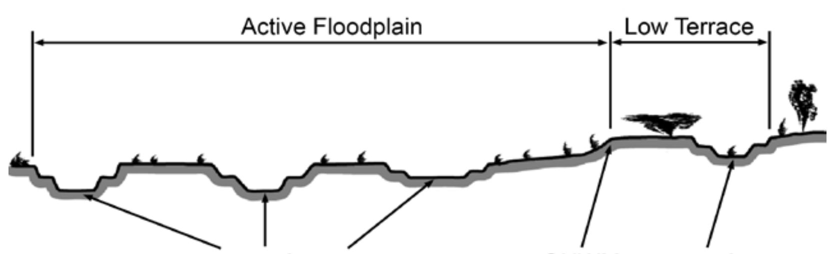
Brief site description:
Disturbed site formerly used as ranch/poultry farm; north and south leg of feature within lower topographic area adjacent to western site boundary.

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

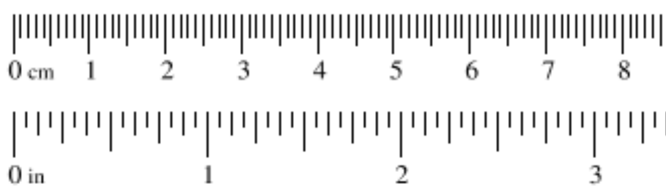


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

Wentworth Size Classes

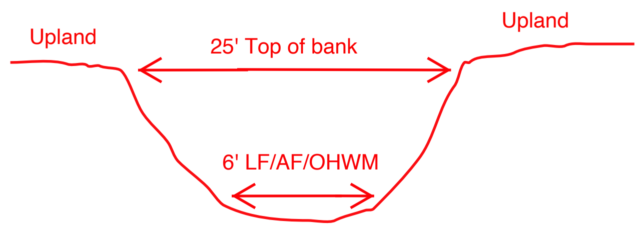
Inches (in)		Millimeters (mm)	Wentworth size class	
			Boulder	Gravel
	10.08	256		
			Cobble	
	2.56	64		
			Pebble	
	0.157	4		
			Granule	
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		
			Coarse sand	
	0.020	0.50		
			Medium sand	
1/2	0.0098	0.25		
			Fine sand	
1/4	0.005	0.125		
			Very fine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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 3 **Date:** 06/03/2021 **Time:** 0915

Cross section drawing:

Northern leg of feature; facing downstream (west)



OHWM

GPS point: 33.966030, -117.024921

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________
- ☐ Other: ____________

Comments:
Approximately 6-foot wide OHWM defined by a faint break in slope and change in vegetation cover. Data was taken during a drought year. No distinguishable difference in sediment texture from active floodplain (AF) to upland. More defined bed and bank occurs downstream, but off site.

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 3 **Date:** 06/03/2021 **Time:** 0915

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Medium silt

Total veg cover: 80 % Tree: 0 % Shrub: 0 % Herb: 80 %

Community successional stage:

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

Indicators:

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

Comments:

AF defined by faint break in bank slope; AF heavily vegetated with non-native grasses.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Medium silt

Total veg cover: 50 % Tree: 0 % Shrub: 0 % Herb: 50 %

Community successional stage:

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

Indicators:

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

Comments:

No true low terrace; uplands defined by surface relief. Uplands partially vegetated with non-native grasses.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 4
Investigator(s): Shanti Santulli, Sarah Krejca
Date: 06/07/2021
Town: Beaumont
Photo begin file#: 18
Time: 0900
State: CA
Photo end file#: 19

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Beaumont Summit Station Aquatic Resource Delineation Report Review Area

Projection: WGS 84 **Datum:** NAD 83
Coordinates: 33.964891, -117.023514

Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

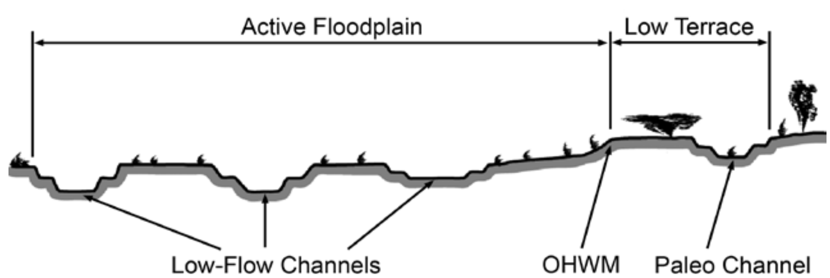
Brief site description:
Disturbed site formerly used as ranch/poultry farm; north and south leg of drainage within lower topographic area adjacent to western site boundary.

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

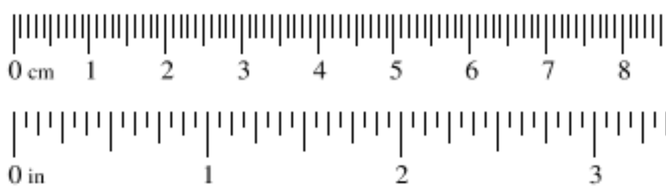


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

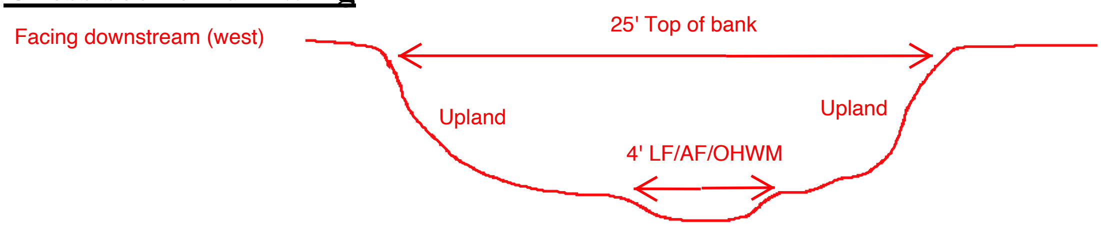
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 4 **Date:** 06/07/2021 **Time:** 0900

Cross section drawing:



OHWM

GPS point: 33.964891, -117.023514

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________
- ☐ Other: ____________

Comments:
Approximately 4-foot wide OHWM defined by a break in slope and a change in vegetation cover. Data was taken during a drought year; however, indicators still observed and consistent with anticipated extent of OHWM based on review of aerials and site conditions/topography. No distinguishable difference in sediment texture from active floodplain (AF) to upland.

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 4 **Date:** 06/07/2021 **Time:** 0900

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse silt

Total veg cover: 30 % Tree: 0 % Shrub: 0 % Herb: 30 %

Community successional stage:

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

Indicators:

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

Comments:

AF defined by faint break in bank slope; AF sparsely vegetated, becoming less vegetated downstream. Vegetation dominated by non-native grasses, including short-pod mustard (Hirschfeldia incana), ripgut brome (Bromus diandrus), and false brome (Brachypodium distachyon).

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse silt

Total veg cover: 65 % Tree: 0 % Shrub: 0 % Herb: 65 %

Community successional stage:

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

Indicators:

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

Comments:

No true low terrace; uplands defined by surface relief. Uplands dominated by non-native grasses, including short-pod mustard (Hirschfeldia incana), ripgut brome (Bromus diandrus), and false brome (Brachypodium distachyon).

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 5
Investigator(s): Chelsea Polevy, Sarah Krejca
Date: 06/03/2021 **Time:** 1200
Town: Beaumont **State:** CA
Photo begin file#: 27 **Photo end file#:** 28

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Beaumont Summit Station Aquatic Resource Delineation Report Review Area

Projection: WGS 84 **Datum:** NAD 83
Coordinates: 33.963128, -117.017059

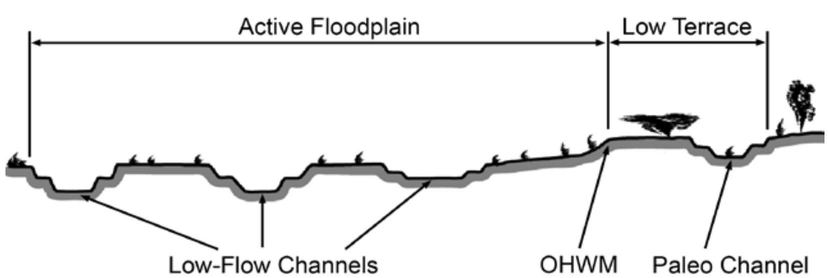
Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm; drainage feature adjacent to/south of developed concrete slabs near southeast site boundary.

Checklist of resources (if available):

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

Hydrogeomorphic Floodplain Units

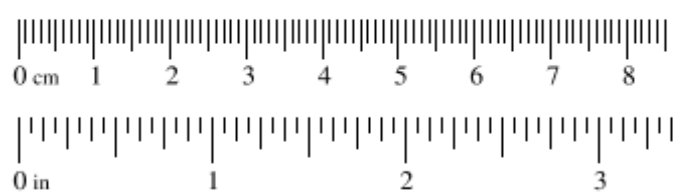


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

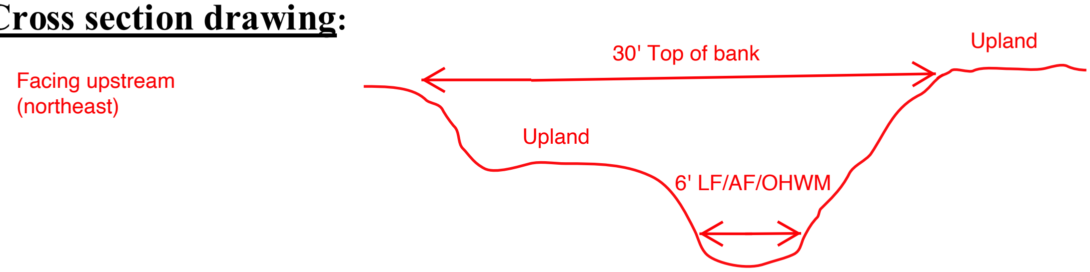
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 5 **Date:** 06/03/2021 **Time:** 1200

Cross section drawing:



OHWM

GPS point: 33.963128, -117.017059

Indicators:

- ☑ Change in average sediment texture
- ☑ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________
- ☐ Other: ____________

Comments:
Approximately 6-foot wide OHWM defined by a break in slope, change in sediment texture, and change in vegetation species. Data was taken during a drought year; however, indicators still observed and consistent with anticipated extent of OHWM based on review of aerials and site conditions/topography.

Floodplain unit:

☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 5 **Date:** 06/03/2021 **Time:** 1200

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:
Average sediment texture: Medium silt with cobbles
Total veg cover: 80 % Tree: 0 % Shrub: 15 % Herb: 65 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:
AF defined by break in bank slope; AF heavily vegetated with non-native grasses, including shortpod mustard (Hirschfeldia incana).

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:
Average sediment texture: Medium silt
Total veg cover: 80 % Tree: 5 % Shrub: 10 % Herb: 65 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☑ Late (herbaceous, shrubs, mature trees)

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

Comments:
No true low terrace; uplands defined by surface relief. Uplands heavily vegetated with non-native grasses, including shortpod mustard (Hirschfeldia incana), and also included horehound (Marrubium vulgare) and a black elder (Sambucus nigra).

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Date: 06/03/2021
Time: 1130
Project Number: N/A
Town: Beaumont
State: CA
Stream: ODP 6
Photo begin file#: 25
Photo end file#: 25
Investigator(s): Sarah Krejca, Chelsea Polevy

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Exeter Cherry Valley Aquatic Resource Delineation Report Review Area

Projection: WGS 84
Datum: NAD 83
Coordinates: 33.962849, -117.017148

Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

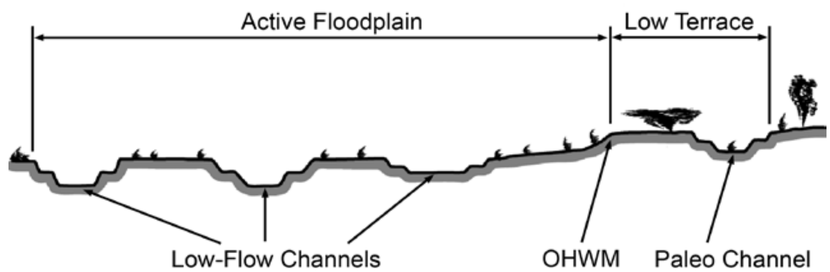
Brief site description:
Disturbed site formerly used as ranch/poultry farm; swale-like feature within area of non-native grassland

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

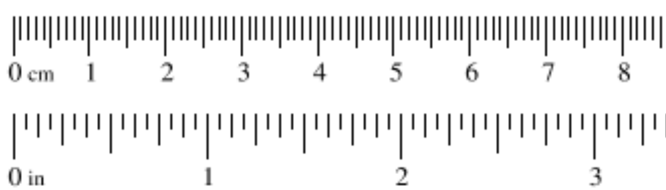


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

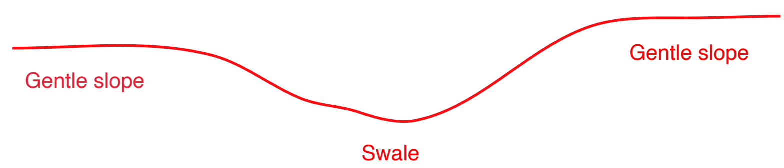
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 6 **Date:** 06/03/2021 **Time:** 1130

Cross section drawing:



OHWM

GPS point: 33.962849, -117.017148

Indicators:

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

Comments:

Area did not contain clear bed and bank indicators; no change in sediment texture or break in slope; vegetation in swale and adjacent upland area did not differ (both heavily vegetated and dominated by non-native grasses). Data was collected during a drought year; however, historic aerials and previous delineation note consistent conditions.

Floodplain unit:

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:

Project ID: Beaumont Summit Station **Cross section ID:** ODP 6 **Date:** 06/03/2021 **Time:** 1130

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 7
Investigator(s): Chelsea Polevy, Sarah Krejca
Date: 06/03/2021
Time: 1415
Town: Beaumont
State: CA
Photo begin file#: 33
Photo end file#: 34

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Exeter Cherry Valley Aquatic Resource Delineation Report Review Area

Projection: WGS 84
Datum: NAD 83
Coordinates: 33.962282, -117.021353

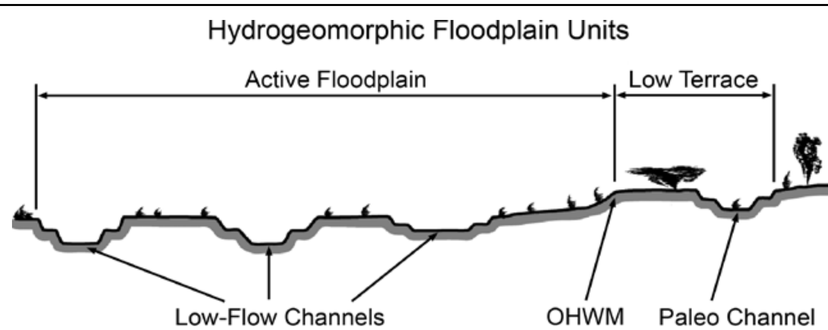
Potential anthropogenic influences on the channel system:
Area receives upstream flows from runoff from developed road (Brookside Avenue) and from culvert that crosses under Brookside Avenue; site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm; large drainage feature in southern portion of site within area mapped as tree of heaven.

Checklist of resources (if available):

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

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

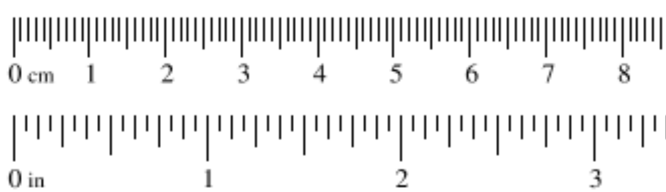


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

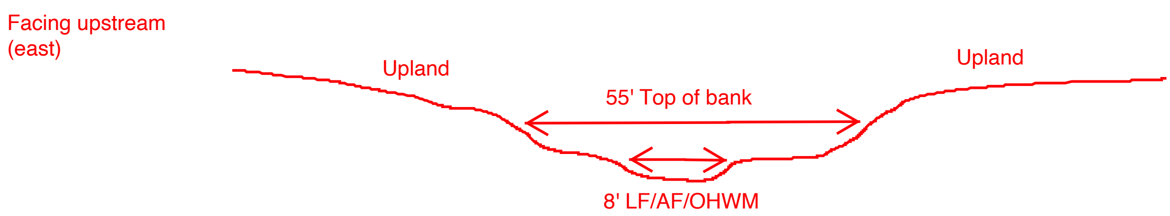
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 7 **Date:** 06/03/2021 **Time:** 1415

Cross section drawing:



OHWM

GPS point: 33.962282, -117.021353

Indicators:

- ☑ Change in average sediment texture
- ☑ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________________
- ☐ Other: ____________________

Comments:
Approximately 8-foot wide OHWM primarily defined by a change in average sediment texture, change in vegetation species and cover, and faint break in bank slope. Data was collected during a drought year; however, indicators still observed and consistent with anticipated extent of OHWM based on review of aerials and site conditions/topography.

Floodplain unit:

☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________________

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

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 7 **Date:** 06/03/2021 **Time:** 1415

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:
Average sediment texture: Medium sand
Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %
Community successional stage:
- ☑ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:
AF defined by faint break in bank slope; AF unvegetated.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:
Average sediment texture: Medium silt
Total veg cover: 100 % Tree: 10 % Shrub: 5 % Herb: 85 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☑ Late (herbaceous, shrubs, mature trees)

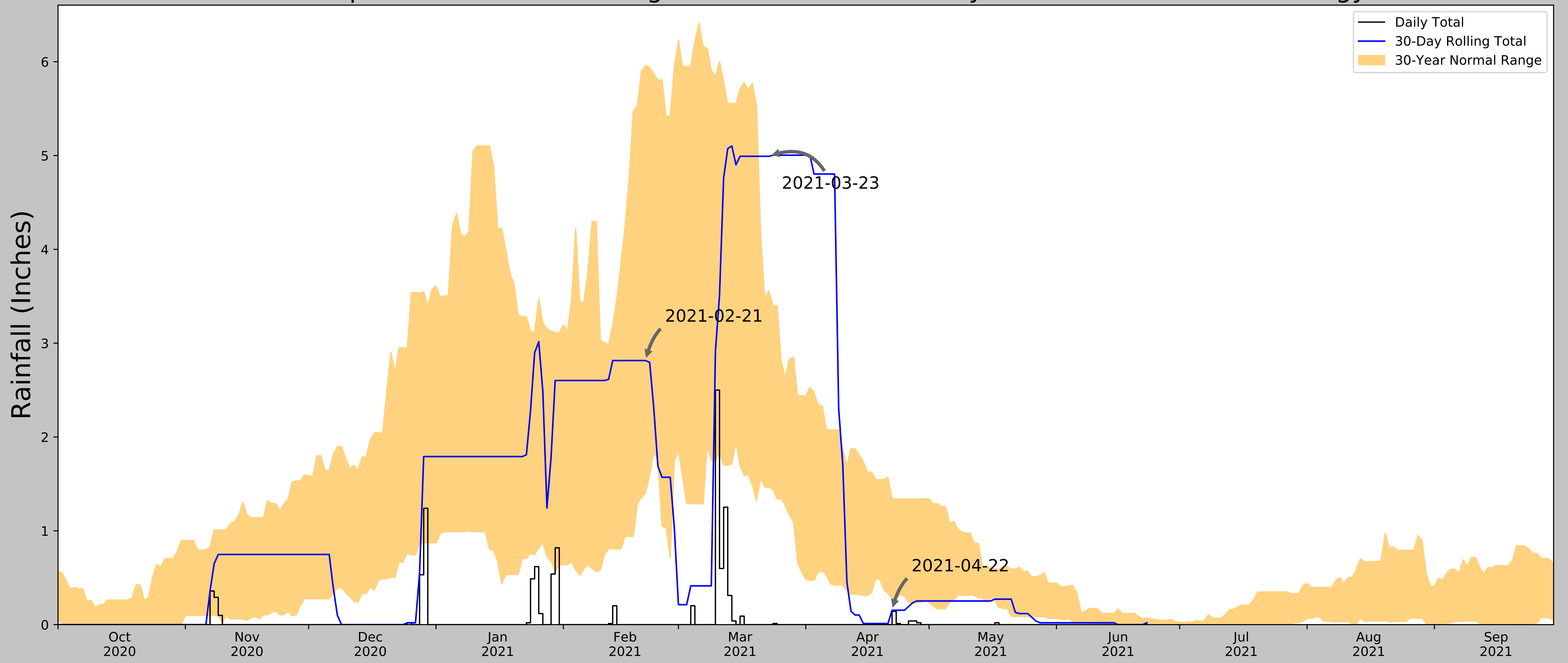
Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☑ Surface relief
- ☐ Other: ____
- ☐ Other: ____
- ☐ Other: ____

Comments:
No true low terrace; uplands defined by soil development and surface relief; uplands were dominated with non-native grasses and tree of heaven (Ailanthus altissima).

APPENDIX F

ANTECEDENT PRECIPITATION TOOL OUTPUT

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



Coordinates	33.965141, -117.019732
Observation Date	2021-04-22
Elevation (ft)	2485.7
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Dry Season

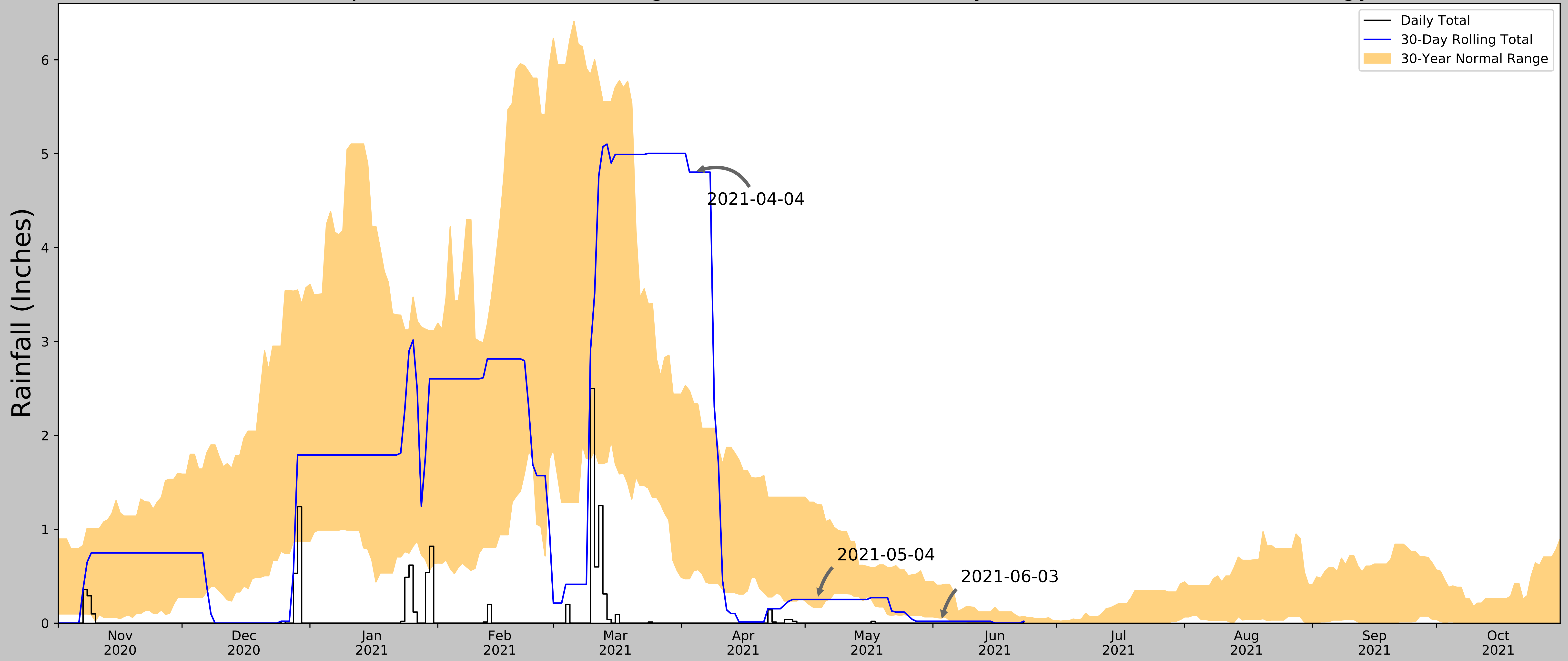
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-04-22	0.279528	1.340945	0.153543	Dry	1	3	3
2021-03-23	1.466535	3.561024	4.992126	Wet	3	2	6
2021-02-21	1.404331	5.958268	2.814961	Normal	2	1	2
Result							Normal Conditions - 11

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CORONA 12.5 SE	33.7346, -117.4315	1301.837	28.496	1183.863	46.559	149	0
DESERT HOT SPRINGS 3.0 NW	33.9855, -116.5415	1338.911	27.438	1146.789	43.813	1581	0
HOMELAND 1.7 NNE	33.769, -117.0923	2248.032	14.177	237.668	9.749	10	3
IDYLLWILD 1.8 NW	33.7631, -116.735	6325.131	21.488	3839.431	92.171	1557	0
HEMET 4.1 ENE	33.7527, -116.9196	1698.163	15.763	787.537	19.507	1076	87
CORONA 12.8 SE	33.7307, -117.4276	1403.871	28.463	1081.829	43.6	102	0
BIG BEAR LAKE	34.2431, -116.9169	6752.953	20.086	4267.253	94.751	6722	0
ELSINORE	33.6861, -117.3458	1268.045	26.87	1217.655	44.81	135	0
HEMET	33.7381, -116.8939	1811.024	17.269	674.676	19.422	21	0

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



Coordinates	33.965141, -117.019732
Observation Date	2021-06-03
Elevation (ft)	2485.7
Drought Index (PDSI)	Extreme drought (2021-05)
WebWIMP H_2O Balance	Dry Season

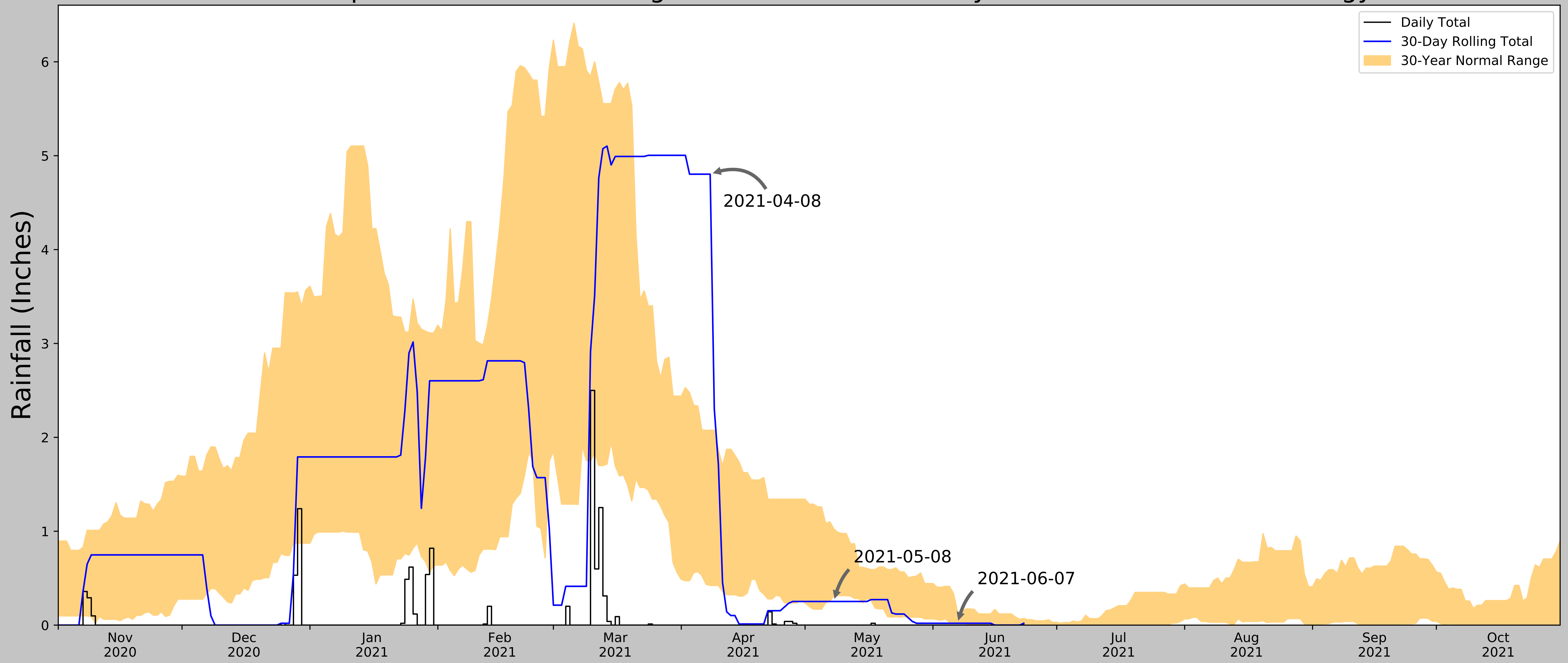
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-06-03	0.054331	0.403937	0.019685	Dry	1	3	3
2021-05-04	0.170079	1.26063	0.251969	Normal	2	2	4
2021-04-04	0.558661	2.34252	4.80315	Wet	3	1	3
Result							Normal Conditions - 10

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CORONA 12.5 SE	33.7346, -117.4315	1301.837	28.496	1183.863	46.559	149	0
DESERT HOT SPRINGS 3.0 NW	33.9855, -116.5415	1338.911	27.438	1146.789	43.813	1581	0
HOMELAND 1.7 NNE	33.769, -117.0923	2248.032	14.177	237.668	9.749	10	3
IDYLLWILD 1.8 NW	33.7631, -116.735	6325.131	21.488	3839.431	92.171	1557	0
HEMET 4.1 ENE	33.7527, -116.9196	1698.163	15.763	787.537	19.507	1076	86
CORONA 12.8 SE	33.7307, -117.4276	1403.871	28.463	1081.829	43.6	102	0
BEAUMONT 2.5 NW	33.9543, -117.012	2532.152	0.87	46.452	0.432	0	1
BIG BEAR LAKE	34.2431, -116.9169	6752.953	20.086	4267.253	94.751	6722	0
ELSINORE	33.6861, -117.3458	1268.045	26.87	1217.655	44.81	135	0
HEMET	33.7381, -116.8939	1811.024	17.269	674.676	19.422	21	0

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



Coordinates	33.965141, -117.019732
Observation Date	2021-06-07
Elevation (ft)	2485.7
Drought Index (PDSI)	Extreme drought (2021-05)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-06-07	0.017323	0.124409	0.019685	Normal	2	3	6
2021-05-08	0.314173	1.022047	0.251969	Dry	1	2	2
2021-04-08	0.422441	2.075591	4.80315	Wet	3	1	3
Result							Normal Conditions - 11

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CORONA 12.5 SE	33.7346, -117.4315	1301.837	28.496	1183.863	46.559	149	0
DESERT HOT SPRINGS 3.0 NW	33.9855, -116.5415	1338.911	27.438	1146.789	43.813	1581	0
HOMELAND 1.7 NNE	33.769, -117.0923	2248.032	14.177	237.668	9.749	10	3
IDYLLWILD 1.8 NW	33.7631, -116.735	6325.131	21.488	3839.431	92.171	1557	0
HEMET 4.1 ENE	33.7527, -116.9196	1698.163	15.763	787.537	19.507	1076	86
CORONA 12.8 SE	33.7307, -117.4276	1403.871	28.463	1081.829	43.6	102	0
BEAUMONT 2.5 NW	33.9543, -117.012	2532.152	0.87	46.452	0.432	0	1
BIG BEAR LAKE	34.2431, -116.9169	6752.953	20.086	4267.253	94.751	6722	0
ELSINORE	33.6861, -117.3458	1268.045	26.87	1217.655	44.81	135	0
HEMET	33.7381, -116.8939	1811.024	17.269	674.676	19.422	21	0

APPENDIX G

SITE PHOTOGRAPHS

Appendix G. Site Photographs[1]

Beaumont Summit Station Aquatic Resources Delineation – April 22, 2021; June 3 and 7, 2021

Photo 1. Looking southwest towards Erosional Feature (EF)-1 (yellow line). Vegetation surrounding EF-1 had been recently mowed. EF-1 exhibited a slight break in bank slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other Ordinary High Water Mark (OHWM) indicators. (33.968462, -117.024590). June 3, 2021.

Photo 2. View of OHWM Datasheet Point (ODP) 1, facing west, within the lower topographic area between two gentle slopes just west of EF-1. The lower topographic area did not exhibit any bed and bank indicators, there was no break in slope, and the sediment texture and vegetation did not differ from the lower topographic area to the adjacent slopes (33.968296, -117.024925). June 3, 2021.

Photo 3. View of area of low topography between EF-1 and EF-2, facing southwest (33.967847, -117.024635). June 3, 2021.

Photo 4. View of ODP 2, facing southwest, within EF-2. The gully/erosional feature exhibited a slight break in bank slope but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other OHWM indicators, and did not continue downstream (33.967305, -117.025013). June 3, 2021.

[1] See corresponding Figure 5 series for Photo Point Locations. See Aquatic Resource Delineation Report Sections 6 through 8 for a discussion of each feature.

Photo 5. Overview of area of lower topography located east of EF-2, facing east (33.967002, -117.025087). June 3, 2021.

Photo 6. Overview of area of lower topography located west of Basin (B)-2, facing southwest (33.966258, -117.022864). June 3, 2021.

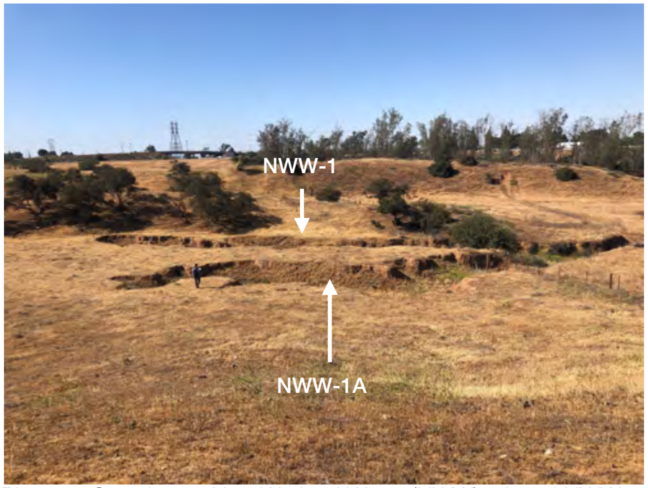


Photo 7. Overview of Non-Wetland Water (NWW)-1A and NWW-1, facing south. NWW-1A and NWW-1 converge just before continuing off site and downstream and exhibiting a more defined bed and bank (33.966304, -117.025167). June 3, 2021.

Photo 8. Upstream view of ODP 3, facing southeast, within NWW-1A. The OHWM was defined by a faint break in bank slope and a change in vegetation cover. NWW-1A and NWW-1 continue downstream where OHWM indicators become more prominent (33.966120, -117.025049). June 3, 2021.

Photo 9. Downstream view of ODP 3, facing west, within NWW-1A. As NWW-1A continues downstream, OHWM indicators become more prominent (33.966076, -117.024773). June 3, 2021.

Photo 10. Downstream view of NWW-1 from upstream extent, facing west. As NWW-1 continues downstream, OHWM indicators become more prominent (33.965835, -117.024734). June 3, 2021.

Photo 11. View of B-1, which contained several mulefat (*Baccharis salicifolia*), facing north. B-1 was previously used as a settling basin to hold manure (33.966130, -117.021422). June 3, 2021.

Photo 12. View of B-2, which contained some mulefat and tree tobacco (*Nicotiana glauca*), facing northeast. B-2 was previously used as a settling basin to hold manure (33.966130, -117.021422). June 3, 2021.

Photo 13. View of B-3, facing south. B-3 was previously used as a settling basin to hold manure (33.965818, -117.021455). June 3, 2021.

Photo 14. View of Wetland Data Form Point (WDP) 1 (white arrow) within small stand of mule fat, facing east, within B-4. WDP 1 met the wetland hydrology parameter; however, hydrophytic vegetation and hydric soil parameters were not met at WDP 1. B-4 was previously used as a settling basin to hold manure (33.965370, -117.022221). June 3, 2021.

Photo 15. View of B-5 facing southeast. B-5 was previously used as a settling basin to hold manure (33.965122 -117.021874). June 3, 2021.

Photo 16. View of area mapped by U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) as a “Reservoir,” facing west. No evidence of hydrology was observed (33.965010, -117.021979). June 3, 2021.

Photo 17. Downstream view of NWW-2, facing west. (33.965125, -117.022334). June 7, 2021.

Photo 18. Upstream view of ODP 4, facing east, within NWW-2. The OHWM was defined by a faint break in bank slope and a change in vegetation cover (33.964853, -117.023670). June 7, 2021.

Photo 19. Downstream view of ODP 4, facing west, within NWW-2. Vegetation was dominated by non-native grasses, including short-pod mustard *(Hirschfeldia incana*), ripgut brome *(Bromus diandrus*), and false brome *(Brachypodium distachyon*) (33.964874, -117.023356). June 7, 2021.

Photo 20. View of WDP 2 (white arrow), facing west, within NWW-2. WDP 2 did not meet the hydrophytic vegetation, hydric soil, or wetland hydrology parameters (33.964962, -117.023251). June 7, 2021.

Photo 21. View of NWW-2A (yellow line), which showed faint indicators of an OHWM, as it continues into NWW-2, facing northwest (33.964876, -117.022516). June 7, 2021.

Photo 22. View of culvert outlets located along the southern extent of the review area under Brookside Avenue, facing south. Flows from the culvert outlets continue into NWW-3 (33.961603, -117.018517). June 3, 2021.

Photo 23. Downstream view of NWW-3, facing northwest, located just north of the two culvert outlets under Brookside Avenue before NWW-3 converges with NWW-3A (33.961636, -117.018604). June 3, 2021.

Photo 24. View of EF-4 within the review area, facing west. EF-4 continues west into Swale (S)-1, which ultimately converges with NWW-3A (33.963245, -117.013837). April 22, 2021.

Photo 25. View of ODP 6, facing east, within S-1. S-1 did not exhibit any bed and bank indicators, there was no change in sediment texture or break in slope, and vegetation did not differ between the swale and the adjacent upland area (33.962812, -117.017420). June 3, 2021.

Photo 26. View at upstream extent of NWW-3A, facing southwest, just west of S-2 (33.963458, -117.016526). June 3, 2021.

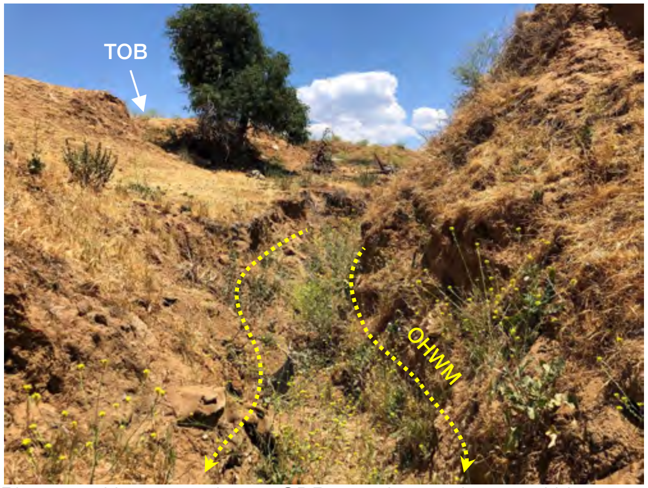


Photo 27. Upstream view of ODP 5, facing northeast, within NWW-3A. The OHWM was primarily defined by a a break in bank slope, change in average sediment texture, and change in vegetation species (33.963053, -117.017202). June 3, 2021.

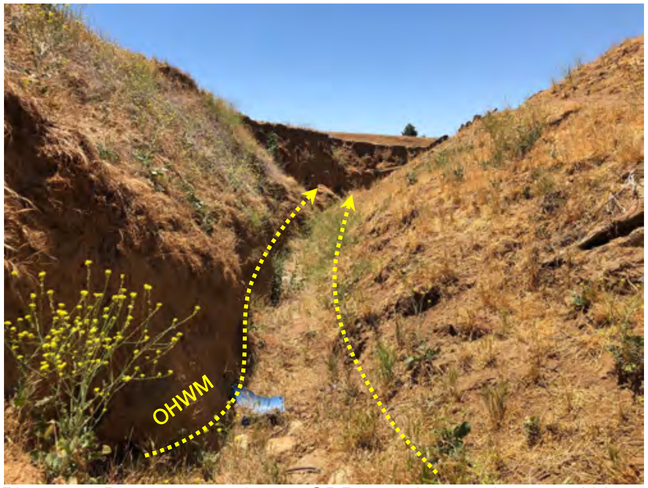


Photo 28. Downstream view of ODP 5, facing southwest, within NWW-3A (33.963266, -117.017032). June 3, 2021.


Photo 29. View of S-3, facing south, as it travels towards NWW-3A (33.9632961, -117.018316). April 22, 2021.


Photo 30. Downstream view of NWW-3A, facing southwest (33.962811, -117.018492). June 3, 2021.


Photo 31. Downstream view of area of NWW-3A exhibiting a faint OHWM, facing west (33.962373, -117.019364). June 3, 2021.


Photo 32. Downstream view of NWW-3, located west of the convergence of NWW-3 and NWW-3A, facing southwest (33.962054, -117.02037). June 3, 2021.

Photo 33. Upstream view of ODP 7, facing east, within NWW-3. The OHWM was primarily defined by a change in average sediment texture, change in vegetation species and cover, and faint break in bank slope (33.962257, -117.021513).

Photo 34. Downstream view of ODP 7, facing west, within NWW-3 (33.962335, -117.021187). June 3, 2021.


Photo 35. View of WDP 3, facing north, within NWW-3. WDP 3 met the hydrophytic vegetation parameter; however, hydric soil and wetland hydrology parameters were not met within WDP 3 (33.962696, -117.022892). June 7, 2021.


Photo 36. View of EF-6 (yellow line), facing northwest, which travels into area with some mulefat and tree tobacco, just east of NWW-3B. EF-6 did not appear to contribute flows to NWW-3B (33.963667, -117.020341). June 3, 2021.

Photo 37. View of EF-7 (yellow arrow), just south of EF-6, facing south/southwest. EF-7 converges with EF-8 (white arrow), neither of which appeared to contribute flows to NWW-3B (33.963581, -117.020494). June 3, 2021.

Photo 38. Looking downstream from the south side of the upstream extent of NWW-3B, facing northwest (33.963553, -117.021142). June 3, 2021.

Photo 39. View of D-1, facing east (33.965103, -117.019365). April 22, 2021.

Photo 40. View of area where D-1 abruptly stops, facing south. Flows likely continue as sheet flow into S-5, before continuing into NWW-3B1 (33.964824, -117.020845). June 3, 2021.

Photo 41. View of NWW-3B1, facing south. Flows continue south/southwest into NWW-3B (white arrow) (33.964550, -117.021793). June 3, 2021.


Photo 42. Downstream view of NWW-3B, facing west (33.963775, -117.022856). April 22, 2021.

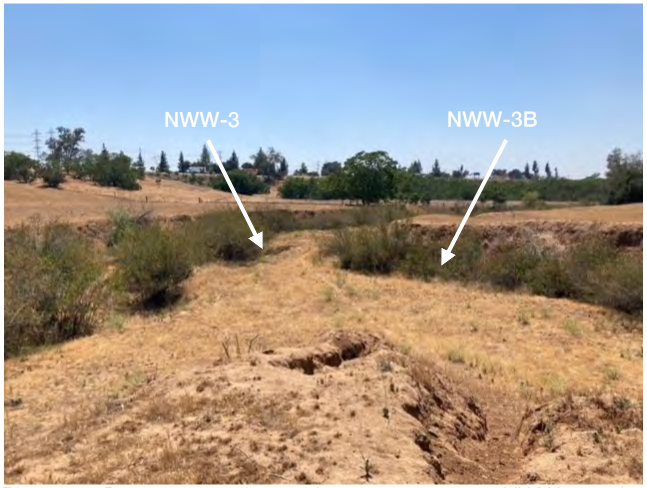


Photo 43. Downstream view of the convergence of NWW-3 and NWW-3B, facing west, before NWW-3 continues off site (33.963316, -117.023726). June 3, 2021.


Photo 44. View of slight depressional area surrounded by mulefat scrub, located south of NWW-3B, facing west. No evidence of hydrology was observed (33.963283, -117.021269). June 3, 2021.


Photo 45. East facing view of area mapped by USGS NHD as a "Reservoir" and where a basin was previously located east of EF-8. No evidence of hydrology was observed (33.963493, -117.020227). June 3, 2021.


Photo 46. Southeast facing view of area where a basin was previously located west of S-3. No evidence of hydrology was observed (33.963274, -117.019648). June 3, 2021.

APPENDIX H

LITERATURE CITATIONS AND REFERENCES

APPENDIX H. LITERATURE CITATIONS AND REFERENCES

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APPENDIX I

ORM BULK UPLOAD AQUATIC RESOURCES OR CONSOLIDATED EXCEL SPREADSHEET

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
NWW-1	CALIFORNIA	R6		Area	0.018	ACRE	DELINEATE	33.965908	-117.025153
NWW-1A	CALIFORNIA	R6		Area	0.021	ACRE	DELINEATE	33.966006	-117.025084
NWW-2	CALIFORNIA	R6		Area	0.087	ACRE	DELINEATE	33.964929	-117.023925
NWW-2A	CALIFORNIA	R6		Area	0.004	ACRE	DELINEATE	33.964977	-117.022656
NWW-2B	CALIFORNIA	R6		Area	0.012	ACRE	DELINEATE	33.965185	-117.022994
NWW-2C	CALIFORNIA	R6		Area	0.007	ACRE	DELINEATE	33.964845	-117.023224
NWW-3	CALIFORNIA	R6		Area	0.385	ACRE	DELINEATE	33.962391	-117.021747
NWW-3A	CALIFORNIA	R6		Area	0.146	ACRE	DELINEATE	33.962760	-117.018132
NWW-3B	CALIFORNIA	R6		Area	0.117	ACRE	DELINEATE	33.963540	-117.022834
NWW-3B1	CALIFORNIA	R6		Area	0.0301001	ACRE	DELINEATE	33.964055	-117.021934

APPENDIX J

GIS DATA (PROVIDED ELECTRONICALLY TO AGENCIES)

Appendix C3: Determination of Biologically Equivalent or Superior Preservation (DBESP) Report

BEAUMONT SUMMIT STATION PROJECT DBESP REPORT

Riverside County, California

July 1, 2022

Prepared for:
Exeter Cherry Valley Land, LLC
5060 North 40th Street, Suite 108
Phoenix, AZ 85018
(708) 341-9821

Prepared by:
Rocks Biological Consulting
4312 Rialto Street
San Diego, CA 92107
(619) 701-6798

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APPENDICES

Appendix A – Beaumont Summit Station Aquatic Resources Delineation Report
Appendix B – Beaumont Summit Station Project Burrowing Owl Survey Report

1 EXECUTIVE SUMMARY

Kimley-Horn (project applicant) retained Rocks Biological Consulting (RBC) to prepare a Determination of Biologically Equivalent or Superior Preservation (DBESP) Report for the 191-acre Beaumont Summit Station Project (project or proposed project) in the city of Beaumont, Riverside County, California. RBC prepared this DBESP Report in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (Western Riverside County Regional Conservation Authority [RCA] 2003) for the proposed project.

The project site is not located within a Cellgroup or Criteria Area. As such, the project is not subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or Joint Project Review (JPR) processes. The project site is located within the Narrow Endemic Plant Species Survey Area (NEPSSA) for Marvin's onion (*Allium marvinii*) and multi-stemmed dudleya (*Dudleya multicaulis*), as well as the MSHCP Burrowing Owl Survey Area. A habitat assessment and focused surveys for both Marvin's onion and many-stemmed dudleya were conducted the spring of 2021; no suitable habitat for these species was observed within the project site, and no occurrences of either species was observed. Focused breeding season surveys for burrowing owl were also conducted for the project in accordance with the MSHCP Burrowing Owl Survey Instructions (RCA 2005). The the project site has moderate potential to support burrowing owl; however, no burrowing owl(s) or burrowing owl sign were observed on site during protocol surveys.

Approximately 8.48 acres of MSHCP riparian/riverine areas occur within the 191-acre project boundary (or project site), 2.41 acres of which fall within the project impact area and will be permanently and directly impacted by the proposed project. The riparian/riverine areas within the project boundary have moderate potential to support least Bell's vireo (*Vireo bellii pusillus*) and very low to no potential to support the riparian bird species southwestern willow flycatcher (*Empidonax traillii extimus*) and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). An individual male least Bell's vireo was observed during protocol surveys, outside of the project impact area. No suitable vernal pool habitat that could support Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), Riverside fairy shrimp (*Streptocephalus woottoni*), or vernal pool fairy shrimp (*Branchinecta lynchi*) occur within the project site. The project site is not located within the Criteria Area Species Survey Areas (CASSA), Mammal, Invertebrate, or Amphibian Survey Areas.

The project applicant proposes offsetting impacts on 2.41 acres of MSHCP riparian/riverine resources at a 3:1 mitigation ratio through the purchase of 4.82 acres/credits (a 2:1 mitigation ratio) from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed in-lieu fee [ILF] Program), as available; and an additional 1:1 mitigation through either on-site preservation, with a focus on removal invasive species and replanting with native species, or the purchase of 2.41 acres/credits from an in-watershed mitigation bank (i.e., the the Santa Ana River Watershed ILF Program), as available. The U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) will make final determination regarding compensatory mitigation requirements during the permit evaluation process. If on-site enhancement is pursued, an enhancement and revegetation plan will developed in consultation with the regulatory agencies during the aquatic resources permitting process.

2 INTRODUCTION

2.1 PROJECT AREA

The approximately 191-acre proposed project is located south of Cherry Valley Boulevard, north of Brookside Avenue, and east of Interstate 10 (I-10; Figure 1). The current zoning for the project site is Specific Plan. All proposed changes associated with the project are located within areas previously annexed to the City of Beaumont by Local Agency Formation Commission (LAFCO). The review area is bounded by undeveloped land to the north and west, rural residences with livestock pens to the east, and residential development to the south. The latitude and longitude of the approximate center of the review area is 33.965141, -117.019732. The review area sits on Township 2 South, Range 1 West, and Section 30 within the El Casco 7.5-minute quadrangle, as mapped by the U.S. Geological Survey (USGS; Figure 2). The following Assessor Parcel Numbers (APNs) are associated with the project site: 407-230-22, -23, -24, -25, -26, -27, -28, 407-190-016, and 407-190-017.

The project is within the Santa Ana Hydrologic Unit Code (HUC) 8 (18070203), San Timoteo Wash HUC 10 (1807020304), and San Timoteo Canyon-San Timoteo Wash HUC 12 (180702030403) watersheds (Figure 3). In addition to the watersheds defined by the USGS and commonly used by the Corps, the RWQCB also defines watershed boundaries by Hydrologic Units (HUs). The majority of the project site is within the Santa Ana Basin, the Santa Ana River HU, and the Beaumont Hydrologic Subarea (Santa Ana Regional Water Quality Control Board [SARWQCB] 1986; SARWQCB 2019).

The proposed project site is within the MSHCP Plan Area but not located within a Cellgroup or Criteria Area. The project is identified as occurring within the NEPSSA for Marvin's onion and many-stemmed dudleya, as well as the MSHCP Survey Area for burrowing owl.

2.2 PROJECT DESCRIPTION

The proposed project includes a General Plan Amendment, Specific Plan Amendment, Tentative Parcel Map, Plot Plan Approval, and a Development Agreement. The proposed project is divided into five parcels with Parcels 1, 2, and 3 (Specific Plan Planning Area 1) designated for e-commerce uses with supporting office. Parcel 4 (Specific Plan Planning Area 2) would include the development of up to 150,000 square feet of commercial uses. Parcel 5 (Specific Plan Planning Area 3) would remain as open space. The project proposes to amend the existing General Plan to allow for these uses on the 191-acre project. The proposed project will impact only approximately 156 acres within proposed project boundary.

2.3 EXISTING CONDITIONS

Elevations on site range from approximately 2,400 to 2,600 above mean sea level (amsl). Seven soil types occur on site varying in percent slopes (Figure 4). The project site is composed of nine parcels that support several upland and riparian vegetation communities (Figure 5). The flat areas of the project site are primarily dominated non-native grassland and developed habitats. The drainage features within the project site are composed primarily of non-native grassland, mulefat scrub, and non-native riparian (Figure 6).

Surrounding land uses include open space, agriculture, and residential development. The non-native grassland in the northern and southern portions of the project appear to be regularly disked.

2.3.1 VEGETATION COMMUNITIES

The project site supports ten vegetation communities and other land covers, as classified in accordance with *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and consistent with the MSHCP vegetation mapping classification (Table 1). Vegetation within the project site is predominantly comprised of non-native grassland.

Table 1. Vegetation Communities within Project Boundary

Vegetation Community/Land Use	Project Site (acres)[1]
Upland	
Chamise Chaparral	>0.01
Developed	48.70
Disturbed	1.50
Eucalyptus Woodland	0.12
Non-native Grassland	134.54
Riversidean Sage Scrub	0.24
Torrey's Scrub Oak Stands	1.10
Riparian	
Blue Elderberry Stands	0.30
Mulefat Scrub	2.14
Non-native Riparian	2.32
Total	**190.991**

[1]*Acreages summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.*

Chamise Chapparal

This chaparral vegetation community (>0.01 acre) is overwhelmingly dominated by chamise (*Adenostoma fasciculatum*). Within the project site, the chamise chaparral contains some individuals of California buckwheat (*Eriogonum fasciculatum*) and it occurs along the northwestern project boundary. Chamise chaparral continues as patches within non-native grassland west of the project.

Developed

Developed land (48.70 acres) within the project site does not support native vegetation and includes human-made structures. Within the project site, developed habitat includes the buildings and paved surfaces associated with the former agricultural operations.

Disturbed

Disturbed land (1.50 acres) is typically classified as land on which the native vegetation has been significantly altered by agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of a plant association (e.g., disturbed Riversidean sage scrub). Disturbed habitat is typically found in vacant lots, along roadsides, within construction staging areas, and in abandoned fields. The habitat is typically dominated by non-native annual species and perennial broadleaf species. Disturbed habitat on the project site occurs within the gravel driveways and staging areas that support the sparse growth of non-native grasses and forbaceous species. A few Mexican fan palms (*Washingtonia robusta*) also occur within the driveway near the eastern entrance to the project site off Cherry Valley Boulevard.

Eucalyptus Woodland

The Eucalyptus woodland (*Eucalyptus* spp.) habitat (0.12 acre) ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species produces a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. A large stand of eucalyptus woodland occurs west of the project site towards I-10; the eastern extent of the large stand occurs along the western border of the project site.

Non-native Grassland

The non-native grassland within the project site (134.54 acres) is dominated by ripgut grass (*Bromus diandrus*) but also contains occurrences of other non-native grass and forbaceous species such as red brome (*B. rubens*), Mediterranean barley (*Hordeum marinum*), and short-pod mustard (*Hirschfeldia incana*). Rigid fiddleneck (*Amsinckia menziesii*) was observed within the non-native grassland habitat growing out of the topographical depressions in the western portion of project site. The project site is frequently mowed and had been grazed in the past using cattle, keeping non-native grasses and ruderal species fairly low to the ground. Non- native grassland occurs throughout much of the project site.

Riversidean Sage Scrub

Riversidean sage scrub (0.24 acre) is a form of coastal sage scrub found in Riverside County consisting of low, soft shrubs. The project site supports small patches of Riversidean sage scrub that are dominated by California sagebrush (*Artemisia californica*) and California buckwheat and contain non-native grasses between shrubs. Riversidean sage scrub is found in the southwestern portion of the project site and off-site along the southern project boundary.

Torrey's Scrub Oak Stands

Mature individuals of Torrey's scrub oak (*Quercus x acutidens*) form distinct stands (1.10 acres) occurring along the upper banks of canyons and drainages within the western portion of the project. Torrey's scrub oak is a small oak tree and on-site Torrey's scrub oak do not exceed 25 feet in height. Non-native grasses occur as the understory between individual trees. The stands of Torrey's scrub oak within the project site do not represent a specific vegetation community (e.g., scrub oak chaparral), but are a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat.

Blue Elderberry Stands

Individual stands of blue elderberry (*Sambucus nigra* ssp. *caerulea*) occur within the project site (0.30 acre). Blue elderberry is a tall woody shrub that can grow up to 25 feet tall. The blue elderberry trees within the project site do not represent a specific vegetation community, rather a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat. Blue elderberry is not a hydrophytic, or wetland-exclusive, plant species; it can be found growing in both upland and riparian habitats. However, this stand of trees is included in the riparian community discussion for the purposes of this analysis due to its location exclusively within the drainages in the project site.

Mulefat Scrub

Mulefat scrub (2.14 acres) consists of mulefat (*Baccharis salicifolia*) as the dominant or co-dominant species within a continuous shrub canopy or thicket. A few isolated, individual willows (*Salix* spp.) also occur within the continuous mulefat scrub. The herbaceous layer is typically sparse. The mulefat scrub within the project site is approximately 10-15 feet in height and co-occurs with the blue elderberry stands and non-native riparian vegetation within the canyons and drainages in the southwest.

Non-native Riparian

This habitat includes densely vegetated riparian thickets dominated by non-native, invasive species. Within the project site, non-native riparian habitat (2.32 acres) consists of a monotypic stands of tree of heaven (*Ailanthus altissima*), occurring within the drainages in the southwestern portion of the project. Tree of heaven are large trees with some individuals exceeding 30 feet in height. Virtually no understory occurs within the stands of tree of heaven that occur within the project site.

2.3.2 SOILS

Based on the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) map of the project area, seven soil map units, outlined below, occur within the project site boundary (Figure 4). The National Technical Committee for Hydric Soils defines hydric soils; *Changes in Hydric Soils Database Selection Criteria* (77 Federal Register 12234) outlines the current four hydric soil criteria. None of the soils present on site are classified as hydric soils. The soils are described below per the USDA's *Official Soil Description and Series Classification* database (NRCS 2018) and the USDA's *Soil Survey of Wester Riverside Area, California* (1971).

Greenfield sandy loam, 2 to 8 percent slopes, eroded – The Greenfield series consists of deep, well-drained soils that formed in moderately coarse and coarse alluvium derived from granitic rock and other mixed rock sources. Greenfield soils have slow to medium runoff, moderately rapid permeability, and slopes ranging from 0 to 30 percent. These soils occur on alluvial fans and terraces at elevations of 100 to 3,500 feet amsl. Greenfield soil is used for production of field, forage, and fruit crops and also for growing grain and pasture. Uncultivated areas consist of annual grasses, forbs, some shrubs, and some oak trees. The NRCS does not list Greenfield sandy loam, 2 to 8 percent slopes, eroded, which occurs on site, as hydric.

Greenfield sandy loam, 8 to 15 percent slopes, eroded – The Greenfield series consists of deep, well-drained soils that formed in moderately coarse and coarse alluvium derived from granitic rock and other mixed rock sources. Greenfield soils have slow to medium runoff, moderately rapid permeability, and slopes ranging from 0 to 30 percent. These soils occur on alluvial fans and terraces at elevations of 100 to 3,500 feet amsl. Greenfield soil is used for production of field, forage, and fruit crops and also for growing grain and pasture. Uncultivated areas consist of annual grasses, forbs, some shrubs, and some oak trees. The NRCS does not list Greenfield sandy loam, 8 to 15 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 2 to 5 percent slopes, eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 2 to 5 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, deep, 5 to 8 percent slopes, eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 5 to 8 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 8 to 15 percent slopes, severely eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 8 to 15 percent slopes, severely eroded, which occurs on site, as hydric.

Ramona sandy loam, deep, 15 to 25 percent slopes, severely eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 15 to 25 percent slopes, severely eroded, which occurs on site, as hydric.

Terrace escarpments – Terrace escarpments consist of variable alluvium on terraces or gullies derived from granite, gabbro, metamorphosed sandstone, sandstone, or mica-schist. Slopes range from 30 to 75 percent. Vegetation is sparse and includes annual grasses, salvia (*Salvia* sp.), California buckwheat, and chamise. Areas of terrace escarpments are used primarily for watershed and as wildlife habitat. The NRCS does not list terrace escarpments, which occurs on site, as hydric.

3 RIPARIAN/RIVERINE MITIGATION (MSHCP SECTION 6.1.2)

3.1 METHODS

All projects within the MSHCP Plan Area require an evaluation of potential impacts on riparian/riverine areas and vernal pools, as those terms are defined in the MSHCP, and the protected species associated with those habitats.

On April 22 and May 12, 2021, RBC biologists surveyed the project site and conducted vegetation mapping, a general biological survey, and habitat assessments for special-status plant and wildlife species, including species associated with MSHCP survey areas and MSHCP riparian/riverine areas and vernal pool habitats. RBC used binoculars (10 x 42) to aid in the observation of biological resources during biological surveys. Plants were identified using the Jepson Manual 2nd edition (Baldwin et al. 2012) and local botanical knowledge. Vegetation community boundaries were delineated at a 1:2400 scale (1 inch = 200 feet) aerial photograph following Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). RBC completed the *Beaumont Summit Station Project Biological Resources and MSHCP Consistency Report* in July 2022 (RBC 2022a).

RBC Regulatory Specialists Sarah Krejca and Chelsea Polevy conducted an initial jurisdictional assessment on April 22, 2021, followed by a formal aquatic resources delineation on June 3, 2021, to confirm the presence and extent of potentially jurisdictional aquatic resources and MSHCP riparian/riverine areas. RBC regulatory specialist Sarah Krejca and Shanti Santulli conducted an additional aquatic resources delineation field visit on June 7, 2021. RBC completed the *Beaumont Summit Station Project Aquatic Resources Delineation Report* in July 2022 (ARDR; RBC 2022b; Appendix A). Figure 6 shows the results of the formal jurisdictional delineation.

During RBC's jurisdictional delineation field visit on April 22, 2021, June 3, 2021, and June 7, 2021, RBC evaluated all areas with depressions, drainage patterns, and/or wetland vegetation within the ARDR review area (including the project boundary and a 50-foot buffer; Figure 6) for potential jurisdictional status, with a focus on the presence of defined channels and/or wetland vegetation, soils, and hydrology. Details regarding methods used to delineate U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and California Department Fish and Wildlife (CDFW) jurisdictional boundaries are included in the project's ARDR (Appendix A).

While in the field, potentially jurisdictional features were recorded using a hand-held Global Positioning System (GPS) unit with a level of accuracy ranging from eight to 24 feet. RBC staff refined the data using aerial photographs and topographic maps to ensure accuracy.

RBC also conducted protocol surveys for Least Bell's Vireo in accordance with the U.S. Fish and Wildlife Service (USFWS) Least Bell's Vireo Survey Guidelines (USFWS 2001), based on the results of the habitat assessments. The survey included all suitable Least Bell's Vireo riparian habitat in the the project site, as well as a 500-foot buffer surrounding the project site. Surveys were completed between April 22, 2021 and July 16, 2021.

3.2 RESULTS/IMPACTS

3.2.1 DIRECT IMPACTS

Direct impacts are those that involve the loss, modification, or disturbance of natural resources or habitats (i.e., vegetative communities or substrate) that in turn, directly affect plant and wildlife species that depend on that habitat. Direct impacts include the destruction of individual plants or wildlife of low mobility (i.e., plants, amphibian, reptiles, and small mammals). The project boundary contains approximately 8.48 acres of MSHCP riparian/riverine areas, as defined by Section 6.1.2 of the MSHCP, of which, 2.41 acres will be directly impacted by construction; approximately 6.07 acres of MSHCP riparian/riverine areas will be avoided on site as discussed further below (Table 2; Figure 7). The on-site MSHCP riparian/riverine areas conicide with CDFW-jurisdictional vegetated streambed and associated riparian habitat.

Non-Wetland Water (NWW)-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 (Figure 6) meet the MSHCP definition of riparian/riverine areas as they contain freshwater flow during “a portion of the year,” specifically after rain events (RCA 2003). Based on the field observations in April and June 2021, the on-site drainages and associated tributaries are expected to convey ephemeral flows (i.e., only in direct response to precipitation). NWW-3 also receives runoff from development south of the review area that is collected and conveyed on site through a culverted storm drain outlet. Note that the drainages and associated tributaries also previously received runoff from the former on-site agricultural operations (poultry and livestock farm) and are highly incised and disturbed. Based on field observations and a review of Google Earth aerial imagery (Google Earth Pro 2021), USGS National Hydrography Dataset (NHD) data (USGS 2020), and USFWS National Wetlands Inventory data (USFWS 2019), flows from NWW-1, NWW-2, and NWW-3 likely continue off site and downstream, flowing into a feature mapped by the USGS NHD as an ephemeral stream that continues for approximately 4 miles until transitioning to an unnamed tributary for approximately 7.5 miles, then connecting with the San Timoteo Wash. The San Timoteo Wash then continues for approximately 6.6 miles before outletting into the Santa Ana River, which ultimately discharges into the Pacific Ocean (USGS 2020).

Additionally, NWW-2A, NWW-3, NWW-3A, and NWW-3B support riparian habitat dominated by trees or shrubs “which occur close to or which depend upon soil moisture from a nearby fresh water source” (RCA 2003). Specifically, NWW-2A, NWW-3, and NWW-3B support mulefat scrub; NWW-3 supports non-native riparian habitat that is dominated by the invasive tree-of-heaven; and NWW-3 and NWW-3A support blue elderberry stands (Figure 6). Therefore, the features which are described as CDFW-jurisdictional riparian habitat meet the definition of MSHCP riparian habitat.

Additionally, the mulefat scrub within and adjacent to NWW-3 and NWW-3B provide suitable habitat for least Bell’s vireo, an MSHCP riparian/riverine wildlife species. An individual male least Bell’s vireo was observed during the first two of eight protocol surveys foraging and moving frequently along the mulefat canopy of NWW-3. The lack of observations following the first two least Bell’s vireo surveys suggests that this bird was an early season migrant that did not establish a nesting territory within the project area. No female vireo or active nests were detected during protocol surveys. The riparian/riverine features within the project site do not, however, support suitable habitat for southwestern willow flycatcher, or western yellow-billed cuckoo; these species prefer dense native riparian woodlands and forests which are absent from the project site. Therefore, there is very low to no potential for southwestern willow flycatcher or western yellow-billed cuckoo to occur within the project site, and no focused surveys for these species were conducted.

The proposed project will result in permanent, direct impacts on NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3B, NWW-3B1, and a small portion of NWW-3A. The project applicant designed the proposed project to avoid impacts on NWW-3, the primary and highest quality riparian/riverine resource within the project boundary, as well as a majority of NWW-3A (a tributary of NWW-3), as detailed in Table 2 and shown in Figure 7.

Several basins, swales, erosional features, and an abandoned ditch also occur within the project impact footprint. These features were determined to be non-jurisdictional by the Corps, RWQCB, and CDFW (Appendix A, Section 6.6); they also do not meet the MSHCP definition of a riparian/riverine feature as they did not appear to convey or receive flows and therefore do not receive “freshwater flow during all or a portion of the year” (RCA 2003). Additionally, these non-jurisdictional features, dominated by non-native grassland vegetation, do not “contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source” (RCA 2003). A 0.67-acre area of isolated, non-native riparian habitat located south of NWW-3 and the small areas of mulefat scrub located south and east of NWW-3B, totalling 0.38 acre, (Figure 7), also do not receive “freshwater flow during all or a portion of the year” as they are not located within or directly adjacent to a drainage (RCA 2003). Additionally, these areas are dominated by tree-of-heaven (Facultative Upland [FACU]) and mulefat (Facultative [FAC]), respectively, which are not trees or shrubs that “depend upon soil moisture from a nearby fresh water source” (RCA 2003). Therefore, these areas do not fit the MSHCP definition of a riparian/riverine area.

No areas within the project site meet the MSHCP definition of a vernal pool. The basins observed on site are abandoned, manmade settling basins (described as Basin [B-]1 through B-5 per the project ARDR [Appendix A, Section 6.6 and Figures 5A to 5C]). Obligate (OBL) hydrophytes and FAC wetland plant species do not dominate these basins during the wet season based on field surveys, the known history of the project site, and a review of historic aerial imagery. Specifically, no OBL hydrophytes were observed within the basins during the April 22, 2021 field survey. Although a few mulefat (FAC) and tree tobacco (*Nicotiana glauca*; FAC) were observed within several of the basins, the vegetation was dominated by non-native grasses. Additionally, sometime between 1976 and 1996, a former poultry farm began developing B-1 through B-5 for use as settling basins to hold manure from chickens, pigs, and cattle, a use that would not support establishment of vernal pools (See Appendix D of Appendix A). Based on the USDA NRCS, the basins are dominated by Ramona sandy loam, 5 to 8 percent slopes, eroded; terrace escarpments; and Ramona sandy loam, 2 to 5 percent slopes, eroded (Appendix A; Figure 4), soils that are not indicative of a vernal pool. RBC sampled soils within B-4 within an area exhibiting cracked soils and no hydric soil parameters (Appendix A) during the formal aquatic resources delineation on June 7, 2021, which was representative of the conditions within B-1, B-2, B-3, and B-5. The ARDR provides additional details regarding these non-jurisdictional features (Appendix A; Section 6.6).

As detailed below in Table 2 and shown in Figure 7, the proposed project will directly impact 2.41 acres of riparian/riverine habitat.

Table 2. Direct Impacts on Riparian/Riverine Habitat

Feature Name	Aquatic Resource Type	Acreage within Project Boundary	Direct Impact Acreage
NWW-1	Vegetated Streambed	0.02	0.02
NWW-1A	Vegetated Streambed	0.03	0.03
NWW-2	Vegetated Streambed	0.71	0.71
NWW-2A	Vegetated Streambed	<0.01	<0.01
	Riparian Habitat	0.03	0.03
NWW-2B	Vegetated Streambed	0.08	0.08
NWW-2C	Vegetated Streambed	0.07	0.07
NWW-3	Vegetated Streambed	4.36	0.00
	Riparian Habitat	0.72	0.00
NWW-3A	Vegetated Streambed	1.01	0.06
	Riparian Habitat	0.01	0.00
NWW-3B	Vegetated Streambed	1.04	1.00
	Riparian Habitat	0.21	0.21
NWW-3B1	Vegetated Streambed	0.18	0.18
	Total[1]	**8.48**	**2.41**

[1]*Acreages summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.*

3.2.2 INDIRECT IMPACTS

Indirect impacts are considered to be those impacts associated with the project that involve the effects of alteration of the existing habitat and an increase in human population and or land use within the project site. These impacts are commonly referred to as "edge effects" and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to the project site.

Indirect impacts include the effects of increases in ambient levels of sensory stimuli (e.g., noise and light), unnatural predators (e.g., domestic cats and other non-native animals), competitors (e.g., exotic plants and non-native animals), and trampling and unauthorized recreational use due to the increase in human population. Other permanent indirect effects may occur that are related to water quality and storm water management, including trash/debris, toxic materials, and dust.

The project site is not located in proximity to any MSHCP Conservation Areas. Adjacent lands include residential development to the south, I-10 to the southwest, rural residences with livestock pens to the east, and undeveloped land to the north and west.

Final project design and construction will incorporate best management practices (BMPs) to reduce and/or eliminate indirect effects on MSHCP riparian/riverine resources as required for California Environmental Quality Act (CEQA) compliance per the *Beaumont Summit Station Specific Plan Administrative Draft Environmental Impact Report* (City of Beaumont 2021). Construction water quality BMPs will be required to control and prevent discharges of pollutants that can adversely impact the downstream surface water quality. Furthermore, the proposed project will treat on-site runoff with Modular Wetland System (MWS) vaults. Post-construction on-site flows would be directed towards the MWS vaults for treatment and removal of pollutants, then into a proposed underground detention system, and ultimately discharged into the ephemeral stream to the west of the project site (i.e., the downstream portion of NWW-3). Discharged flows would not exceed pre-project flows per CEQA requirements.

Additionally, if least Bell's vireo nesting is discovered, either during protocol surveys, monthly presence/absence surveys, or incidentally, noise level from project activities shall not to exceed 65 dBA at the edge of occupied habitat. If this is not possible, a noise barrier shall be constructed to avoid adverse impacts to any least Bell's vireo nest/s. Artificial light shall not be cast into suitable habitat containing active nests when night work occurs.

As such, the proposed project will not result in significant indirect effects on MSHCP riparian/riverine areas including associated species. Furthermore, the Urban/Wildland Interface Guidelines do not apply to the proposed project.

3.3 MITIGATION AND EQUIVALENCY

3.3.1 DIRECT EFFECTS

To meet the criteria of a biologically equivalent or superior alternative, the project applicant proposes offsetting impacts to the 2.41 acres of MSHCP riparian/riverine resources at a 3:1 mitigation ratio through the purchase of 4.82 credits (2:1 mitigation ratio) from an in-watershed mitigation bank (i.e., the Santa Ana River Watershed ILF Program located within the Santa Ana River watershed [Figure 8]), as available; and an additional 1:1 mitigation through either on-site preservation, with a focus on removal invasive species and replanting with native species, or the purchase of 2.41 acres/credits from an in-watershed mitigation bank (i.e., the the Santa Ana River Watershed ILF Program), as available. The Santa Ana River Watershed ILF Program includes enhancement and rehabilitated riverine and riparian resources within the Santa Ana River watershed. Prior to issuance of a grading permit, the project applicant will provide the City of Beaumont with purchase confirmation.

The 2.41 acres of on-site MSHCP riparian/riverine resources within the project impact area provide minimal aquatic resource functions due to the highly disturbed nature of the property (e.g., regularly mowed, grazed, and farmed land) and historic degradation and runoff into the on-site aquatic features from previous on-site farming operations. Furthermore, as stated in Section 3.2.1, the proposed project was designed to avoid impacts on NWW-3, the primary and highest quality riparian/riverine resource within the project boundary.

The purchase of re-establishment and/or rehabilitiation credits and preservation of 4.82 acres of high-quality sensitive resources at the Santa Ana River Watershed ILF Program and additional mitigation of 1:1 through either on-site preservation or the purchase of 2.41 acres/credits from an in-watershed mitigation bank (i.e., the the Santa Ana River Watershed ILF Program), as available, to offset impacts to 2.41 acres of highly disturbed MSHCP riparian/riverine resources meet the criteria of a biologically equivalent or superior alternative. Additional information and a detailed justification regarding the proposed mitigation will be included in the applicant’s forthcoming Notification of Streambed Alteration to CDFW.

3.3.2 INDIRECT EFFECTS

Section 6.1.4 of the MSHCP provides guidelines pertaining to the urban/wildlands interface, which are intended to address indirect effects associated with locating public and private developments in proximity to an MSHCP Conservation Area. The project site is not adjacent to an existing MSHCP Conservation Area; therefore, no mitigation is proposed to occur to offset indirect effects. However, final project design will incorporate the appropriate BMPs to reduce and/or eliminate indirect effects.

4 NARROW ENDEMIC PLANT SPECIES MITIGATION (MSHCP SECTION 6.1.3)

4.1 METHODS

RBC queried the project site against the NEPSSA (Figure 9). The RCA MSHCP Information Map revealed that the project is located within a NEPSSA for Marvin’s onion and many-stemmed dudleya (RCA 2021). On April 22 and May 12, 2021, RBC qualified botanists assessed the suitability of habitat within the project site to support MSHCP Narrow Endemic species Marvin’s onion and many-stemmed dudleya and surveyed the site for each species. The project site was walked and assessed for the presence of suitable habitat and species. The surrounding 100-foot buffer was surveyed via binoculars for the potential to support special-status floral species.

4.2 RESULTS/IMPACTS

The project site does not contain appropriate soils or suitable habitat for Marvin’s onion and many-stemmed dudleya, and therefore the project will not impact Narrow Endemic Plants. The proposed project will be consistent with Volume I, Section 6.1.3 of the MSHCP.

4.3 MITIGATION AND EQUIVALENCY

4.3.1 DIRECT EFFECTS

There will be no unavoidable direct impacts to narrow endemic plant species resulting from the project.

4.3.2 INDIRECT EFFECTS

There will be no unavoidable indirect impacts to narrow endemic plant species resulting from the project.

5 MITIGATION AND EQUIVALENCY (MSHCP SECTION 6.3.2)

5.1 CRITERIA AREA SPECIES SURVEY AREA – PLANTS

5.1.1 METHODS

RBC queried the project site against the CASSA for plant species (Figure 9). The project site is not located within a CASSA for any plant species; therefore, RBC did not conduct surveys for any plant species listed in Section 6.3.2 of the MSHCP.

5.1.2 RESULTS/IMPACTS

The project site is not located within a CASSA for any plant species. The project is consistent with MSHCP Section 6.3.2.

5.1.3 MITIGATION AND EQUIVALENCY

5.1.3.1 Direct Effects

There will be no unavoidable direct impacts to CASSA plant species resulting from the project.

5.1.3.2 Indirect Effects

There will be no unavoidable indirect impacts to CASSA plant species resulting from the project.

5.2 BURROWING OWL

5.2.1 METHODS

The RCA MSHCP Information Map revealed that the project is located within a MSHCP Burrowing Owl Survey Area (RCA 2021; Figure 9). RBC assessed the project site for suitable burrowing owl habitat on April 22, 2021, in accordance with the Western Riverside MSHCP Burrowing Owl Survey Instructions (RCA 2005). As a result, RBC conducted protocol burrowing owl surveys during the breeding season (March 1 to August 31). RBC biologists conducted four surveys between May 12, 2021, and July 6, 2021 (Appendix B). Surveys were not conducted during rain, dense fog, or when high winds were greater than 20 miles per hour.

RBC biologists walked transects spaced 7-20 meters (20-60 feet) apart through suitable burrowing owl habitat within the project site plus a 500-foot buffer. RBC biologists used binoculars (10x42) to scan the survey area for owls, active and potential burrows, and/or sign of owls. RBC examined all suitable burrows for sign, including feathers, pellets, excrement (e.g., scat and whitewash), and prey remains. RBC considered burrows to be active if a burrowing owl was observed at or near the entrance or if evidence of recent sign was present. Biologists documented all suitable burrows in ArcGIS Collector.

5.2.2 RESULTS/IMPACTS

Although the project site has moderate potential to support burrowing owl, no burrowing owl(s) or burrowing owl sign were observed on site during the protocol surveys.
Mitigation and Equivalency

5.2.2.1 Direct Effects

There will be no unavoidable direct impacts to burrowing owl with the project.

5.2.2.2 Indirect Effects

There will be no unavoidable indirect impacts to burrowing with the project.

5.3 MAMMALS

5.3.1 METHODS

RBC queried the project site against Mammal Species Survey Areas (Figure 9). The project site is not located within any Mammal Species Survey Areas; therefore, no surveys were conducted for any mammal species listed in Section 6.3.2 of the MSHCP.

5.3.2 RESULTS/IMPACTS

The project site is not located within a survey area for any MSHCP mammal species. The project is consistent with MSHCP Section 6.3.2.

5.3.3 MITIGATION AND EQUIVALENCY

5.3.3.1 Direct Effects

There will be no unavoidable direct impacts to MSHCP mammal species resulting from the project.

5.3.3.2 Indirect Effects

There will be no unavoidable indirect impacts to MSHCP mammal species resulting from the project.

5.4 AMPHIBIANS

5.4.1 METHODS

RBC queried the project site against Amphibian Species Survey Areas per the MSHCP. The project site is not located within any Amphibian Species Survey Areas; therefore, no surveys for any amphibian species listed in Section 6.3.2 of the MSHCP were conducted for the project.

5.4.2 RESULTS/IMPACTS

The project site is not located within a survey area for any MSHCP amphibian species. The project is consistent with MSHCP Section 6.3.2.

6 DELHI SANDS FLOWER-LOVING FLY

6.1 METHODS

RBC queried the project site against NRCS soils maps for the proposed project (Figure 4). The project site is not located within Delhi soil mapped within the MSHCP baseline data; therefore, no focused surveys for the Delhi Sands flower-loving fly were conducted for the project.

6.2 RESULTS/IMPACTS

The project site is not located within Delhi soil mapped within the MSHCP baseline data.

6.3 MITIGATION AND EQUIVALENCY

6.3.1 DIRECT EFFECTS

There will be no unavoidable direct impacts to Delhi Sands flower-loving fly resulting from the project.

6.3.2 INDIRECT EFFECTS

There will be no unavoidable indirect impacts to Delhi Sands flower-loving fly resulting from the project.

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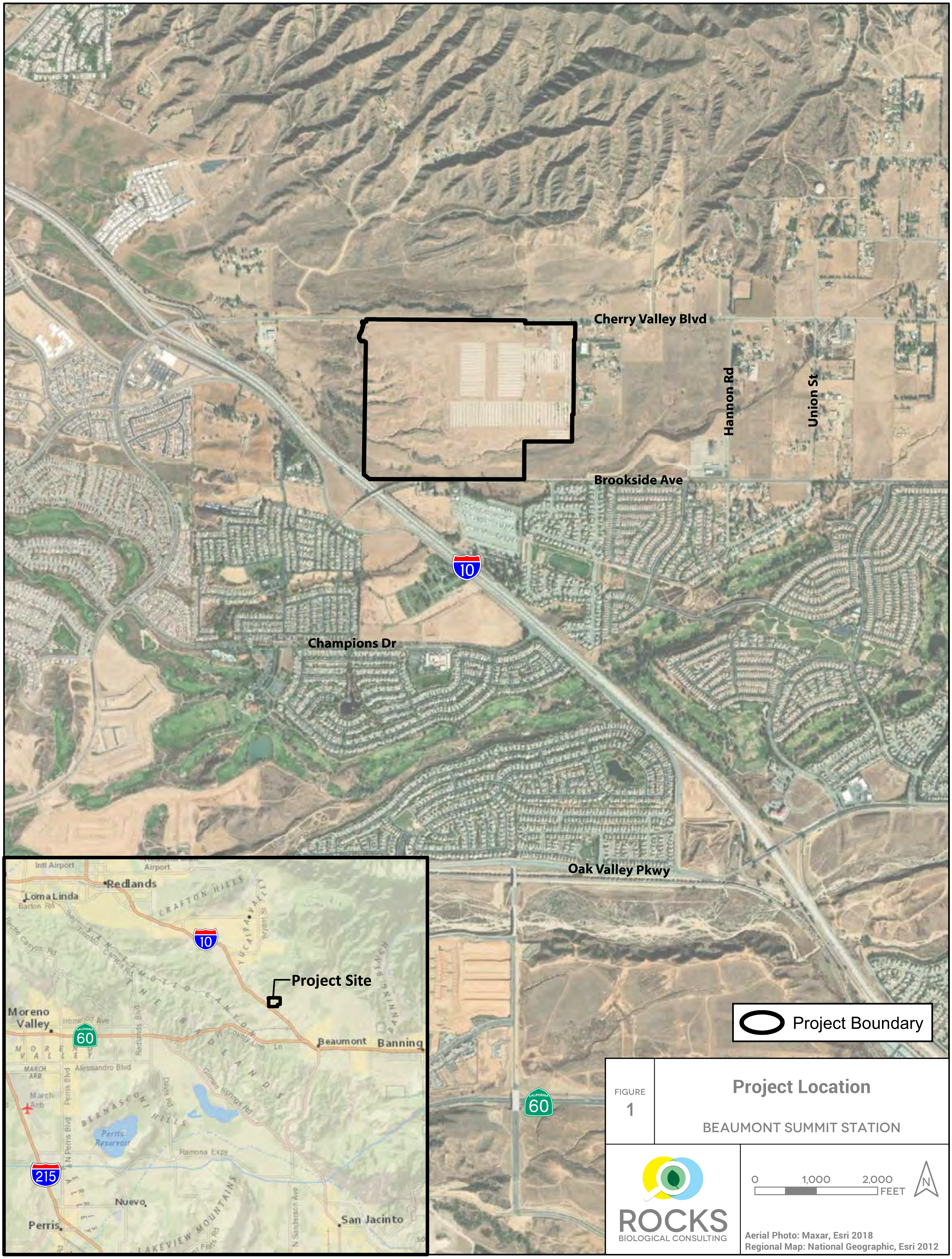
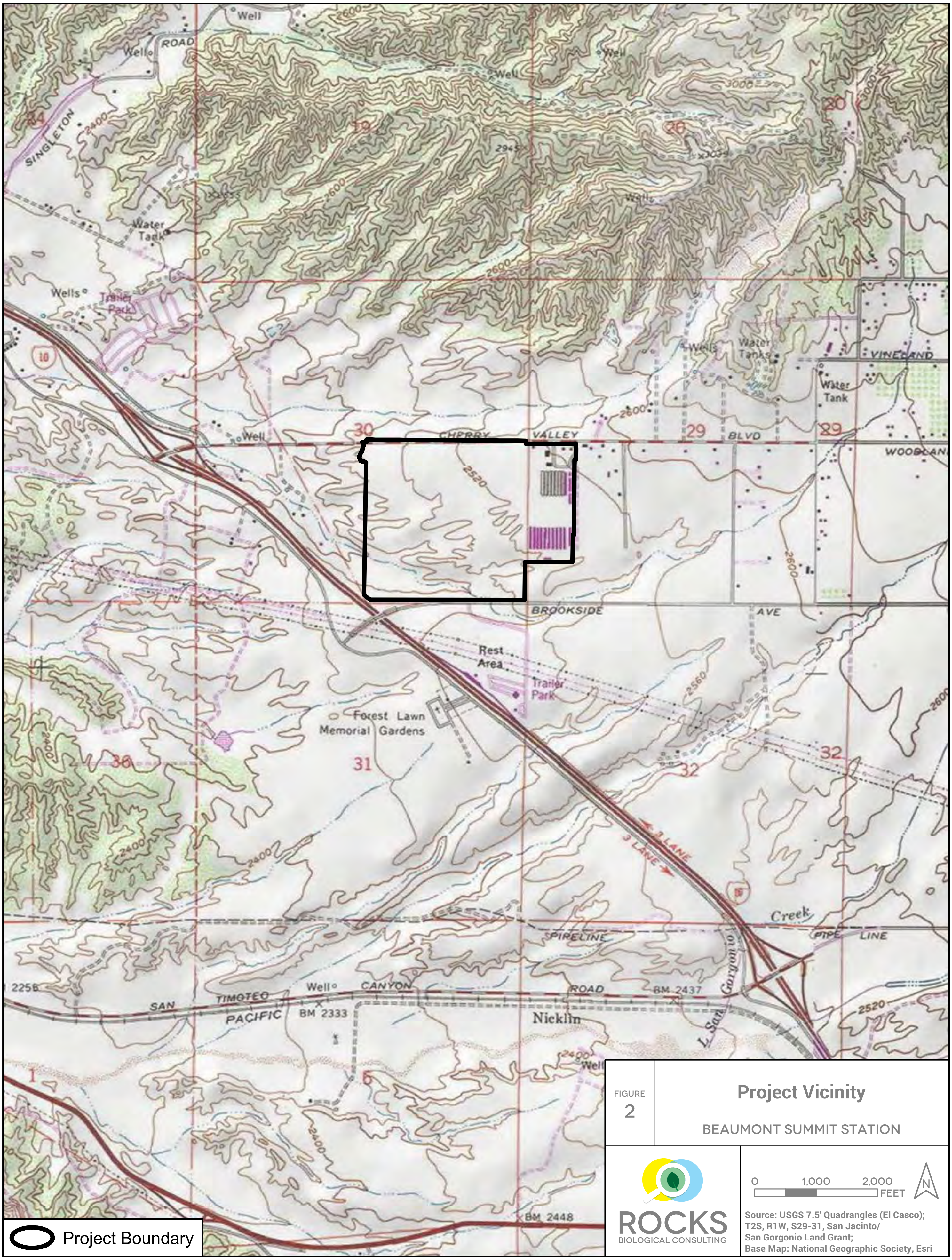


FIGURE 1

Project Location

BEAUMONT SUMMIT STATION



Project Boundary

FIGURE 2

Project Vicinity

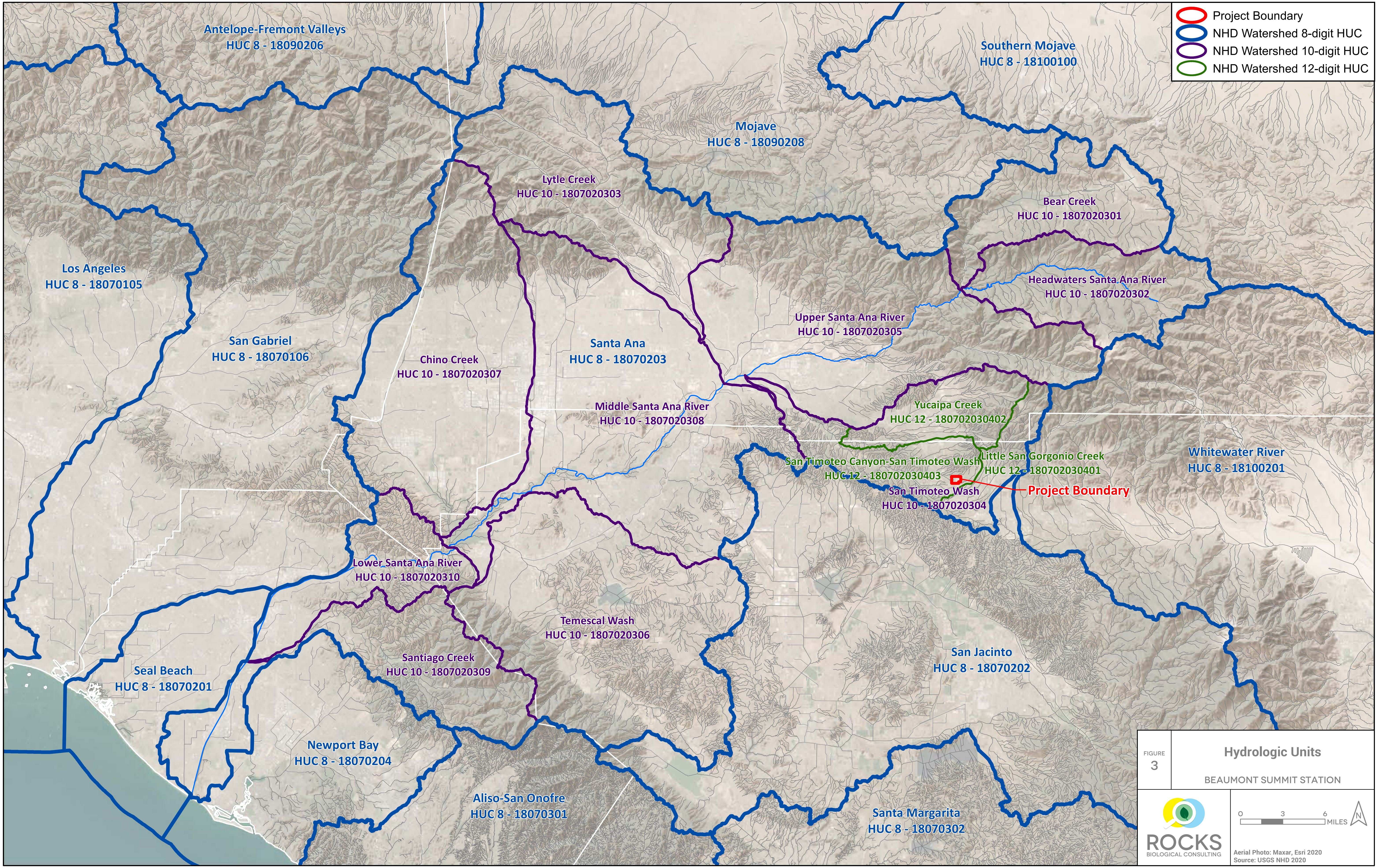
BEAUMONT SUMMIT STATION

ROCKS
BIOLOGICAL CONSULTING

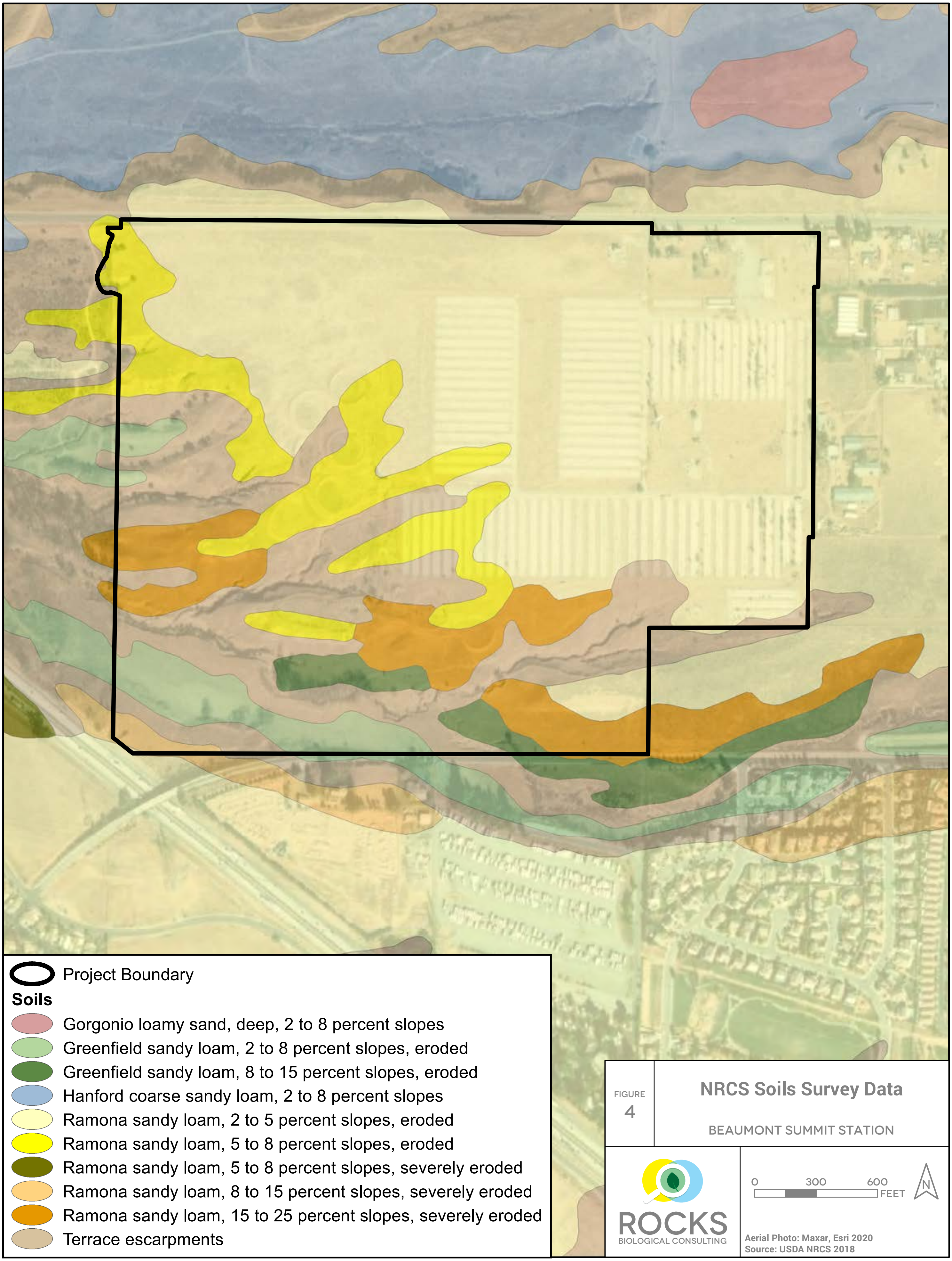
0 1,000 2,000 FEET

N

Source: USGS 7.5' Quadrangles (El Casco); T2S, R1W, S29-31, San Jacinto/ San Gorgonio Land Grant; Base Map: National Geographic Society, Esri



Project Boundary
NHD Watershed 8-digit HUC
NHD Watershed 10-digit HUC
NHD Watershed 12-digit HUC
Antelope-Fremont Valleys
HUC 8 - 18090206
Southern Mojave
HUC 8 - 18100100
Mojave
HUC 8 - 18090208
Lytle Creek
HUC 10 - 1807020303
Bear Creek
HUC 10 - 1807020301
Los Angeles
HUC 8 - 18070105
Headwaters Santa Ana River
HUC 10 - 1807020302
Upper Santa Ana River
HUC 10 - 1807020305
San Gabriel
HUC 8 - 18070106
Santa Ana
HUC 8 - 18070203
Chino Creek
HUC 10 - 1807020307
Yucaipa Creek
HUC 12 - 180702030402
Middle Santa Ana River
HUC 10 - 1807020308
San Timoteo Canyon-San Timoteo Wash
HUC 12 - 180702030403
Little San Gorgonio Creek
HUC 12 - 180702030401
Whitewater River
HUC 8 - 18100201
San Timoteo Wash
HUC 10 - 1807020304
Project Boundary
Lower Santa Ana River
HUC 10 - 1807020310
Temescal Wash
HUC 10 - 1807020306
Santiago Creek
HUC 10 - 1807020309
San Jacinto
HUC 8 - 18070202
Seal Beach
HUC 8 - 18070201
Newport Bay
HUC 8 - 18070204
Aliso-San Onofre
HUC 8 - 18070301
Santa Margarita
HUC 8 - 18070302
FIGURE
3
Hydrologic Units
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0
3
6
MILES
N
Aerial Photo: Maxar, Esri 2020
Source: USGS NHD 2020


Project Boundary
Soils
Gorgonio loamy sand, deep, 2 to 8 percent slopes
Greenfield sandy loam, 2 to 8 percent slopes, eroded
Greenfield sandy loam, 8 to 15 percent slopes, eroded
Hanford coarse sandy loam, 2 to 8 percent slopes
Ramona sandy loam, 2 to 5 percent slopes, eroded
Ramona sandy loam, 5 to 8 percent slopes, eroded
Ramona sandy loam, 5 to 8 percent slopes, severely eroded
Ramona sandy loam, 8 to 15 percent slopes, severely eroded
Ramona sandy loam, 15 to 25 percent slopes, severely eroded
Terrace escarpments
FIGURE
4
NRCS Soils Survey Data
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0
300
600
FEET
N
Aerial Photo: Maxar, Esri 2020
Source: USDA NRCS 2018

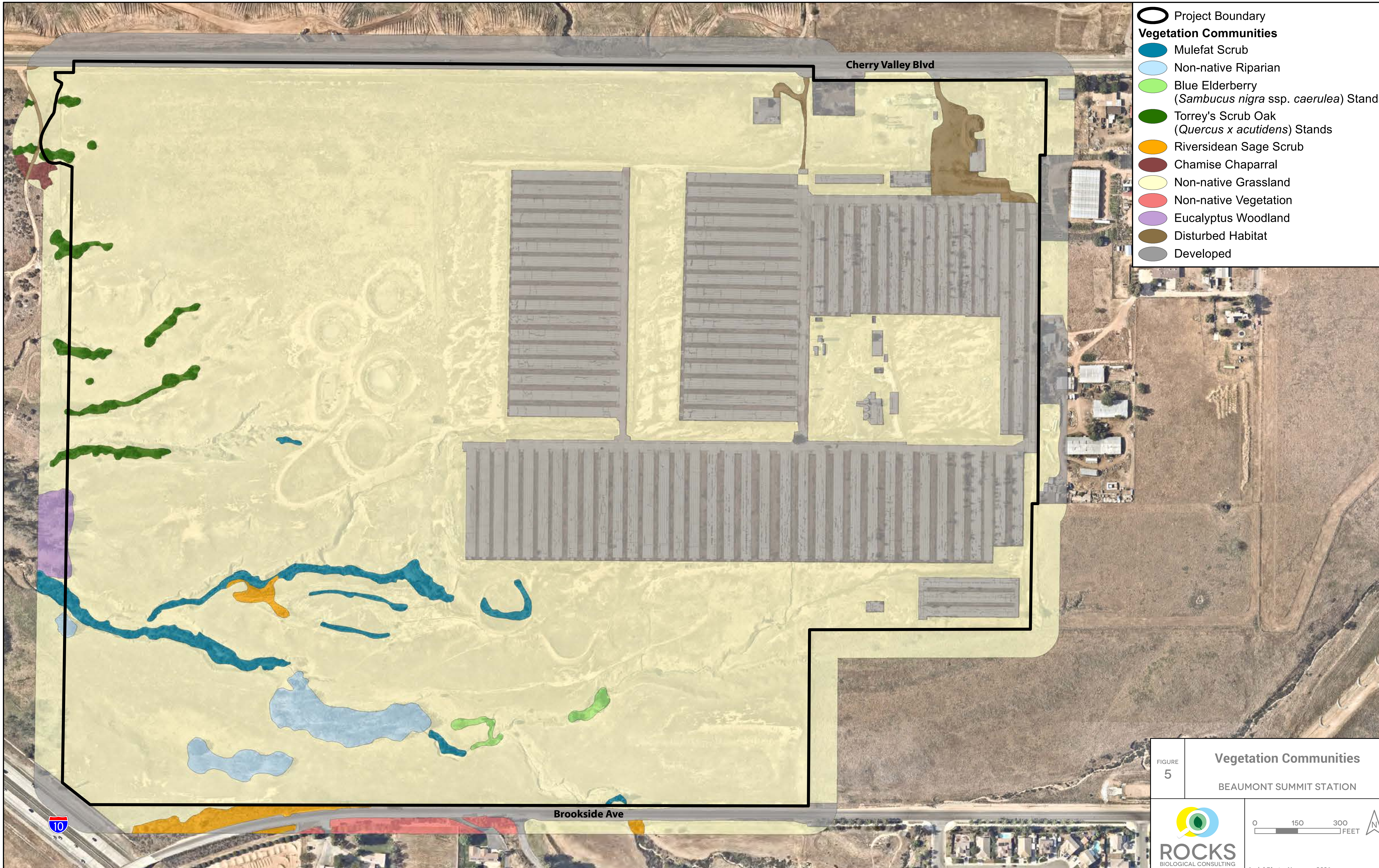
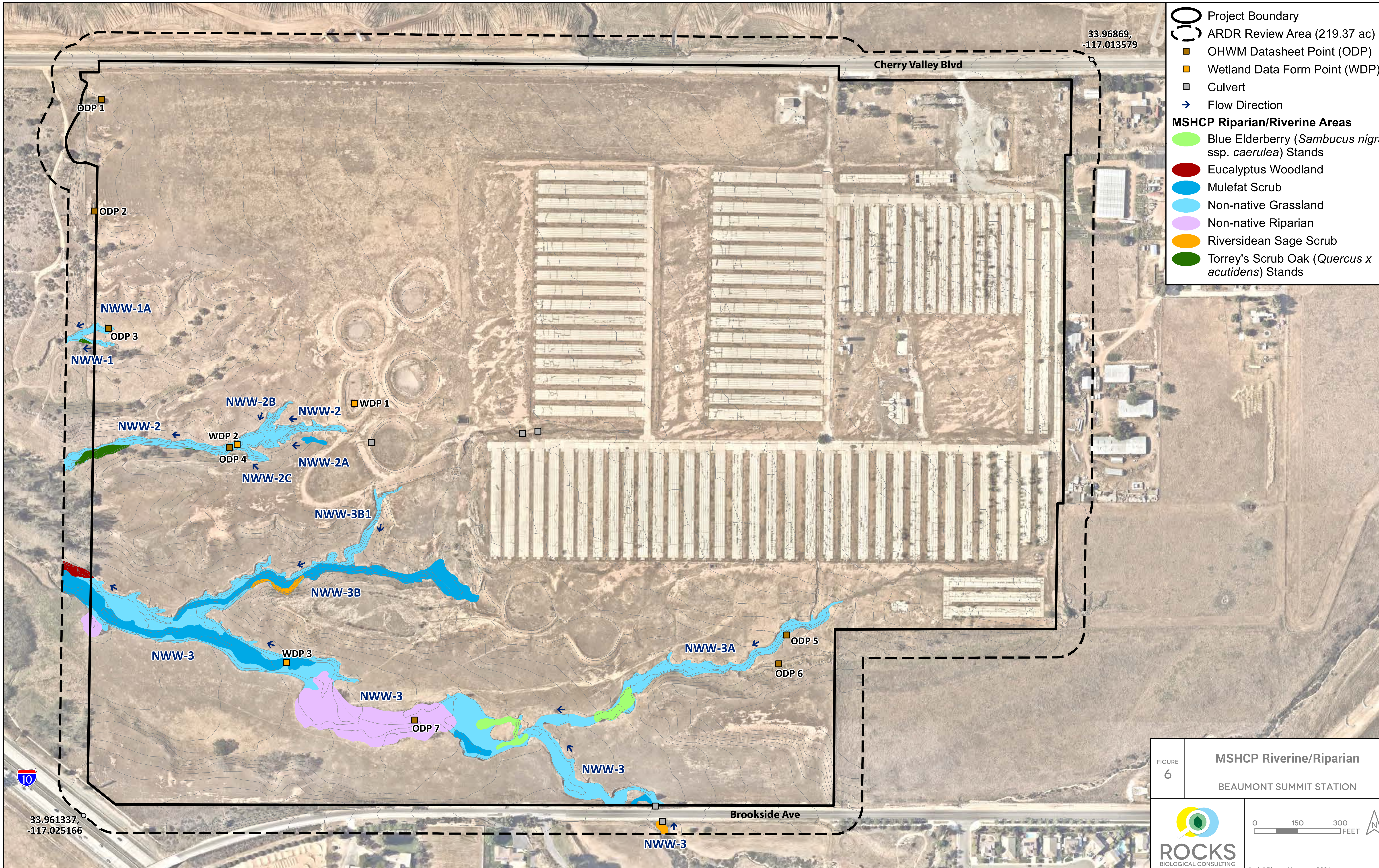


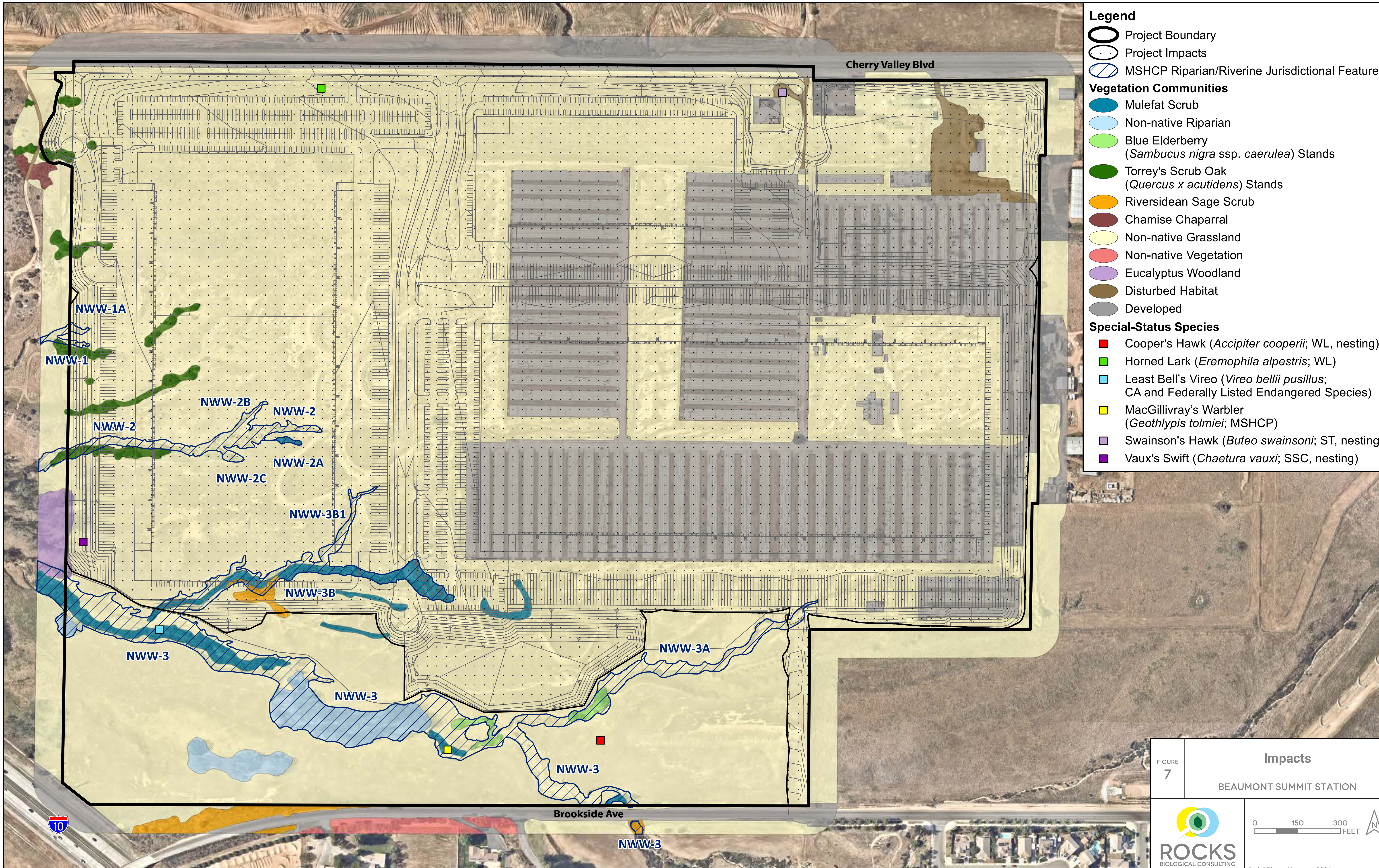
FIGURE 5

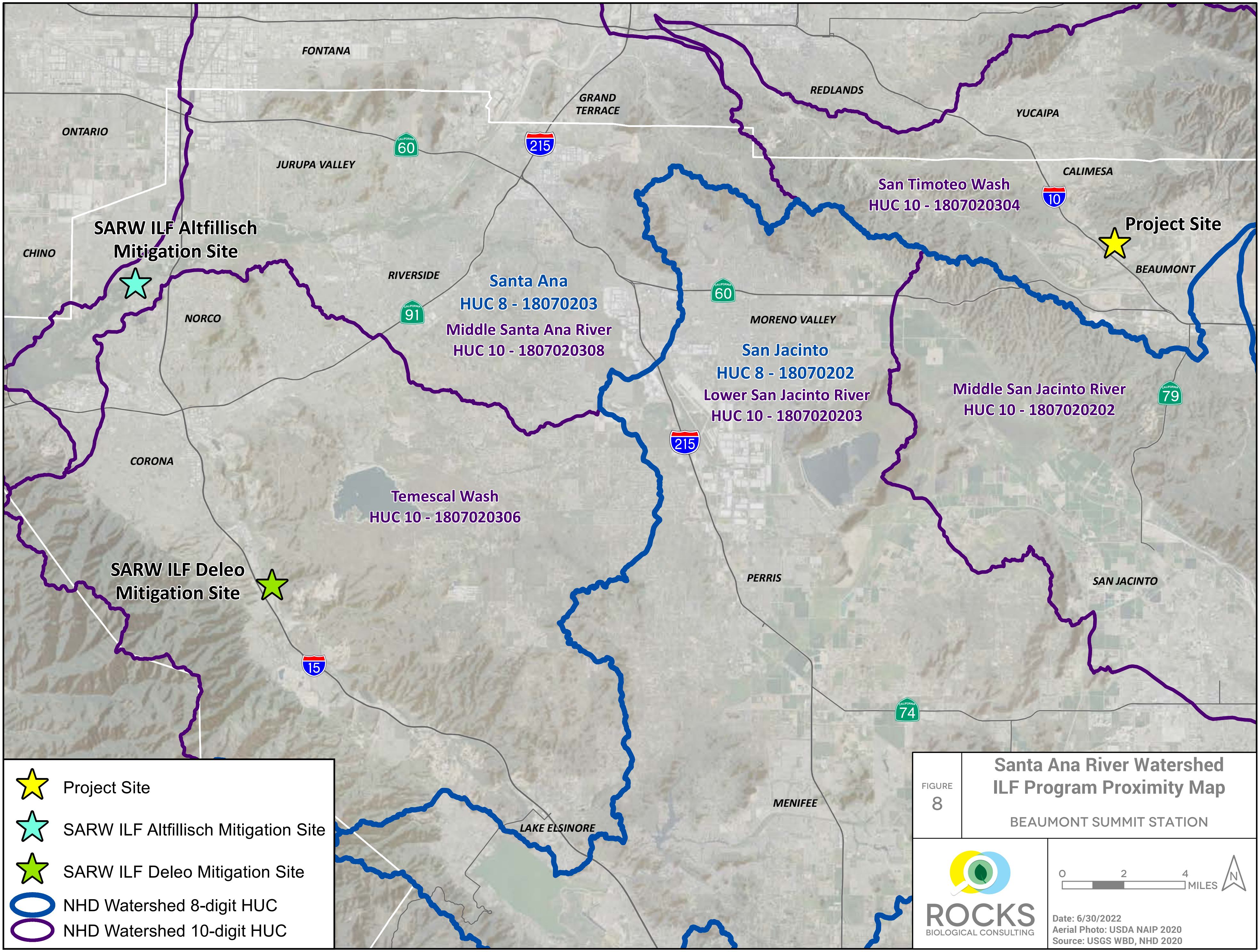
Vegetation Communities

BEAUMONT SUMMIT STATION



Project Boundary
ARDR Review Area (219.37 ac)
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
MSHCP Riparian/Riverine Areas
Blue Elderberry (Sambucus nigra ssp. caerulea) Stands
Eucalyptus Woodland
Mulefat Scrub
Non-native Grassland
Non-native Riparian
Riversidean Sage Scrub
Torrey's Scrub Oak (Quercus x acutidens) Stands
33.96869, -117.013579
Cherry Valley Blvd
ODP 1
ODP 2
NWW-1A
ODP 3
NWW-1
NWW-2B
NWW-2
WDP 1
NWW-2
WDP 2
ODP 4
NWW-2A
NWW-2C
NWW-3B1
NWW-3B
NWW-3
WDP 3
NWW-3
ODP 7
NWW-3A
ODP 5
ODP 6
NWW-3
Brookside Ave
NWW-3
10
33.961337, -117.025166
FIGURE 6
MSHCP Riverine/Riparian
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 150 300 FEET
N
Aerial Photo: Nearmap 2021


Legend
Project Boundary
Project Impacts
MSHCP Riparian/Riverine Jurisdictional Features
Vegetation Communities
Mulefat Scrub
Non-native Riparian
Blue Elderberry
(Sambucus nigra ssp. caerulea) Stands
Torrey's Scrub Oak
(Quercus x acutidens) Stands
Riversidean Sage Scrub
Chamise Chaparral
Non-native Grassland
Non-native Vegetation
Eucalyptus Woodland
Disturbed Habitat
Developed
Special-Status Species
Cooper's Hawk (Accipiter cooperii; WL, nesting)
Horned Lark (Eremophila alpestris; WL)
Least Bell's Vireo (Vireo bellii pusillus;
CA and Federally Listed Endangered Species)
MacGillivray's Warbler
(Geothlypis tolmiei; MSHCP)
Swainson's Hawk (Buteo swainsoni; ST, nesting)
Vaux's Swift (Chaetura vauxi; SSC, nesting)
Cherry Valley Blvd
NWW-1A
NWW-1
NWW-2B
NWW-2
NWW-2
NWW-2A
NWW-2C
NWW-3B1
NWW-3B
NWW-3
NWW-3
NWW-3A
NWW-3
Brookside Ave
NWW-3
10
FIGURE
7
Impacts
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0
150
300
FEET
N
Aerial Photo: Nearmap 2021



FONTANA
GRAND TERRACE
REDLANDS
YUCAIPA
ONTARIO
JURUPA VALLEY
CALIMESA
San Timoteo Wash
HUC 10 - 1807020304
Project Site
BEAUMONT
SARW ILF Altfillisch
Mitigation Site
CHINO
RIVERSIDE
Santa Ana
HUC 8 - 18070203
Middle Santa Ana River
HUC 10 - 1807020308
NORCO
MORENO VALLEY
San Jacinto
HUC 8 - 18070202
Lower San Jacinto River
HUC 10 - 1807020203
Middle San Jacinto River
HUC 10 - 1807020202
CORONA
Temescal Wash
HUC 10 - 1807020306
SARW ILF Deleo
Mitigation Site
PERRIS
SAN JACINTO
MENIFEE
LAKE ELSINORE
60
215
10
91
79
15
74
Project Site
SARW ILF Altfillisch Mitigation Site
SARW ILF Deleo Mitigation Site
NHD Watershed 8-digit HUC
NHD Watershed 10-digit HUC
FIGURE
8
Santa Ana River Watershed
ILF Program Proximity Map
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0
2
4
MILES
N
Date: 6/30/2022
Aerial Photo: USDA NAIP 2020
Source: USGS WBD, NHD 2020

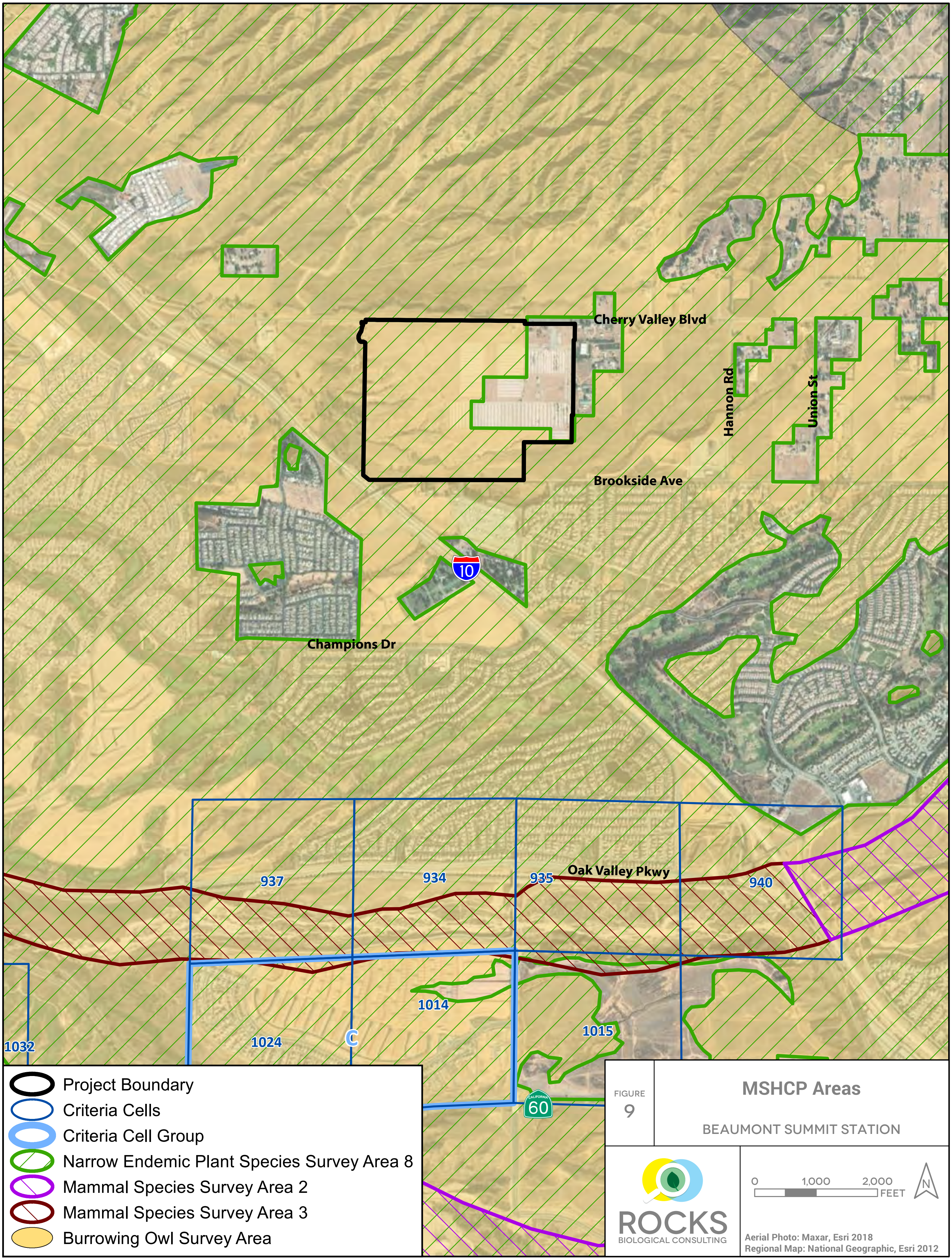


FIGURE 9

MSHCP Areas

BEAUMONT SUMMIT STATION

ROCKS BIOLOGICAL CONSULTING

Aerial Photo: Maxar, Esri 2018
Regional Map: National Geographic, Esri 2012

APPENDIX A

BEAUMONT SUMMIT STATION
AQUATIC RESOURCES DELINEATION REPORT (ARDR)

ROCKS
BIOLOGICAL CONSULTING

BEAUMONT SUMMIT STATION
AQUATIC RESOURCES DELINEATION REPORT

Riverside County, California

July 1, 2022

Prepared for:
Exeter Cherry Valley Land, LLC
5060 North 40th Street, Suite 108
Phoenix, AZ 85018
(708) 341-9821

Prepared by:
Rocks Biological Consulting
4312 Rialto Street
San Diego, CA 92107
(619) 701-6798

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APPENDICES

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Appendix C. Applicable Aquatic Resource Protection Regulations
Appendix D. Recent and Historic Aerials Analysis
Appendix E. Arid West Wetland Determination Data Forms and Ephemeral and Intermittent Streams OHWM Datasheets
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1 INTRODUCTION

On behalf of Exeter Cherry Valley Land, LLC, Rocks Biological Consulting (RBC) conducted a formal aquatic resources delineation for the Beaumont Summit Station review area, composed of 219.37 acres (Figure 1), to identify areas that may be considered jurisdictional under the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act; the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act; and the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code. The information provided in this aquatic resources delineation report (ARDR) is necessary to define the presence or absence of aquatic resources within the review area. This ARDR can also be used by the agencies to inform the jurisidictional status of delineated aquatic resources and by the applicant and agencies to assess conformance with state and federal regulations and to estimate potential impacts and associated permitting requirements. Furthermore, the information contained in this report is in compliance with the Corps Los Angeles District's *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Minimum Standards; Corps 2017). Appendix A provides a checklist to ensure compliance with the Minimum Standards.

This ARDR also serves as a request for the Corps to complete a Preliminary Jurisdictional Determination (PJD) based on the information provided in this report. Appendix B provides the required forms associated with the PJD request.

2 SITE DESCRIPTION, LANDSCAPE SETTING

2.1 LOCATION

The review area is located south of Cherry Valley Boulevard, north of Brookside Avenue, and east/northeast of Interstate (I-) 10, within the City of Beaumont, Riverside County, California (Figure 1). The review area is bounded by undeveloped land to the north and west, rural residences with livestock pens to the east, and residential development to the south. The latitude and longitude of the approximate center of the review area is 33.965141, -117.019732. The review area sits on Township 2 South, Range 1 West, and Section 30 within the El Casco 7.5-minute quadrangle, as mapped by the U.S. Geological Survey (USGS; Figure 2).

2.2 TOPOGRAPHY

The review area is primarily flat with elevations ranging from approximately 2,403 to 2,584 feet above mean sea level (amsl), with areas of lower topography within the drainages on the south and southwestern portions of the review area and between rolling hills along the northwestern boundary of the review area (Figure 2). Drainage patterns on site trend east to west following a gradual decrease in elevation in the same direction.

2.3 WATERSHED

The review area is within the Santa Ana Hydrologic Unit Code (HUC) 8 (18070203), San Timoteo Wash HUC 10 (1807020304), and San Timoteo Canyon-San Timoteo Wash HUC 12 (180702030403) watersheds (Figure 3). In addition to the watersheds defined by the USGS and commonly used by the Corps, the RWQCB also defines watershed boundaries by Hydrologic Units (HUs). The majority of the review area is within the Santa Ana Basin, the Santa Ana River HU, and the Beaumont Hydrologic Subarea (Santa Ana Regional Water Quality Control Board [Santa Ana RWQCB] 1986; Santa Ana RWQCB 2019).

3 METHODS

3.1 PRE-FIELD REVIEW

Prior to the on-site delineation, field maps were created using a Geographic Information System (GIS) and a color aerial photograph at a 1:150 scale. RBC staff also reviewed USGS National Hydrography Dataset (NHD) and topography data (Figure 2), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data (Figure 4), and Natural Resources Conservation Service (NRCS) soils data (Figure 4) to further determine the potential locations of aquatic resources within the review area. RBC also utilized Google Earth to assess current and historic presence or absence of flows and/or ponding in the review area (Google Earth Pro 2021). RBC also reviewed the 2004 *Delineation of Jurisdictional Waters and Wetlands Sunny-Cal Specific Plan Project, City of Beaumont, Riverside County, California* (Sunny-Cal JD Report; Michael Brandman Associates 2004) and the 2006 *Recirculated Draft Environmental Impact Report Sunny-Cal Specific Plan, Annexation, And Sphere of Influence Amendment, SCH# 2004121092* (Sunny-Cal Specific Plan Draft EIR; Michael Brandman Associates 2006).

3.2 ON-SITE DELINEATION AND MAPPING

RBC regulatory specialists Sarah Krejca and Chelsea Polevy conducted an initial jurisdictional assessment field visit on April 22, 2021 and an aquatic resources delineation field visit on June 3, 2021. RBC regulatory specialist Sarah Krejca and Shanti Santulli conducted an additional aquatic resources delineation field visit on June 7, 2021. Field conditions during these field visits are provided below in Table 1.

Table 1. Field Conditions

Date	Survey Time Start – End	Temperature (ºF) Start – End	Wind Speed Range (miles per hour) Start – End	Cloud Cover (%) Start – End
4/22/2021	0745 – 1315	48 – 61	0 to 5 – 5 to 8	100 – 100
6/03/2021	0730 – 1500	67 – 92	0 to 1 – 10 to 15	0 – 0
6/07/2021	0815 – 1245	52 – 62	2 to 5 – 5 to 10	100 – 90

Figure 1 and Figures 5A to 5C depict the 219.37-acre review area. RBC regulatory specialist Sarah Krejca also completed a Streamflow Duration Assessment Method (SDAM) survey during the June 3 and June 7, 2021 field visits.

Areas with depressions, drainage patterns, and/or wetland vegetation within the review area were evaluated, with focus on the presence of defined channels and/or wetland vegetation, soils, and hydrology.

While in the field, potential aquatic resources were recorded using a hand-held Global Positioning System (GPS) unit with a level of accuracy ranging from 8 to 24 feet. RBC staff refined the data using aerial photographs and topographic maps with one-foot contours to ensure accuracy.

All figures generated for this ARDR follow the Corps' Updated Map and Drawing Standards for the South Pacific Division Regulatory Program (Corps 2016).

The below subsections provide the aquatic resources delineation methods used per agency; Appendix C provides additional details regarding the agencies' applicable regulations and guidance associated with this ARDR.

3.2.1 CORPS

Ordinary High Water Mark Delineation

Aquatic resources with a defined ordinary high water mark (OHWM) would be considered potential non-wetland waters of the U.S. Corps regulations at 33 Code of Federal Regulations (CFR) 329.11 define an OHWM as "the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas" (51 Federal Register [FR] 41251, November 13, 1986). RBC staff used guidance provided in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (OHWM Field Guide; Corps 2008a) and Regulatory Guidance Letter (RGL) 05-05 to estimate the extent of an OHWM in the field where applicable. For each feature exhibiting the potential presence of an OHWM, RBC completed a 2010 Arid West Ephemeral and Intermittent Streams OHWM Datasheet following the guidance provided in the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (OHWM Datasheet; Corps 2010). Per the 2010 OHWM Datasheet, common indicators of an OHWM include a break in slope (i.e., abrupt cut in bank slope created by hydrogeomorphic processes across the landscape), changes in average sediment texture between floodplain units (i.e., low-flow, active floodplain, low terrace), and changes in vegetation species and/or cover between floodplain units.

Wetland Delineation

Field staff examined potential wetland waters of the U.S. using the routine determination methods set forth in Part IV, Section D, Subsection 2 of the Corps 1987 *Wetland Delineation Manual* (Wetland Manual; Environmental Laboratory 1987) and the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0* (Arid West Supplement; Corps 2008b) where potential wetland conditions occur within the review area (e.g., areas with depressions, drainage patterns, and/or wetland vegetation where flooding or ponding could occur to create wetland conditions). Areas that meet the three parameters per the Arid West Supplement (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology, following methods set forth in the Wetland Manual and Arid West Supplement) would be considered wetland waters of the U.S. RBC staff base wetland plant indicator status (i.e., Obligate [OBL], occurs 99+% in wetlands; Facultative Wetland [FACW], occurs 67-99% in wetlands; Facultative [FAC], occurs 34-66% in wetlands; Facultative Upland [FACU], occurs 1-33% in wetlands; Upland [UPL], occurs

99+% in uplands; and Not Listed [NL], considered UPL for wetland delineation purposes) on the *National Wetland Plant List* (NWPL; Corps 2018) and hydric soils indicators on *Field Indicators of Hydric Soils in the United States, Version 8.2* (NRCS 2018a). Soil chromas were identified in the field according to *Munsell Soil-Color Charts with Genuine Munsell Color Chips* (Munsell Color 2015) and per the Wetland Manual and Arid West Supplement. Plants identified at wetland delineation sampling locations were identified according to *The Jepson Manual: Vascular Plants of California, 2nd edition* (Baldwin et al. 2012) and nomenclature followed Jepson eFlora (Jepson Flora Project 2019).

3.2.2 RWQCB

Ordinary High Water Mark Delineation

The State Water Resources Control Board (SWRCB) and RWQCBs do not have regulations or guidance on defining the extent of non-wetland waters of the State. As such, field staff identified the lateral limits of potential non-wetland waters of the State using the same methods for determining an OHWM per the Corps as described in Section 3.2.1 as they have generally been considered coincident.

Wetland Delineation

The State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (the Procedures; SWRCB 2021) defines wetland waters of the State. The Procedures were adopted on April 2, 2019; went into effect on May 28, 2020; and were revised on April 6, 2021. As detailed in the Procedures, the SWRCB and RWQCBs define a wetland as follows: “An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation” (SWRCB 2021).

The Procedures provide that RWQCBs shall rely on a wetland delineation from a final ARDR verified by the Corps to determine the extent of wetland waters of the State. If any potential wetland areas have not been delineated in a final ARDR verified by the Corps, the limits of such potential wetland waters of the State shall be identified using the same wetland delineation methods per the Corps as described in Section 3.2.1, except that a lack of vegetation (i.e., less than 5 percent areal coverage of plants during the peak of the growing season) does not preclude an area from meeting the definition of a wetland waters of the State (SWRCB 2021).

3.2.3 CDFW

Lake, Streambed, and Associated Riparian and Wetland Habitat Delineation

CDFW jurisdiction relies on the presence of a lake and/or streambed and associated riparian or wetland habitat. Lakes include “natural lakes or man-made reservoirs” (14 California Code of Regulations [CCR] § 1.56). CDFW regulations define a streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (14 CCR § 1.72). The 1987 *Rutherford v. State of California* (188 Cal. App. 3d

1268) decision further provided that a streambed is the “channel of a water course; the depression between the banks worn by the regular and usual flow of the water.” A streambed includes the “[a]rea extending between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including sand bars which may exist between the foot of said banks….” (188 Cal. App. 3d 1268). The bank is defined as “the slope or elevation of land that bounds the bed of the stream in a permanent or long-standing way, and that confines the stream water up to its highest level” (*The People v. Phillip Wright Osborn*, 116 Cal. App. 4th 764).

Riparian habitat refers to vegetation and habitat associated with a stream. CDFW-jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream. Isolated riparian habitat (i.e., where riparian vegetation does not appear associated with an ephemeral wash) is not considered CDFW-jurisdictional.

CDFW follows the USFWS wetland definition and classification system, which defines a wetland as transitional land between terrestrial and aquatic systems having one or more of the following attributes: “(1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year” (USFWS 1979). A wetland is presumed when all three attributes are present; if less than three attributes are present the presumption of a wetland must be supported by “the demonstrable use of wetland areas by wetland associated fish or wildlife resources, related biological activity, and wetland habitat values” (California Fish and Game Commission [CFGC] 1994).

Potential CDFW-jurisdictional wetland boundaries were determined based on the presence of wetland areas supported by a lake or streambed. Wetland delineation methods to determine the presence of one or more wetland attributes included the same methods per the Corps as described in Section 3.2.1.

Based on the above, potential CDFW-jurisdictional aquatic resources delineated included lakes and/or streambeds and their associated riparian and wetland habitats. Field staff delineated the lateral extent of potential CDFW jurisdiction to be “bank to bank” for a streambed or to the “dripline” of riparian habitat and/or wetland boundary, if present.

4 SITE ALTERATIONS, CURRENT AND PAST LAND USE

RBC staff reviewed Google Earth Pro (Google Earth 2021), the University of California – Santa Barbara (UCSB; UCSB n.d.) database, the 2006 *Sunny-Cal Specific Plan Draft EIR* (Michael Brandman Associates 2006), and the 2004 *Sunny-Cal JD Report* (Michael Brandman Associates 2004) to assess historic and ongoing land uses within the review area.

Based on a review of Google Earth Pro and the UCSB database, various potentially jurisdictional features (e.g., Non-Wetland Water [NWW-] 2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 per Section 6 below) occurred within their current locations in the review area at least as far back as May 1938 (i.e., the earliest aerial image available; Appendix D). Agriculture fields or farming operations are also visible on historic aerials as far back as May 1938 and are primarily concentrated in the northeastern portion of the review area until around June 1980 (UCSB n.d.; Appendix D). By September 1996, farming operations were expanded further into the center of the review area through the construction of several large poultry sheds (UCSB n.d.; Appendix

D). Based on a review of the 2004 *Sunny-Cal JD Report*, the review area encompasses the previously active Sunny-Cal Poultry Farm, which contained operations buildings, employee housing, and poultry sheds, and housed other livestock such as pigs and cattle (Michael Brandman Associates 2004). Per historic aerials, runoff from these developments may have resulted in the creation of various ditches, erosional features, and swales (further described in Section 6 below; Appendix D). Remains of these developments, such as shed and building foundations, exist to this day. Furthermore, per the 2004 *Sunny-Cal JD Report*, the former poultry farm developed various human-made settling basins throughout the review area which were utilized as manure holding areas (e.g., Basin [B-] 1, B-2, B-3, B-4, and B-5, per Section 6 below; Michael Brandman Associates 2004). These basins were established between September 1996 and December 2003 (UCSB n.d.; Appendix D). Normal circumstances were assumed to be present within the review area.

The *Sunny-Cal Specific Plan Draft EIR* determined four drainages within the review area to be Corps- and CDFW-jurisdictional (Michael Brandman Associates 2006) within the general locations of NWW-2, NWW-2B, NWW-3, NWW-3B, NWW-3B1, and portions of NWW-3A, further discussed in Section 6 below. Furthermore, the associated Sunny Cal Egg Ranch Specific Plan (Tract 36583) Project was previously permitted and mitigated under various regulatory approvals in 2015-2016 (CWA Section 404 Nationwide Permit 29 and 43 [File No. SPL-2014-00601-JEM]; CWA Section 401 Water Quality Certification [SARWQCB Project No. 332014-20]; and CDFW SAA No. 1600-2014-0180-R6 [Revision 2]) and included permanent impacts to waters of the U.S./State and streambed/riparian habitat; however, the Sunny Cal Egg Ranch Specific Plan (Tract 36583) Project did not move forward and the previously permitted impacts did not occur. Furthermore, site ownership and project design has changed. As such, this ARDR supercedes previous delineations for review area and will be used to support future permitting associated with the Beaumont Summit Station Project.

The following sections provide additional details regarding site alterations and land use specific to on-site soils, hydrology, and vegetation based on available data and the site visit.

4.1 SOILS

Based on the NRCS soils data map (Figure 4), seven soil map units, outlined below in Table 2, occur within the review area:

Table 2. Soil Mapped within Review Area

Soil Map Unit	Soil Series/Unit	Geomorphic Surface	Taxonomic Class	NRCS Hydric Status
Greenfield sandy loam, 2 to 8 percent slopes, eroded	Greenfield	Alluvial fans, terraces	Coarse-loamy, mixed, active, thermic Typic Haploxeralfs	No
Greenfield sandy loam, 8 to 15 percent slopes, eroded	Greenfield	Alluvial fans, terraces	Coarse-loamy, mixed, active, thermic Typic Haploxeralfs	No
Ramona sandy loam, 2 to 5 percent slopes, eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No

Soil Map Unit	Soil Series/Unit	Geomorphic Surface	Taxonomic Class	NRCS Hydric Status
Ramona sandy loam, 5 to 8 percent slopes, eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No
Ramona sandy loam, 8 to 15 percent slopes, severely eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No
Ramona sandy loam, 15 to 25 percent slopes, severely eroded	Ramona	Alluvial fans, terraces	Fine-loamy, mixed, superactive, thermic Typic Haploxeralfs	No
Terrace escarpments	N/A	Terraces	N/A	No

The National Technical Committee for Hydric Soils defines hydric soils; *Changes in Hydric Soils Database Selection Criteria* (77 FR 12234) outlines the current four hydric soil criteria. The NRCS does not list any of the soil map units within the review area as hydric.

The soils outlined above in Table 2 are further described below per the USDA's *NRCS Official Soil Series Description and Series Classification* database (NRCS 2018b) and the USDA's *Soil Survey of Western Riverside Area, California* (1971):

Greenfield sandy loam, 2 to 8 percent slopes, eroded – The Greenfield series consists of deep, well-drained soils that formed in moderately coarse and coarse alluvium derived from granitic rock and other mixed rock sources. Greenfield soils have slow to medium runoff, moderately rapid permeability, and slopes ranging from 0 to 30 percent. These soils occur on alluvial fans and terraces at elevations of 100 to 3,500 feet amsl. Greenfield soil is used for production of field, forage, and fruit crops and also for growing grain and pasture. Uncultivated areas consist of annual grasses, forbs, some shrubs, and some oak trees. The NRCS does not list Greenfield sandy loam, 2 to 8 percent slopes, eroded, which occurs on site, as hydric.

Greenfield sandy loam, 8 to 15 percent slopes, eroded – The Greenfield series consists of deep, well-drained soils that formed in moderately coarse and coarse alluvium derived from granitic rock and other mixed rock sources. Greenfield soils have slow to medium runoff, moderately rapid permeability, and slopes ranging from 0 to 30 percent. These soils occur on alluvial fans and terraces at elevations of 100 to 3,500 feet amsl. Greenfield soil is used for production of field, forage, and fruit crops and also for growing grain and pasture. Uncultivated areas consist of annual grasses, forbs, some shrubs, and some oak trees. The NRCS does not list Greenfield sandy loam, 8 to 15 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 2 to 5 percent slopes, eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 2 to 5 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 5 to 8 percent slopes, eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 5 to 8 percent slopes, eroded, which occurs on site, as hydric.

Ramona sandy loam, 8 to 15 percent slopes, severely eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 8 to 15 percent slopes, severely eroded, which occurs on site, as hydric.

Ramona sandy loam, 15 to 25 percent slopes, severely eroded – The Ramona series consists of well-drained soils that formed in alluvium derived from granitic rock and related rock sources. Ramona soils have slow to rapid runoff and moderately slow permeability. These soils are nearly level to moderately steep and occur on terraces and fans at elevations of 250 to 3,500 feet amsl. Ramona soil is used for production of grain, hay, pasture, irrigated citrus, olives, truck crops, and seasonal fruits. Uncultivated areas are primarily annual grasses, forbs, chamise, or chaparral. The NRCS does not list Ramona sandy loam, 15 to 25 percent slopes, severely eroded, which occurs on site, as hydric.

Terrace escarpments – Terrace escarpments consist of variable alluvium on terraces or gullies derived from granite, gabbro, metamorphosed sandstone, sandstone, or mica-schist. Slopes range from 30 to 75 percent. Vegetation is sparse and includes annual grasses, salvia (*Salvia* sp.), flat-top buckwheat (*Eriogonum fasciculatum*), and chamise (*Adenostoma fasciculatum*). Areas of terrace escarpments are used primarily for watershed and as wildlife habitat. The NRCS does not list terrace escarpments, which occurs on site, as hydric.

As stated in the Arid West Supplement, RBC used the hydric soils list as a tool and made final hydric soils determinations based on field-collected data at representative wetland delineation sample points deemed appropriate on site as recorded on the attached Arid West Wetland Determination Data Forms (Appendix E) discussed further in Section 6.1.

4.2 HYDROLOGY

Per the review of on-line data sources, USGS NHD maps one “Stream/River” (ephemeral) in the western portion of the review area, one “Stream/River” (ephemeral) in the southern portion of the review area, and six “Reservoirs” in the central and western portions of the review area (Figure 2; USGS 2020). USFWS NWI maps one feature with a designation of “Riverine” in the southern portion of the review area (Figure 4; USFWS 2019). USFWS NWI classifies the onsite feature as Riverine, R4SBA, indicating that the feature is an intermittent (R4) streambed (SB) that temporarily floods (A). However, based on field observations in April and June 2021, the on-site features are expected to convey ephemeral flows (i.e., only in direct response to precipitation).

The primary known hydrologic source for the observed on-site drainages and “reservoirs,” discussed further below, is direct precipitation only. The southern USGS NHD and USFWS NWI feature also receives runoff from development south of the review area that is collected and conveyed on site through a culverted storm drain outlet that flows north under Brookside Avenue. Previously, on-site drainages also received runoff from the former on-site agricultural operations (poultry and livestock farm) and the on-site “reservoirs” were used as settling basins to hold manure from chicken, pigs, and cows.

Based on field observations, the on-site USGS NHD feature within the western portion of the review area travels west, then continues off site. The USGS NHD and USFWS NWI feature within the southern portion of the review area enters the review area then drains through two culvert outlets under Brookside Avenue, travels northwest, then continues off site. The USGS NHD maps the two features as converging just west of the review area and continuing as an ephemeral stream for approximately 4 miles until transitioning to an intermittent stream for approximately 7.5 miles, then connecting with the San Timoteo Wash. The San Timoteo Wash then continues for approximately 6.6 miles before outletting into the Santa Ana River, which ultimately discharges into the Pacific Ocean (USGS 2020).

4.3 VEGETATION

Table 3 provides vegetation community acreages within the review area based on vegetation mapping conducted by RBC biologists on April 22, 2021 (Figure 6). The review area primarily consists of non-native grassland. The vegetation community classifications generally follow Holland’s *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and are consistent with the *Western Riverside County Multiple Species Habitat Conservation Plan* (MSHCP; Dudek & Associates, Inc. 2003) vegetation mapping classification.

Table 3. Vegetation Communities within Review Area

Vegetation Community/Land Cover Type	Acre(s)[1]
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands	0.31
Chamise Chaparral	0.19
Developed	61.66
Disturbed Habitat	1.59
Eucalyptus Woodland	0.80
Mulefat Scrub	2.32
Non-native Grassland	146.83
Non-native Riparian	2.37
Non-native Vegetation	0.81
Riversidean Sage Scrub	1.12

Vegetation Community/Land Cover Type	Acre(s)[1]
Torrey's Scrub Oak (*Quercus x acutidens*) Stands	1.37
Total	219.37

[1] Acreages summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

Blue Elderberry Stands

Individual stands of blue elderberry (*Sambucus nigra* ssp. *caerulea*) occur within the review area (0.31 acre). Blue elderberry is a tall woody shrub that can grow up to 25 feet tall. The blue elderberry trees within the review area do not represent a specific vegetation community, rather a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat.

Chamise Chaparral

Chamise chaparral is overwhelmingly dominated by chamise. Chamise chaparral within the review area (0.19 acre) contains some individuals of California buckwheat and occurs along the northwestern review area boundary. Chamise chaparral continues as patches within non-native grassland west of the review area.

Developed

Developed land does not support native vegetation and includes human-made structures. Developed land within the review area (61.66 acres) includes buildings and paved surfaces associated with the former agricultural operations.

Disturbed Habitat

Disturbed habitat is typically classified as land on which the native vegetation has been significantly altered by agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of a plant association (e.g. disturbed Riversidean sage scrub). Disturbed habitat is typically found in vacant lots, along roadsides, within construction staging areas, and in abandoned fields. The habitat is typically dominated by non-native annual species and perennial broadleaf species. Disturbed habitat within the review area (1.59 acres) occurs within the gravel driveways and staging areas that support the sparse growth of non-native grasses and forbaceous species.

Eucalyptus Woodland

Eucalyptus woodland (*Eucalyptus* spp.) habitat ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species produce a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. A large stand of eucalyptus woodland occurs along the western border of the review area (0.80 acre).

Mulefat Scrub

Mulefat scrub consists of mulefat (*Baccharis salicifolia*) as the dominant or co-dominant species within a continuous shrub canopy or thicket. A few isolated, individual willows (*Salix* spp.) also occur within the continuous mulefat scrub. The herbaceous layer is typically sparse. Mulefat scrub within the review area (2.32 acres) is approximately 10-15 feet in height and co-occurs with the blue elderberry stands and non-native riparian vegetation within the canyons and drainages in the southwest.

Non-native Grassland

Non-native grassland within the review area is dominated by ripgut brome (*Bromus diandrus*) but also contains occurrences of other non-native grass and forbaceous species such as red brome (*Bromus rubens*), Mediterranean barley (*Hordeum marinum*), and short-pod mustard (*Hirschfeldia incana*). Rigid fiddleneck (*Amsinckia menziesii*) was observed within the non-native grassland habitat growing out of the topographical depressions in the western portion of review area. The review area is frequently mowed and was previously grazed using cattle, keeping non-native grasses and ruderal species fairly low to the ground. Non-native grassland (146.83 acres) occurs throughout much of the review area.

Non-native Riparian

Non-native riparian habitat includes densely vegetated riparian thickets dominated by non-native, invasive species. Non-native riparian habitat within the review area (2.37 acres) consists of monotypic stands of tree of heaven (*Ailanthus altissima*), occurring within the drainages in the southwestern portion of the review area. Tree of heaven are large trees with some individuals exceeding 30 feet in height. Virtually no understory occurs within the stands of tree of heaven that occur within the review area.

Non-native Vegetation

Non-native vegetation refers to areas where non-native ornamentals and landscaping have been installed. Non-native vegetation within the review area (0.81 acre) occurs just south of Brookside Avenue and is dominated by tree of heaven and pine trees (*Pinus* sp.)

Riversidean Sage Scrub

Riversidean sage scrub (1.12 acres) is a form of coastal sage scrub found in Riverside County consisting of low, soft shrubs. The review area supports small patches of Riversidean sage scrub that are dominated by California sagebrush (*Artemisia californica*) and California buckwheat and contain non-native grasses between shrubs. Riversidean sage scrub is found in the southwestern portion of the review area and along the southern review area boundary.

Torrey's Scrub Oak Stands

Mature individuals of Torrey's scrub oak (*Quercus x acutidens*) form distinct stands (1.37 acres) occurring along the upper banks of canyons and drainages within the western portion of the review area. Torrey's scrub oak is a small oak tree and on-site Torrey's scrub oak do not exceed 25 feet in height. Non-native grasses occur as the understory between individual trees. The stands of Torrey's scrub oak within the review area do not represent a specific vegetation community (e.g., scrub oak chaparral), but are a monotypic stand of trees that are functionally distinct from the surrounding non-native grassland habitat.

5 PRECIPITATION DATA AND ANALYSIS

RBC utilized the NRCS Agricultural Applied Climate Information System (AgACIS) database for the Beaumont 2.5 NW station (approximately 0.7 mile southeast) to access pre-site visit precipitation data (NRCS 2021), as shown in Table 4.

RBC also utilized the Corps' Antecedent Precipitation Tool (APT) to assess whether or not the delineation date occurred in a drier, average, or wetter than normal period for the review area (Corps 2020). The Corps created the APT to assist with determining "typical year" precipitation conditions for a review area (i.e., the normal periodic range of precipitation and other climate variables for the waterbody). Additionally, the APT can also generally inform the regulatory agencies whether or not normal hydrologic/climatic conditions were on site at the time of the site visit and assist with completion of the Wetland Determination Data Forms (Appendix E).

5.1 PRECIPITATION SUMMARY

Table 4 describes the estimated monthly total precipitation for the review area from June 2020 to May 2021 to provide the pertinent pre-site visit precipitation data from the NRCS database for the Beaumont 2.5 NW, California NWS station (NRCS 2021).

Table 4. Precipitation Data for June 2020 to May 2021

	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Monthly Total Precipitation (inch[es])	0.11	0.00	0.00	0.00	T*	0.70	1.26	2.48	0.15	1.94	0.13	M[1]

[1]Per AgACIS database: "Values of 'M' indicate missing data and 'T' indicates a trace."

5.2 ANTECEDENT PRECIPITATION TOOL DATA

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from -10 (extremely dry) to +10 (extremely wet) (National Oceanic and Atmospheric Administration [NOAA] 2020) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (i.e., Arid West Supplement). The antecedent precipitation condition is classified as drier than normal with an antecedent runoff condition (ARC) score less than 10; normal with an ARC score between 10 to 14; or wetter than normal with an ARC score greater than 14 (Corps 2000).

Table 5 summarizes the key data extrapolated from the APT output to compare the current year 30-day rolling total to the averaged 30-year normal for the weather stations with comprehensive historical data within 30 miles of the review area: estimated drought conditions, wet or dry season determination, ARC score, and antecedent precipitation condition. The APT output provided in Appendix F and summarized in Table 5, noted a PDSI Class of "severe drought" on April 22, 2021 and "extreme drought" on June 3, 2021 and June 7, 2021 for the review area; the precipitation and climatic conditions were classified as "drier than normal" on April 22, 2021 and "normal" on

June 3, 2021 and June 7, 2021 for the review area based on the 30-day rolling totals for the three months preceding the field survey dates. Field staff considered the drought conditions during the field delineation, evaluated how the drought conditions could affect the data collected on the Arid West Wetland Determination Data Forms and Ephemeral and Intermittent Streams OHWM Datasheets (Appendix E), and used recent and historic aerials to ensure appropriate representation of the extent of the on-site aquatic features for this ARDR despite 2021 drought conditions.

Table 5. Antecedent Precipitation Tool Data for the Review Area

Field Survey Date	PDSI Value	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
4/22/2021	-3.99	Severe drought	Dry season	9	Drier than normal
6/03/2021	-4.98	Extreme drought	Dry season	10	Normal conditions
6/07/2021	-4.98	Extreme drought	Dry season	11	Normal conditions

6 DESCRIPTION OF OBSERVED POTENTIAL AQUATIC RESOURCES

The following descriptions of observed potential aquatic resources within the review area document the presence or absence of aquatic resource indicators per the methods discussed in Section 3. The subsections below are intended to be reviewed independently under each agency's purview unless otherwise directed in the text (i.e., the aquatic resource description is the same between two or more agencies) given the various regulatory definitions and standards per each agency.

Appendix G provides site photographs of the features within the review area; all figures in the Figure 5 series display representative photo points.

6.1 CORPS WETLAND WATERS OF THE U.S.

RBC collected data at three representative Wetland Data Form Points (WDP) within the review area, one within NWW-2 (see *Non-Wetland Water 2* in Section 6.2 below), one within NWW-3 (see *Non-Wetland Water 3* in Section 6.2 below), and one within B-4 (see *Basins 1 – 5* in Section 6.6 below), to determine the presence or absence of jurisdictional wetland waters of the U.S. (Figure 5A; Appendix E). The delineated aquatic features on site did not meet the appropriate wetland parameters to qualify as wetland waters of the U.S. based on the data collected during the field delineation, as discussed further in Section 6.2.

6.2 CORPS NON-WETLAND WATERS OF THE U.S.

Non-Wetland Water 1

NWW-1 is a vegetated, earthen-bottom drainage that occurs within the far western portion of the review area (Figure 5A). Specifically, NWW-1 is an approximately 175-linear foot feature within an area of non-native grassland, the upstream extent of which appeared severely incised and erosional. After approximately 145 linear feet, NWW-1 converges with NWW-1A (see *Non-Wetland*

Water 1A below) before continuing off site and downstream, and exhibiting a more defined bed and bank with established vegetation along the banks.

OHWM Datasheet Point (ODP) 3 (see *Non-Wetland Water 1A* below) represents the OHWM within NWW-1 given the similar conditions observed within NWW-1A; similarily, WDP 2 (see *Non-Wetland Water 2* below) provides representative wetland delineation data for NWW-1 given the similar conditions observed within NWW 2. The estimated OHWM within NWW-1 measured approximately four feet wide until NWW-1 converged with NWW-1A, at which point the OHWM increased to approximately six feet wide.

Non-Wetland Water 1A

NWW-1A is a vegetated, earthen-bottom drainage that occurs withn the far western portion of the review area and is a tributary of NWW-1 (Figure 5A). Specifically, NWW-1A is an approximately 156-linear foot feature within an area of non-native grassland that, similar to NWW-1, originates as a severely incised and erosional feature.

An OHWM delineation was conducted within the drainage to confirm the presence or absence of OHWM indicators. ODP 3 confirmed the presence of the following OHWM indicators within NWW-1A: a faint break in bank slope and change in vegetation cover between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 3). WDP 2 (see *Non-Wetland Water 2* below) was representative of the conditions in NWW-1A. Based on the data collected, the estimated OHWM measured approximately six feet wide throughout the extent of NWW-1A.

Non-Wetland Water 2

NWW-2 is a vegetated, earthen-bottom drainage that travels through the western portion of the review area, south of NWW-1 (Figure 5A). Specifically, NWW-2 is an approximately 1,018-linear foot feature within an area of non-native grassland that initiates just west of B-4 (see *Basin 4* below). After approximately 200 linear feet, NWW-2 converges with NWW-2A (see *Non-Wetland Water 2A* below), then flows approximately 90 linear feet before converging with NWW-2B (see *Non-Wetland Water 2B* below) after which NWW-2 continues an additional 70 linear feet before converging with NWW-2C (see *Non-Wetland Water 2C* below). After converging with NWW-2C, NWW-2 flows approximately 658 linear feet before continuing off site and downstream.

A wetland and OHWM delineation were conducted within NWW-2 to confirm the presence or absence of wetland parameters and/or OHWM indicators. ODP 4 confirmed the presence of the following OHWM indicators within NWW-2: a break in bank slope and change in vegetation cover between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 4). Based on the data collected, the estimated OHWM ranged from three feet to four feet wide throughout the extent of NWW-2.

WDP 2 was taken within a vegetated area dominated by blue elderberry (FACU), mulefat (FAC), false brome (*Brachypodium distachyon*; NL/UPL), and ripgut brome (NL/UPL). WDP 2 did not meet the hydrophytic vegetation, hydric soil, or wetland hydrology parameters (Figure 5A; Appendix E, WDP 2).

Non-Wetland Water 2A

NWW-2A is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5A). Specifically, NWW-2A displays a faint OHWM and flows for approximately 168 linear feet through a small area dominated by mulefat and non-native grasses before converging with NWW-2 (see *Non-Wetland Water 2* above).

ODP 4 (see *Non-Wetland Water 2* above) was representative of the OHWM in NWW-2A. WDP 2 (see *Non-Wetland Water 2* above) was representative of the conditions in NWW-2A. Based on the data collected, the estimated OHWM ranged from one foot to two feet wide.

Non-Wetland Water 2B

NWW-2B is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5A). Specifically, NWW-2B travels for approximately 175 linear feet through an area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2* above).

ODP 4 (see *Non-Wetland Water 2* above) represents the OHWM within NWW-2B given the similar conditions observed within NWW-2; similarily, WDP 2 (see *Non-Wetland Water 2* above) provides representative wetland delineation data for NWW-2B given the similar conditions observed within NWW 2. Based on the data collected, the estimated OHWM measured approximately three feet wide.

Non-Wetland Water 2C

NWW-2C is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5A). Specifically, NWW-2C flows for approximately 109 linear feet through a small area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2* above).

ODP 4 (see *Non-Wetland Water 2* above) represents the OHWM within NWW-2C given the similar conditions observed within NWW-2; WDP 2 (see *Non-Wetland Water 2* above) also provides representative wetland delineation data for NWW-2C. Based on the data collected, the estimated OHWM measured approximately three feet wide.

Non-Wetland Water 3

NWW-3 is a vegetated, earthen-bottom drainage that flows through the southern portion of the review area (Figure 5A). Specifically, NWW-3 is an approximately 2,710-linear foot feature that enters the southern boundary of the review area then immediately flows through two culvert outlets under Brookside Avenue. After exiting the culverts, NWW-3 continues northwest for approximately 600 linear feet through an area of non-native grassland, before converging with NWW-3A (see *Non-Wetland Water 3A* below). NWW-3 then flows northwest for approximately 1,740 linear feet through areas of non-native grassland, mulefat scrub, blue elderberry stands, and non-native riparian, until converging with NWW-3B (see *Non-Wetland Water 3B* below). After converging with NWW-3B, NWW-3 flows west approximately 370 linear feet before continuing off site and downstream.

A wetland and OHWM delineation were conducted within NWW-3 to confirm the presence or absence of wetland parameters and/or OHWM indicators. ODP 7 confirmed the presence of the following OHWM indicators within NWW-3: a faint break in slope, change in average sediment texture, change in vegetation cover, and change in vegetation species between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 7). Based on the data collected, the estimated OHWM ranged from four feet to eight feet wide throughout the extent of NWW-3.

WDP 3 was taken within a sparsely vegetated area dominated by mulefat (FAC). WDP 3 met the hydrophytic vegetation parameter; however, WDP 3 did not meet the hydric soil or wetland hydrology parameters (Figure 5A; Appendix E, WDP 3).

Non-Wetland Water 3A

NWW-3A is a vegetated, earthen-bottom drainage that occurs within the southern portion of the review area, east of NWW-3, and is a tributary to NWW-3 (Figure 5A). NWW-3A likely resulted from runoff from former agricultural fields in the northeast corner of the review area and adjacent fields to the east of the review area, based on a review of historic aerials (Appendix D). Furthermore, NWW-3A appeared to have previously convey surface flows/runoff downslope from the former farming operations within the review area, based on its location just south of the former poultry sheds and a review of historic aerials (Appendix D). Specifically, NWW-3A is an approximately 1,290-linear foot feature that originates at the western extent of Swale (S-) 1 (see *Swales 1– 5* below) and eventually converges with NWW-3 (see *Non-Wetland Water 3* above).

An OHWM delineation was conducted within the drainage to confirm the presence or absence of OHWM indicators. ODP 5 confirmed the presence of the following OHWM indicators within NWW-3A: a break in bank slope, change in average sediment texture, and change in vegetation cover between the active floodplain and adjacent uplands (Figure 5A; Appendix E, ODP 5). WDP 3 (see *Non-Wetland Water 3* above) was representative of the conditions in NWW-3A.

Based on the data collected, the estimated OHWM ranged from approximately three feet to six feet wide throughout the extent of NWW-3A.

Non-Wetland Water 3B

NWW-3B is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area, directly west of what remains of the former poultry sheds (Figure 5A). NWW-3B is a tributary to NWW-3 that likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B appeared to previously convey surface flows/runoff from the former farming operations within the review area (Appendix D). Specifically, NWW-3B is an approximately 1,273-linear foot feature that originates just west of the western extent of Erosional Feature (EF-) 8 (see *Erosional Features 1 – 8* below), then travels approximately 393 linear feet before converging with NWW-3B1 (see *Non-Wetland Water 3B1* below), then continues another 880 linear feet before converging with NWW-3 (see *Non-Wetland Water 3* above).

ODP 5 (see *Non-Wetland Water 3A* above) provides representative data for the OHWM in NWW-3B given similar conditiosn wihtin the two features. WDP 3 (see *Non-Wetland Water 3* above) provides representative wetland delineation data in NWW-3B. Based on the data collected, the estimated OHWM measured approximately four feet wide throughout the extent of NWW-3B.

Non-Wetland Water 3B1

NWW-3B1 is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-3B (Figure 5A). NWW-3B1 likely also resulted from runoff from former agricultural fields in the northeast corner of the review area, based a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B1 appeared to previously convey surface flows/runoff from the former farming operations within the review area. Specifically, NWW-3B1 is an approximately 409-linear foot feature that originates at the western extent of S-5 (see *Swales 1 – 5* below), then drains south/southwest as it gradually widens before converging with NWW-3B (see *Non-Wetland Water 3B* above).

Data collected at ODP 5 (see *Non-Wetland Water 3A* above) represents of the OHWM observed within NWW-3B1. WDP 3 (see *Non-Wetland Water 3* above) also provides wetland delineation data in NWW-3B1. Based on the data collected, the estimated OHWM ranged from approximately one foot to four feet wide.

6.3 CDFW STREAMBED AND ASSOCIATED RIPARIAN AND WETLAND HABITATS

As outlined in Section 6.1, RBC collected data at three representative WDPs within the review area to determine the presence or absence of potential CDFW-jurisdictional wetlands (Figure 5B; Appendix E). The delineated aquatic features on site did not meet the appropriate wetland parameters to qualify as CDFW-jurisdictional wetlands based on the data collected during the field delineation.

Figure 5B displays the estimated extent of streambed, delineated based on the top of the channel banks, and associated riparian habitat within the review area; Table 7 provides additional details.

Non-Wetland Water 1: Vegetated Streambed

NWW-1 is a heavily vegetated, earthen-bottom drainage that occurs within the far western portion of the review area (Figure 5B). Specifically, NWW-1 is an approximately 175-linear foot feature ranging from approximately nine feet to 21 feet wide from bank to bank, within an area of non-native grassland, the upstream extent of which appeared severly incised and erosional. After approximately 145 linear feet, NWW-1 converges with NWW-1A (see *Non-Wetland Water 1A*: *Vegetated Streambed* below) before continuing off site and downstream, and exhibiting a more defined bed and bank with established vegetation along the banks. The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 1A: Vegetated Streambed

NWW-1A is a heavily vegetated, earthen-bottom drainage that occurs withn the far western portion of the review area and is a tributary of NWW-1 (Figure 5B). Specifically, NWW-1A is an approximately 156-linear foot feature ranging from approximately eight feet to 30 feet wide from bank to bank, within an area of non-native grassland that, similar to NWW-1, originates as a severely incised and erosional feature. The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 2: Vegetated Streambed

NWW-2 is a vegetated, earthen-bottom drainage that travels through the western portion of the review area, south of NWW-1 (Figure 5B). Specifically, NWW-2 is an approximately 1,018-linear foot feature ranging from approximately 15 feet to 60 feet wide from bank to bank, within an area of non-native grassland that initiates just west of B-4 (see *Basin 4* below). After approximately 200 linear feet, NWW-2 converges with NWW-2A (see *Non-Wetland Water 2A: Vegetated Streambed* below), then continues approximately 90 linear feet before converging with NWW-2B (see *Non-Wetland Water 2B: Vegetated Streambed* below), and travels an additional 70 linear feet before converging with NWW-2C (see *Non-Wetland Water 2C: Vegetated Streambed* below). After converging with NWW-2C, NWW-2 flows west approximately 658 linear feet before continuing off site and downstream. The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 2A: Vegetated Streambed

NWW-2A is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5B). NWW-2A likely resulted from runoff from the former agricultural operations, based on field observations and a review of historic aerials (Appendix D). Specifically, NWW-2A displays a faint streambed measuring approximately one foot to two feet wide from bank to bank, and flows for approximately 168 linear feet through a small area dominated by mulefat and non-native grasses before converging with NWW-2 (see *Non-Wetland Water 2: Vegetated Streambed* above). The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL), as well as mulefat (FAC).

Non-Wetland Water 2A: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-2A streambed includes mulefat scrub (Figure 5B).

Non-Wetland Water 2B: Vegetated Streambed

NWW-2B is a vegetated, earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5B). Specifically, NWW-2B ranges from approximately nine feet to 49 feet wide from bank to bank and travels for approximately 175 linear feet through an area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2: Vegetated Streambed* above). The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL), as well as mulefat (FAC).

Non-Wetland Water 2C: Vegetated Streambed

NWW-2C is a vegetated earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-2 (Figure 5B). Specifically, NWW-2C ranges from approximately 20 feet to 47 feet wide from bank to bank and flows northwest for approximately 109 linear feet through a small area of non-native grassland before converging with NWW-2 (see *Non-Wetland Water 2: Vegetated Streambed* above). The streambed and earthen banks are generally dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL), as well as mulefat (FAC).

Non-Wetland Water 3: Vegetated Streambed

NWW-3 is a vegetated, earthen-bottom drainage that flows through the southern portion of the review area (Figure 5B). Specifically, NWW-3 is an approximately 2,710-linear foot that ranges from approximately 12 feet to 140 feet wide from bank to bank. NWW-3 enters the southern boundary of the review area then immediately drains through two culvert outlets under Brookside Avenue. After exiting the culverts, NWW-3 travels northwest for approximately 600 linear feet through an area of non-native grassland, before converging with NWW-3A (see *Non-Wetland Water 3A* below). NWW-3 then continues northwest for approximately 1,740 linear feet through areas of non-native grassland, mulefat scrub, blue elderberry stands, and non-native riparian, until converging with NWW-3B (see *Non-Wetland Water 3B: Vegetated Streambed* below). After converging with NWW-3B, NWW-3 flows west approximately 370 linear feet before continuing off site and downstream. The streambed is generally dominated by dominated by non-native grassland plant species such as ripgut brome (NL/UPL), false brome (NL/UPL), shortpod mustard (NL/UPL), and horehound (*Marrubium vulgare*; FACU).

Non-Wetland Water 3: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-3 streambed includes mulefat scrub, non-native riparian (dominated by tree of heaven [FACU]), and blue elderberry stands (Figure 5B).

Non-Wetland Water 3A: Vegetated Streambed

NWW-3A is a vegetated, earthen-bottom drainage that occurs within the southern portion of the review area, east of NWW-3, and is a tributary to NWW-3 (Figure 5B). NWW-3A likely resulted from runoff from former agricultural fields within the northeast corner of the review area and adjacent fields to the east of the review area, based on a review of historic aerials (Appendix D). Furthermore, NWW-3A appeared to have previously convey surface flows/runoff downslope from the former farming operations within the review area, based on its location just south of the former poultry sheds and a review of historic aerials (Appendix D). Specifically, NWW-3A is an approximately 1,290-linear foot feature ranging from approximately six feet to 65 feet wide from bank to bank that originates at the western extent of S-1 (see *Swales 1 – 5* below) and eventually flows into NWW-3 (see *Non-Wetland Water 3: Vegetated Streambed* above). The streambed is generally dominated by ripgut brome (NL/UPL), false brome (NL/UPL), shortpod mustard (NL/UPL), and horehound (FACU).

Non-Wetland Water 3A: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-3A streambed includes blue elderbery stands (Figure 5B).

Non-Wetland Water 3B: Vegetated Streambed

NWW-3B is a vegetated earthen-bottom drainage that occurs within the western portion of the review area, directly west of what remains of the former poultry sheds (Figure 5B). NWW-3B is a tributary to NWW-3 that likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B appeared to previously convey surface flows/runoff from the former farming operations within the review area. Specifically, NWW-

3B is an approximately 1,273-linear foot feature ranging from approximately 20 feet to 70 feet wide from bank to bank that originates just west of the western extent of EF-8 (see *Erosional Features 1 – 8* below), then flows west approximately 393 linear feet before converging with NWW-3B1 (see *Non-Wetland Water 3B1: Vegetated Streambed* below), then travels another 880 linear feet before converging with NWW-3 (see *Non-Wetland Water 3: Vegetated Streambed* above). The streambed is generally dominated by ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

Non-Wetland Water 3B: Riparian Habitat

Riparian habitat observed as directly associated with the delineated NWW-3B streambed includes mulefat scrub (Figure 5B).

Non-Wetland Water 3B1: Vegetated Streambed

NWW-3B1 is a vegetated earthen-bottom drainage that occurs within the western portion of the review area and is a tributary to NWW-3B (Figure 5B). NWW-3B1 likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, based on a review of historic aerials and field observations, NWW-3B1 appeared to previously convey surface flows/runoff from the former farming operations within the review area. Specifically, NWW-3B1 is an approximately 409-linear foot feature ranging from approximately five feet to 30 feet wide from bank to bank that originates at the western extent of S-5 (see *Swales 1 – 5* below), then continues south/southwest as it gradually widens before converging with NWW-3B (see *Non-Wetland Water 3B: Vegetated Streambed* above). The streambed is generally dominated by ripgut brome (NL/UPL), false brome (NL/UPL), and shortpod mustard (NL/UPL).

6.4 RWQCB WETLAND WATERS OF THE STATE

As outlined in Section 6.1, RBC collected data at three representative WDPs within the review area to determine the presence or absence of jurisdictional wetland waters of the State (Figure 5C; Appendix E). The delineated aquatic features on site did not meet the appropriate wetland parameters to qualify as wetland waters of the State based on the data collected during the field delineation.

6.5 RWQCB NON-WETLAND WATERS OF THE STATE

Field staff identified the lateral limits of potential non-wetland waters of the State using the same methods for determining an OHWM per the Corps as described in Section 3.2.1. as they have generally been considered coincident; however, based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project (Santa Ana RWQCB 2022), the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat). As such, RWQCB non-wetland boundaries are the same boundaries defined as CDFW-jurisdictional streambed and associated riparian habitat for the review area.

Figure 5C displays the estimated extent of RWQCB non-wetland waters within the review area; Table 8 provides additional details.

Non-Wetland Water 1: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-1 are the same boundaries defined for NWW-1 described in Section 6.3 above (*Non-Wetland Water 1: Vegetated Streambed*).

Non-Wetland Water 1A: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-1A are the same boundaries defined for NWW-1A described in Section 6.3 above (*Non-Wetland Water 1A: Vegetated Streambed*).

Non-Wetland Water 2: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2 are the same boundaries defined for NWW-2 described in Section 6.3 above (*Non-Wetland Water 2: Vegetated Streambed*).

Non-Wetland Water 2A: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2A are the same boundaries defined for NWW-2A described in Section 6.3 above (*Non-Wetland Water 2A: Vegetated Streambed*).

Non-Wetland Water 2A: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-2A as described in Section 6.3 above (*Non-Wetland Water 2A: Riparian Habitat*).

Non-Wetland Water 2B: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2B are the same boundaries defined for NWW-2B described in Section 6.3 above (*Non-Wetland Water 2B: Vegetated Streambed*).

Non-Wetland Water 2C: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-2C are the same boundaries defined for NWW-2C described in Section 6.3 above (*Non-Wetland Water 2C: Vegetated Streambed*).

Non-Wetland Water 3: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3 are the same boundaries defined for NWW-3 described in Section 6.3 above (*Non-Wetland Water 3: Vegetated Streambed*).

Non-Wetland Water 3: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-3 as described in Section 6.3 above (*Non-Wetland Water 3: Riparian Habitat*).

Non-Wetland Water 3A: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3A are the same boundaries defined for NWW-3A described in Section 6.3 above (*Non-Wetland Water 3A: Vegetated Streambed*).

Non-Wetland Water 3A: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-3A as described in Section 6.3 above (*Non-Wetland Water 3A: Riparian Habitat*).

Non-Wetland Water 3B: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3B are the same boundaries defined for NWW-3B described in Section 6.3 above (*Non-Wetland Water 3B: Vegetated Streambed*).

Non-Wetland Water 3B: Riparian Habitat

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction over riparian habitat observed as directly associated with NWW-3B as described in Section 6.3 above (*Non-Wetland Water 3B: Riparian Habitat*).

Non-Wetland Water 3B1: Non-Wetland Water

Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB non-wetland boundaries of NWW-3B1 are the same boundaries defined for NWW-3B1 described in Section 6.3 above (*Non-Wetland Water 3B1: Vegetated Streambed*).

6.6 OTHER FEATURES

Field staff further investigated several areas with potential aquatic resource indicators, including basins, swales, erosional features, and an abandoned ditch as described below. Additionally, ODP 1 was taken within a lower topographic area between two gentle slopes (Figures 5A to 5C; Appendix E, ODP 1). This lower topographic area and other similar areas within the review area (See Appendix G, Photos 2, 3, 5, and 6) did not display an OHWM or exhibit bed and bank indicators, and did not appear to convey surface flows. As discussed in Section 4, the review area has been heavily manipulated and disturbed since at least 1938 based on review of historic aerials (Appendix D); many of the features discussed below are expected to be a result of the consistent manipulation of the review area.

Furthermore, the features discussed in this section are not discussed further in this ARDR as they are not anticipated to be jurisdictional under the Corps, RWQCB, or CDFW regulations, policy, and/or guidance based on the information provided in this section. An approved jurisdictional determination (AJD) can be provided under separate cover if required to confirm the features discussed below are not waters of the U.S.

Swales 1 – 5

Five swales (S-1 through S-5; Figures 5A to 5C) were observed during the field delineation that did not display an observable OHWM, bed and bank, or other evidence of conveying regular flows on site. These disturbed swale features also did not appear to convey flows to downstream aquatic resources via observed flow patterns, culverts, or other flow paths. A summary of the observed swales are provided below.

S-1 is a slightly concave drainage area located in the southeastern corner of the review area that eventually converges with NWW-3A at its western extent. S-1 did not display an observable OHWM or bed and bank and instead appeared to convey surface flows from EF-4, which historically conveyed runoff from former agricultural fields in the neighboring properties east of the review area (Appendix D). ODP 6, taken in an area of non-native grassland, did not show evidence of a break in slope or a defined bed and bank between the swale and adjacent uplands. Additionally, ODP 6 did not contain a change in sediment texture, change in vegetation species or cover, or any other OHWM indicators between the swale and the adjacent upland area (Figures 5A to 5C; Appendix E, ODP 6). Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-2 is a slightly concave drainage area located in the southeastern portion of the review area, north of S-1, that converges with NWW-3A at its western extent. S-2 likely resulted from runoff from former agricultural fields in the northeast corner of the review area, based on a review of historic aerials (Appendix D). Furthermore, S-2 appeared to have previously conveyed surface flows/runoff from the former farming operations within the review area based on its location just south of the former locations of the poultry sheds and a review of historic aerials (Appendix D). The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-2. Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-3 is a slightly concave drainage area located in the southeastern portion of the review area, west of S-1 and S-2, that converges with NWW-3A at its southern extent. S-3 appeared to have previously conveyed surface flows/runoff downslope from the former farming operations, based on its location just south of the former locations of the poultry sheds and a review of historic aerials (Appendix D). The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-3. Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-4 is a slightly concave drainage area located in the central portion of the review area, east of NWW-3B, that converges with EF-6 at its western extent. S-4 appeared to have previously conveyed surface flows/runoff from the former farming operations, based on its location just south of the former locations of the poultry sheds and a review of historic aerials (Appendix D). The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-4. Thus, this swale was determined to not have an OHWM or defined bed and bank.

S-5 is a concave drainage area located in the central portion of the review area, just west of Ditch (D-) 1 (see *Ditch 1* below), that converges with NWW-3B1 at its western extent. S-5 appeared to have previously conveyed surface flows/runoff from an abandoned ditch (D-1) associated with the former agricultural operations. The conditions and vegetation observed at S-1 were similar to and representative of the conditions and vegetation observed at S-5. Thus, this swale was determined to not have an OHWM or defined bed and bank.

Basins 1 – 5

Five basins (B-1 through B-5; Figures 5A to 5C) that occur within the western portion of the review area did not display an observable OHWM or bed and bank and instead displayed cracked soils and some concavity within the otherwise flat landscape indicative of a basin. As discussed previously in Section 4, the former poultry farm developed B-1 through B-5 for use as settling basins to hold manure from chicken, pigs, and cows. Four additional areas were investigated as potential basins, based on the appearance of ponding water and/or possible concavity during a review of recent and historic aerials (Appendix D). These areas (see Appendix G, Photos 16, 37, 44, 45, and 46) were determined to not qualify as basins, based on a lack of cracked soils and concavity.

Wetland delineation data was collected within B-4 within a small stand of mulefat (FAC) to confirm the presence or absence of wetland parameters. WDP 1 met the wetland hydrology parameter based on the presence of surface soil cracks; however, WDP 1 did not meet the hydrophytic vegetation or hydric soil parameters (Figures 5A to 5C; Appendix E, WDP 1). WDP 1 was representative of the wetland conditions for B-1, B-2, B-3, and B-5.

Erosional Features 1 – 8

Eight erosional features (EF-1 through EF-8; Figures 5A to 5C) were observed during the field delineation that did not display an observable OHWM or defined bed and bank, and were severely incised. A summary of the observed erosional features are provided below.

EF-1 is an incised erosional feature located in the northwestern corner of the review area. EF-1 abruptly starts and stops within the otherwise flat landscape. EF-1 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank.

EF-2 and EF-3 are deeply incised gullies/erosional features located south of EF-1, in the northwestern portion of the review area. Similar to EF-1, EF-2 and EF-3 also abruptly start and stop within the review area. ODP 2, taken in an area of non-native grassland within EF-2, exhibited a slight break in bank slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other OHWM indicators (Figures 5A to 5C; Appendix E, ODP 2). The conditions and vegetation observed at EF-2 were similar to and representative of the conditions and vegetation observed at EF-3. Thus, these erosional features wer determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within the gullies and the abrupt stop to the features, EF-2 and EF-3 appear to no longer receive flows and do not convey flows downstream.

EF-4 is a gully/erosional feature located in the southeastern corner of the review area. EF-4 appears to initiate just to the east of the review area and appeared to previously convey runoff from former agricultural fields in the neighboring properties east of the review area (Appendix D). EF-4 continues for a short distance before dissipating and becoming swale-like (see *Swales 1 – 5* above). EF-4 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-4 and the quick transition into S-1, EF-

4 appears to no longer receive flows or receive flows very infrequently, and does not convey flows downstream.

EF-5 is a slightly incised erosional feature located in the southeastern portion of the review area. EF-5 appears to have conveyed runoff downslope from the previous poultry farm operations, due to its location just south of the former locations of the poultry sheds. EF-5 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-5, EF-5 appears to no longer receive flows.

EF-6 is a sharply incised gully/erosional feature located in the central portion of the review area, just west of S-4 (see *Swales 1 – 5* above). EF-6 appears to have conveyed runoff from the previous poultry farm operations, due to its location just south of the former locations of the poultry sheds and the presence of a black pipe where EF-6 initiates, that is assumed to have outletted discharge from the former farming operations. EF-6 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, this erosional feature was determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-6, EF-6 appears to no longer receive flows and does not convey flows downstream into NWW-3B.

EF-7 is a gully/erosional feature located in the central portion of the review area, just south of EF-6, that connects to EF-8. Similar to EF-6, EF-7 appears to have conveyed runoff from the previous poultry farm operations, due to its location just south of the former locations of the poultry sheds and the presence of a black pipe where EF-7 initiates, that is assumed to have outletted discharge from the former farming operations. It appeared that EF-7 previously discharged into EF-8, which was a slightly less incised erosional feature. EF-7 and EF-8 exhibited a slight break in slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Thus, these erosional features were determined to not have an OHWM or defined bed and bank. Additionally, based on the established vegetation within EF-7 and EF-8, these erosional features appear to no longer receive flows and do not convey flows downstream into NWW-3B.

Ditch 1

D-1 (Figures 5A to 5C) is an earthen-bottom ditch that is located in the center of the review area, within the former locations of the poultry sheds. D-1, which is located within an area of non-native grassland, appears to have initiated as runoff from underneath a concrete slab associated with the poultry sheds, then continues west before traveling through a culverted pipe and becoming more incised at several points before abruptly terminating (see Appendix G, Photo 40). Based on the established vegetation and a review of historic aerials (Appendix D), D-1 is an abandoned ditch that was created between May 2002 and June 2003 to convey runoff away from the poultry sheds. D-1 displayed a break in bank slope but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other other OHWM indicators. Vegetation within the ditch was well established and contained some refuse from the former agricultural operations, indicating that this ditch likely no longer receives flows and does not convey flows downstream into NWW-3B1.

7 DEVIATION FROM NWI AND NHD

The delineated extent of NWW-3 generally occurs within the area mapped by the USFWS NWI as "Riverine" and the area mapped by the NRCS NHD as an ephemeral "Stream/River" in the southern portion of the review area. However, although the NWI designates this aquatic resource as intermittent (R4), based on field observations in April and June 2021, NWW-3 is expected to convey ephemeral flows (i.e., only in direct response to precipitation). The delineated extent of NWW-2 generally occurs within the area mapped by the NRCS NHD as an ephemeral "Stream/River" in the western portion of the review area. The delineated extent of B-1, B-2, B-3, B-4, and B-5 generally occur within five of the areas mapped by the NRCS NHD as "Reservoir"; two additional areas mapped by the NRCS NHD as "Reservoir" were inspected but were determined to not qualify as reservoirs based on a lack of cracked soils and concavity (see *Basins 1 – 5* above). USGS NHD and USFWS NWI do not map any additional aquatic resources within the review area.

8 RESULTS AND CONCLUSIONS

The results provided in this section include the extent of delineated aquatic resources within the review area based on observed field indicators of potential waters of the U.S., waters of the State, and CDFW streambed and associated wetland and/or riparian habitat per the methodologies discussed in Section 3.

This section, however, does not analyze the Corps' jurisdictional status of the delineated features per the current regulations, guidance, and standard operating procedures. A jurisdictional analysis for an AJD, along with the applicable JD request forms, will be provided under separate cover to the Corps.

8.1 CORPS

NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 displayed clear indicators of an OHWM, such as a break in bank slope, change in average sediment texture, and change in vegetation species and cover between the drainage and adjacent uplands (Figure 5A). However, these features did not meet the three wetland parameters.

As such, NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 may be considered non-wetland waters of the U.S. given the presence of an OHWM. Approximately 0.83 acre (7,483 linear feet) of potential non-wetland waters of the U.S. associated with NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 occur within the review area, as further detailed in Table 6 and as shown on Figure 5A. The ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is included as Appendix I.

Table 6. Aquatic Resource Summary: Corps

Aquatic Resource Name	Cowardin Code	Active Channel Width Range (Feet)	Observed OHWM Indicators[1]	Observed Wetland Parameters[2]	Presence of OHWM/ Wetland	Dominant Vegetation[3]	Location (lat, long)	Acre(s)	Linear Feet
NWW-1	R6	4 – 6	CVC, BBS; see NWW-1A[4]	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.965908, -117.025153	0.02	175
NWW-1A	R6	6 – 6	CVC, BBS	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.966006, -117.025084	0.02	156
NWW-2	R6	3 – 4	CVC, BBS	None	Yes/No	Non-native Grassland; See WDP 2	33.964929, -117.023925	0.09	1,018
NWW-2A	R6	1 – 2	CVC, BBS; see NWW-2[4]	None; see NWW-2[5]	Yes/No	Mulefat Scrub; See WDP 3	33.964977, -117.022656	<0.01	168
NWW-2B	R6	3 – 3	CVC, BBS; see NWW-2[4]	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.965185, -117.022994	0.01	175
NWW-2C	R6	3 – 3	CVC, BBS; see NWW-2[4]	None; see NWW-2[5]	Yes/No	Non-native Grassland; See WDP 2	33.964845, -117.023224	0.01	109
NWW-3	R6	4 – 8	CAST, CVS, CVC, BBS	HV	Yes/No	Mulefat Scrub; See WDP 3	33.962391, -117.021747	0.39	2,710
NWW-3A	R6	3 – 6	CAST, CVS, BBS	HV; see NWW-3[5]	Yes/No	Non-native Grassland; See WDP 2	33.962760, -117.018132	0.15	1,290
NWW-3B	R6	4 – 4	CAST, CVS, BBS; see NWW-3A[4]	HV; see NWW-3[5]	Yes/No	Mulefat Scrub; See WDP 3	33.963540, -117.022834	0.12	1,273
NWW-3B1	R6	1 – 4	CAST, CVS, BBS; see NWW-3A[4]	HV; see NWW-3[5]	Yes/No	Non-native Grassland; See WDP 2	33.964055, -117.021934	0.03	409
							Total[6]	**0.83**	**7,483**

[1] OHWM Indicators: CAST = Change in average sediment texture; CVS = Change in vegetation species; CVC = Change in vegetation cover; BBS = Break in bank slope
[2] Wetland Indicators: HV = Hydrophytic vegetation
[3] See Figure 6 for all vegetation communities present within each aquatic resource.
[4] Based on a representative ODP taken within an aquatic resource with similar conditions.
[5] Based on a representative WDP taken within an aquatic resource with similar conditions.
[6] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

8.2 CDFW

NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 qualify as CDFW streambed with associated riparian habitat.

Approximately 8.00 acres (7,483 linear feet) of vegetated streambed and 1.01 acres of associated riparian habitat occur within the review area, as further detailed in Table 7 and as shown on Figure 5B.

Table 7. Aquatic Resource Summary: CDFW

Aquatic Resource Name	Aquatic Resource Type	Vegetation Community	Width Range[1] (Feet)	Location (lat, long)	Acre(s)	Linear Feet[2]
NWW-1	Vegetated Streambed	Non-native Grassland	9 – 21	33.965912, -117.025153	0.06	175
		Torrey's Scrub Oak		33.965905, -117.025193	0.01	
NWW-1A	Vegetated Streambed	Non-native Grassland	8 – 30	33.966014, -117.025085	0.07	156
NWW-2	Vegetated Streambed	Non-native Grassland	15 – 60	33.964951, -117.023674	0.71	1,018
		Torrey's Scrub Oak		33.964834, -117.024985	0.12	
NWW-2A	Vegetated Streambed	Non-native Grassland	1 – 2	33.965173, -117.023011	<0.01	168
		Mulefat Scrub		33.964970, -117.022752	<0.01	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.964966, -117.022542	0.03	–
NWW-2B	Vegetated Streambed	Non-native Grassland	9 – 49	33.964825, -117.023223	0.08	175
NWW-2C	Vegetated Streambed	Non-native Grassland	20 – 47	33.962269, -117.020283	0.07	109
NWW-3	Vegetated Streambed	Non-native Grassland	12 – 140	33.962377, -117.022101	2.37	2,710
		Mulefat Scrub		33.962547, -117.021943	1.05	
		Eucalyptus Woodland		33.963045, -117.023804	0.07	
		Non-native Riparian		33.961260, -117.018464	1.02	
		Blue Elderberry		33.963695, -117.025272	0.11	
		Riversidean Sage Scrub		33.962362, -117.019172	0.03	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.962322, -117.022037	0.03	–
		Non-native Riparian		33.962170, -117.020330	0.69	

Aquatic Resource Name	Aquatic Resource Type	Vegetation Community	Width Range[1] (Feet)	Location (lat, long)	Acre(s)	Linear Feet[2]
		Blue Elderberry		33.961528, -117.018718	0.04	
NWW-3A	Vegetated Streambed	Non-native Grassland	6 – 65	33.963610, -117.020925	0.87	1,290
		Blue Elderberry		33.962783, -117.018163	0.14	
	Riparian Habitat[3]	Blue Elderberry	N/A	33.962425, -117.019001	0.01	—
NWW-3B	Vegetated Streambed	Non-native Grassland	20 – 70	33.963566, -117.022903	0.36	1,273
		Mulefat Scrub		33.963562, -117.023254	0.61	
		Riversidean Sage Scrub		33.963522, -117.022922	0.07	
	Riparian Habitat[3]	Mulefat Scrub	N/A	33.963617, -117.022422	0.21	—
NWW-3B1	Vegetated Streambed	Non-native Grassland	5 – 30	33.964098, -117.021923	0.18	409
				Total[4]	**9.01**	**7,483**

[1] Corresponds with the approximate stream bank widths observed during delineation. Width range accounts for entirety of streambed delineated, not individual vegetation communities.
[2] Linear feet not calculated for individual aquatic resource type and vegetation community (including riparian habitat that occurs outside of delineated streambed) to avoid redundant linear foot calculation where such areas overlap.
[3] Occurs outside of delineated streambed.
[4] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

8.3 RWQCB

NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 displayed clear indicators of an OHWM, such as a break in bank slope, change in average sediment texture, and change in vegetation species and cover between the drainage and adjacent uplands (Appendix E). However, based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project (Santa Ana RWQCB 2022), the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat). As such, NWW-1, NWW-1A, NWW-2, NWW-2A, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1, to the top of the channel banks and including associated riparian habitat, may be considered waters of the State (Figure 5C). These features did not meet the three wetland parameters.

Approximately 8.00 acres (7,483 linear feet) of potential non-wetland waters of the State and 1.01 acres of associated riparian habitat occur within the review area, as further detailed in Table 8 and as shown on Figure 5C.

Table 8. Aquatic Resource Summary: RWQCB

Aquatic Resource Name	Aquatic Resource Type[1]	Cowardin Code	Active Channel Width Range (Feet)[2]	Observed Wetland Parameters[3]	Presence of OHWM/ Wetland	Dominant Vegetation[4]	Location (lat, long)	Acre(s)	Linear Feet[5]
NWW-1	Non-Wetland Water	R6	9 – 21	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.965911, -117.025160	0.07	175
NWW-1A	Non-Wetland Water	R6	8 – 30	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.966014, -117.025085	0.07	156
NWW-2	Non-Wetland Water	R6	15 – 60	None	Yes/No	Non-native Grassland; See WDP 2	33.964934, -117.023860	0.82	1,018
NWW-2A	Non-Wetland Water	R6	1 – 2	None; see NWW-2[6]	Yes/No	Mulefat Scrub; See WDP 3	33.964970, -117.022603	<0.01	168
	Riparian Habitat[7]	RP	N/A	None	No/No	Mulefat Scrub	33.964966, -117.022542	0.03	—
NWW-2B	Non-Wetland Water	R6	9 – 49	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.965173, -117.023011	0.08	175
NWW-2C	Non-Wetland Water	R6	20 – 47	None; see NWW-2[6]	Yes/No	Non-native Grassland; See WDP 2	33.964825, -117.023223	0.07	109
NWW-3	Non-Wetland Water	R6	12 – 140	HV	Yes/No	Non-native Grassland; See WDP 3	33.962631, -117.022409	4.66	2,710
	Riparian Habitat[7]	RP	N/A	None	No/No	Non-native Riparian	33.962302, -117.021813[8]	0.76	—
NWW-3A	Non-Wetland Water	R6	6 – 65	HV; see NWW-3[6]	Yes/No	Non-native Grassland; See WDP 2	33.962732, -117.018281	1.01	1,290
	Riparian Habitat[7]	RP	N/A	None	No/No	Blue Elderberry	33.962362, -117.019172	0.01	—
NWW-3B	Non-Wetland Water	R6	20 – 70	HV; see NWW-3[6]	Yes/No	Mulefat Scrub; See WDP 3	33.963595, -117.022740	1.04	1,273
	Riparian Habitat[7]	RP	N/A	None	No/No	Mulefat Scrub	33.963610, -117.020925	0.21	—
NWW-3B1	Non-Wetland Water	R6	5 – 30	HV; see NWW-3[6]	Yes/No	Non-native Grassland; See WDP 2	33.964098, -117.021923	0.18	409
							Total[9]	9.01	7,483

[1] Based on comments provided by the Santa Ana RWQCB, the RWQCB has asserted jurisdiction beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat).
[2] Based on comments provided by the Santa Ana RWQCB, the widths of RWQCB-jurisdictional non-wetland waters correspond with the approximate CDFW stream bank widths observed during delineation (i.e., to the top of the channel banks).
[3] Wetland Indicators: HV = Hydrophytic vegetation
[4] See Figure 6 for all vegetation communities present within each aquatic resource.
[5] Linear feet not calculated for riparian habitat that occurs outside of non-wetland waters to avoid redundant linear foot calculation where such areas overlap.
[6] Based on a representative WDP taken within an aquatic resource with similar conditions.

[7] Based on comments provided by the Santa Ana RWQCB, RWQCB jurisdiction extends beyond the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and associated riparian habitat). This riparian habitat occurs outside of the delineated non-wetland water (i.e., the top of channel banks).
[8] Representative coordinates of riparian habitat associated with NWW-3. See Figure 5C for all riparian habitat associated with NWW-3.
[9] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus the sum of the total rounded numbers may not directly add up in this table.

8.4 DISCLAIMER STATEMENT

The aquatic resources acreages and linear feet estimated in this section represent the existing conditions during the time of the field surveys. Please note that the applicable agencies will make final jurisdictional determinations. RBC recommends early coordination with the resource agencies to determine the final jurisdictional boundaries, applicable permitting processes, compensatory mitigation requirements, and other potential permitting issues specific to the proposed work within the review area. Agency representatives may request to access the site to field-verify the results of this ARDR with the applicant, or a designated representative.

The information provided in this report should remain valid for up to five years from the date of the field effort for the jurisdictional delineation unless site conditions change substantially, or a regulatory agency requires an updated report.

9 CONTACT INFORMATION

Applicant/Land Owner:

Andrew Greybar

Exeter Cherry Valley Land, LLC

5060 North 40th Street, Suite 108

Phoenix, AZ 85018

andrew.greybar@eqtexeter.com

708-341-9821

Agent:

Shanti Santulli

Rocks Biological Consulting

4312 Rialto Street

San Diego, CA 92107

shanti@rocksbio.com

619-674-8067

Agency access to the review area can be coordinated with the applicant and/or agent upon request.

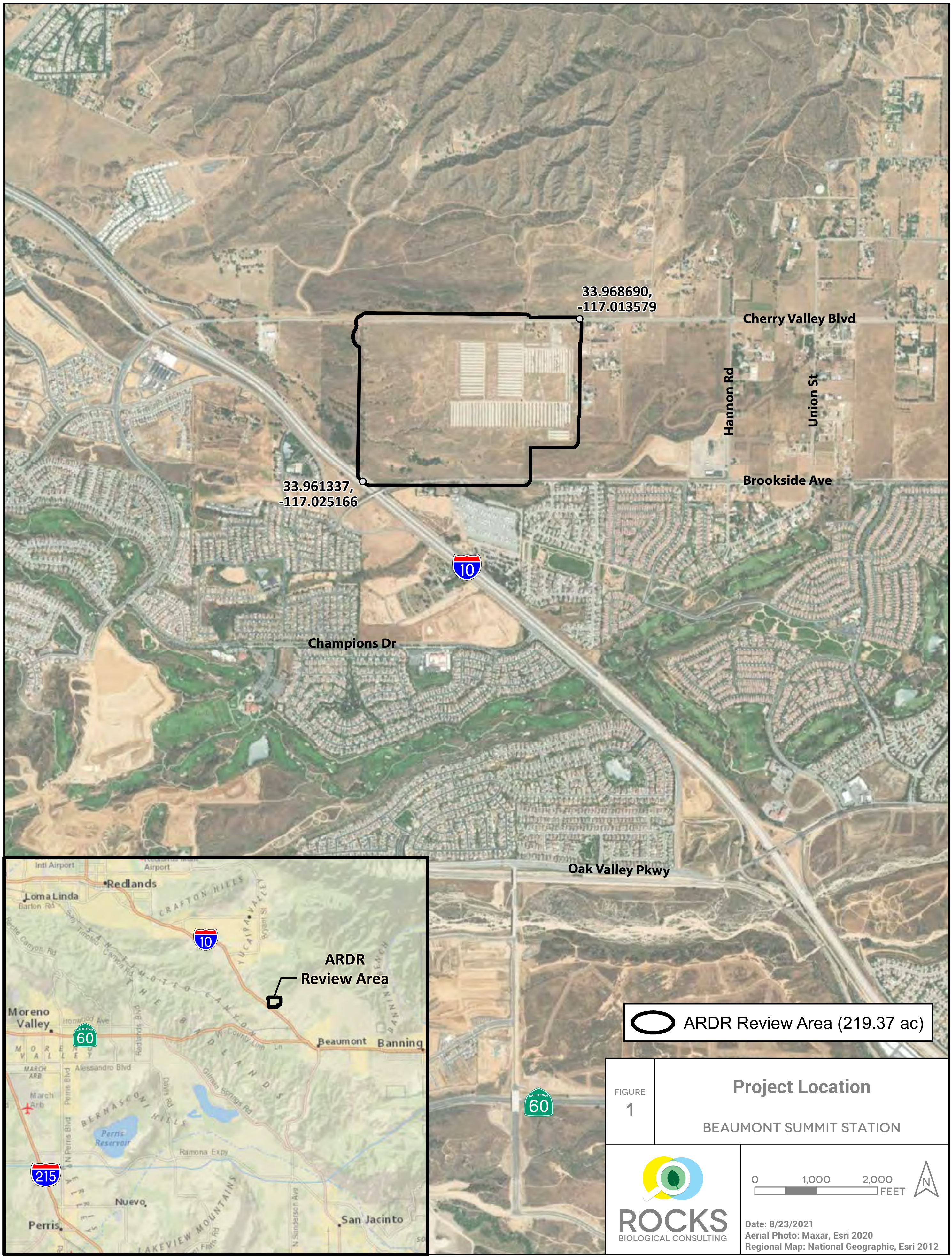
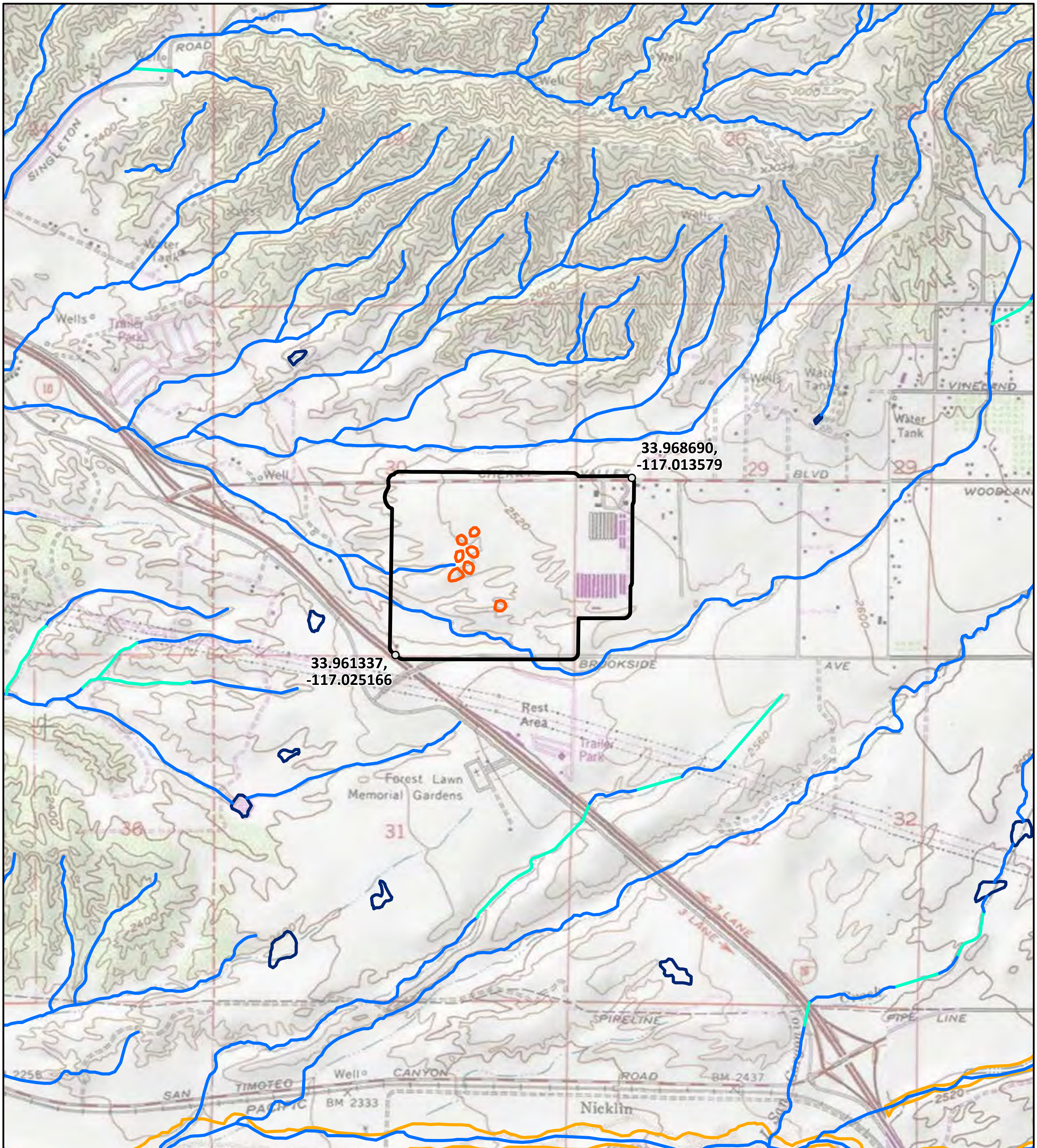


FIGURE 1 Project Location

BEAUMONT SUMMIT STATION



ARDR Review Area

National Hydrography Dataset (NHD)

- Stream/River
- Connector
- Wash
- Reservoir
- Lake/Pond

FIGURE 2

USGS Topo and NHD

BEAUMONT SUMMIT STATION

ROCKS
BIOLOGICAL CONSULTING

0 1,000 2,000 FEET

N

Date: 8/23/2021
Source: USGS NHD 2020
USGS 7.5' Quadrangles (El Casco);
T2S, R1W, S29-31, San Jacinto/
San Gorgonio Land Grant

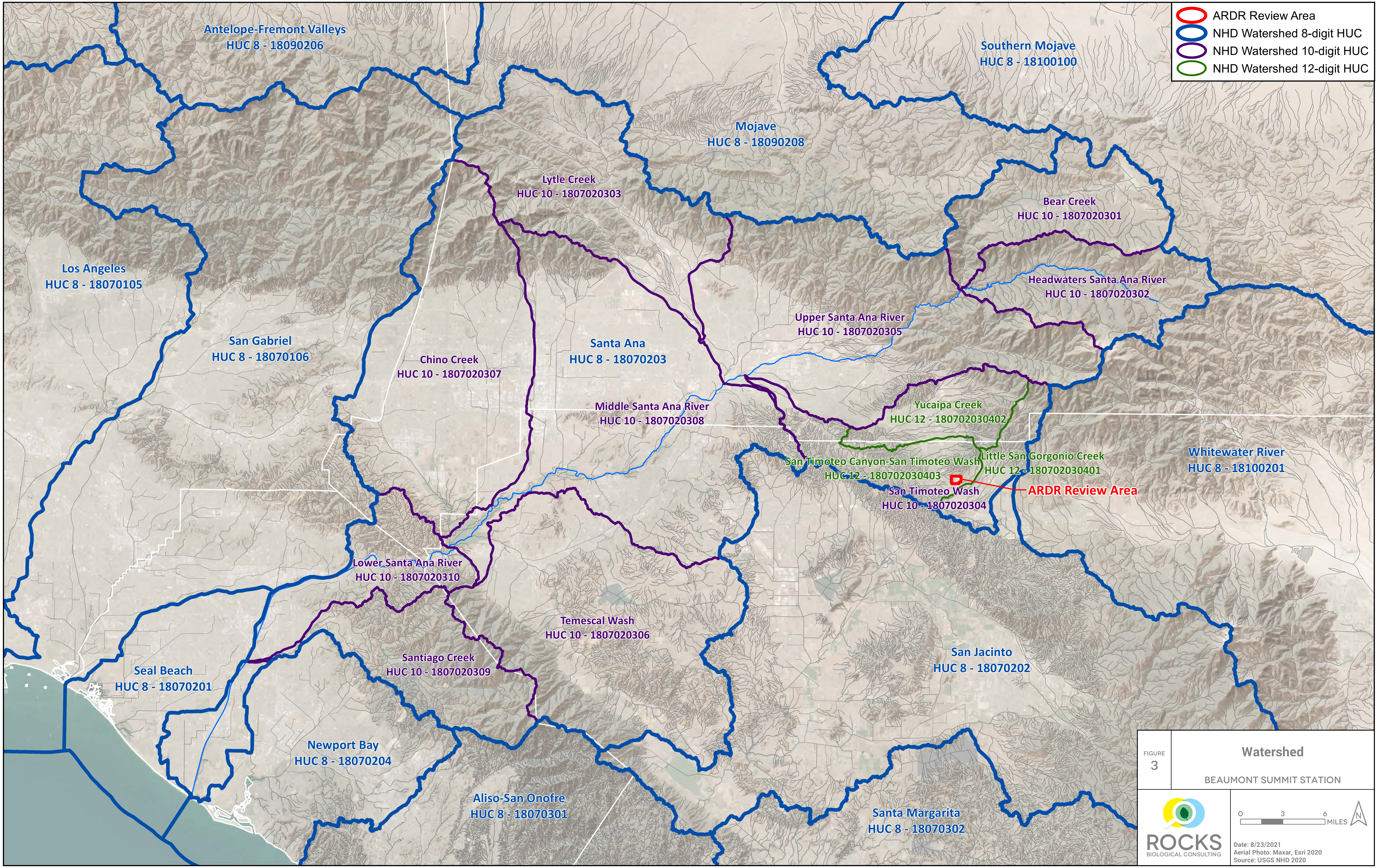
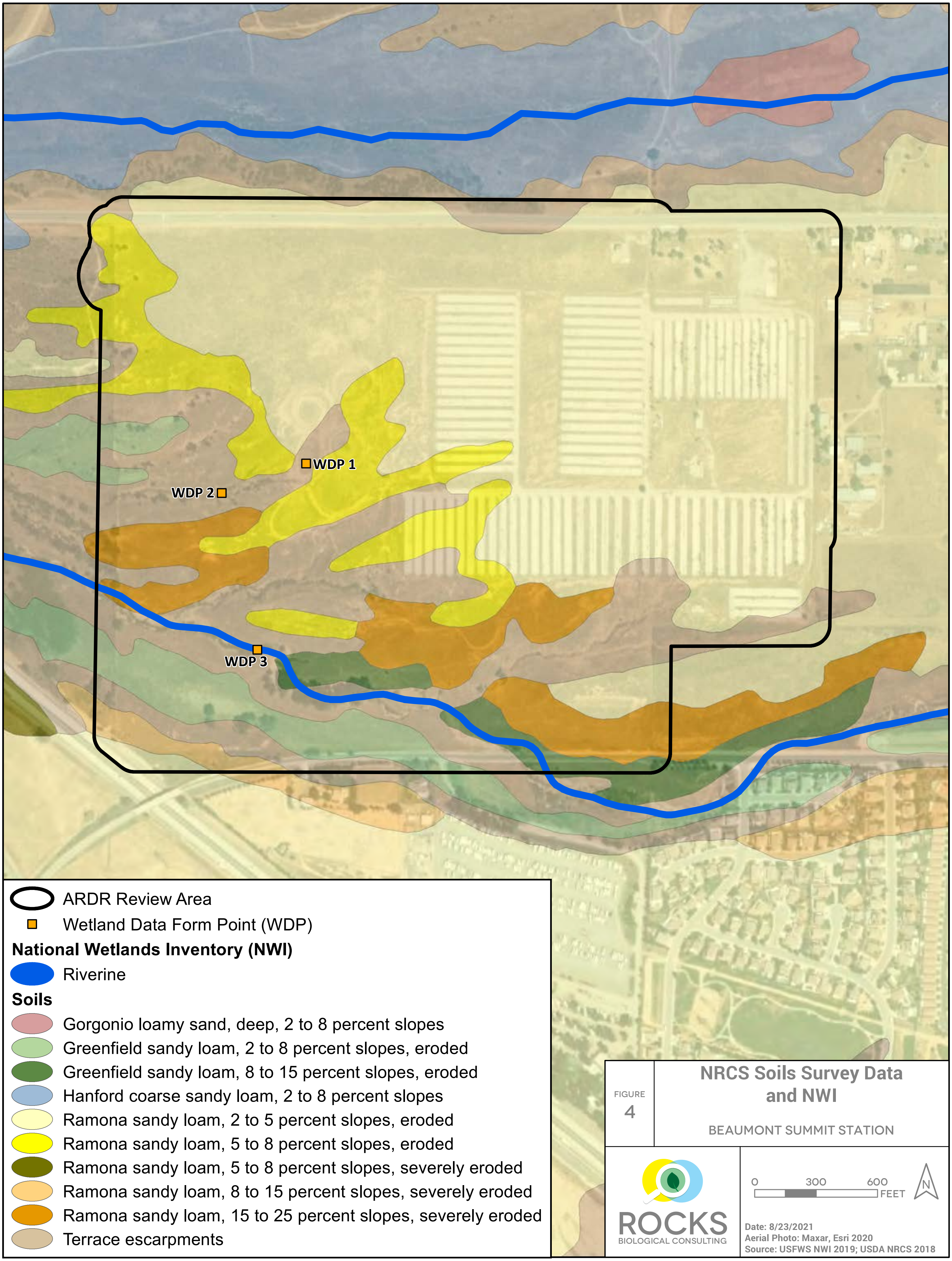


FIGURE 3 Watershed

BEAUMONT SUMMIT STATION



ARDR Review Area

Wetland Data Form Point (WDP)

National Wetlands Inventory (NWI)

Riverine

Soils

Gorgonio loamy sand, deep, 2 to 8 percent slopes

Greenfield sandy loam, 2 to 8 percent slopes, eroded

Greenfield sandy loam, 8 to 15 percent slopes, eroded

Hanford coarse sandy loam, 2 to 8 percent slopes

Ramona sandy loam, 2 to 5 percent slopes, eroded

Ramona sandy loam, 5 to 8 percent slopes, eroded

Ramona sandy loam, 5 to 8 percent slopes, severely eroded

Ramona sandy loam, 8 to 15 percent slopes, severely eroded

Ramona sandy loam, 15 to 25 percent slopes, severely eroded

Terrace escarpments

FIGURE 4

NRCS Soils Survey Data and NWI

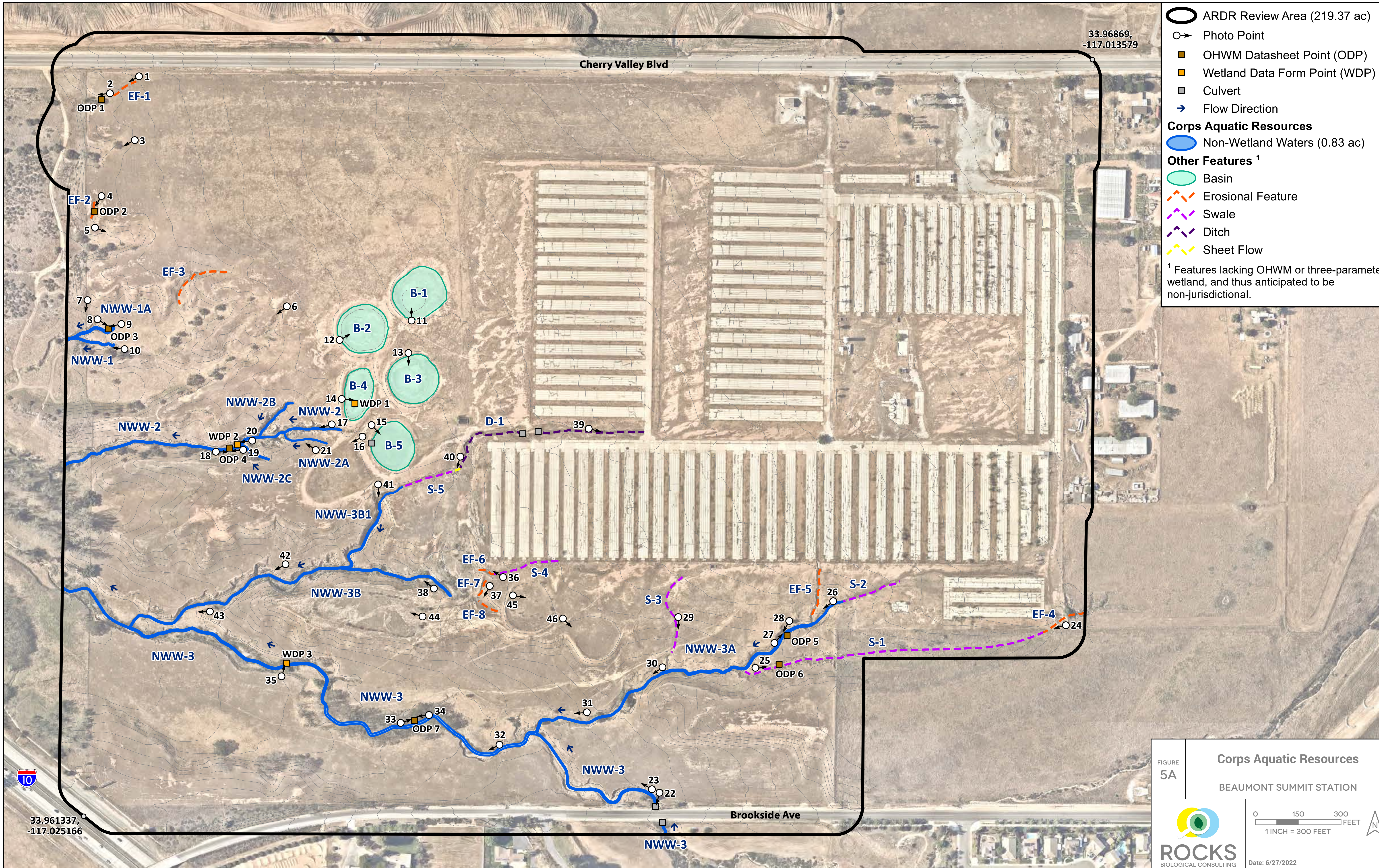
BEAUMONT SUMMIT STATION

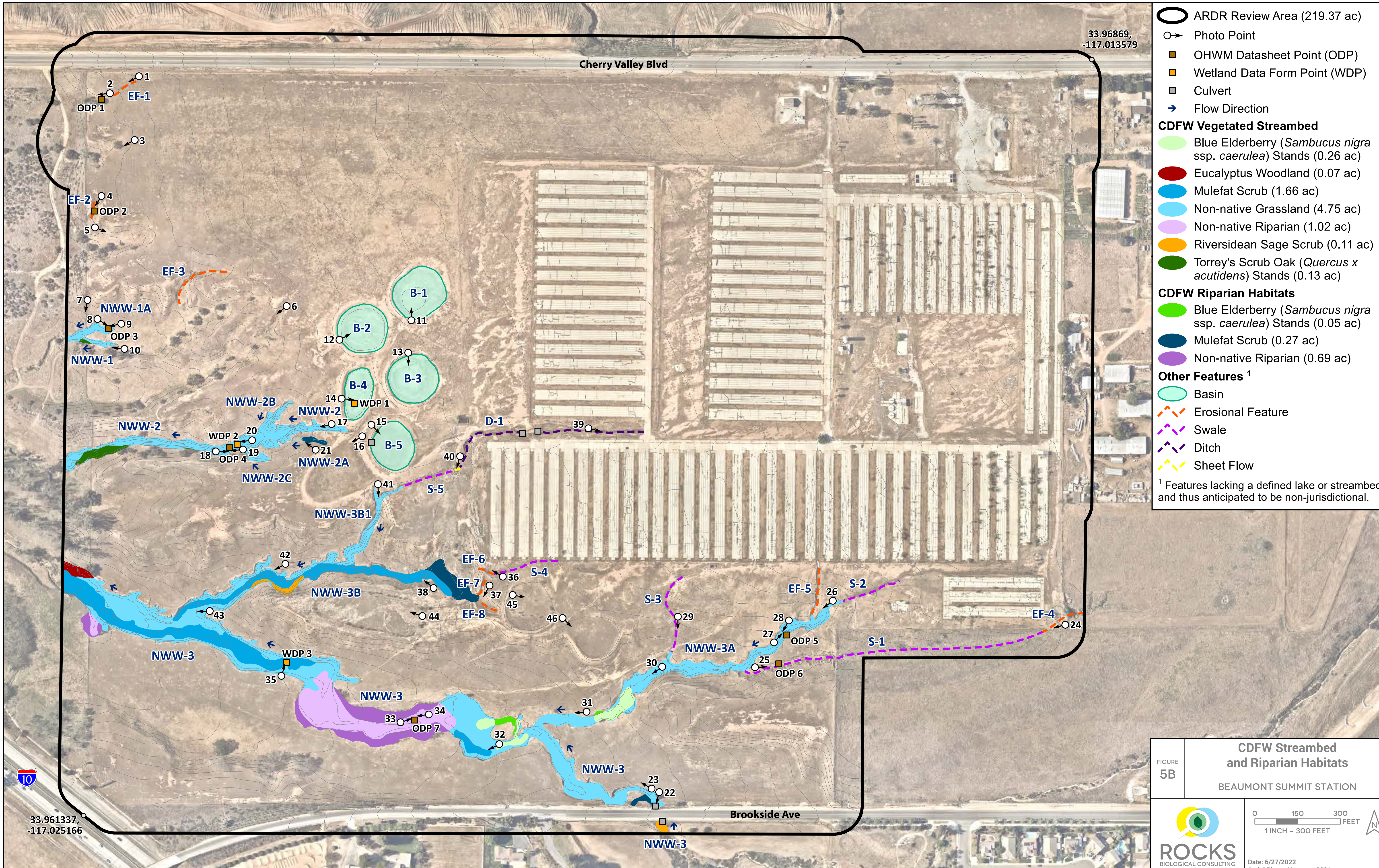
ROCKS BIOLOGICAL CONSULTING

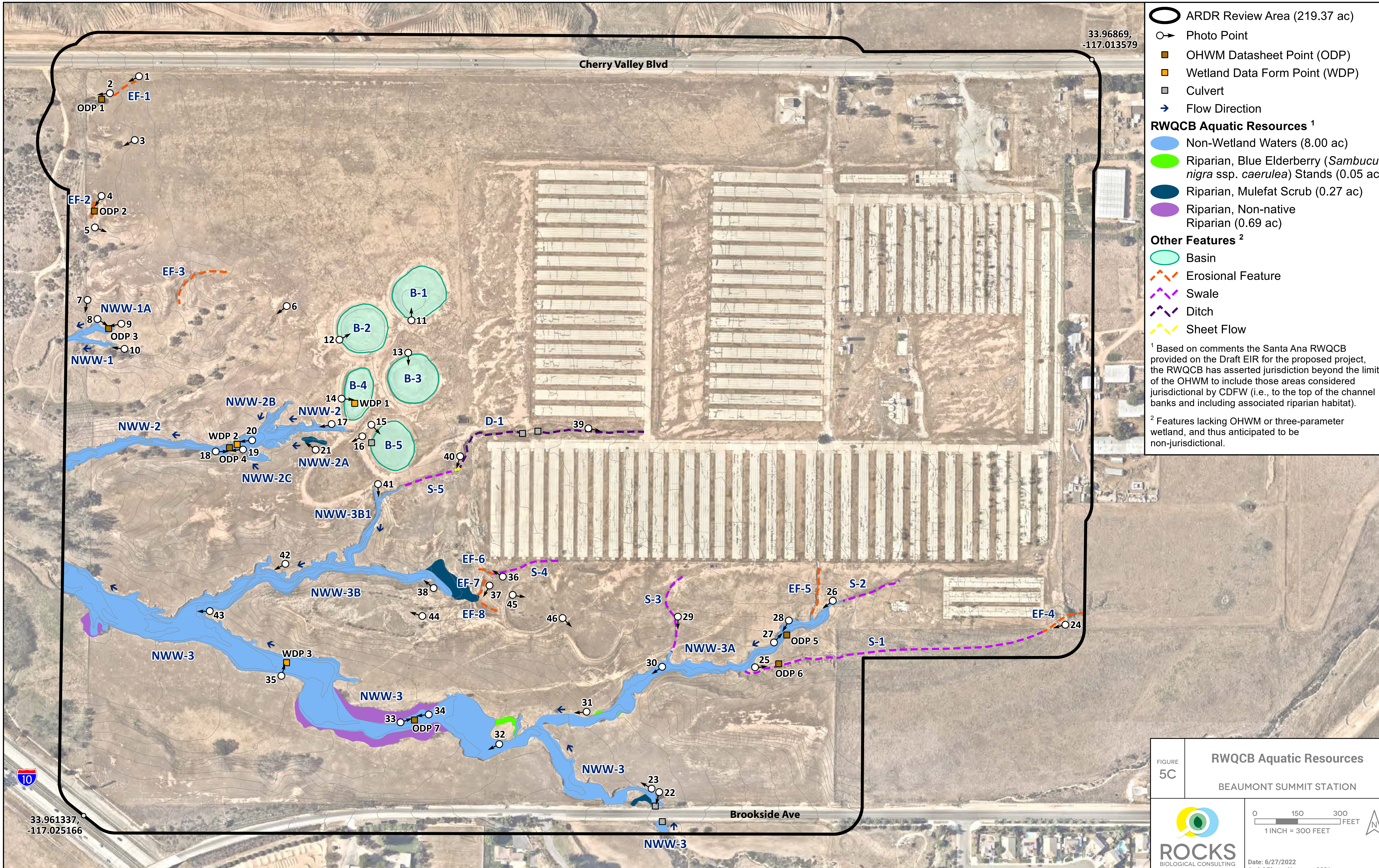
0 300 600 FEET

N

Date: 8/23/2021
Aerial Photo: Maxar, Esri 2020
Source: USFWS NWI 2019; USDA NRCS 2018


ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
Corps Aquatic Resources
Non-Wetland Waters (0.83 ac)
Other Features [1]
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
[1] Features lacking OHWM or three-parameter wetland, and thus anticipated to be non-jurisdictional.
Cherry Valley Blvd
Brookside Ave
33.96869, -117.013579
33.961337, -117.025166
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
ODP 1
ODP 2
ODP 3
ODP 4
ODP 5
ODP 6
ODP 7
WDP 1
WDP 2
WDP 3
NWW-1
NWW-1A
NWW-2
NWW-2A
NWW-2B
NWW-2C
NWW-3
NWW-3A
NWW-3B
NWW-3B1
B-1
B-2
B-3
B-4
B-5
D-1
S-1
S-2
S-3
S-4
S-5
10
FIGURE
5A
Corps Aquatic Resources
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0 150 300 FEET
1 INCH = 300 FEET
Date: 6/27/2022
Aerial Photo: Nearmap 2021


ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
CDFW Vegetated Streambed
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands (0.26 ac)
Eucalyptus Woodland (0.07 ac)
Mulefat Scrub (1.66 ac)
Non-native Grassland (4.75 ac)
Non-native Riparian (1.02 ac)
Riversidean Sage Scrub (0.11 ac)
Torrey's Scrub Oak (*Quercus x acutidens*) Stands (0.13 ac)
CDFW Riparian Habitats
Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) Stands (0.05 ac)
Mulefat Scrub (0.27 ac)
Non-native Riparian (0.69 ac)
Other Features [1]
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
[1] Features lacking a defined lake or streambed, and thus anticipated to be non-jurisdictional.
Cherry Valley Blvd
Brookside Ave
33.96869, -117.013579
33.961337, -117.025166
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
ODP 1
ODP 2
ODP 3
ODP 4
ODP 5
ODP 6
ODP 7
WDP 1
WDP 2
WDP 3
NWW-1
NWW-1A
NWW-2
NWW-2A
NWW-2B
NWW-2C
NWW-3
NWW-3A
NWW-3B
NWW-3B1
B-1
B-2
B-3
B-4
B-5
D-1
S-1
S-2
S-3
S-4
S-5
10
FIGURE 5B
CDFW Streambed and Riparian Habitats
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 150 300 FEET
1 INCH = 300 FEET
N
Date: 6/27/2022
Aerial Photo: Nearmap 2021



ARDR Review Area (219.37 ac)
Photo Point
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Flow Direction
RWQCB Aquatic Resources [1]
Non-Wetland Waters (8.00 ac)
Riparian, Blue Elderberry (Sambucus nigra ssp. caerulea) Stands (0.05 ac)
Riparian, Mulefat Scrub (0.27 ac)
Riparian, Non-native Riparian (0.69 ac)
Other Features [2]
Basin
Erosional Feature
Swale
Ditch
Sheet Flow
[1] Based on comments the Santa Ana RWQCB provided on the Draft EIR for the proposed project, the RWQCB has asserted jurisdiction beyond the limits of the OHWM to include those areas considered jurisdictional by CDFW (i.e., to the top of the channel banks and including associated riparian habitat).
[2] Features lacking OHWM or three-parameter wetland, and thus anticipated to be non-jurisdictional.
Cherry Valley Blvd
Brookside Ave
33.96869, -117.013579
33.961337, -117.025166
10
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
ODP 1
ODP 2
ODP 3
ODP 4
ODP 5
ODP 6
ODP 7
WDP 1
WDP 2
WDP 3
NWW-1
NWW-1A
NWW-2
NWW-2A
NWW-2B
NWW-2C
NWW-3
NWW-3A
NWW-3B
NWW-3B1
B-1
B-2
B-3
B-4
B-5
D-1
S-1
S-2
S-3
S-4
S-5
FIGURE 5C
RWQCB Aquatic Resources
BEAUMONT SUMMIT STATION
ROCKS BIOLOGICAL CONSULTING
0 150 300 FEET
1 INCH = 300 FEET
N
Date: 6/27/2022
Aerial Photo: Nearmap 2021

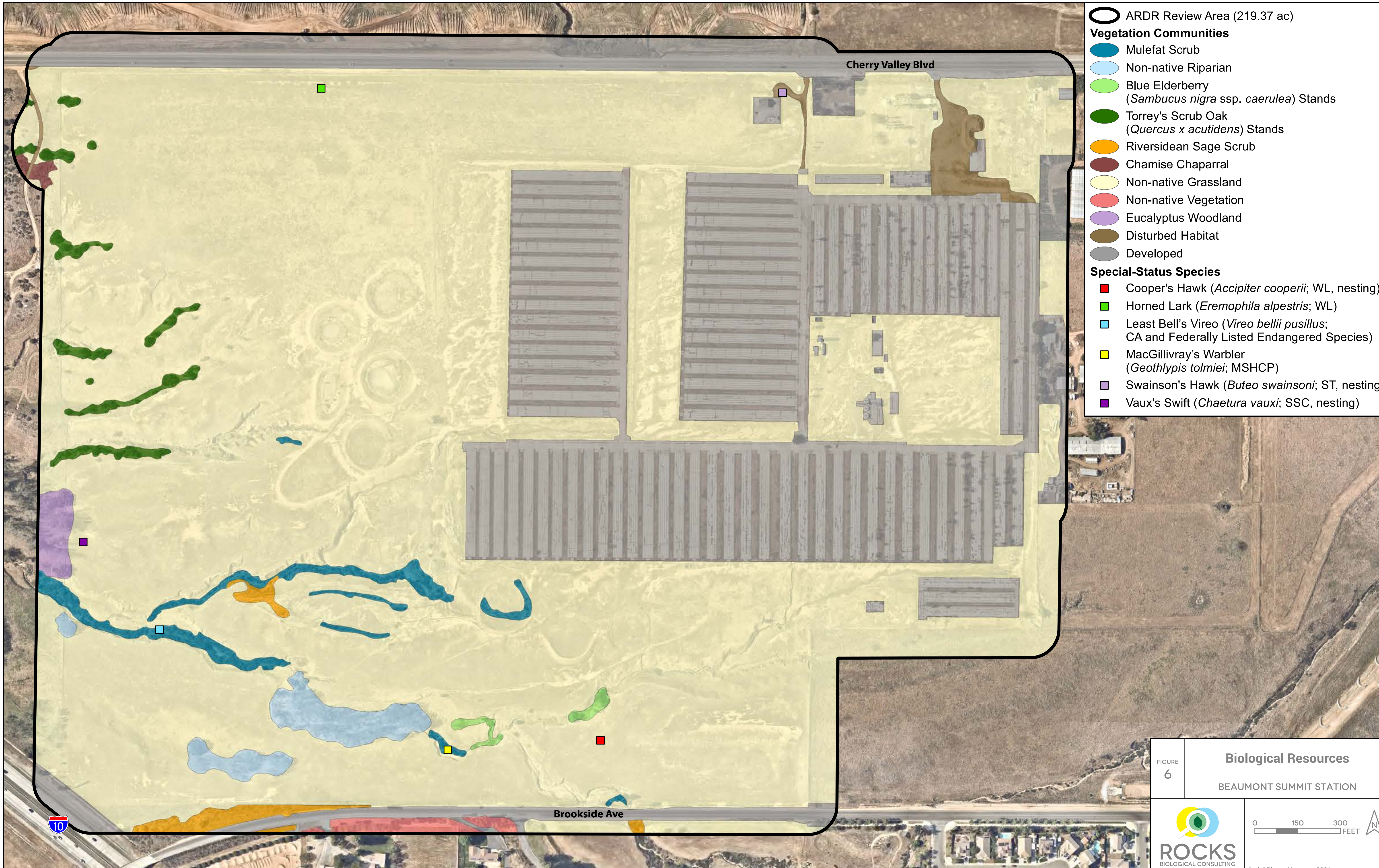


FIGURE 6 Biological Resources

BEAUMONT SUMMIT STATION

APPENDIX A

CHECKLIST: MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS

APPENDIX A. CHECKLIST: MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS, LOS ANGELES DISTRICT REGULATORY DIVISION, USACE, MARCH 16, 2017

REPORT SECTION/ PAGE NUMBER	MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS	ADDITIONAL NOTES
Section 1; Appendix B	1. JD REQUEST AND FORMS: ☑ A cover letter indicating whether you are requesting a jurisdictional determination (JD)*. ☑ If you are requesting a JD, you must complete, sign, and return the Request for Corps Jurisdictional Determination (JD) sheet. ☑ For preliminary jurisdictional determinations the Preliminary Jurisdictional Determination Form must be signed and submitted.	
Section 9	2. CONTACT INFORMATION: Contact information for the ☑ applicant(s), ☑ property owner(s), and ☑ agent(s).	
N/A	3. SITE ACCESS: If the property owner or their representatives will not accompany the Corps to the site, a signed statement from the property owner(s) allowing Corps personnel to enter the property and to collect samples during normal business hours. If the property lacks direct access by public roads (in other words, access requires passage through private property not owned by the applicant), the owner or proponent must obtain permission from the adjacent property owner(s) to provide access for Corps personnel.	Property owner and/or representatives will accompany the Corps for a site visit upon request.
Section 2.1	4. LOCATION: ☑ Directions to the survey area, ☐ an address (if available) and ☑ one or more set of geographic coordinates expressed in decimal degrees.	
Section 3.2.1	5. DELINEATION MANUAL CONFIRMATION: ☑ A statement confirming the delineation has been conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and applicable regional supplement(s). ☑ The regional supplement(s) used must be identified. ☑ For OHWM delineations, a statement must be included confirming the use of the OHWM field guide or that it is not applicable.	
Section 6	6. AQUATIC RESOURCE(S) DESCRIPTION: ☑ A narrative describing all aquatic resources on-site and an explanation of the mapped boundaries and any complex transition zones. ☑ If the site contains resources that only meet one or two of the three wetland criteria or do not exhibit a clear OHWM, describe the rationale for their inclusion or exclusion from the delineation. ☑ Also explain if any erosional features, upland swales, ditches and other potential aquatic features were considered but not included in the delineation.	
Figures 1 and 5A; Section 6; Table 6	7. AQUATIC RESOURCE MAPPING AND ACREAGE: ☑ Map of the outside survey boundary, ☑ total extent of aquatic and proposed non-aquatic features, ☑ type of feature(s) (waters of the United States or wetland), and include ☑ the total acreage for each polygon.	
Section 3.2; Table 1	8. FIELD WORK DATES: ☑ Date(s) field work was completed.	
Table 6	9. AQUATIC RESOURCE TABLE: A table listing all aquatic resources. The table must include ☑ the name of each aquatic resource (actual or arbitrary), ☑ its Cowardin type, ☑ acreage, ☑ summary of OHWM/wetland presence, ☑ dominant vegetation for each, and ☑ location (latitude/longitude in decimal degrees). ☑ For linear features, the table must show both acreage and linear feet as well as channel measurements (active channel width).	
Section 4; Tables 1, 4, and 5; Appendices F and G	10. FIELD CONDITIONS: A description of existing field conditions, including ☑ current land use, ☑ normal conditions, ☑ flood/drought conditions, ☐ irrigation practices, ☑ past or recent manipulation to the site, and ☐ characteristics considered atypical (for criteria see OHWM and wetland supplement guides). ☑ Include WETS tables or pre-site visit precipitation data as appropriate: https://www.wcc.nrcs.usda.gov/climate/wets_doc.html.*	N/A for unchecked; APT data provided in

		lieu of WETS tables
Section 4.2	11. HYDROLOGY: ☑ A discussion of the hydrology at the site, including ☑ all known surface or subsurface sources, ☑ drainage gradients, ☑ downstream connections to the nearest traditional navigable waterway or interstate water, and ☑ any influence from manmade water sources such as irrigation.	
N/A	12. REMOTE SENSING: ☐ If remote sensing was used in the delineation, provide an explanation of how it was used and include the name, date and source of the tools and data used and copies of the maps/photographs.	N/A
Section 4.1; Table 2; Figure 4; Appendix G	13. SOILS: ☑ Soil descriptions, ☑ soil map(s), ☑ soil photos, and ☑ a discussion of hydric soils (for wetland delineations only).	
Figure 2	14. USGS QUADRANGLE: ☑ A site location map on a 7.5-minute USGS quadrangle. The map must provide ☑ the name of the USGS quadrangle, ☑ Section, ☑ Township, ☑ Range, and ☑ the latitude and longitude in decimal degree format.	
Appendix I	15. BULK UPLOAD FORM: ☑ For sites with 3 or more separate aquatic features a completed copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet must be submitted.	
Figure 5 series	16. FIGURES: ☑ Map(s) of all delineated aquatic resources in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program.	
Figure 5 series and Appendix G	17. SITE PHOTOGRAPHS: ☑ Ground photographs showing representative aquatic resource sites (or lack of), ☑ as well as an accompanying map of photo-points and table of photographic information (see Final Map and Drawing Standards for the South Pacific Division Regulatory Program item no. 8 a-c).	
Appendix E	18. DATA FORMS: ☑ Completed data forms including all essential information to make a jurisdictional determination [e.g. 2006 Wetland Determination Data Form -- Arid West Supplement; 2010 Arid West Ephemeral and Intermittent Streams OHWM Datasheet].	
Section 3	19. METHODS: ☑ A description of the methods used to survey the aquatic resource boundaries. ☑ If GPS data is used, the level of accuracy must be included. Ideally, the GPS equipment should have the capability of sub-meter (<=1 meter) level horizontal accuracy.	
Appendix J	20. GIS DATA: ☑ Digital data for the site, aquatic resource boundaries, and data point locations must be provided in a geographic information system (GIS) format, preferably either ESRI shapefiles or Geodatabase format, but GoogleEarth KMZ or KML files may be acceptable non-complex projects. Each GIS data file must be accompanied by a metadata file containing the appropriate geographic coordinate system, projection, datum, and labeling description. If GIS data is unavailable or otherwise cannot be produced and the Corps determines a site visit is necessary, the aquatic resource boundaries should be physically marked with numbered flags or stakes to facilitate verification by the Corps.	

APPENDIX B

JURISDICTIONAL DETERMINATION REQUEST FORMS

Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: District Name Here

- I am requesting a JD on property located at: South of Cherry Valley Blvd., north of Brookside Ave., and east/northeast of I-10
  (Street Address)
  City/Township/Parish: Beaumont County: Riverside State: CA
  Acreage of Parcel/Review Area for JD: 215.96
  Section: 30 Township: 2 S Range: 1 W
  Latitude (decimal degrees): 33.965141 Longitude (decimal degrees): -117.019732
  (For linear projects, please include the center point of the proposed alignment.)
- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- ✔ I currently own this property. ___ I plan to purchase this property.
  ___ I am an agent/consultant acting on behalf of the requestor.
  ___ Other (please explain): ________________.
- Reason for request: (check as many as applicable)
  ___ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
  ___ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
  ___ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
  ✔ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
  ___ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
  ___ A Corps JD is required in order to obtain my local/state authorization.
  ___ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
  ___ I believe that the site may be comprised entirely of dry land.
  ___ Other: ________________
- Type of determination being requested:
  ___ I am requesting an approved JD.
  ✔ I am requesting a preliminary JD.
  ___ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
  ___ I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

*Signature: ________________ Date: ________________

- Typed or printed name: Andrew Greybar
  Company name: Exeter Cherry Valley Land, LLC
  Address: 5060 North 40th Street, Suite 108
  Phoenix, AZ 85018
  Daytime phone no.: 708-341-9821
  Email address: andrew.greybar@eqtexeter.com

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Appendix 2 - **PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM**

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD:

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Andrew Greybar, Exeter Cherry Valley Land, LLC 5060 North 40th Street, Suite 108 Phoenix, AZ 85018

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Los Angeles District

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: CA County/parish/borough: Riverside City: Beaumont

Center coordinates of site (lat/long in degree decimal format):

Lat.: 33.965141 Long.: -117.019732

Universal Transverse Mercator: 11S 498177.05m E 3758291.07m N

Name of nearest waterbody: San Timoteo Wash

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
		SEE	ATTACHED		

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: 2022 ARDR, prepared by Rocks Biological Consulting.
- ☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report. Rationale: ________.
- ☐ Data sheets prepared by the Corps: ________.
- ☐ Corps navigable waters' study: ________.
- ☒ U.S. Geological Survey Hydrologic Atlas: 2022 ARDR, Figure 2; USGS NHD 2020.
  - ☒ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: USGS 7.5-minute El Casco quad.
- ☒ Natural Resources Conservation Service Soil Survey. Citation: 2022 ARDR, Figure 4; USDA NRCS 2018.
- ☒ National wetlands inventory map(s). Cite name: 2022 ARDR, Figure 4; USFWS NWI 2019.
- ☐ State/local wetland inventory map(s): ________.
- ☐ FEMA/FIRM maps: ________.
- ☐ 100-year Floodplain Elevation is: ________.(National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): See 2022 ARDR, Figures 1& 5A-C (Maxar, Esri 2020, National Geographic, Esri 2012, Nearmap 2021), Appendix D, Recent and Historic Aerials.
  or ☒ Other (Name & Date): See 2022 ARDR Appendix G, Site Photographs.
- ☐ Previous determination(s). File no. and date of response letter: ________.
- ☒ Other information (please specify): 2022 ARDR, prepared by Rocks Biological Consulting.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

________________	________________
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resources (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
NWW-1	33.965908	-117.025153	0.02 ac/175 ln ft	Non-wetland waters	Section 404
NWW-1A	33.966006	-117.025084	0.02 ac/156 ln ft	Non-wetland waters	Section 404
NWW-2	33.964929	-117.023925	0.09 ac/1,018 ln ft	Non-wetland waters	Section 404
NWW-2A	33.964977	-117.022656	<0.01 ac/168 ln ft	Non-wetland waters	Section 404
NWW-2B	33.965185	-117.022994	0.01 ac/175 ln ft	Non-wetland waters	Section 404
NWW-2C	33.964845	-117.023224	0.01 ac/109 ln ft	Non-wetland waters	Section 404
NWW-3	33.962391	-117.021747	0.39 ac/2,710 ln ft	Non-wetland waters	Section 404
NWW-3A	33.962760	-117.018132	0.15 ac/1,290 ln ft	Non-wetland waters	Section 404
NWW-3B	33.963540	-117.022834	0.12 ac/1,273 ln ft	Non-wetland waters	Section 404
NWW-3B1	33.964055	-117.021934	0.03 ac/409 ln ft	Non-wetland waters	Section 404

APPENDIX C

APPLICABLE AQUATIC RESOURCE PROTECTION REGULATIONS

APPENDIX C. APPLICABLE AQUATIC RESOURCE PROTECTION REGULATIONS

Several regulations have been established by federal, state, and local agencies to protect and conserve aquatic resources. The descriptions below provide a brief overview of agency regulations that may be applicable to the project.

Executive Order 11990

Executive Order 11990 aims to avoid direct or indirect impacts on wetlands from federal or federally approved projects when a practicable alternative is available. If wetland impacts cannot be avoided, all practicable measures to minimize harm must be included.

Clean Water Act

Pursuant to Section 404 of the Clean Water Act (33 U.S. Code [USC] § 1251 et seq.; CWA), the U.S. Army Corps of Engineers (Corps) is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S. (including wetlands), which include those waters listed in 33 Code of Federal Regulations (CFR) 328.3 (51 Federal Register [FR] 41217, November 13, 1986; 53 FR 20764, June 6, 1988) and further defined by the 2001 *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* (SWANCC; 531 U.S. 159) decision and the 2006 *Rapanos v. United States* (547 U.S. 715) decision. The Corps, with oversight from the U.S. Environmental Protection Agency (USEPA), has the principal authority to issue CWA Section 404 permits. The Corps would require a Standard Individual Permit (SIP) for more than minimal impacts to waters of the U.S. as determined by the Corps. Projects with minimal individual and cumulative adverse effects on the environment may meet the conditions of an existing Nationwide Permit (NWP).

A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for all Section 404 permitted actions. The Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board (SWRCB), provides oversight of the Section 401 certification process in California. The RWQCB is required to provide Water Quality Certification for licenses or permits that authorize an activity that may result in a discharge from a point source into a waters of the U.S. Water Quality Certification authorization “is limited to assuring that a discharge from a Federally licensed or permitted activity will comply with water quality requirements” (40 CFR 121.3).

The National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the U.S. under Section 402 of the CWA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) provides for statewide coordination of water quality regulations. The SWRCB was established as the statewide authority and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis. The RWQCBs have primary responsibility for protecting water quality in California. As discussed above, the RWQCBs regulate discharges to surface waters under the CWA. In addition, the RWQCBs are responsible for administering the Porter-Cologne Water Quality Control Act.

Pursuant to the Porter-Cologne Water Quality Control Act, the state is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if a Section 404 permit is not required for the activity. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

California Fish and Game Code Section 1600-1602

Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Game Code (CFGC), California Department of Fish and Wildlife (CDFW) regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. A Notification of Lake or Streambed Alteration must be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” CDFW has jurisdiction over riparian habitats associated with watercourses and wetland habitats supported by a river, lake, or stream. Jurisdictional waters are delineated by the outer edge of riparian vegetation (i.e., drip line) or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources (e.g., riparian or wetland areas not supported by a river, lake, or stream). CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and applicant is the Lake or Streambed Alteration Agreement.

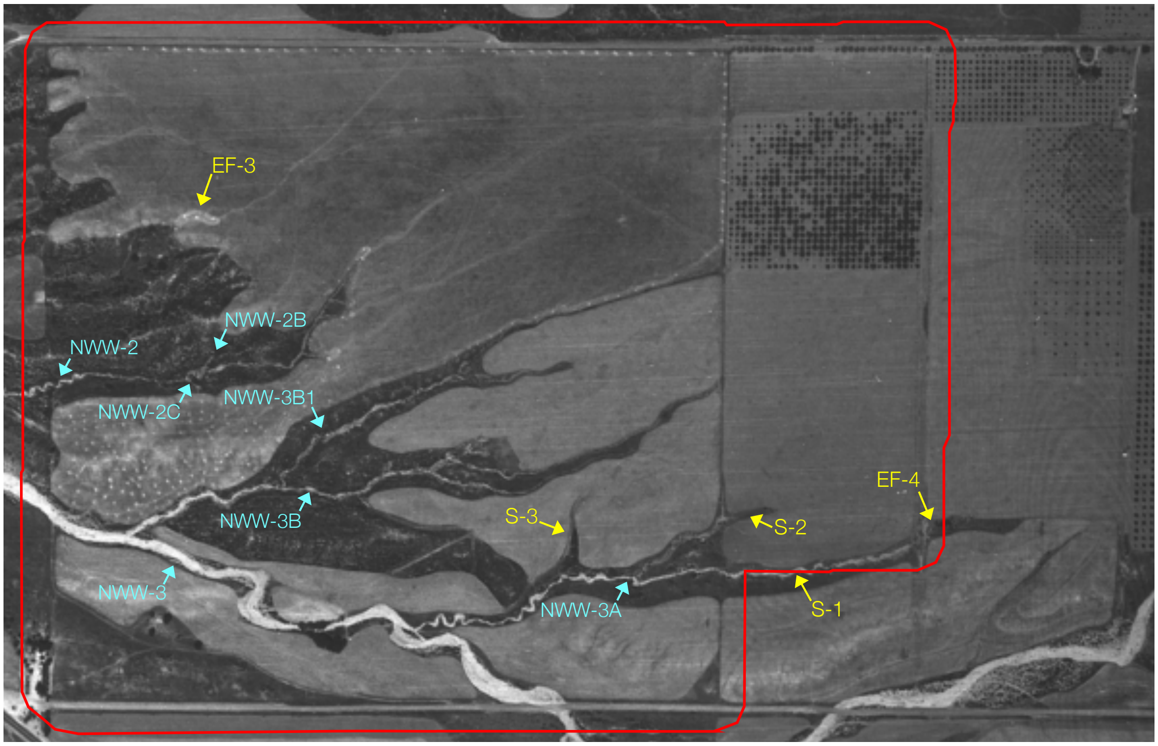
APPENDIX D

RECENT AND HISTORIC AERIALS ANALYSIS

Appendix D

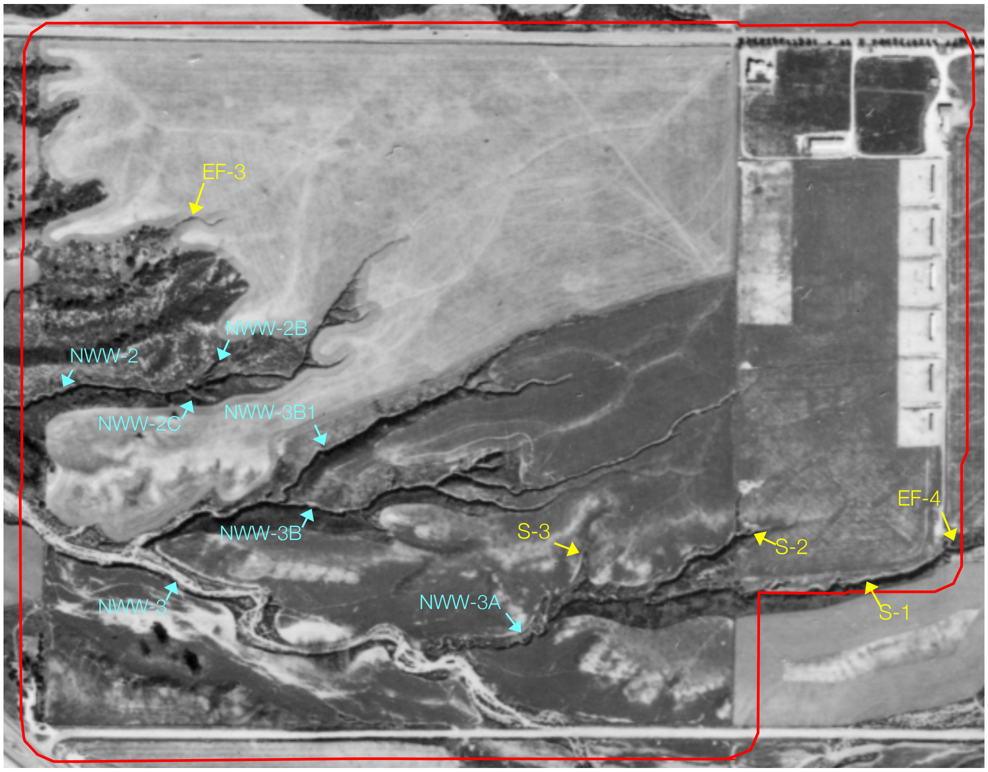
Recent and Historic Aerials Analysis

Source: Google Earth Pro and University of California – Santa Barbara



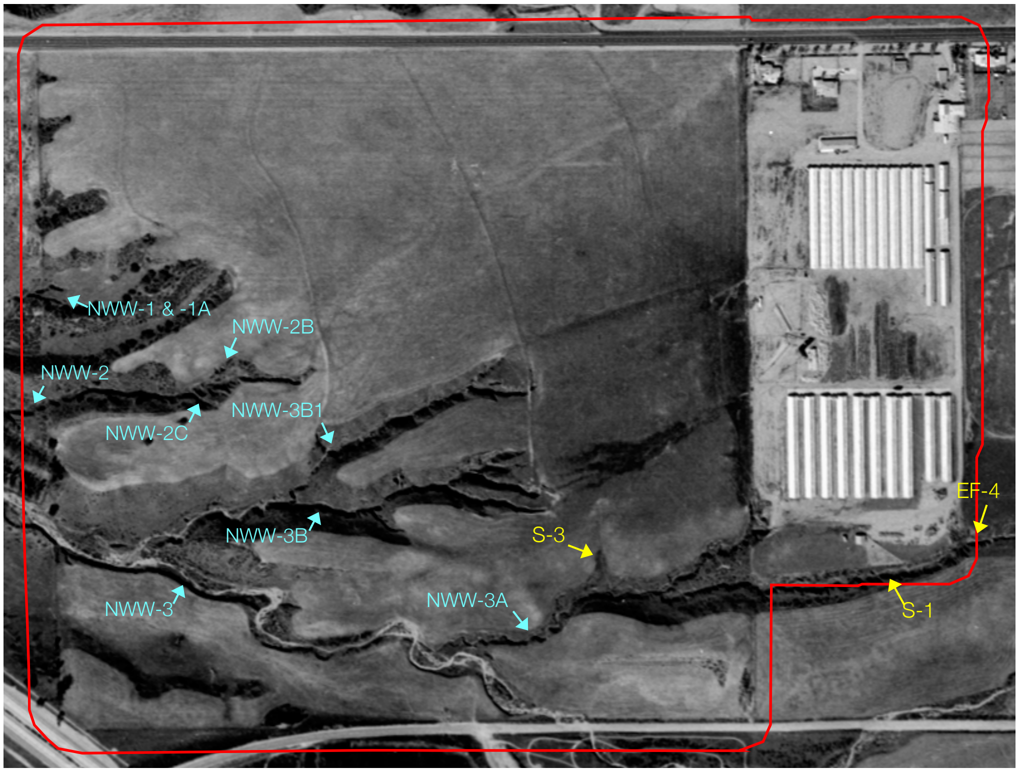
May 1938 – Agriculture fields are present on the northeast corner of the review area. The review area appears to be regularly mowed as distinguishable by the contrast in color between areas of higher elevation and lower topographical areas between hill slopes and along drainage features (see northwest corner and southern segment of the review area). Non-Wetland Water (NWW)-2B, NWW-2C, NWW-3, and NWW-3A are visible on the May 1938 aerial in their current locations. NWW-2, NWW-3B, and NWW-3B1 are also visible on the aerial in their current locations; however, each feature extends further east/northeast across the review area. NWW-3A, NWW-3B, and NWW-3B1 appear to receive runoff from the agriculture fields in the northeast corner of the review area. NWW-3A also appears to receive runoff from the agricultural fields east of the review area. NWW-1, NWW-1A, and NWW-2A are not distinguishable in the May 1938 aerial.

Erosional Feature (EF)-1 and EF-2 are not apparent. EF-3 is evident and appears to receive some runoff from Cherry Valley Boulevard. Some potential inundation or vegetation is visible in the current location of EF-4. The area appears to receive runoff from agricultural fields in the adjacent properties east of the review area. EF-5 through EF-8 are not yet present. Basin (B)-1 through B-5 are not yet present and evidence of potential ponding in their present-day locations is not visible. Swale (S)-1 is evident and more defined on the May 1938 aerial. Some potential inundation or vegetation appears in the current extent of S-2 and S-3. Ditch (D)-1, S-4, and S-5 are not yet present.



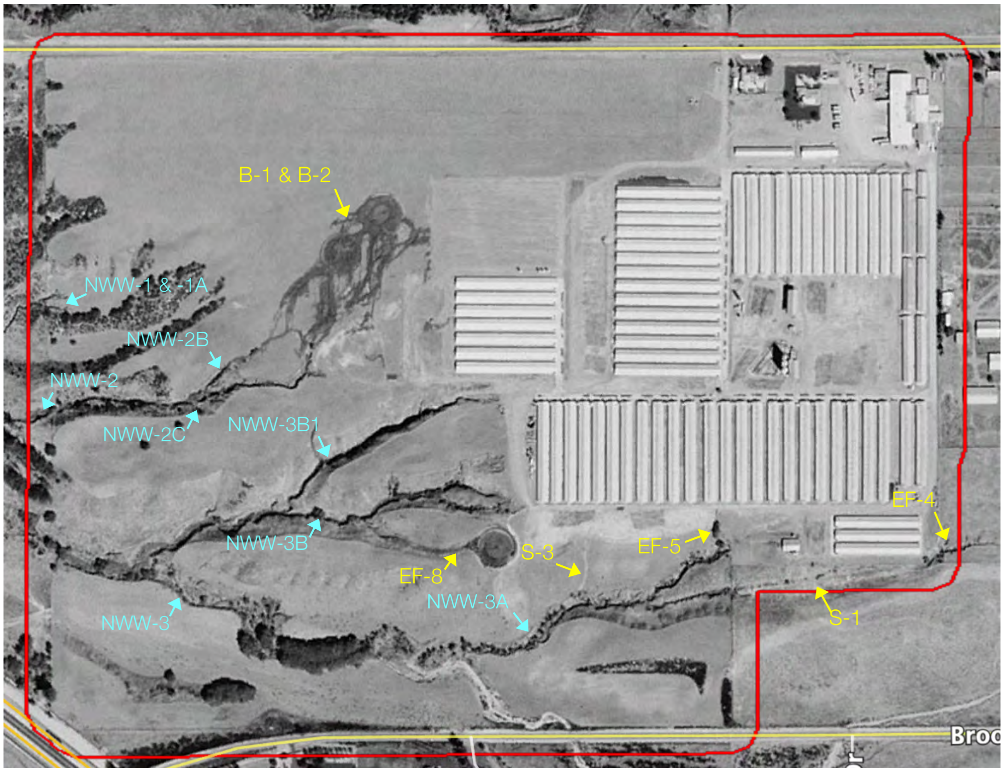
February 1953 – The agriculture fields were removed from the northeast corner and some structures were constructed along the eastern review area boundary between May 1938 and February 1953. The review area continues to appear to be regularly mowed (see northern segment and northwest corner of the review area). NWW-2B, NWW-2C, NWW-3, and NWW-3A are visible on the February 1953 aerial in their current locations. NWW-2, NWW-3B, and NWW-3B1 are also visible on the aerial in their current locations; however, each feature extends further east/northeast across the review area. NWW-1, NWW-1A, and NWW-2A are not distinguishable in the February 1953 aerial.

EF-1 and EF-2 are not apparent. EF-3 and EF-4 are evident and visible on the February 1953 aerial. EF-5 through EF-8 are not yet present. B-1 through B-5 are not yet present and evidence of potential ponding in their present-day locations is not visible. S-1 through S-3 are evident and more defined on the February 1953 aerial. D-1, S-4, and S-5 are not yet present.



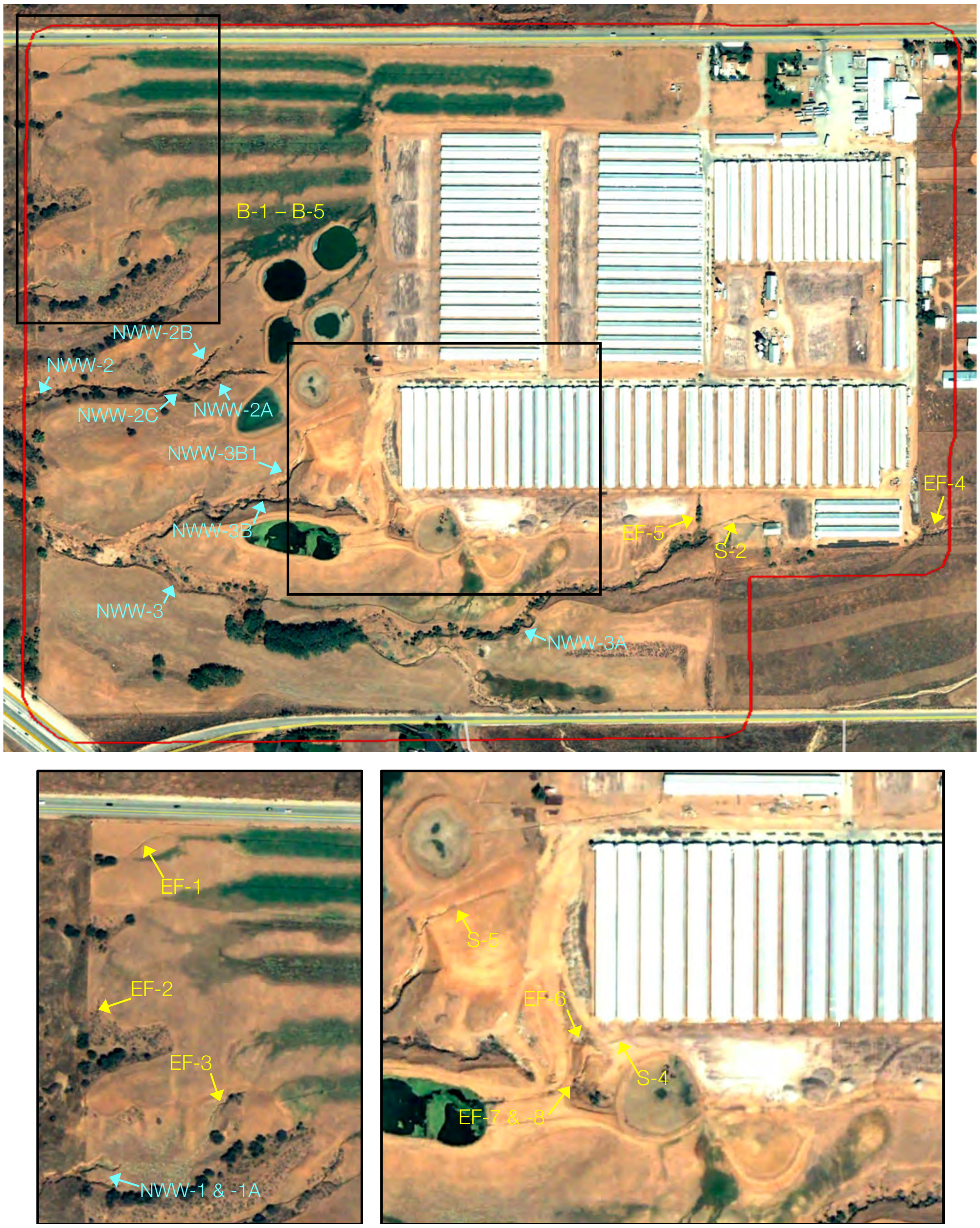
February 1976 – Farming operations within the review area began sometime between February 1953 and February 1976 with the construction of various poultry sheds in the northeast portion of the review area. Remains of these developments, such as the shed concrete foundations, exist to this day. NWW-1, NWW-1A, NWW-2C, and NWW-3 are visible on the aerial in their current locations. NWW-2B is evident but less distinguishable in the February 1976 aerial. The review area continues to appear to be regularly mowed and, along with the initiation of farming operations, likely resulted in the significant reduction of the furthermost east/northeast extents of NWW-2, NWW-3A, NWW-3B, and NWW-3B1 between February 1953 and 1976. NWW-2A is not distinguishable in the February 1976 aerial.

EF-1 and EF-2 are not apparent. EF-3 is no longer evident in the February 1976 aerial and was likely mowed between February 1953 and 1976. EF-4 is evident while EF-5 through EF-8 are still not yet present. B-1 through B-5 are not yet present and evidence of potential ponding in their present-day locations is not visible. S-1 is evident in the February 1976 aerial; however, S-1 is becoming less distinguishable. S-2 is no longer present as the new farming operations extend into S-2's previous location. Some evidence of S-3 is visible; however, the feature is less defined. D-1, S-4, and S-5 are not yet present.



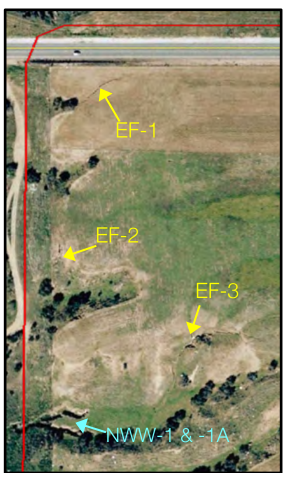
September 1996 – Farming operations within the review area continue to expand between February 1976 and September 1996 with the development of more poultry sheds in the center of the review area. Additionally, various ponding basins (i.e., B-1 and B-2) were developed within the review area during this time. Remains of these developments and site modifications exist to this day. B-1 and B-2 appear to drain runoff into NWW-2 and NWW-2B. Furthermore, an unnamed basin in the center of the review area drains into NWW-3B. The drainage between the unnamed basin and NWW-3B accounts for a portion of present-day NWW-3B and EF-8. NWW-1, NWW-1A, NWW-3, and NWW-3A are visible on the aerial in their current locations and extents. NWW-2C is evident but less distinguishable in the September 1996 aerial. The review area still appears to be regularly mowed. The expanding farming operations contribute to further reduction of NWW-3B and NWW-3B1. NWW-2A is not distinguishable in the September 1996 aerial.

EF-1 through EF-3 are not apparent. EF-4 is still defined and visible. EF-5 is now visible and appears to receive runoff from the newly constructed poultry sheds. B-3 through B-5 are not visible/present in September 1996. S-1 is evident in the September 1996 aerial but appears to be losing further definition. Some evidence of S-3 is visible; however, the feature is less distinguishable. D-1, S-4, and S-5 are not visible.



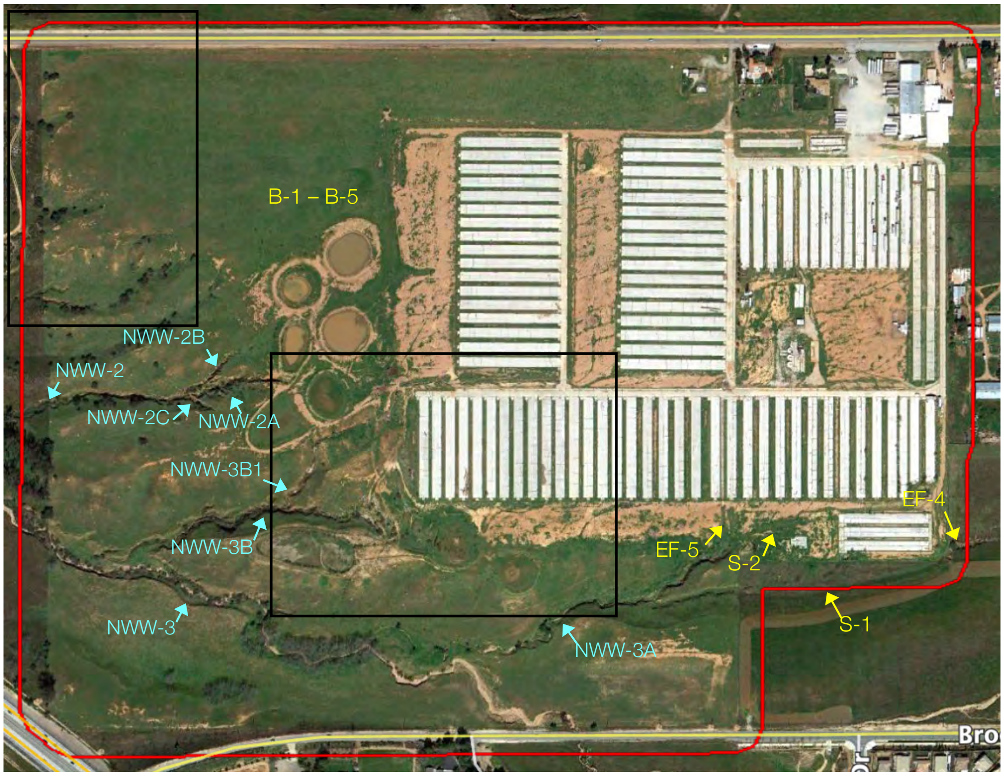
October 2003 – Farming operations within the review area continue to expand between September 1996 and October 2003 with the construction of more poultry sheds in the center of the review area. Additionally, more ponding basins (i.e., B-3 through B-5 and various other unnamed basins) were developed during this time. Remains of these developments and site modifications exist to this day. B-1 and B-2 are still present; however, no longer appear to drain runoff into NWW-2 and NWW-2B. Furthermore, NWW-3B no longer appears to receive flows from the unnamed basin in the center of the review area. NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, and NWW-3A are visible on the aerial in their current locations. The expanding farming operations continue to contribute to further reductions of NWW-3B and NWW-3B1. By October 2003, NWW-3B and NWW-3B1 were reduced to their current extents. NWW-2A is primarily only visible near its convergence with NWW-2.

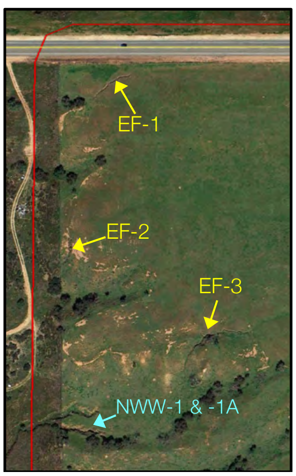
EF-1 through EF-3 are visible and appear to receive runoff from a new irrigation system within the review area. EF-4 is evident, and EF-5 still appears to receive runoff from the poultry sheds. S-1 is further indistinguishable and appears to likely contain the same characteristics as those observed present-day (i.e., no break in slope or a defined bed and bank between the swale and adjacent uplands). S-2 has reemerged and appears to receive runoff from farming operation buildings. The expansion of the poultry sheds appears to result in S-4 and EF-6 becoming slightly apparent and S-5, EF-7, and EF-8 being visible in their current locations and extents. S-3 and D-1 are not yet apparent.



January 2006 – Various poultry sheds throughout the review area were demolished sometime between October 2003 and January 2006. The remaining shed concrete foundations visible in the January 2006 aerial exist to this day. NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 are visible in their current locations and extents. NWW-2A is primarily only visible near its convergence with NWW-2.

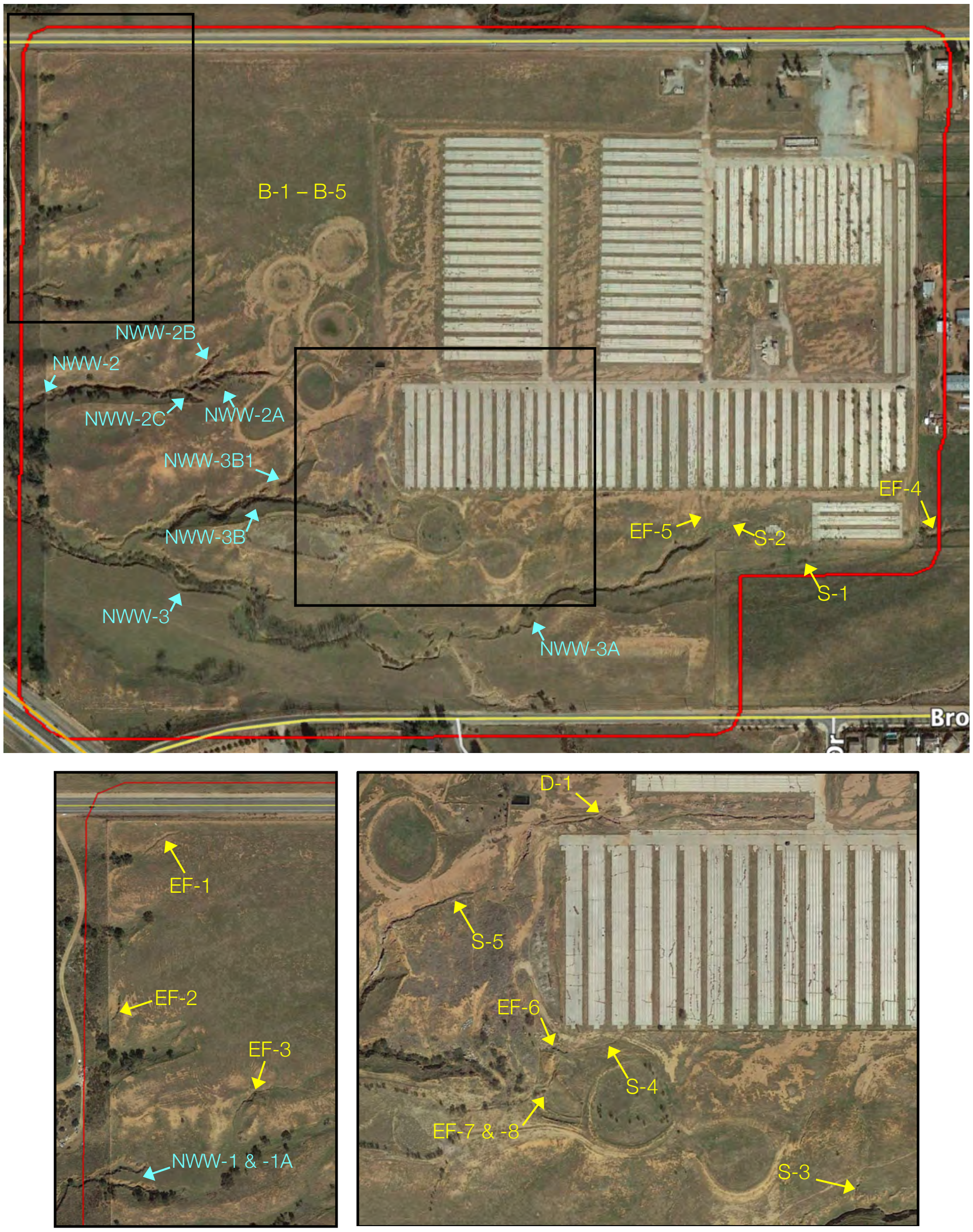
B-1 through B5 and EF-1 through EF-4 are visible in their current locations. EF-5 and S-2 continue to receive runoff downslope from the farming operations. S-1 is still only defined by the slight concave topography and lacks any other distinguishable features. S-3 has reemerged and is slightly visible in the January 2006 aerial. Active farming activities between October 2003 and January 2006 likely resulted in further defining S-4, S-5, and EF-6 through EF-8. D-1 is now fully evident in the January 2006 aerial. The northernmost poultry sheds appear to create downslope runoff which defined and created D-1 between October 2003 and January 2006.





March 2011 – Based on GoogleEarth aerials, the last remaining poultry sheds throughout the review area were removed between January 2006 and August 2006. By March 2011, NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 are visible in their current locations and extents. NWW-2A is primarily only visible near its convergence with NWW-2.

B-1 through B5 and EF-1 through EF-4 are visible in their current locations. EF-5 and S-2 are less distinguishable in the May 2011 aerial, likely a result from the total removal of farming operations within the review area. S-1 is still only apparent by the slight concave topography and lacks any other distinguishable features. The end of farming operations also likely contributed to the significant reduction of S-3 between January 2006 and March 2011. S-3 is only slightly evident near its convergence with NWW-3A. EF-6 through EF-8 and S-4 are also less distinguishable in the March 2011 aerial. S-5 and D-1 are still evident in the March 2011 aerial.



February 2018 – Based on GoogleEarth aerials, the last remaining farming operation buildings located in the northeastern corner were removed between October 2016 and February 2018. By February 2018, NWW-1, NWW-1A, NWW-2, NWW-2B, NWW-2C, NWW-3, NWW-3A, NWW-3B, and NWW-3B1 are visible in their current locations and extents. NWW-2A is primarily only visible near its convergence with NWW-2.

B-1 through B5 and EF-1 through EF-4 are visible in their current locations. EF-5 and S-2 are less distinguishable in the February 2018 aerial. S-1 is still only defined by the slight concave topography and lacks any other distinguishable features. S-3 is still only slightly evident near its convergence with NWW-3A. EF-6 through EF-8 and S-4 are also less distinguishable. S-5 and D-1 are still evident in the March 2011 aerial.

APPENDIX E

ARID WEST WETLAND DETERMINATION DATA FORMS AND EPHEMERAL AND INTERMITTENT STREAMS OHWM DATASHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont Summit Station City/County: Beaumont Sampling Date: 06/07/2021

Applicant/Owner: Exeter Cherry Valley Land, LLC State: CA Sampling Point: WDP 1

Investigator(s): Shanti Santulli, Sarah Krejca, Ian Hirschler Section, Township, Range: T2S, R1W, S30

Landform (hillslope, terrace, etc.): In basin (constructed) Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): LRR C - Mediterranean California Lat: 33.965328 Long: -117.022071 Datum: WGS 84

Soil Map Unit Name: Terrace escarpments NWI classification: None

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

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

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

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

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?		✔
Wetland Hydrology Present?	✔	

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

Remarks:

Sample point taken within constructed earthen basin, near three individual mulefat. Drought conditions per APT (i.e., atypical hydrologic conditions/naturally problematic); however, wetland hydrology parameter still met based on presence of surface soil cracks.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: N/A)			
1. N/A			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 10-foot radius)			
1. Baccharis salicifolia	25%	Yes	FAC
2.			
3.			
4.			
5.			
= Total Cover	25%		
Herb Stratum (Plot size: 5-foot radius)			
1. Hirschfeldia incana	15%	Yes	NL/UPL
2. Polygonum aviculare	3%	No	FAC
3. Croton setiger	2%	No	NL/UPL
4.			
5.			
6.			
7.			
8.			
= Total Cover	20%		
Woody Vine Stratum (Plot size: N/A)			
1. N/A			
2.			
= Total Cover	N/A		

% Bare Ground in Herb Stratum 80% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	28	x 3 = 84
FACU species	0	x 4 = 0
UPL species	17	x 5 = 85
Column Totals:	45 (A)	169 (B)

Prevalence Index = B/A = 3.76

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

Sample point taken near three individual mulefat within area mapped as non-native grassland.

SOIL

Sampling Point: WDP 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5 YR 4/3	100%	N/A	N/A	N/A	N/A	Clay loam	No evidence of redox observed.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Shovel refusal - compact soils

Depth (inches): 7 inches

Hydric Soil Present? Yes ______ No ✔

Remarks:

Soil moistened with spray bottle to record soil color. Uniform soil throughout. No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ______ No ✔ Depth (inches): N/A

Water Table Present? Yes ______ No ✔ Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes ______ No ✔ Depth (inches): N/A

Wetland Hydrology Present? Yes ✔ No ______

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

N/A

Remarks:

Abandoned farm/stock pond that may still collect water during rains but no other wetland hydrology indicators observed beyond soil surface cracks. Did not meet FAC-Neutral Test.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont Summit Station City/County: Beaumont Sampling Date: 06/07/2021

Applicant/Owner: Exeter Cherry Valley Land, LLC State: CA Sampling Point: WDP 2

Investigator(s): Sarah Krejca, Shanti Santulli Section, Township, Range: T2S, R1W, S30

Landform (hillslope, terrace, etc.): In channel Local relief (concave, convex, none): Slightly concave Slope (%): 1-3%

Subregion (LRR): LRR C - Mediterranean California Lat: 32.964923 Long: -117.023427 Datum: WGS 84

Soil Map Unit Name: Terrace escarpments NWI classification: None

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

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

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

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

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

Remarks:

Sample point taken within earthen channel. Drought conditions per APT (i.e., atypical hydrologic conditions/naturally problematic); no hydrology indicators observed. However, sampling point within ephemeral channel not anticipated to function as wetland - hydrophytic vegetation and hydric soils also not observed.

VEGETATION – Use scientific names of plants.

Stratum / Species	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10-foot radius)			
1. Sambucus nigra	5%	Yes	FACU
2.			
3.			
4.			
= Total Cover	5%		
Sapling/Shrub Stratum (Plot size: 10-foot radius)			
1. Baccharis salicifolia	25%	Yes	FAC
2.			
3.			
4.			
5.			
= Total Cover	25%		
Herb Stratum (Plot size: 5-foot radius)			
1. Brachypodium distachyon	35%	Yes	NL/UPL
2. Bromus diandrus	25%	Yes	NL/UPL
3. Hirschfeldia incana	15%	No	NL/UPL
4. Marrubium vulgare	5%	No	FACU
5.			
6.			
7.			
8.			
= Total Cover	80%		
Woody Vine Stratum (Plot size: N/A)			
1. N/A			
2.			
= Total Cover	N/A		

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	10	x 4 =	40
UPL species	75	x 5 =	375
Column Totals:	110 (A)		490 (B)

Prevalence Index = B/A = 4.45

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ___ No ✔

Remarks:

Sample point taken within area mapped as non-native grassland.

SOIL

Sampling Point: WDP 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10 YR 3/3	100%	N/A	N/A	N/A	N/A	Loam	No evidence of redox observed.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Shovel refusal - compact soils

Depth (inches): 11 inches

Hydric Soil Present? Yes ______ No ✔

Remarks:

Soil moistened with spray bottle to record soil color. Uniform soil throughout. No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ______ No ✔ Depth (inches): N/A

Water Table Present? Yes ______ No ✔ Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes ______ No ✔ Depth (inches): N/A

Wetland Hydrology Present? Yes ______ No ✔

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

N/A

Remarks:

Did not meet FAC-Neutral Test. No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Beaumont Summit Station City/County: Beaumont Sampling Date: 06/07/2021

Applicant/Owner: Exeter Cherry Valley Land, LLC State: CA Sampling Point: WDP 3

Investigator(s): Sarah Krejca, Shanti Santulli, Ian Hirschler Section, Township, Range: T2S, R1W, S30

Landform (hillslope, terrace, etc.): In channel Local relief (concave, convex, none): Slightly concave Slope (%): 1-2%

Subregion (LRR): LRR C - Mediterranean California Lat: 33.962825 Long: -117.022836 Datum: WGS 84

Soil Map Unit Name: Terrace escarpments NWI classification: Riverine

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

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

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

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

	Yes	No
Hydrophytic Vegetation Present?	✔	
Hydric Soil Present?		✔
Wetland Hydrology Present?		✔

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

Remarks:

Sample point taken within earthen channel. Drought conditions per APT (i.e., atypical hydrologic conditions/naturally problematic); hydrophytic vegetation parameter still met at sampling point, but no hydric soils or wetland hydrology. Sampling point within ephemeral stream not anticipated to function as wetland despite presence of mulefat (FAC).

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: N/A)			
1. N/A			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 5-foot radius)			
1. Baccharis salicifolia	10%	Yes	FAC
2.			
3.			
4.			
5.			
= Total Cover	10%		
Herb Stratum (Plot size: N/A)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover			
Woody Vine Stratum (Plot size: N/A)			
1. N/A			
2.			
= Total Cover	N/A		

% Bare Ground in Herb Stratum 97% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

Sample point taken within area mapped as mulefat scrub. Less than 5% herbaceous cover (approximately 3%), therefore, per AW manual, no herb stratum. 5-foot radius plot size used for sapling/shrub stratum to only account for vegetation within area with same soil and hydrologic conditions (i.e., within the channel).

SOIL

Sampling Point: WDP 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 4/3	100%	N/A	N/A	N/A	N/A	Sand	No evidence of redox observed.

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Shovel refusal - compact soils

Depth (inches): 16 inches

Hydric Soil Present? Yes ______ No ✔

Remarks:

Soil moistened with spray bottle to record soil color. Uniform soil throughout. No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ______ No ✔ Depth (inches): N/A
Water Table Present? Yes ______ No ✔ Depth (inches): N/A
Saturation Present? (includes capillary fringe) Yes ______ No ✔ Depth (inches): N/A

Wetland Hydrology Present? Yes ______ No ✔

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

N/A

Remarks:

Did not meet FAC-Neutral Test. No wetland hydrology indicators observed.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station **Project Number:** N/A **Stream:** ODP 1 **Investigator(s):** Chelsea Polevy, Sarah Krejca	**Date:** 06/03/2021 **Time:** 0815 **Town:** Beaumont **State:** CA **Photo begin file#:** 2 **Photo end file#:** 2
Y ☑ / N ☐ Do normal circumstances exist on the site?	**Location Details:** Beaumont Summit Station Aquatic Resource Delineation Report Review Area
Y ☑ / N ☐ Is the site significantly disturbed?	**Projection:** WGS 84 **Datum:** NAD 83 **Coordinates:** 33.968238, -117.025022

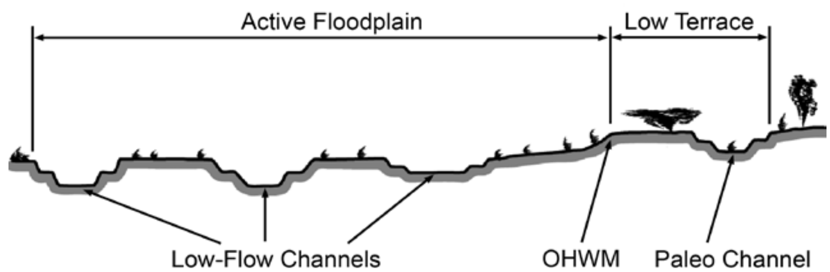
Potential anthropogenic influences on the channel system:
Surrounding area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm. Lower topographic area between two gentle slopes, just south of developed road (Cherry Valley Boulevard).

Checklist of resources (if available):

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

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

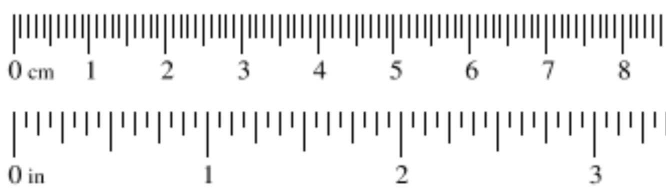


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

Wentworth Size Classes

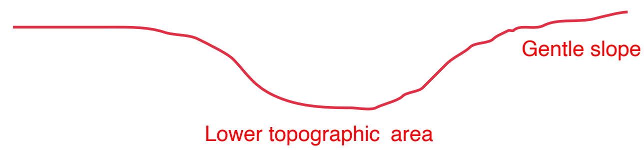
Inches (in)		Millimeters (mm)	Wentworth size class	
			Boulder	Gravel
	10.08	256		
			Cobble	
	2.56	64		
			Pebble	
	0.157	4		
			Granule	
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		
			Coarse sand	
	0.020	0.50		
			Medium sand	
1/2	0.0098	0.25		
			Fine sand	
1/4	0.005	0.125		
			Very fine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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 1 **Date:** 06/03/2021 **Time:** 0815

Cross section drawing:

Facing west



OHWM

GPS point: 33.968238, -117.025022

Indicators:

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

Comments:
Lower topographic area did not exhibit bed and bank indicators; no change in sediment texture or break in slope; vegetation did not differ from lower topographic area to adjacent slopes (dominated by non-native grassland and scrub oak). Data was collected during a drought year; however, historic aerials and previous delineation note consistent conditions.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________________

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

Community successional stage:

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

Indicators:

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

Comments:

Project ID: Beaumont Summit Station **Cross section ID:** ODP 1 **Date:** 06/03/2021 **Time:** 0815

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station **Project Number:** N/A **Stream:** ODP 2 **Investigator(s):** Chelsea Polevy, Sarah Krejca	**Date:** 06/03/2021 **Time:** 0830 **Town:** Beaumont **State:** CA **Photo begin file#:** 4 **Photo end file#:** 4
Y ☑ / N ☐ Do normal circumstances exist on the site?	**Location Details:** Beaumont Summit Station Aquatic Resource Delineation Report Review Area
Y ☑ / N ☐ Is the site significantly disturbed?	**Projection:** WGS 84 **Datum:** NAD 83 **Coordinates:** 33.967162, -117.025097

Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

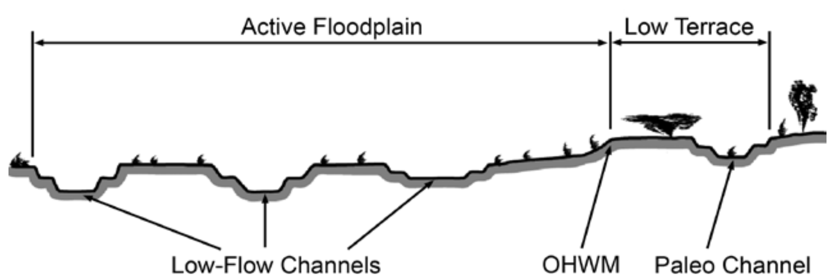
Brief site description:
Disturbed site formerly used as ranch/poultry farm; gully/erosional feature adjacent to western site boundary. Highly incised area.

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

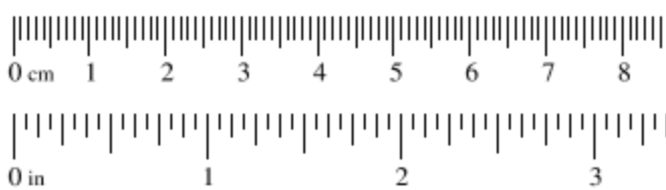


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

Wentworth Size Classes

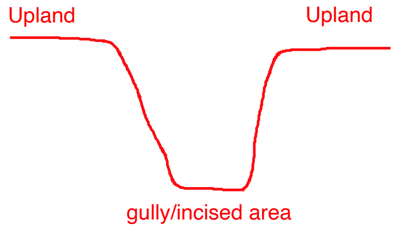
Inches (in)	Millimeters (mm)	Wentworth size class	
		Boulder	Gravel
10.08	256		Gravel
		Cobble	Gravel
2.56	64		Gravel
		Pebble	Gravel
0.157	4		Gravel
		Granule	Gravel
0.079	2.00		
		Very coarse sand	Sand
0.039	1.00		Sand
		Coarse sand	Sand
0.020	0.50		Sand
		Medium sand	Sand
1/2 0.0098	0.25		Sand
		Fine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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 2 **Date:** 06/03/2021 **Time:** 0830

Cross section drawing:

Facing downstream (southwest)



OHWM

GPS point: 33.967162, -117.025097

Indicators:

- [ ] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: ____________
- [ ] Other: ____________

Comments:
Gully/erosional feature that exhibited a slight break in bank slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other OHWM indicators. Gully and surrounding upland were both heavily vegetated with non-native grasses.

Floodplain unit:

- [ ] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:

Project ID: Beaumont Summit Station **Cross section ID:** ODP 2 **Date:** 06/03/2021 **Time:** 0830

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 3
Investigator(s): Chelsea Polevy, Sarah Krejca
Date: 06/03/2021 **Time:** 0915
Town: Beaumont **State:** CA
Photo begin file#: 8 **Photo end file#:** 9

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Beaumont Summit Station Aquatic Resource Delineation Report Review Area

Projection: WGS 84 **Datum:** NAD 83
Coordinates: 33.966030, -117.024921

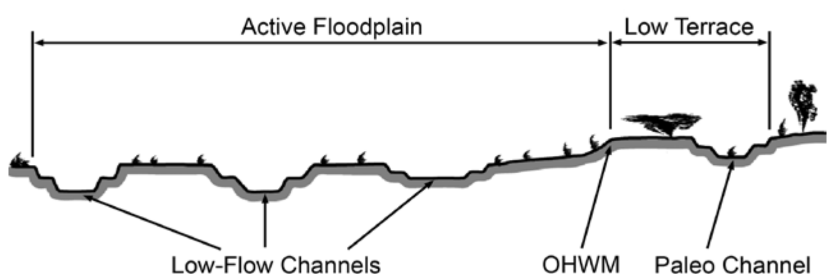
Potential anthropogenic influences on the channel system:
Surrounding area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm; north and south leg of feature within lower topographic area adjacent to western site boundary.

Checklist of resources (if available):

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

Hydrogeomorphic Floodplain Units

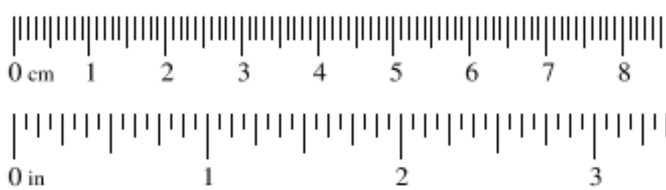


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

Wentworth Size Classes

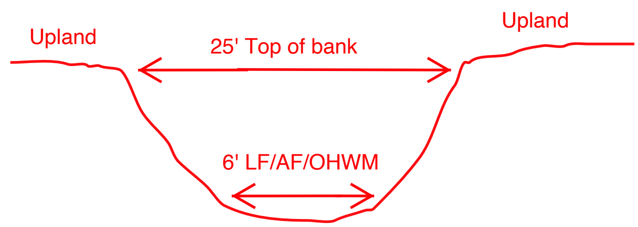
Inches (in)		Millimeters (mm)	Wentworth size class	
			Boulder	Gravel
	10.08	256		
			Cobble	
	2.56	64		
			Pebble	
	0.157	4		
			Granule	
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		
			Coarse sand	
	0.020	0.50		
			Medium sand	
1/2	0.0098	0.25		
			Fine sand	
1/4	0.005	0.125		
			Very fine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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 3 **Date:** 06/03/2021 **Time:** 0915

Cross section drawing:

Northern leg of feature; facing downstream (west)



OHWM

GPS point: 33.966030, -117.024921

Indicators:

- [ ] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: ____________________
- [ ] Other: ____________________

Comments:
Approximately 6-foot wide OHWM defined by a faint break in slope and change in vegetation cover. Data was taken during a drought year. No distinguishable difference in sediment texture from active floodplain (AF) to upland. More defined bed and bank occurs downstream, but off site.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________________

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

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 3 **Date:** 06/03/2021 **Time:** 0915

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:
Average sediment texture: Medium silt
Total veg cover: 80 % Tree: 0 % Shrub: 0 % Herb: 80 %
Community successional stage:
- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:
AF defined by faint break in bank slope; AF heavily vegetated with non-native grasses.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:
Average sediment texture: Medium silt
Total veg cover: 50 % Tree: 0 % Shrub: 0 % Herb: 50 %
Community successional stage:
- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:
No true low terrace; uplands defined by surface relief. Uplands partially vegetated with non-native grasses.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 4
Investigator(s): Shanti Santulli, Sarah Krejca

Date: 06/07/2021 **Time:** 0900
Town: Beaumont **State:** CA
Photo begin file#: 18 **Photo end file#:** 19

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Beaumont Summit Station Aquatic Resource Delineation Report Review Area

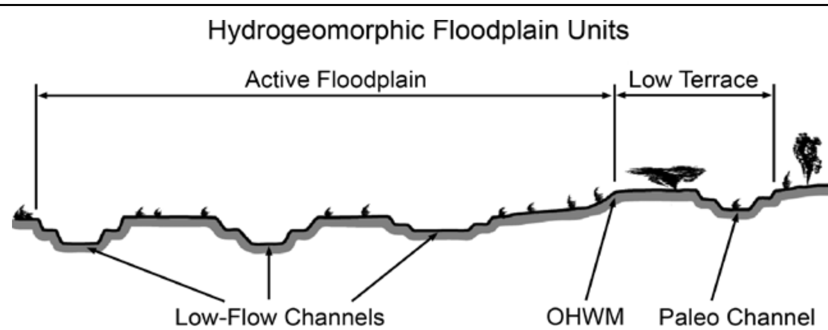
Projection: WGS 84 **Datum:** NAD 83
Coordinates: 33.964891, -117.023514

Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm; north and south leg of drainage within lower topographic area adjacent to western site boundary.

Checklist of resources (if available):

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

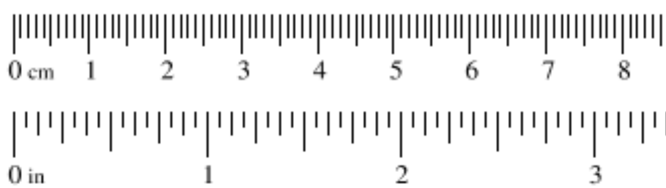


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

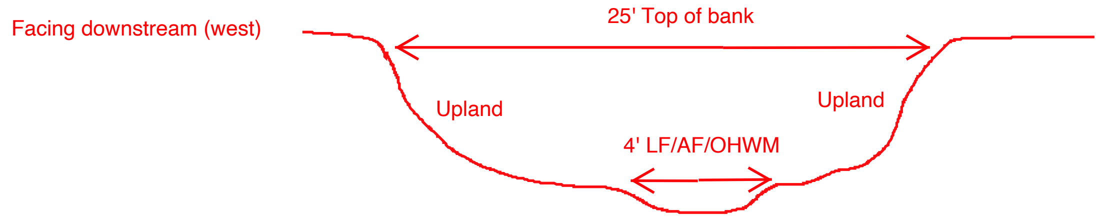
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 4 **Date:** 06/07/2021 **Time:** 0900

Cross section drawing:



OHWM

GPS point: 33.964891, -117.023514

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: __________
- ☐ Other: __________

Comments:
Approximately 4-foot wide OHWM defined by a break in slope and a change in vegetation cover. Data was taken during a drought year; however, indicators still observed and consistent with anticipated extent of OHWM based on review of aerials and site conditions/topography. No distinguishable difference in sediment texture from active floodplain (AF) to upland.

Floodplain unit:

☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: __________

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 4 **Date:** 06/07/2021 **Time:** 0900

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:
Average sediment texture: Coarse silt
Total veg cover: 30 % Tree: 0 % Shrub: 0 % Herb: 30 %
Community successional stage:
- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:
AF defined by faint break in bank slope; AF sparsely vegetated, becoming less vegetated downstream. Vegetation dominated by non-native grasses, including short-pod mustard (Hirschfeldia incana), ripgut brome (Bromus diandrus), and false brome (Brachypodium distachyon).

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:
Average sediment texture: Coarse silt
Total veg cover: 65 % Tree: 0 % Shrub: 0 % Herb: 65 %
Community successional stage:
- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:
No true low terrace; uplands defined by surface relief. Uplands dominated by non-native grasses, including short-pod mustard (Hirschfeldia incana), ripgut brome (Bromus diandrus), and false brome (Brachypodium distachyon).

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 5
Investigator(s): Chelsea Polevy, Sarah Krejca
Date: 06/03/2021
Time: 1200
Town: Beaumont
State: CA
Photo begin file#: 27
Photo end file#: 28

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Beaumont Summit Station Aquatic Resource Delineation Report Review Area

Projection: WGS 84
Datum: NAD 83
Coordinates: 33.963128, -117.017059

Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

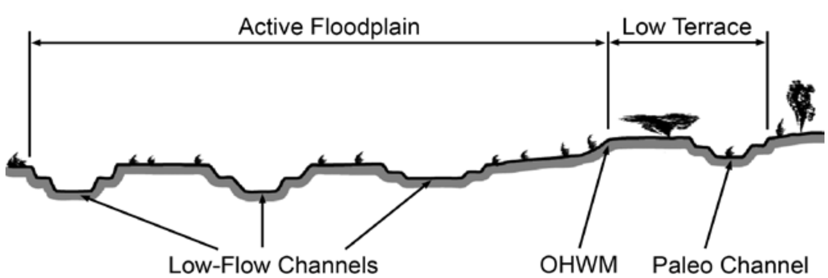
Brief site description:
Disturbed site formerly used as ranch/poultry farm; drainage feature adjacent to/south of developed concrete slabs near southeast site boundary.

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

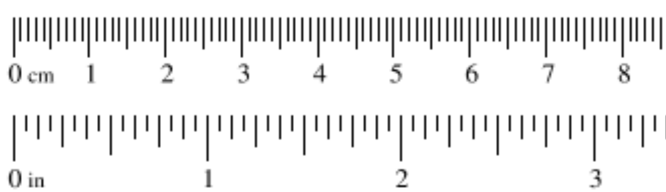


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

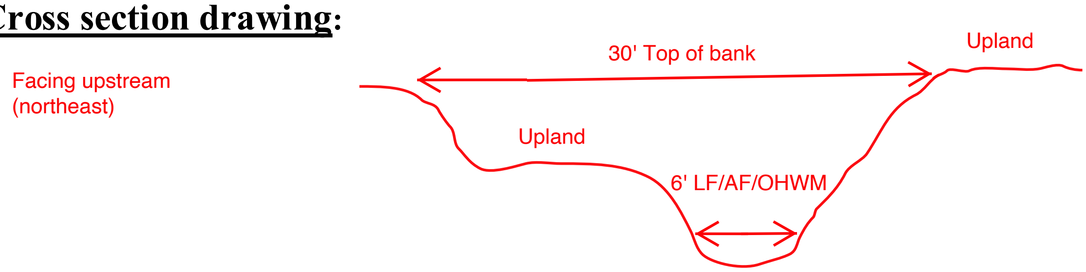
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 5 **Date:** 06/03/2021 **Time:** 1200

Cross section drawing:



OHWM

GPS point: 33.963128, -117.017059

Indicators:

- ☑ Change in average sediment texture
- ☑ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: ____________
- ☐ Other: ____________

Comments:
Approximately 6-foot wide OHWM defined by a break in slope, change in sediment texture, and change in vegetation species. Data was taken during a drought year; however, indicators still observed and consistent with anticipated extent of OHWM based on review of aerials and site conditions/topography.

Floodplain unit:

☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 5 **Date:** 06/03/2021 **Time:** 1200

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Medium silt with cobbles

Total veg cover: 80 % Tree: 0 % Shrub: 15 % Herb: 65 %

Community successional stage:

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

Indicators:

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

Comments:

AF defined by break in bank slope; AF heavily vegetated with non-native grasses, including shortpod mustard (Hirschfeldia incana).

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Medium silt

Total veg cover: 80 % Tree: 5 % Shrub: 10 % Herb: 65 %

Community successional stage:

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

Indicators:

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

Comments:

No true low terrace; uplands defined by surface relief. Uplands heavily vegetated with non-native grasses, including shortpod mustard (Hirschfeldia incana), and also included horehound (Marrubium vulgare) and a black elder (Sambucus nigra).

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Date: 06/03/2021
Time: 1130
Project Number: N/A
Town: Beaumont
State: CA
Stream: ODP 6
Photo begin file#: 25
Photo end file#: 25
Investigator(s): Sarah Krejca, Chelsea Polevy

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Exeter Cherry Valley Aquatic Resource Delineation Report Review Area

Projection: WGS 84
Datum: NAD 83
Coordinates: 33.962849, -117.017148

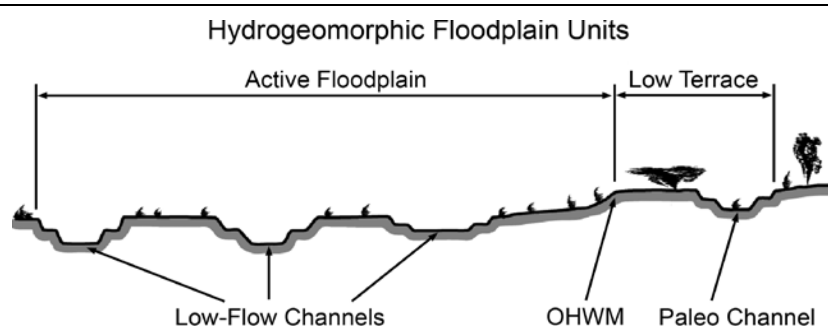
Potential anthropogenic influences on the channel system:
Area has been recently mowed; area is undeveloped but site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm; swale-like feature within area of non-native grassland

Checklist of resources (if available):

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

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



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

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

Wentworth Size Classes

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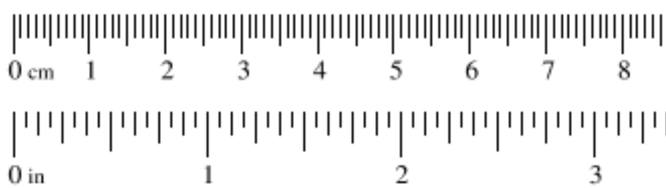
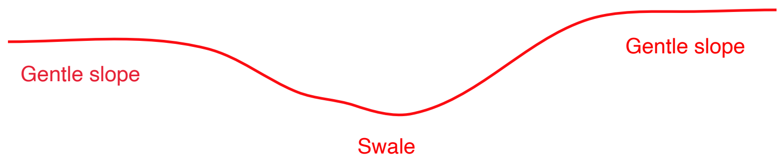
			Pebble	
	0.157	4		
			Granule	
	0.079	2.00		
			Very coarse sand	Sand
	0.039	1.00		
			Coarse sand	
	0.020	0.50		
			Medium sand	
1/2	0.0098	0.25		
			Fine sand	
1/4	0.005	0.125		
			Very fine sand	
1/8	0.0025	0.0625		
			Coarse silt	Silt
1/16	0.0012	0.031		
			Medium silt	
1/32	0.00061	0.0156		
			Fine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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 6 **Date:** 06/03/2021 **Time:** 1130

Cross section drawing:



OHWM

GPS point: 33.962849, -117.017148

Indicators:

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

Comments:

Area did not contain clear bed and bank indicators; no change in sediment texture or break in slope; vegetation in swale and adjacent upland area did not differ (both heavily vegetated and dominated by non-native grasses). Data was collected during a drought year; however, historic aerials and previous delineation note consistent conditions.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ____________

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

Community successional stage:

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

Indicators:

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

Comments:

Project ID: Beaumont Summit Station **Cross section ID:** ODP 6 **Date:** 06/03/2021 **Time:** 1130

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:
Average sediment texture: ____________
Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Beaumont Summit Station
Project Number: N/A
Stream: ODP 7
Investigator(s): Chelsea Polevy, Sarah Krejca
Date: 06/03/2021
Town: Beaumont
Photo begin file#: 33
Time: 1415
State: CA
Photo end file#: 34

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:
Exeter Cherry Valley Aquatic Resource Delineation Report Review Area

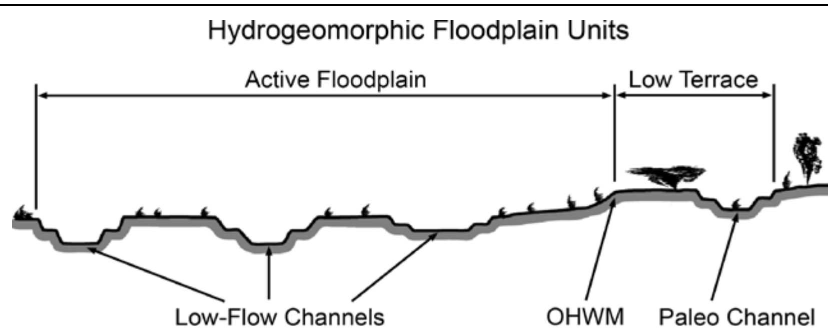
Projection: WGS 84 **Datum:** NAD 83
Coordinates: 33.962282, -117.021353

Potential anthropogenic influences on the channel system:
Area receives upstream flows from runoff from developed road (Brookside Avenue) and from culvert that crosses under Brookside Avenue; site was formerly used as a ranch/poultry farm.

Brief site description:
Disturbed site formerly used as ranch/poultry farm; large drainage feature in southern portion of site within area mapped as tree of heaven.

Checklist of resources (if available):

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

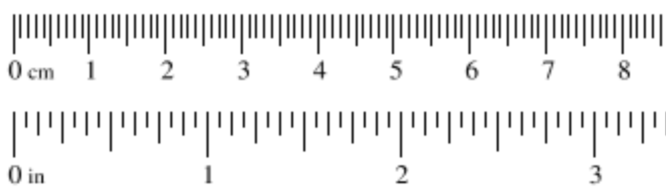


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

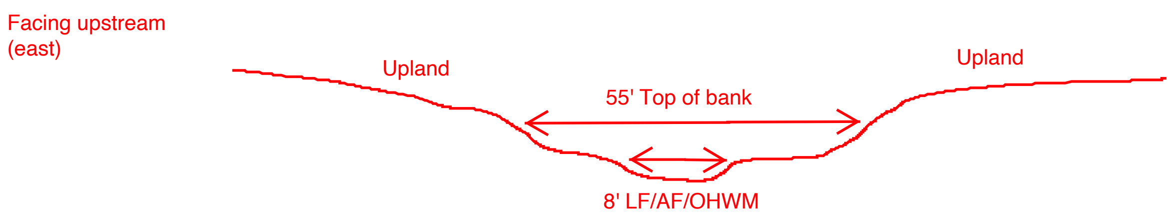
Wentworth Size Classes

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



Project ID: Beaumont Summit Station **Cross section ID:** ODP 7 **Date:** 06/03/2021 **Time:** 1415

Cross section drawing:



OHWM

GPS point: 33.962282, -117.021353

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: ______
- [ ] Other: ______

Comments:
Approximately 8-foot wide OHWM primarily defined by a change in average sediment texture, change in vegetation species and cover, and faint break in bank slope. Data was collected during a drought year; however, indicators still observed and consistent with anticipated extent of OHWM based on review of aerials and site conditions/topography.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace/Upland

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: ______

Total veg cover: ____ % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

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

Indicators:

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

Comments:
Low-flow channel (LF) is indistinguishable/cannot be determined from AF/OHWM.

Project ID: Beaumont Summit Station **Cross section ID:** ODP 7 **Date:** 06/03/2021 **Time:** 1415

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace/Upland

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

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

Community successional stage:

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

Indicators:

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

Comments:

AF defined by faint break in bank slope; AF unvegetated.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace/Upland

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Medium silt

Total veg cover: 100 % Tree: 10 % Shrub: 5 % Herb: 85 %

Community successional stage:

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

Indicators:

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

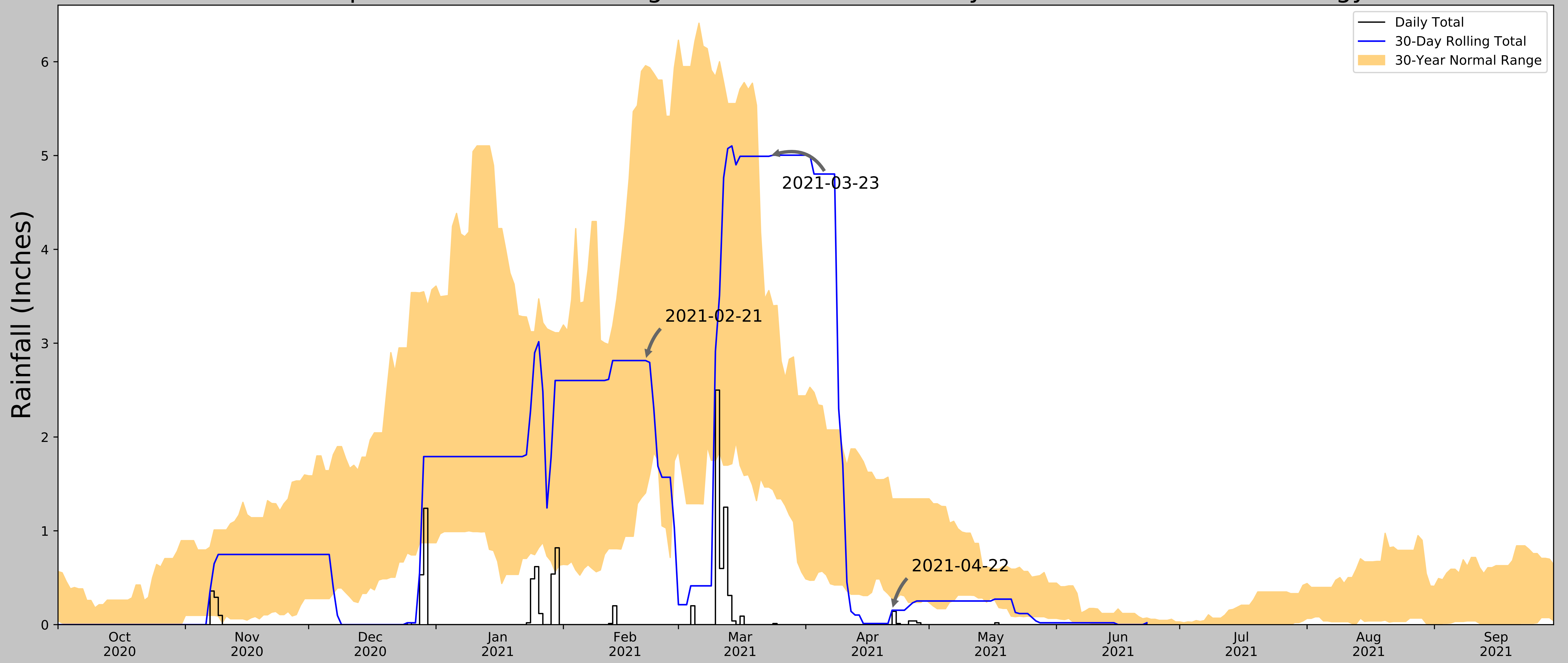
Comments:

No true low terrace; uplands defined by soil development and surface relief; uplands were dominated with non-native grasses and tree of heaven (Ailanthus altissima).

APPENDIX F

ANTECEDENT PRECIPITATION TOOL OUTPUT

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



Coordinates	33.965141, -117.019732
Observation Date	2021-04-22
Elevation (ft)	2485.7
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Dry Season

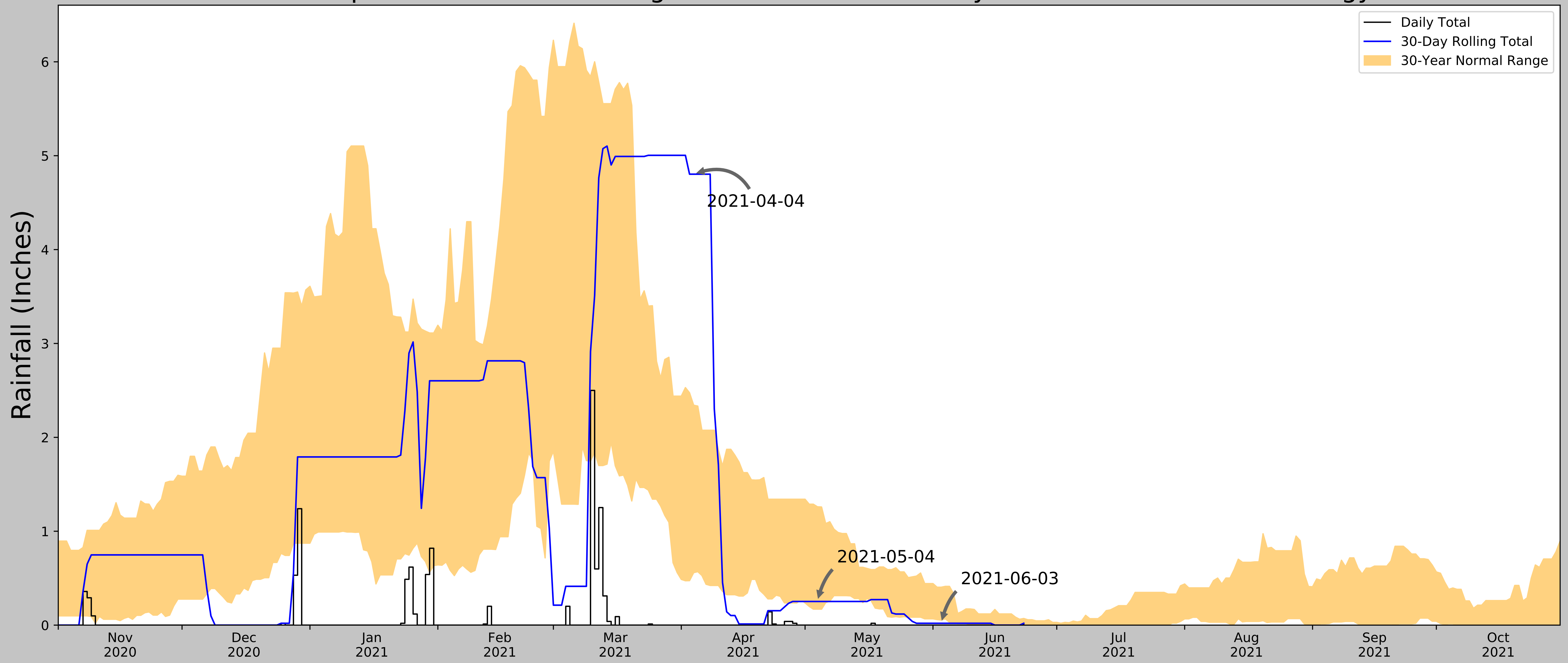
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-04-22	0.279528	1.340945	0.153543	Dry	1	3	3
2021-03-23	1.466535	3.561024	4.992126	Wet	3	2	6
2021-02-21	1.404331	5.958268	2.814961	Normal	2	1	2
Result							Normal Conditions - 11

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CORONA 12.5 SE	33.7346, -117.4315	1301.837	28.496	1183.863	46.559	149	0
DESERT HOT SPRINGS 3.0 NW	33.9855, -116.5415	1338.911	27.438	1146.789	43.813	1581	0
HOMELAND 1.7 NNE	33.769, -117.0923	2248.032	14.177	237.668	9.749	10	3
IDYLLWILD 1.8 NW	33.7631, -116.735	6325.131	21.488	3839.431	92.171	1557	0
HEMET 4.1 ENE	33.7527, -116.9196	1698.163	15.763	787.537	19.507	1076	87
CORONA 12.8 SE	33.7307, -117.4276	1403.871	28.463	1081.829	43.6	102	0
BIG BEAR LAKE	34.2431, -116.9169	6752.953	20.086	4267.253	94.751	6722	0
ELSINORE	33.6861, -117.3458	1268.045	26.87	1217.655	44.81	135	0
HEMET	33.7381, -116.8939	1811.024	17.269	674.676	19.422	21	0

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



Coordinates	33.965141, -117.019732
Observation Date	2021-06-03
Elevation (ft)	2485.7
Drought Index (PDSI)	Extreme drought (2021-05)
WebWIMP H_2O Balance	Dry Season

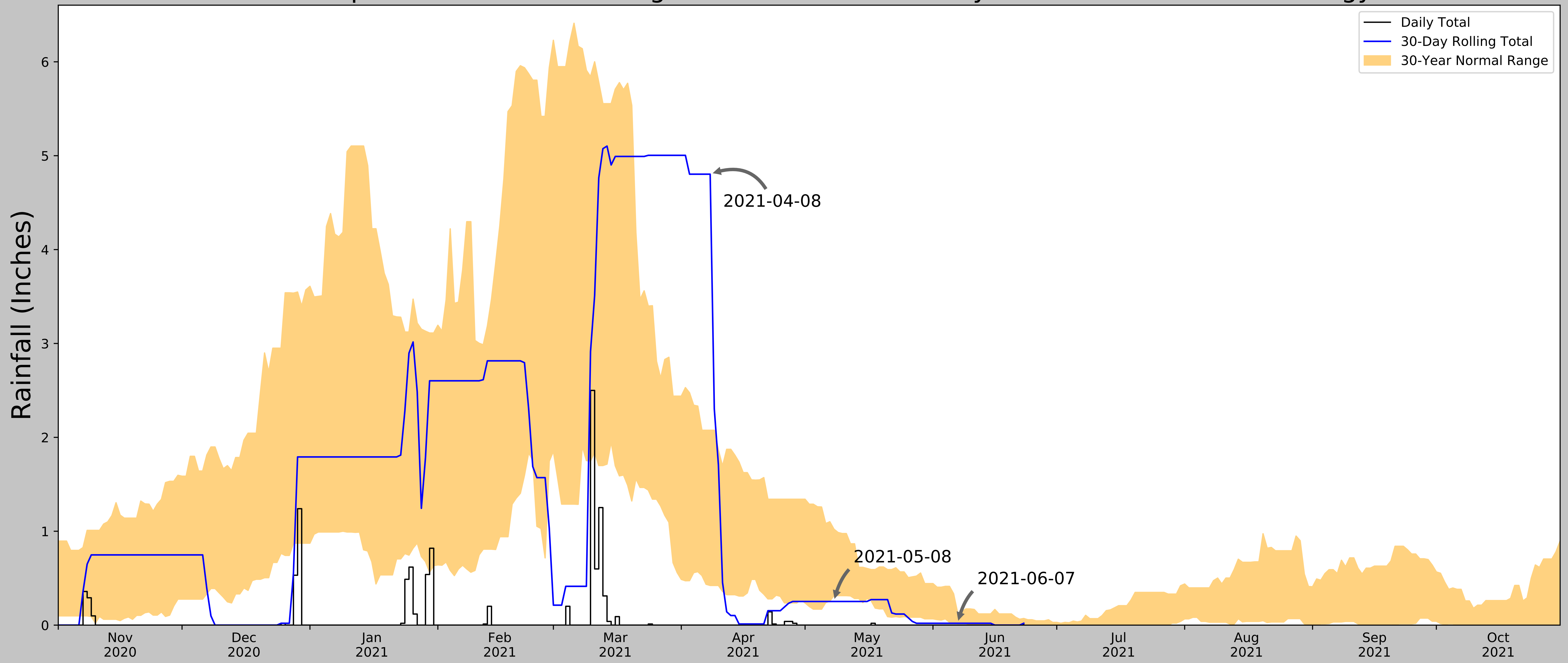
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-06-03	0.054331	0.403937	0.019685	Dry	1	3	3
2021-05-04	0.170079	1.26063	0.251969	Normal	2	2	4
2021-04-04	0.558661	2.34252	4.80315	Wet	3	1	3
Result							Normal Conditions - 10

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CORONA 12.5 SE	33.7346, -117.4315	1301.837	28.496	1183.863	46.559	149	0
DESERT HOT SPRINGS 3.0 NW	33.9855, -116.5415	1338.911	27.438	1146.789	43.813	1581	0
HOMELAND 1.7 NNE	33.769, -117.0923	2248.032	14.177	237.668	9.749	10	3
IDYLLWILD 1.8 NW	33.7631, -116.735	6325.131	21.488	3839.431	92.171	1557	0
HEMET 4.1 ENE	33.7527, -116.9196	1698.163	15.763	787.537	19.507	1076	86
CORONA 12.8 SE	33.7307, -117.4276	1403.871	28.463	1081.829	43.6	102	0
BEAUMONT 2.5 NW	33.9543, -117.012	2532.152	0.87	46.452	0.432	0	1
BIG BEAR LAKE	34.2431, -116.9169	6752.953	20.086	4267.253	94.751	6722	0
ELSINORE	33.6861, -117.3458	1268.045	26.87	1217.655	44.81	135	0
HEMET	33.7381, -116.8939	1811.024	17.269	674.676	19.422	21	0

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



Coordinates	33.965141, -117.019732
Observation Date	2021-06-07
Elevation (ft)	2485.7
Drought Index (PDSI)	Extreme drought (2021-05)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-06-07	0.017323	0.124409	0.019685	Normal	2	3	6
2021-05-08	0.314173	1.022047	0.251969	Dry	1	2	2
2021-04-08	0.422441	2.075591	4.80315	Wet	3	1	3
Result							Normal Conditions - 11

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CORONA 12.5 SE	33.7346, -117.4315	1301.837	28.496	1183.863	46.559	149	0
DESERT HOT SPRINGS 3.0 NW	33.9855, -116.5415	1338.911	27.438	1146.789	43.813	1581	0
HOMELAND 1.7 NNE	33.769, -117.0923	2248.032	14.177	237.668	9.749	10	3
IDYLLWILD 1.8 NW	33.7631, -116.735	6325.131	21.488	3839.431	92.171	1557	0
HEMET 4.1 ENE	33.7527, -116.9196	1698.163	15.763	787.537	19.507	1076	86
CORONA 12.8 SE	33.7307, -117.4276	1403.871	28.463	1081.829	43.6	102	0
BEAUMONT 2.5 NW	33.9543, -117.012	2532.152	0.87	46.452	0.432	0	1
BIG BEAR LAKE	34.2431, -116.9169	6752.953	20.086	4267.253	94.751	6722	0
ELSINORE	33.6861, -117.3458	1268.045	26.87	1217.655	44.81	135	0
HEMET	33.7381, -116.8939	1811.024	17.269	674.676	19.422	21	0

APPENDIX G

SITE PHOTOGRAPHS

Appendix G. Site Photographs[1]

Beaumont Summit Station Aquatic Resources Delineation – April 22, 2021; June 3 and 7, 2021

Photo 1. Looking southwest towards Erosional Feature (EF)-1 (yellow line). Vegetation surrounding EF-1 had been recently mowed. EF-1 exhibited a slight break in bank slope, but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other Ordinary High Water Mark (OHWM) indicators. (33.968462, -117.024590). June 3, 2021.

Photo 2. View of OHWM Datasheet Point (ODP) 1, facing west, within the lower topographic area between two gentle slopes just west of EF-1. The lower topographic area did not exhibit any bed and bank indicators, there was no break in slope, and the sediment texture and vegetation did not differ from the lower topographic area to the adjacent slopes (33.968296, -117.024925). June 3, 2021.

Photo 3. View of area of low topography between EF-1 and EF-2, facing southwest (33.967847, -117.024635). June 3, 2021.

Photo 4. View of ODP 2, facing southwest, within EF-2. The gully/erosional feature exhibited a slight break in bank slope but did not exhibit a distinctive change in average sediment texture, change in vegetation species or cover, or any other OHWM indicators, and did not continue downstream (33.967305, -117.025013). June 3, 2021.

[1] See corresponding Figure 5 series for Photo Point Locations. See Aquatic Resource Delineation Report Sections 6 through 8 for a discussion of each feature.

Photo 5. Overview of area of lower topography located east of EF-2, facing east (33.967002, -117.025087). June 3, 2021.

Photo 6. Overview of area of lower topography located west of Basin (B)-2, facing southwest (33.966258, -117.022864). June 3, 2021.

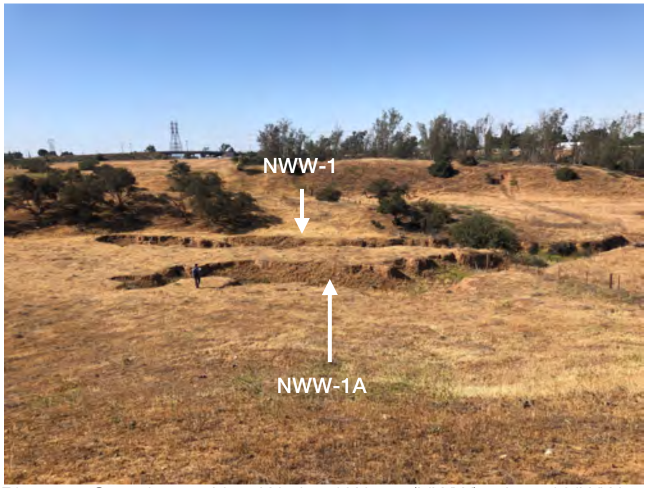


Photo 7. Overview of Non-Wetland Water (NWW)-1A and NWW-1, facing south. NWW-1A and NWW-1 converge just before continuing off site and downstream and exhibiting a more defined bed and bank (33.966304, -117.025167). June 3, 2021.

Photo 8. Upstream view of ODP 3, facing southeast, within NWW-1A. The OHWM was defined by a faint break in bank slope and a change in vegetation cover. NWW-1A and NWW-1 continue downstream where OHWM indicators become more prominent (33.966120, -117.025049). June 3, 2021.

Photo 9. Downstream view of ODP 3, facing west, within NWW-1A. As NWW-1A continues downstream, OHWM indicators become more prominent (33.966076, -117.024773). June 3, 2021.

Photo 10. Downstream view of NWW-1 from upstream extent, facing west. As NWW-1 continues downstream, OHWM indicators become more prominent (33.965835, -117.024734). June 3, 2021.

Photo 11. View of B-1, which contained several mulefat (*Baccharis salicifolia*), facing north. B-1 was previously used as a settling basin to hold manure (33.966130, -117.021422). June 3, 2021.

Photo 12. View of B-2, which contained some mulefat and tree tobacco (*Nicotiana glauca*), facing northeast. B-2 was previously used as a settling basin to hold manure (33.966130, -117.021422). June 3, 2021.

Photo 13. View of B-3, facing south. B-3 was previously used as a settling basin to hold manure (33.965818, -117.021455). June 3, 2021.

Photo 14. View of Wetland Data Form Point (WDP) 1 (white arrow) within small stand of mule fat, facing east, within B-4. WDP 1 met the wetland hydrology parameter; however, hydrophytic vegetation and hydric soil parameters were not met at WDP 1. B-4 was previously used as a settling basin to hold manure (33.965370, -117.022221). June 3, 2021.

Photo 15. View of B-5 facing southeast. B-5 was previously used as a settling basin to hold manure (33.965122 -117.021874). June 3, 2021.

Photo 16. View of area mapped by U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) as a “Reservoir,” facing west. No evidence of hydrology was observed (33.965010, -117.021979). June 3, 2021.

Photo 17. Downstream view of NWW-2, facing west. (33.965125, -117.022334). June 7, 2021.

Photo 18. Upstream view of ODP 4, facing east, within NWW-2. The OHWM was defined by a faint break in bank slope and a change in vegetation cover (33.964853, -117.023670). June 7, 2021.

Photo 19. Downstream view of ODP 4, facing west, within NWW-2. Vegetation was dominated by non-native grasses, including short-pod mustard *(Hirschfeldia incana*), ripgut brome *(Bromus diandrus*), and false brome *(Brachypodium distachyon*) (33.964874, -117.023356). June 7, 2021.

Photo 20. View of WDP 2 (white arrow), facing west, within NWW-2. WDP 2 did not meet the hydrophytic vegetation, hydric soil, or wetland hydrology parameters (33.964962, -117.023251). June 7, 2021.

Photo 21. View of NWW-2A (yellow line), which showed faint indicators of an OHWM, as it continues into NWW-2, facing northwest (33.964876, -117.022516). June 7, 2021.


Photo 22. View of culvert outlets located along the southern extent of the review area under Brookside Avenue, facing south. Flows from the culvert outlets continue into NWW-3 (33.961603, -117.018517). June 3, 2021.

Photo 23. Downstream view of NWW-3, facing northwest, located just north of the two culvert outlets under Brookside Avenue before NWW-3 converges with NWW-3A (33.961636, -117.018604). June 3, 2021.


Photo 24. View of EF-4 within the review area, facing west. EF-4 continues west into Swale (S)-1, which ultimately converges with NWW-3A (33.963245, -117.013837). April 22, 2021.

Photo 25. View of ODP 6, facing east, within S-1. S-1 did not exhibit any bed and bank indicators, there was no change in sediment texture or break in slope, and vegetation did not differ between the swale and the adjacent upland area (33.962812, -117.017420). June 3, 2021.

Photo 26. View at upstream extent of NWW-3A, facing southwest, just west of S-2 (33.963458, -117.016526). June 3, 2021.

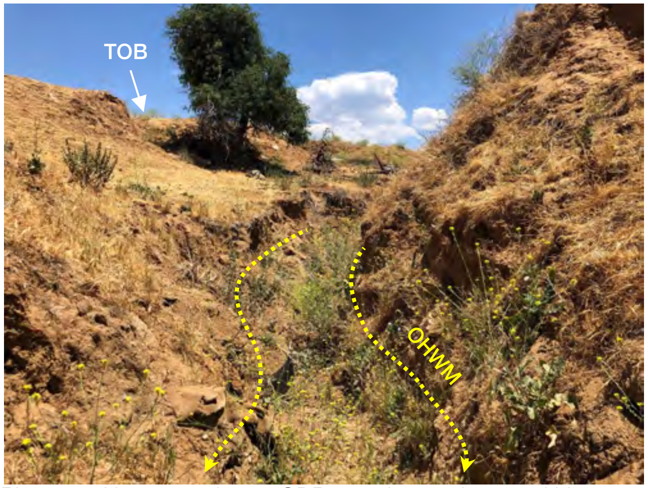


Photo 27. Upstream view of ODP 5, facing northeast, within NWW-3A. The OHWM was primarily defined by a a break in bank slope, change in average sediment texture, and change in vegetation species (33.963053, -117.017202). June 3, 2021.

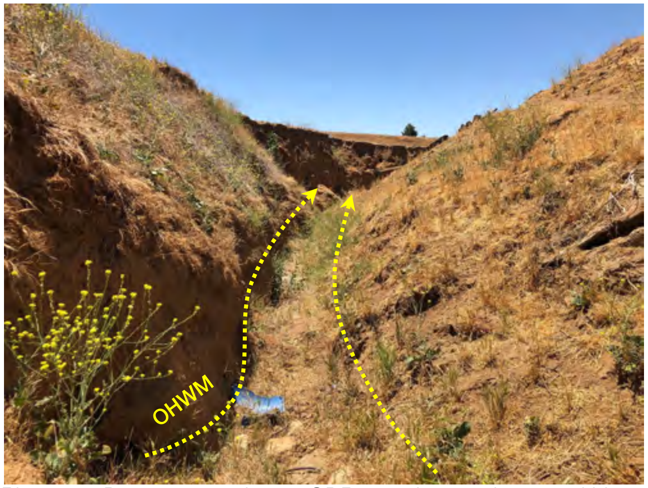


Photo 28. Downstream view of ODP 5, facing southwest, within NWW-3A (33.963266, -117.017032). June 3, 2021.

Photo 29. View of S-3, facing south, as it travels towards NWW-3A (33.9632961, -117.018316). April 22, 2021.

Photo 30. Downstream view of NWW-3A, facing southwest (33.962811, -117.018492). June 3, 2021.

Photo 31. Downstream view of area of NWW-3A exhibiting a faint OHWM, facing west (33.962373, -117.019364). June 3, 2021.

Photo 32. Downstream view of NWW-3, located west of the convergence of NWW-3 and NWW-3A, facing southwest (33.962054, -117.02037). June 3, 2021.

Photo 33. Upstream view of ODP 7, facing east, within NWW-3. The OHWM was primarily defined by a change in average sediment texture, change in vegetation species and cover, and faint break in bank slope (33.962257, -117.021513).

Photo 34. Downstream view of ODP 7, facing west, within NWW-3 (33.962335, -117.021187). June 3, 2021.


Photo 35. View of WDP 3, facing north, within NWW-3. WDP 3 met the hydrophytic vegetation parameter; however, hydric soil and wetland hydrology parameters were not met within WDP 3 (33.962696, -117.022892). June 7, 2021.


Photo 36. View of EF-6 (yellow line), facing northwest, which travels into area with some mulefat and tree tobacco, just east of NWW-3B. EF-6 did not appear to contribute flows to NWW-3B (33.963667, -117.020341). June 3, 2021.

Photo 37. View of EF-7 (yellow arrow), just south of EF-6, facing south/southwest. EF-7 converges with EF-8 (white arrow), neither of which appeared to contribute flows to NWW-3B (33.963581, -117.020494). June 3, 2021.

Photo 38. Looking downstream from the south side of the upstream extent of NWW-3B, facing northwest (33.963553, -117.021142). June 3, 2021.

Photo 39. View of D-1, facing east (33.965103, -117.019365). April 22, 2021.

Photo 40. View of area where D-1 abruptly stops, facing south. Flows likely continue as sheet flow into S-5, before continuing into NWW-3B1 (33.964824, -117.020845). June 3, 2021.

Photo 41. View of NWW-3B1, facing south. Flows continue south/southwest into NWW-3B (white arrow) (33.964550, -117.021793). June 3, 2021.


Photo 42. Downstream view of NWW-3B, facing west (33.963775, -117.022856). April 22, 2021.

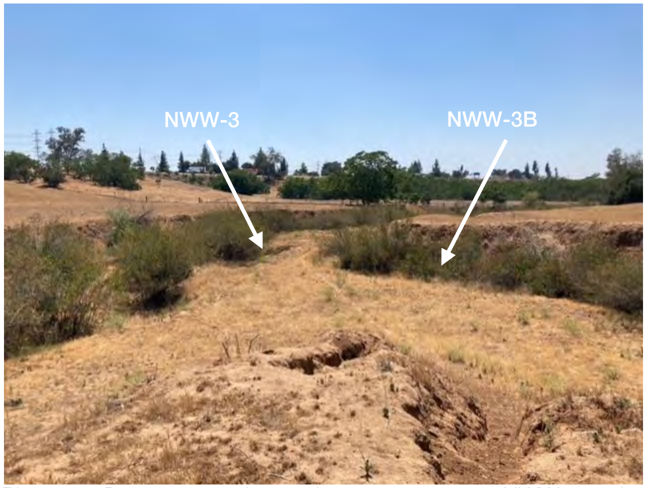


Photo 43. Downstream view of the convergence of NWW-3 and NWW-3B, facing west, before NWW-3 continues off site (33.963316, -117.023726). June 3, 2021.


Photo 44. View of slight depressional area surrounded by mulefat scrub, located south of NWW-3B, facing west. No evidence of hydrology was observed (33.963283, -117.021269). June 3, 2021.


Photo 45. East facing view of area mapped by USGS NHD as a "Reservoir" and where a basin was previously located east of EF-8. No evidence of hydrology was observed (33.963493, -117.020227). June 3, 2021.


Photo 46. Southeast facing view of area where a basin was previously located west of S-3. No evidence of hydrology was observed (33.963274, -117.019648). June 3, 2021.

APPENDIX H

LITERATURE CITATIONS AND REFERENCES

APPENDIX H. LITERATURE CITATIONS AND REFERENCES

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APPENDIX I

ORM BULK UPLOAD AQUATIC RESOURCES OR CONSOLIDATED EXCEL SPREADSHEET

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
NWW-1	CALIFORNIA	R6		Area	0.018	ACRE	DELINEATE	33.965908	-117.025153
NWW-1A	CALIFORNIA	R6		Area	0.021	ACRE	DELINEATE	33.966006	-117.025084
NWW-2	CALIFORNIA	R6		Area	0.087	ACRE	DELINEATE	33.964929	-117.023925
NWW-2A	CALIFORNIA	R6		Area	0.004	ACRE	DELINEATE	33.964977	-117.022656
NWW-2B	CALIFORNIA	R6		Area	0.012	ACRE	DELINEATE	33.965185	-117.022994
NWW-2C	CALIFORNIA	R6		Area	0.007	ACRE	DELINEATE	33.964845	-117.023224
NWW-3	CALIFORNIA	R6		Area	0.385	ACRE	DELINEATE	33.962391	-117.021747
NWW-3A	CALIFORNIA	R6		Area	0.146	ACRE	DELINEATE	33.962760	-117.018132
NWW-3B	CALIFORNIA	R6		Area	0.117	ACRE	DELINEATE	33.963540	-117.022834
NWW-3B1	CALIFORNIA	R6		Area	0.0301001	ACRE	DELINEATE	33.964055	-117.021934

APPENDIX J

GIS DATA (PROVIDED ELECTRONICALLY TO AGENCIES)

APPENDIX B

BEAUMONT SUMMIT STATION PROJECT BURROWING OWL SURVEY REPORT

BEAUMONT SUMMIT STATION PROJECT

PROTOCOL PRESENCE/ABSENCE 2021 SURVEY REPORT FOR BURROWING OWL (*Athene cunicularia*)

Riverside County, California

October 5, 2021

Prepared for:
EQT Exeter
8621 East Whitton Avenue
Scottsdale, AZ 85251
(708) 341-9821

Prepared by:
Rocks Biological Consulting
4312 Rialto St,
San Diego, CA 92107
(619) 701-6798

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Appendix A – Site Photographs
Appendix B – Bird Species Observed During Burrowing Owl Focused Surveys

1 SUMMARY

This report is a summary of focused burrowing owl (*Athene cunicularia*; BUOW) surveys Rocks Biological Consulting (RBC) conducted for the Beaumont Summit Station Project (project) in the City of Beaumont, Riverside County, California. The project is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) Burrowing Owl Survey Area (RCA 2021). RBC conducted a habitat assessment for BUOW on April 22, 2021 in accordance with the Western Riverside MSHCP Burrowing Owl Survey Instructions (RCA 2006.

Based on the presence of suitable habitat, RBC conducted breeding season BUOW surveys between May 12, 2021 and July 6, 2021 in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (RCA 2006 and California Department of Fish and Wildlife (CDFW) *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). No BUOW, active burrows, or sign were documented within the survey area.

2 INTRODUCTION

2.1 PROJECT LOCATION & PROPOSED ACTIVITY

The project is in the northwestern portion of the City of Beaumont, California (Figure 1). The project site is approximately 191 acres, located south of Cherry Valley Boulevard, north of Brookside Avenue, and east of Interstate 10 (I-10). The project would amend the approved Sunny-Cal Specific Plan (2007) and would include development of the site for an e-commerce center, commercial development, open space (parks/trails and buffer), and roads. Development start time will be dependent on processing time but is scheduled to begin in fall 2022 with an estimated construction time of approximately one year.

2.2 BURROWING OWL NATURAL HISTORY

Within California, BUOW is listed by the California Department of Fish and Wildlife (CDFW) as a Species of Special Concern (SSC). Suitable habitat for BUOW is generally typified by short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils, such as naturally occurring grassland, shrub steppe, and desert habitats (Haug et al. 1993). Additionally, BUOW may occur in agricultural areas, ruderal grassy fields, vacant lots and pastures containing suitable vegetation structure and useable burrows and foraging habitat in proximity (Gervais et al. 2008). Typically, BUOW use burrows that have been dug by other species, termed host burrowers. In California, BUOW frequently use burrows dug by California ground squirrel (*Otospermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*) and dens or holes dug by other fossorial species, including badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (e.g., San Joaquin kit fox [*Vulpes macrotis mutica*]) (Ronan 2002). In addition, BUOW also frequently use natural rock cavities, debris piles, culverts, and pipes for nesting and roosting (Rosenberg et al. 1998) and have been documented using artificial burrows for nesting and cover (Belthoff and Smith 2003). Occupancy of burrowing owl habitat is confirmed at a site when at least one burrowing owl, or its sign at or near a burrow entrance, is observed within the last three years (Rich 1984).

3 METHODS

RBC biologists conducted a habitat assessment for BUOW on April 22, 2021 in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (RCA 2006). Based on the presence of suitable habitat on-site, RBC avian biologists Ian Hirschler and Chris Thomson conducted focused burrow surveys and focused breeding season BUOW surveys between May 12 and July 6, 2021 in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (RCA 2006) and the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Mr. Hirschler is a wildlife biologist with over six years of professional experience and a Bachelor of Science degree in field and wildlife biology. Mr. Thomson is a wildlife biologist with over three years of professional experience and a Bachelor of Science degree in environmental science with a focus on ornithology. Both biologists have extensive experience performing burrowing owl surveys.

The survey area included the project site, as well as all suitable habitat within a 500-foot buffer per CDFW guidance (Figure 2). Survey timing followed MSHCP Instructions which calls for focused burrowing owl surveys consisting of site visits on four separate days; however, survey methodologies followed those presented in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

Two visits were required for each survey ‘pass’ due to the size of the site and survey timing restrictions. During each survey, RBC avian biologists walked through suitable BUOW habitat within the survey area via straight-line transects spaced 10 meters (m) to 30 m apart, adjusting for vegetation height and density, and used binoculars to scan the survey area at least every 100 m for BUOW, active burrows, and/or sign of BUOW. No calls were used. Care was taken to minimize disturbance near suitable burrows to avoid flushing any burrowing owls. All observed burrows were examined for sign, including feathers, pellets, whitewash, and prey remains. Burrows were considered active if a BUOW was observed at or near the entrance or if recent sign was present. All BUOW, active burrows, and BUOW sign were mapped in the geographic information system (GIS) program ArcGIS Collector. Survey dates, times, and weather conditions are presented in Table 1, below. Climatic and temporal conditions did not affect BUOW detection or survey scope.

Table 1. Burrowing Owl Survey Dates and Conditions

Survey Number	Date	Surveyor(s)	Time (Start; End)	Temp (F) (Start; End)	Cloud Cover (%) (Start; End)	Wind Range (mph) (Start; End)	Precip. (Start; End)	Visibility (Lo, Med, High) (Start; End)
1 (dusk)	5/12/21	I. Hirschler, C. Thomson	1730-1930	81-70	0-0	3-7; 3-7	0-0	High; High
1 (dawn)	5/13/21	I. Hirschler, C. Thomson	0715-0930	60-70	0-0	0-2; 1-4	0-0	High; High
2 (dusk)	6/6/21	I. Hirschler, C. Thomson	1730-1945	77-67	0-0	5-8; 5-8	0-0	High; High
2 (dawn)	6/7/21	I. Hirschler, C. Thomson	0730-1000	52-75	100-100	0-2; 1-3	0-0	High; High
3 (dusk)	6/23/21	I. Hirschler	1745-1930	76-74	80-60	2-5; 0-2	0-0	High; High
3 (dawn)	6/24/21	I. Hirschler	0715-1000	64-69	15-5	0-2; 0-2	0-0	High; High
4 (dusk)	7/5/21	I. Hirschler, H. Swarthout[1]	1715-1945	88-82	0-0	0-2; 1-4	0-0	High; High
4 (dawn)	7/6/21	I. Hirschler	1715-1945	88-82	0-0	0-2; 1-4	0-0	High; High

[1]*Hannah Swarthout participated in survey 4 (dusk) as a trainee*

4 RESULTS

4.1 EXISTING CONDITIONS & HABITAT ASSESSMENT

The project site is composed primarily of non-native grassland dominated by red brome (*Bromus rubens*) and goldentop grass (*Lamarckia aurea*) as well as developed land. The developed land on-site consists of multiple concrete foundations and several abandoned outbuildings that supported former poultry and egg farm operations. The project site also supports several canyons and drainages composed of non-native grassland, mulefat thickets, non-native riparian habitat and Riversidian sage scrub.

During the initial BUOW habitat assessment, most of the survey area was determined to be suitable BUOW habitat based on the presence of open grassland and several observations of California ground squirrel activity at suitable burrows throughout the project site. Photographs of site conditions are presented in Appendix A.

4.2 BURROWING OWL SURVEY RESULTS

RBC conducted four focused BUOW surveys during the breeding season (February 1 to August 31) between May 12, 2021 and July 6, 2021. No BUOW, sign, or active burrows were observed during focused surveys.

No evidence of owl predation was observed; however, common predators in the area include coyote, gray fox (*Urocyon cinereoargenteus*), and raccoon (*Procyon lotor*). Additionally, 34 bird species were observed during protocol surveys as listed in Appendix B.

5 BURROWING OWL MITIGATION

Pursuant to the MSHCP, all project sites containing burrows or suitable habitat require pre-construction surveys (RCA 2006). The pre-construction surveys will be conducted in accordance with MSHCP Objective 6 for BUOW. As such, the following minimization and avoidance measure is required in order to avoid direct impacts on BUOW:

> A qualified biologist will conduct a pre-construction presence/absence survey for burrowing owls within 30 days prior to site disturbance. If burrowing owls are documented on site, the owls will be relocated/excluded from the site outside of the breeding season following accepted protocols, as specified in the MSHCP.

6 CONCLUSIONS

No BUOW, active burrows, or BUOW sign were documented within the project site during the focused BUOW surveys conducted between May 12, 2021 and July 6, 2021. However, due to the presence of suitable habitat on site and the potential for future occupation of the site, pre-construction surveys will be required to avoid potential direct impacts on BUOW resulting from the project in conformance with the MSHCP.

7 REFERENCES

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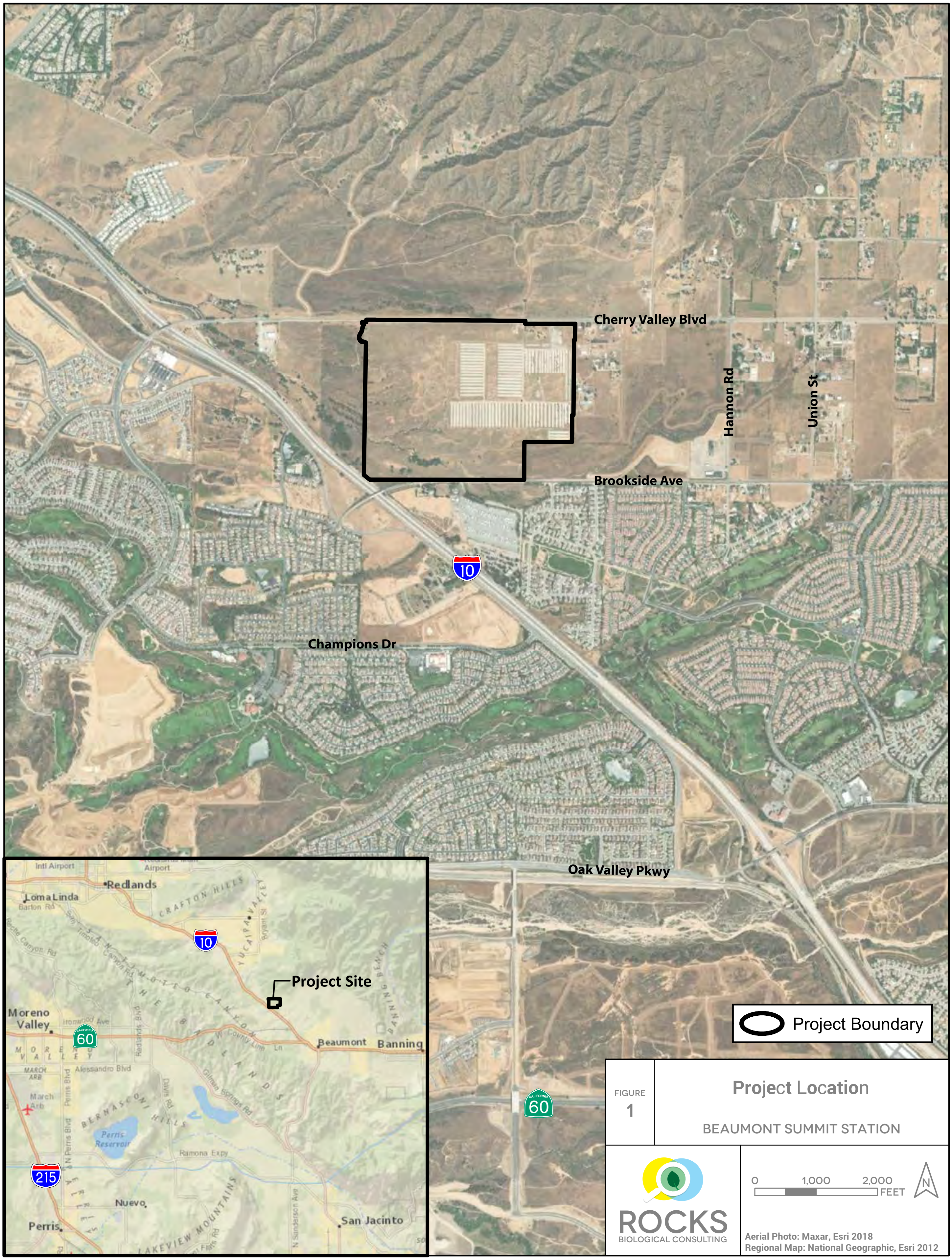
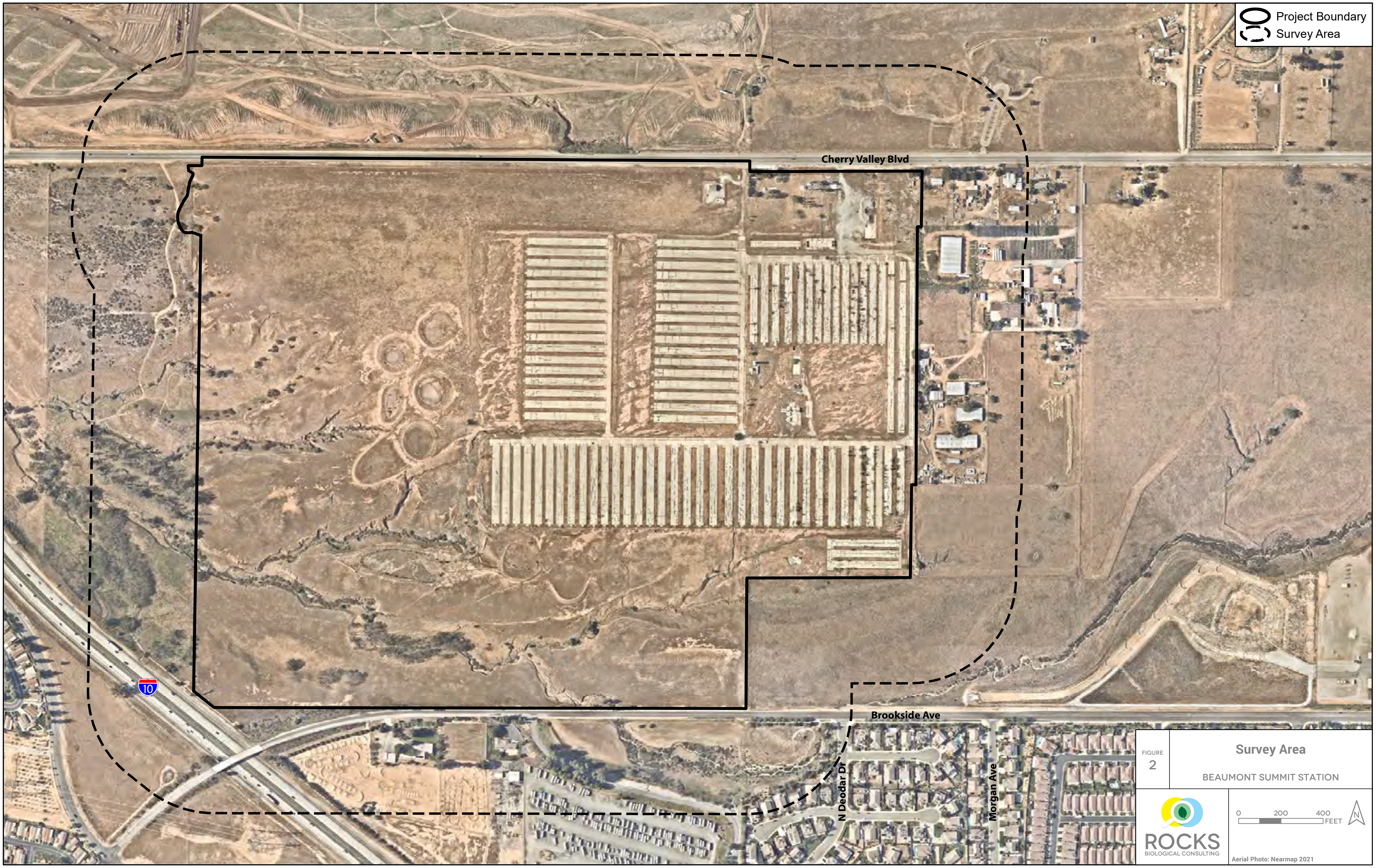


FIGURE 1

Project Location

BEAUMONT SUMMIT STATION


Project Boundary
Survey Area
Cherry Valley Blvd
Brookside Ave
N Deodar Dr
Morgan Ave
10
FIGURE
2
Survey Area
BEAUMONT SUMMIT STATION
ROCKS
BIOLOGICAL CONSULTING
0
200
400
FEET
N
Aerial Photo: Nearmap 2021

APPENDIX A

SITE PHOTOGRAPHS

Appendix A

Site Photographs

Photo 1. Overview of project site from the western site boundary, showing drainages running through non-native grassland, facing northeast on April 22, 2021.

Photo 2. View of non-native grassland in the western portion of the project site, showing oaks and drainages containing mulefat, facing west on April 22, 2021.

Photo 3. View of non-native grassland within central portion of the project, facing east on April 22, 2021.

Photo 4. Picture of concrete pads within the central portion of the project, facing south on April 22, 2021.

Photo 5. Representative photos from April 22, 2021 of the non-native riparian (*Ailanthus altissima*) within the drainages in the southwestern portion of the site; stands have a height of up to approximately 25 feet.

Photo 6. South-facing view of mulefat scrub within the drainages in the southwestern portion of the site, facing west on May 27, 2021.

Photo 7. Representative picture of the drainages within the southwestern portion of the project site, facing east on April 22, 2021.

Photo 8. Representative picture of the drainages within the southwestern portion of the project site, facing north on April 22, 2021.

Photo 9. Representative photo of the small-mammal burrows throughout the non-native grassland within the survey area.

Photo 10. Representative photo of the adjacent chamise chaparral habitat northwest of project boundary on July 20, 2021.

APPENDIX B

BIRD SPECIES OBSERVED DURING FOCUSED BURROWING OWL SURVEYS

Appendix B

Bird Species Observed During Burrowing Owl Focused Surveys

Family	Common Name	Scientific Name
Accipitridae	red-tailed hawk	*Buteo jamaicensis*
Alaudidae	horned lark	*Eremophila alpestris*
Charadriidae	killdeer	*Charadrius vociferus*
Columbidae	rock pigeon	*Columba livia*
Columbidae	Eurasian collared-dove	*Streptopelia decaocto*
Columbidae	mourning dove	*Zenaida macroura*
Corvidae	American crow	*Corvus brachyrhynchos*
Corvidae	common raven	*Corvus corax*
Falconidae	American kestrel	*Falco sparverius*
Fringillidae	house finch	*Haemorhous mexicanus*
Fringillidae	Lawrence's goldfinch	*Spinus lawrencei*
Fringillidae	lesser goldfinch	*Spinus psaltria*
Hirundinidae	barn swallow	*Hirundo rustics*
Hirundinidae	cliff swallow	*Petrochelidon pyrrhonota*
Hirundinidae	northern rough-winged swallow	*Stelgidopteryx serripennis*
Icteridae	Brewer’s blackbird	*Euphagus cyanocephalus*
Icteridae	Bullock's oriole	*Icterus bullockii*
Icteridae	hooded oriole	*Icterus cucullatus*
Icteridae	western meadowlark	*Sturnella neglecta*
Mimidae	northern mockingbird	*Mimus polyglottos*
Passerellidae	lark sparrow	Chondestes grammacus
Passerellidae	song sparrow	*Melospiza melodia*
Passerellidae	California towhee	*Melozone crissalis*
Passeridae	house sparrow	*Passer domesticus*
Picidae	Nuttall's woodpecker	*Dryobates nuttallii*
Ptiliogonatidae	phainopepla	*Phainopepla nitens*
Sturnidae	European starling	*Sturnus vulgaris*
Trochilidae	Anna’s hummingbird	*Calypte anna*
Troglodytidae	Bewick's wren	*Thryomanes bewickii*
Turdidae	western bluebird	*Sialia mexicana*
Tyrannidae	black phoebe	*Sayornis nigricans*
Tyrannidae	Say’s phoebe	*Sayornis saya*
Tyrannidae	western kingbird	*Tyrannus verticalis*
Tyrannidae	Cassin's kingbird	*Tyrannus vociferans*

Appendix K: Traffic Impact Analysis

Traffic Study

for

Beaumont Summit Station Project

In the City of Beaumont

Prepared for:

The City of Beaumont

June 2022

Kimley»Horn

TRAFFIC STUDY
FOR THE
BEAUMONT SUMMIT STATION PROJECT

IN THE
CITY OF BEAUMONT

Prepared for:

The City of Beaumont

Prepared by:

Kimley-Horn and Associates, Inc.
1100 Town and Country Road, Suite 700
Orange, CA 92868

June 2022

TRAFFIC STUDY
BEAUMONT SUMMIT STATION PROJECT

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TRAFFIC STUDY
FOR THE PROPOSED
BEAUMONT SUMMIT STATION PROJECT
IN THE CITY OF BEAUMONT

INTRODUCTION

This traffic study has been prepared to evaluate the project-related traffic effects associated with the proposed Beaumont Summit Station project in the City of Beaumont.

PROJECT DESCRIPTION

The Project site is located in the northwestern area of the City of Beaumont, immediately east of the Interstate 10 (I-10) Freeway. A project vicinity map is provided on Figure 1. The site is bounded by Cherry Valley Boulevard to the north, the I-10 Freeway to the west, Brookside Avenue to the south and generally vacant land to the east. Based on the City of Beaumont General Plan, the project site is currently zoned as single-family residential, but is currently vacant. The Project site is comprised of nine vacant parcels.

The Project site is divided into five parcels and will be developed in two phases. Phase 1 will include Parcels 1, 2, and 3 designated for industrial uses. These parcels are proposed to be developed with three separate industrial warehouse buildings, as follows:

- Building 1: 985, 860 square-foot (SF) high-cube short-term storage building
- Building 2: 1,213,235 SF high-cube short-term storage building
- Building 3: 358,370 SF general warehouse

The Project proposed to amend the existing zoning from Single-Family Residential to Light Industrial for Parcels 1, 2, and 3 to allow for industrial uses. Phase 1 of construction is anticipated to begin the second quarter of 2023 and conclude in the third quarter of 2024.

Parcel 4 will be developed as part of Phase 2 and would include the development of Commercial uses, as follows:

- Four-story hotel: 220 rooms
- Shopping center: 25,000 SF
- High-turnover (sit-down) restaurant: 15,000 SF
- Fast-food restaurant with drive-throughs: 10,000 SF

Phase 2 of the Project is anticipated to begin early 2026 and finish mid to late 2027. A copy of the project site plan is provided on Figure 2. Project access would consist of three driveways along Cherry Valley Boulevard. The west and middle project driveways would be signalized and the east project driveway would be an unsignalized right-in-right-out (RIRO) only driveway.

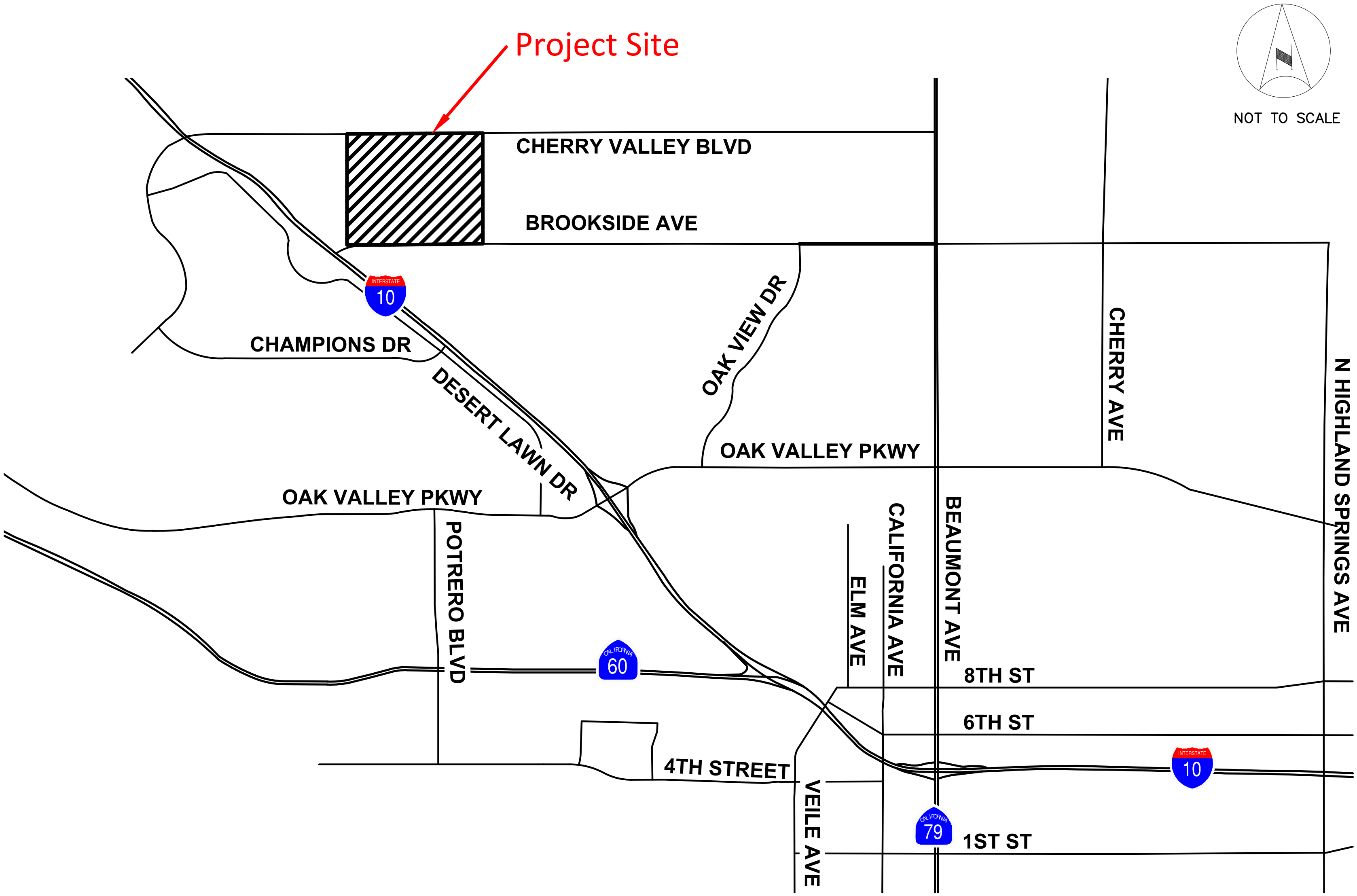

FIGURE 1
VICINITY MAP

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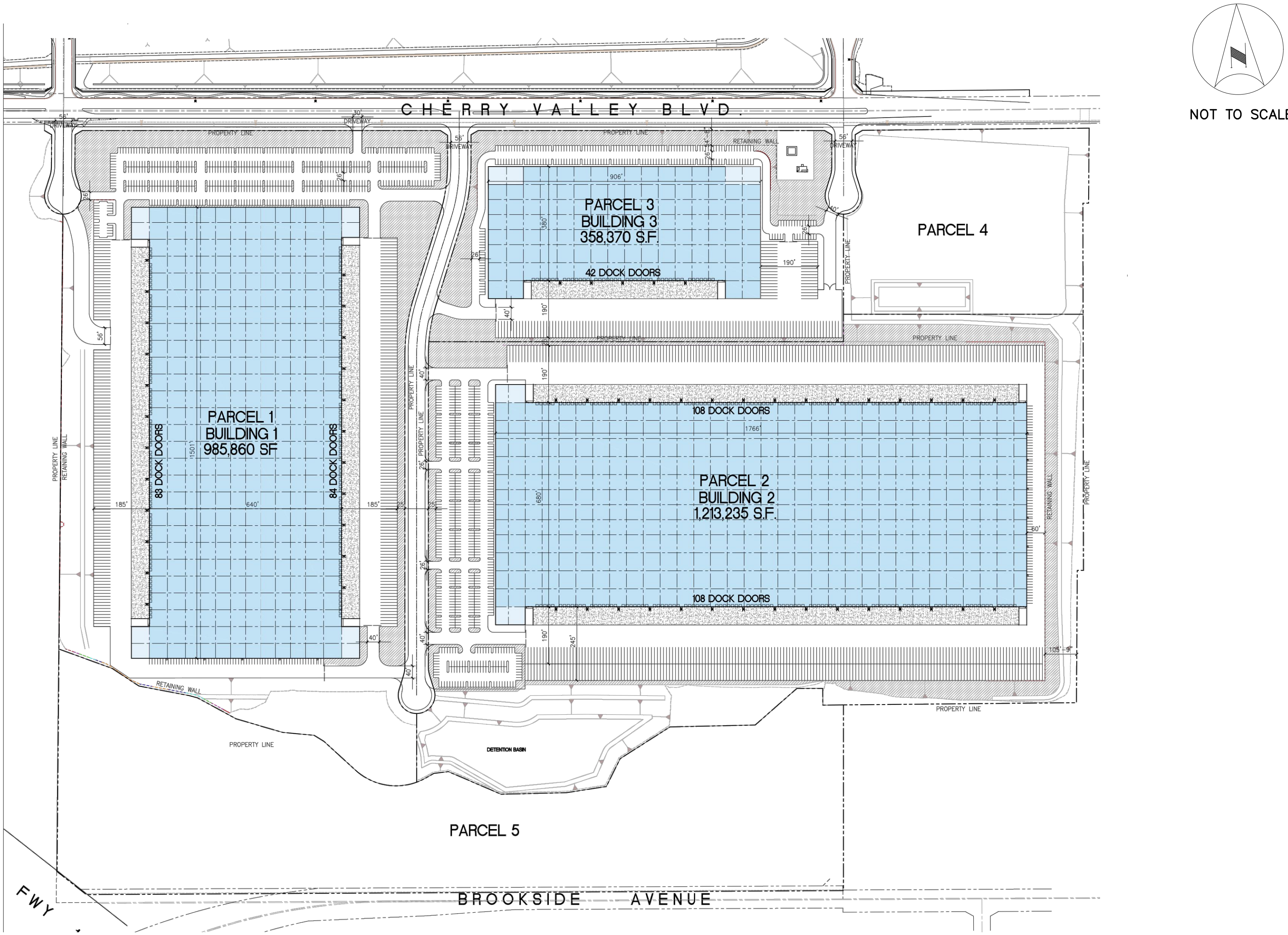

FIGURE 2
PROJECT SITE PLAN

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ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

This traffic analysis will provide an evaluation of weekday morning and evening peak hour operations for the following scenarios:

- Existing Conditions
- Opening Year 2024 Cumulative
- Opening Year 2024 Cumulative Plus Project (Phase 1)
- Opening Year 2027 Cumulative
- Opening Year 2027 Cumulative Plus Project (Phases 1 and 2)
- Horizon Year 2040
- Horizon Year 2040 Plus Project (Phases 1 and 2)

Intersection Analysis – HCM Methodology

The City of Beaumont follows the County of Riverside traffic study procedures (*Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled – 2020*). Peak hour intersection operations are evaluated using the methodology outlined in the Highway Capacity Manual (HCM 6th Edition), consistent with the requirements of the City of Beaumont and the County of Riverside. The intersection analysis was conducted using the Vistro software program and using the specified input parameters required by the City.

Per the HCM Methodology, Level of Service (LOS) for signalized intersections is defined in terms of average control delay per vehicle during the peak hours. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. The charts on page 5 provide a description of the operating characteristics of each Level of Service and average seconds of delay for signalized and unsignalized intersections.

LEVEL OF SERVICE DEFINITIONS	
Level of Service	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service	Signalized Intersection (Average delay per vehicle, in seconds) [1]	Unsignalized Intersections (Average delay per vehicle, in seconds) [2]
A	$\leq$ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

[1] Source: Highway Capacity Manual (HCM 6th Edition), Exhibit 18-4.

[2] Source: Highway Capacity Manual (HCM 6th Edition), Exhibits 19-1 and 20-2.

Performance Criteria

The City of Beaumont General Plan states that Level of Service "D" is considered acceptable during the peak hours.

Significance Thresholds

A project -related traffic effect would be considered to be significant when the project traffic, when added to existing traffic, causes the Level of Service to deteriorate to below the target Level of Service, and effects cannot be mitigated through project conditions of approval. A cumulative effect would occur when cumulative traffic (existing plus ambient growth plus Cumulative Projects plus project traffic) exceeds the target Level of Service, and effects cannot be mitigated through the Transportation Uniform Mitigation Fee (TUMF) network, project conditions of approval, or other implementation mechanisms.

AREA CONDITIONS

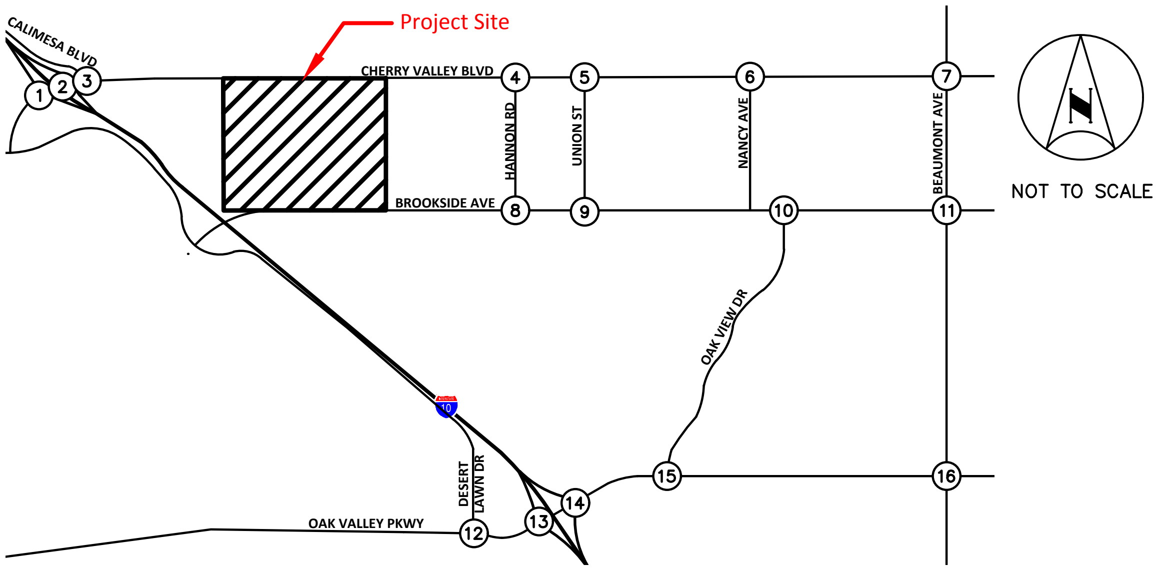
Study Area

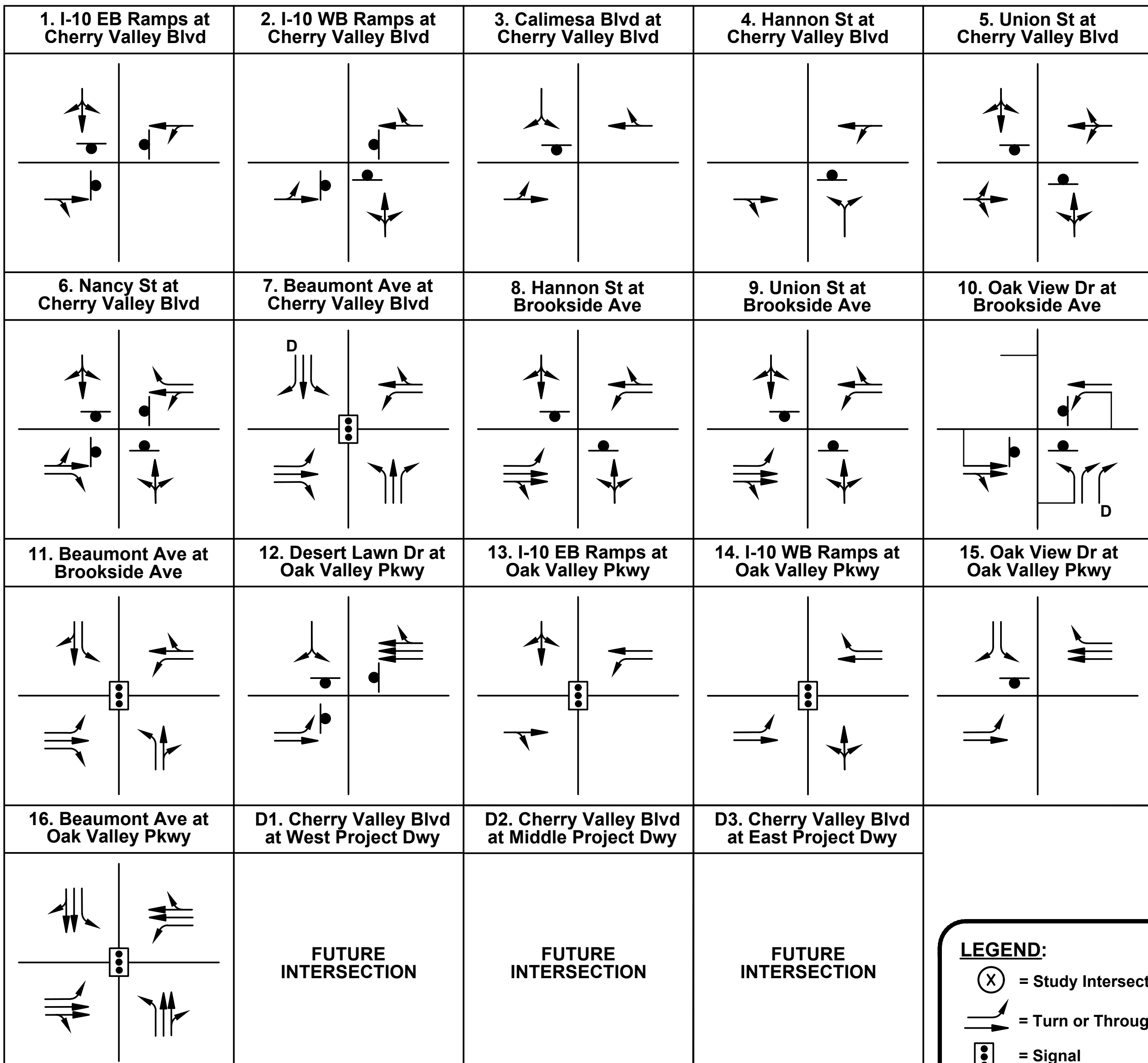
This traffic study includes documentation of existing conditions, future conditions, and identification of project-related deficiencies at the following study intersections:

1. I-10 EB Ramps at Cherry Valley Boulevard
2. I-10 WB Ramps at Cherry Valley Boulevard
3. Calimesa Boulevard at Cherry Valley Boulevard
4. Hannon Road at Cherry Valley Boulevard
5. Union Street at Cherry Valley Boulevard
6. Nancy Avenue at Cherry Valley Boulevard
7. Beaumont Avenue at Cherry Valley Boulevard
8. Hannon Road at Brookside Avenue
9. Union Street at Brookside Avenue
10. Oak View Drive at Brookside Avenue
11. Beaumont Avenue at Brookside Avenue
12. Desert Lawn Drive at Oak Valley Parkway
13. I-10 EB Ramps at Oak Valley Parkway
14. I-10 WB Ramps at Oak Valley Parkway
15. Oak View Drive at Oak Valley Parkway
16. Beaumont Avenue at Oak Valley Parkway

D1. Cherry Valley Boulevard at West Driveway
D2. Cherry Valley Boulevard at Middle Driveway
D3. Cherry Valley Boulevard at East Driveway

The study locations were established in consultation with City of Beaumont staff through the Scoping Letter Agreement process. A copy of the approved Scoping Agreement is provided in *Appendix A*. The study intersection locations and their existing lane configurations are shown on Figure 3.





LEGEND:

- (X) = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- D = Defacto Right Turn

FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

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EXISTING TRANSPORTATION SYSTEM

Existing Roadway System

Regional vehicular access to the site is provided by the SR-60 and I-10 Freeways. The I-10 Freeway is an east-west freeway, located immediately west of the project site. The I-10 Freeway provides three travel lanes in each direction and connects directly to SR-79 (Beaumont Avenue) and SR-60. SR-60 is an east-west freeway located approximately 2.15 miles south of the project site. SR-60 provides two travel lanes in each direction. Southeast of the project site, SR-60 merges into the I-10 Freeway.

Local access to the project vicinity is provided by surrounding arterial and commuter roadways.

Cherry Valley Boulevard is an east-west undivided roadway that is immediately north of the project site and currently provides one travel lane in each direction. Cherry Valley Boulevard is shown as a Secondary Street in the Riverside County Circulation Element of the General Plan (Circulation Element). On-street parking is prohibited, and bike lanes are provided on both sides of the roadway. Cherry Valley Boulevard connects to the I-10 Freeway that is approximately one-half mile from the project site.

Brookside Avenue is an east-west divided roadway located immediately south of the project site and currently provides one travel lane in each direction. Brookside Avenue is shown as a Secondary Street on the City of Beaumont Circulation Element. On-street parking is prohibited on both sides of the roadway, and there are no bike lanes provided.

Oak Valley Parkway is an east-west undivided roadway that currently provides two travel lanes in each direction. Oak Valley Parkway is shown as an Urban Arterial east of Potrero Boulevard on the City of Beaumont Circulation Element. On-street parking is prohibited, and bike lanes are provided on both sides of the roadway.

Beaumont Avenue (SR-79) is north-south undivided roadway that currently provides one travel lane in each direction north of Oak Valley Parkway and two lane in each direction south of Oak Valley Parkway. Beaumont Avenue is shown as an Industrial Collector on the City of Beaumont Circulation Element. On-street parking is prohibited, and bike lanes are provided on both sides of the roadway.

Calimesa Boulevard is a north-south undivided roadway that currently provides one travel lane in each direction. Calimesa Boulevard is shown as a Secondary Street on the City of Beaumont Circulation Element. On-street parking is prohibited, and bike lanes are provided on the east side of the roadway.

Hannon Road is a north-south undivided roadway that provides one lane in each direction. Hannon Road is shown as a Local Street on the City of Beaumont Circulation Element. On-street parking is prohibited on both sides of the roadway, and no bike lanes are provided.

Union Street is a north-south undivided roadway that provides one lane in each direction. Union Street is shown as a Local Street on the City of Beaumont Circulation Element. On-street parking is prohibited on both sides of the roadway, and no bike lanes are provided.

Nancy Avenue is a north-south undivided roadway that provides one lane in each direction. Nancy Avenue is shown as a Local Street on the City of Beaumont Circulation Element. On-street parking is prohibited on both sides, and no bike lanes are provided.

Oak View Drive is a north-south undivided roadway that currently provides one travel lane in each direction. Oak View Drive is shown as an Industrial Collector on the City of Beaumont Circulation Element. On-street parking is prohibited, and bike lanes are provided on both sides of the roadway.
Desert Lawn Drive is a north-south undivided roadway that currently provides one travel lane in each direction. Desert Lawn Drive is shown as an Urban Arterial on the City of Beaumont Circulation Element. On-street parking is prohibited on both sides of the roadway, and no bike lanes are provided.

Existing Transit Service

Public transportation within the City of Beaumont is provided by PASS Transit, operated by the Riverside County Transportation Commission (RCTC), the Riverside Transit Authority (RTA) and the Sunline Transit Agency lines. The nearest bus stop to the Project site is Bus Route 3, located near the intersection of Cherry Valley Boulevard and Beaumont Avenue approximately 2 miles away from the project site.

Bus Route 3 ends at the Walmart Supercenter, at Highland Springs Avenue and the I-10 Freeway. This shopping center is a transfer point for the PASS Banning lines, as well as the Riverside Transit Authority (RTA) and the Sunline Transit Agency lines.

Existing Traffic Volumes

Due to the closure of schools and businesses during the COVID-19 pandemic, modifications to typical traffic count protocol have been used. Historical counts from 2017 were available for the following intersections:

1. I-10 EB Ramps at Cherry Valley Boulevard
2. I-10 WB Ramps at Cherry Valley Boulevard
3. Calimesa Boulevard at Cherry Valley Boulevard
5. Union Street at Cherry Valley Boulevard
6. Nancy Avenue at Cherry Valley Boulevard
7. Beaumont Avenue at Cherry Valley Boulevard

An ambient annual growth rate of two (2) percent per year was applied to the above study intersections to develop existing year 2021 volumes.

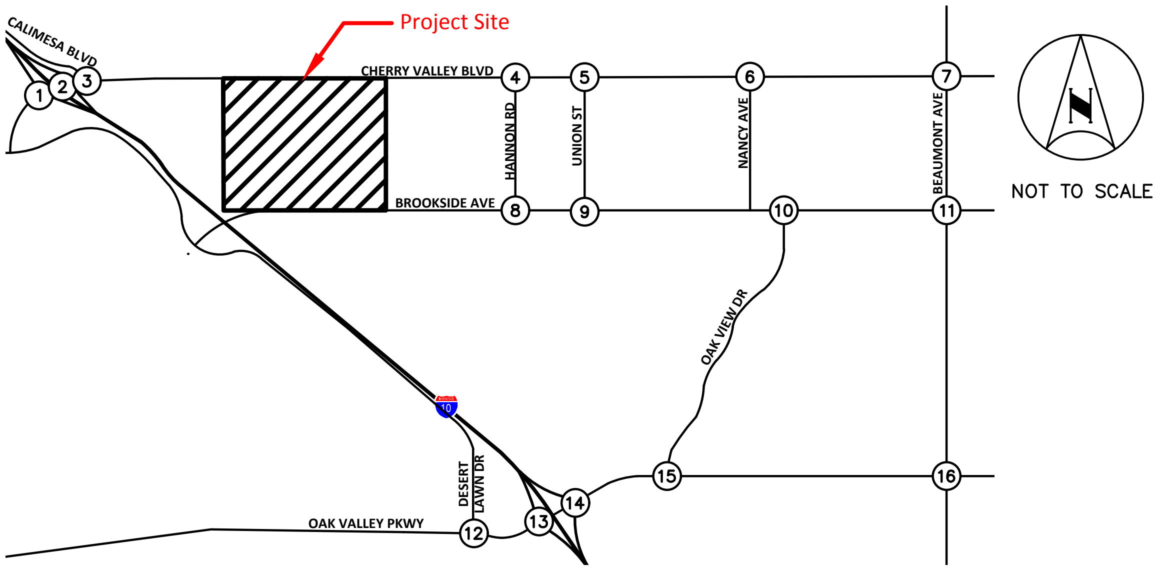
New traffic counts were collected during the morning (7-9 AM) and evening (4-6 PM) peak periods in May 2021, for all study intersections.

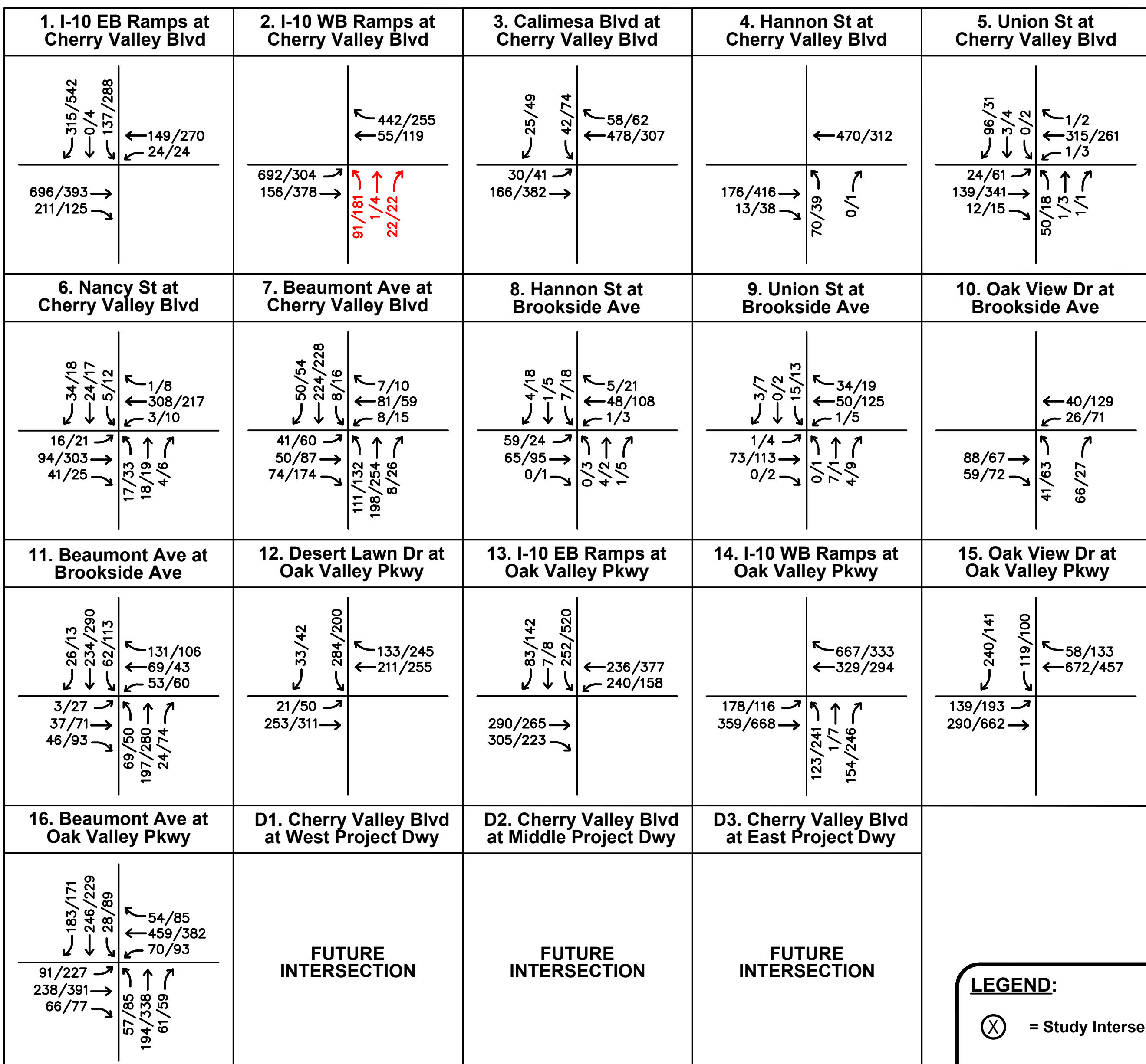
Based on a comparison of historical and new traffic count data, a COVID adjustment factor of 32% was applied to new traffic counts during the AM peak hour at the study intersections. In the PM peak hour, the new traffic counts were higher than the historical traffic counts grown to 2021. Therefore, the new 2021 counts were used for the study intersections in the PM peak hour.

Copies of the traffic count data worksheets are provided in *Appendix B*.

The intersection count data included vehicle classifications for passenger vehicles and trucks. Vehicle classifications are necessary to compute Passenger Car Equivalent (PCE) volumes, which are used in the traffic analysis to address the effects of truck traffic on intersection operation.

The PCE volumes were developed by applying a PCE factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with 4 or more axles. PCE volume worksheets are provided in *Appendix C*. Existing morning and evening peak hour volumes with the PCE factors applied are presented on Figure 4.





LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 4
EXISTING TRAFFIC VOLUMES

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EXISTING TRAFFIC OPERATING CONDITIONS

Peak Hour Intersection Operations

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. Intersection analysis worksheets are provided in *Appendix D*. The results of the intersection analysis for Existing Conditions are shown on Table 1. Review of this table indicates that all study intersections are currently operating at an acceptable Level of Service in both peak hours with the following exception:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS E, PM: LOS F
- #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F
- #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F

PROJECT TRAFFIC

Project Trip Generation

Trip generation estimates for the project are based on daily and peak hour trip generation rates obtained from the Institute of Transportation Engineers (ITE) <u>Trip Generation Manual</u> (11th Edition) for the following uses:

- ITE Land Use 154: High-Cube Short-Term Storage
- ITE Land Use 150: Warehousing
- ITE Land Use 310: Hotel
- ITE Land Use 822: Strip Retail Plaza (<40k)
- ITE Land Use 932: High-Turnover (Sit-Down) Restaurant
- ITE Land Use 934: Fast-Food Restaurant w/ Drive-Through

Passenger car equivalent (PCE) factors were applied to the Project truck trips to determine the total PCE trips to be generated by the project.

Trip generation rates and the resulting project PCE trips for Phase 1 of the project are summarized on Table 2. Review of this table indicates that the Project is forecasted to generate 4,667 daily PCE trips on a weekday, with 303 PCE trips during the morning peak hour (233 inbound and 70 outbound) and 362 PCE trips (102 inbound and 260 outbound) during the evening peak hour.

Trip generation rates and the resulting project PCE trips for Phases 1 and 2 of the project are summarized on Table 3. Review of this table indicates that the Project is forecasted to generate 13,152 daily PCE trips on a weekday, with 835 PCE trips during the morning peak hour (520 inbound and 315 outbound) and 832 PCE trips (349 inbound and 483 outbound) during the evening peak hour. Further breakdown of project trip generation and PCE trips can be found in *Appendix A*.

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	I-10 EB Ramps at Cherry Valley Boulevard	U	42.5	E	82.6	F
2	I-10 WB Ramps at Cherry Valley Boulevard	U	67.6	F	22.2	C
3	Calimesa Boulevard at Cherry Valley Boulevard	U	17.4	C	20.7	C
4	Cherry Valley Boulevard at Hannon Road	U	15.4	C	16.3	C
5	Cherry Valley Boulevard at Union Street	U	9.8	A	11.0	B
6	Cherry Valley Boulevard at Nancy Avenue	U	10.2	B	11.0	B
7	Cherry Valley Boulevard at Beaumont Avenue	S	23.4	C	26.3	C
8	Brookside Avenue at Hannon Road	U	11.0	B	11.9	B
9	Brookside Avenue at Union Street	U	10.0	A	11.6	B
10	Brookside Avenue at Oak View Drive	U	8.4	A	8.8	A
11	Brookside Avenue at Beaumont Avenue	S	27.4	C	26.6	C
12	Oak Valley Parkway at Desert Lawn Drive	U	13.7	B	15.9	C
13	Oak Valley Parkway at I-10 EB Ramps	S	51.4	D	41.8	D
14	Oak Valley Parkway at I-10 WB Ramps	S	80.5	F	30.1	C
15	Oak Valley Parkway at Oak View Drive	S	19.2	B	15.6	B
16	Oak Valley Parkway at Beaumont Avenue	S	29.6	C	31.8	C

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

TABLE 2
SUMMARY OF PROJECT TRIP GENERATION - PHASE 1
BEAUMONT SUMMIT STATION PROJECT

PROJECT TRIP GENERATION WITH PCE

Project Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Proposed Use									
Buildings 1 & 2 (B-1 & B-2): High-Cube Short-Term Storage	2,199.095	KSF	3,826	169	51	220	78	196	274
Building 3 (B-3): Warehousing	358.370	KSF	841	64	19	83	24	64	88
Total Proposed Project PCE Trips			4,667	233	70	303	102	260	362

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

TABLE 3

SUMMARY OF PROJECT TRIP GENERATION - PHASE 1 AND 2

BEAUMONT SUMMIT STATION PROJECT

PROJECT TRIP GENERATION WITH PCE

Project Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Proposed Use									
Buildings 1 & 2 (B-1 & B-2): High-Cube Short-Term Storage	2,199.095	KSF	3,826	169	51	220	78	196	274
Building 3 (B-3): Warehousing	358.370	KSF	841	64	19	83	24	64	88
Building 4 (B-4): Shopping Center	--	--	8,485	287	245	532	247	223	470
Total Proposed Project PCE Trips			13,152	520	315	835	349	483	832

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

Trip Distribution and Assignment

Trip distribution assumptions for the proposed project were developed based on current traffic patterns observed within the study area, as well as trip distribution assumptions for similar high-cube short-term storage buildings and warehouse projects. Separate distribution patterns were assumed for passenger car trips and truck trips. Trip distribution percentages at each study intersection were applied to the project trip generation estimates to determine the project trips through each intersection. Passenger Car trip distribution and assignment assumptions for the Project are shown on Figure 5. Truck trip distribution and assignment assumptions for the Project are shown on Figure 6. The resulting project trips for Phase 1 and Phases 1 and 2 at the study intersections are shown on Figure 7 and Figure 8, respectively.

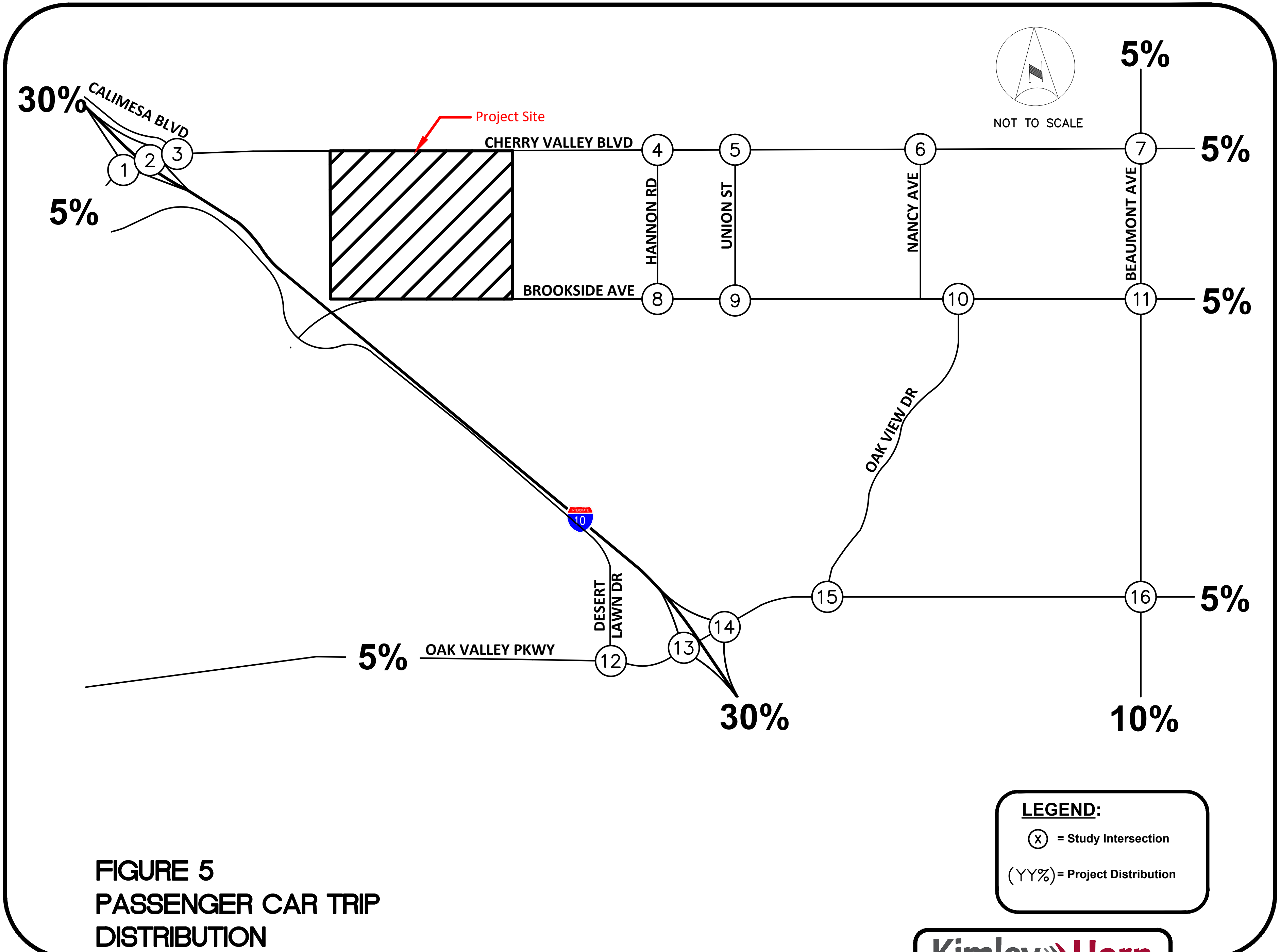

FIGURE 5
PASSENGER CAR TRIP DISTRIBUTION

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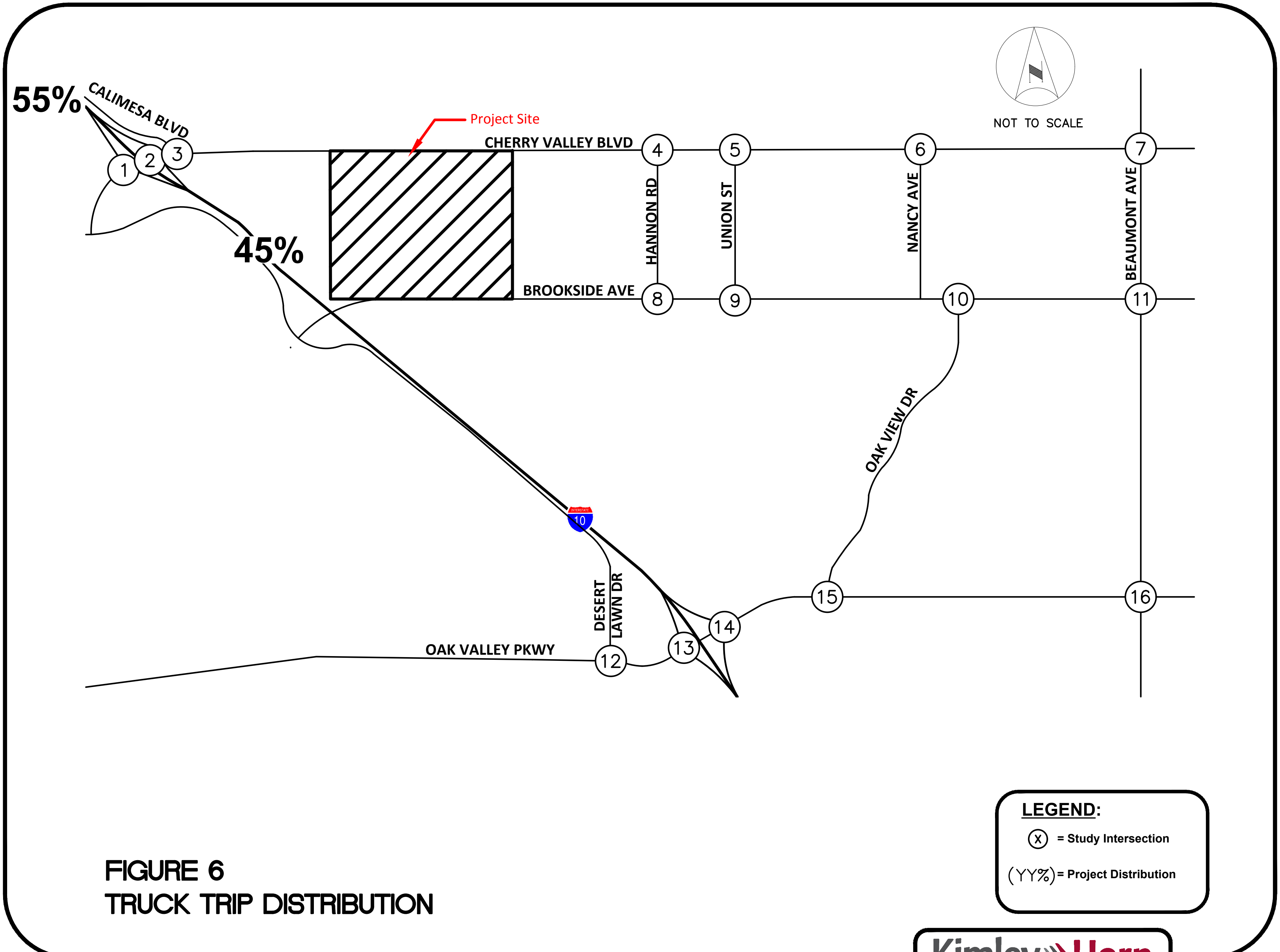

FIGURE 6
TRUCK TRIP DISTRIBUTION

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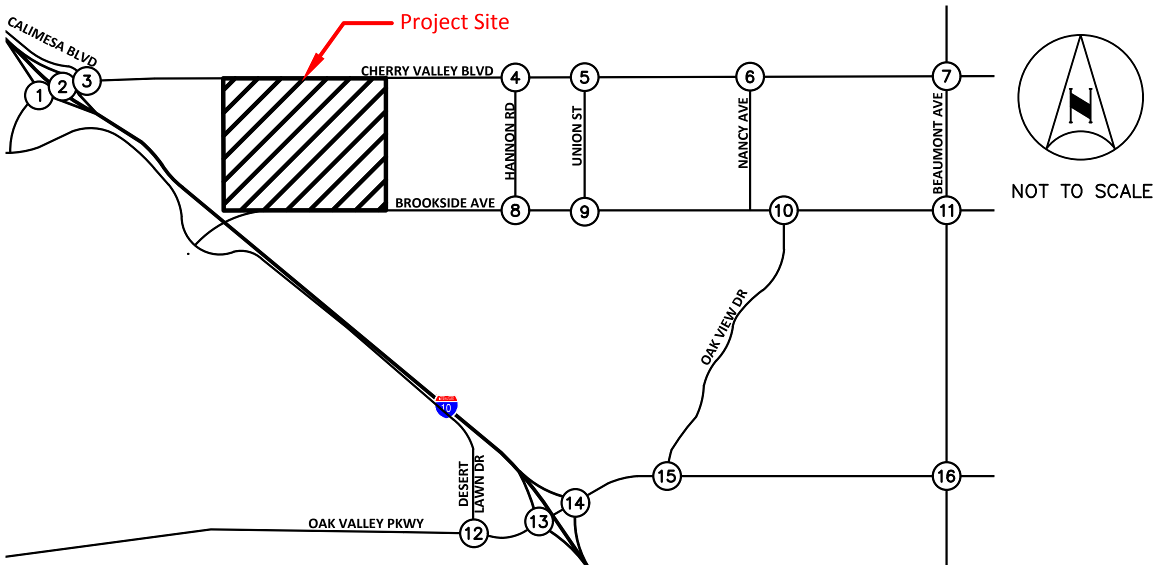
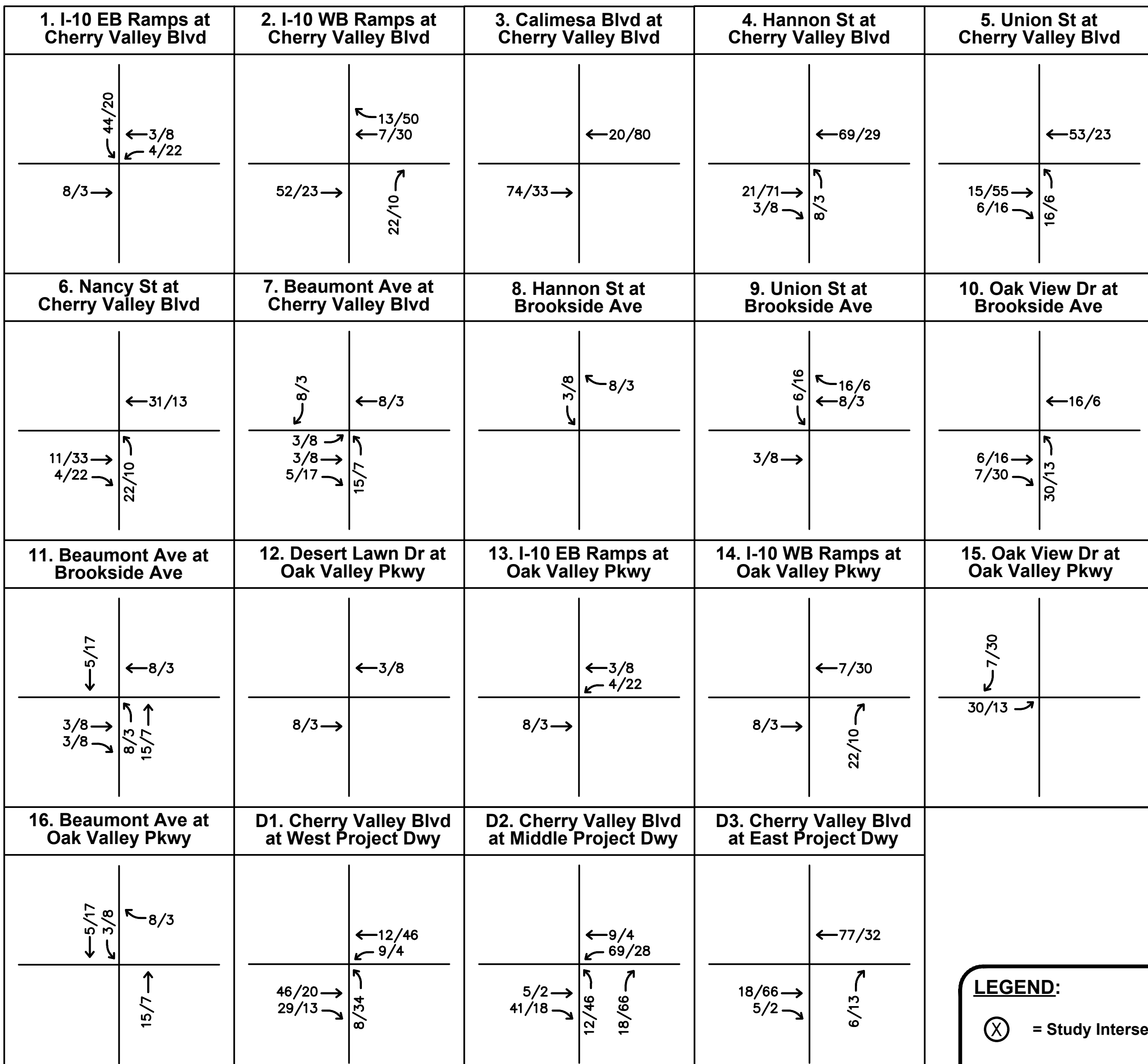




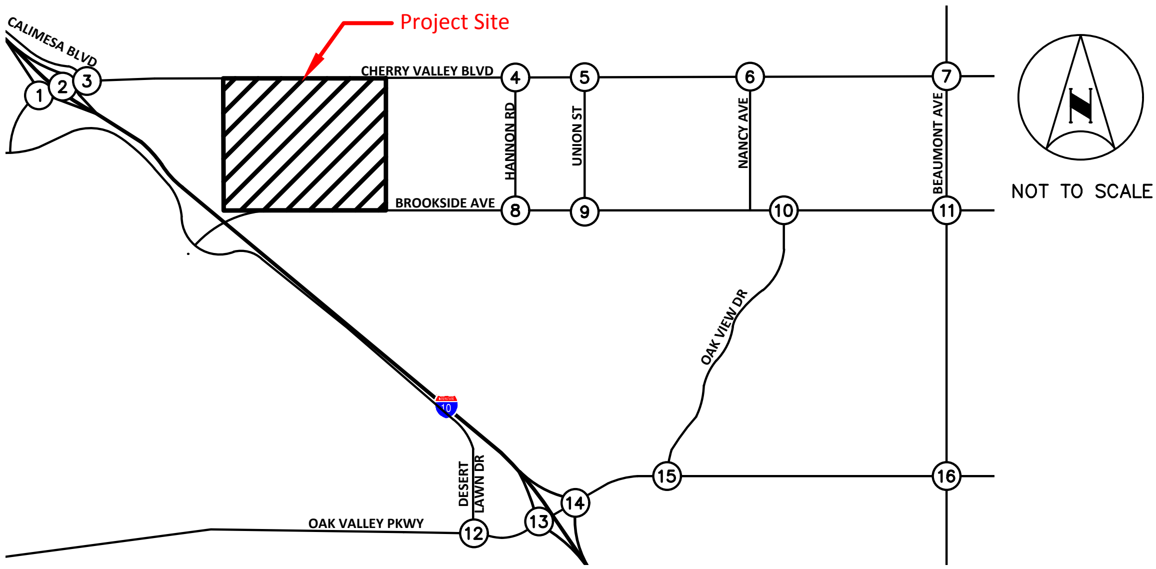
LEGEND:

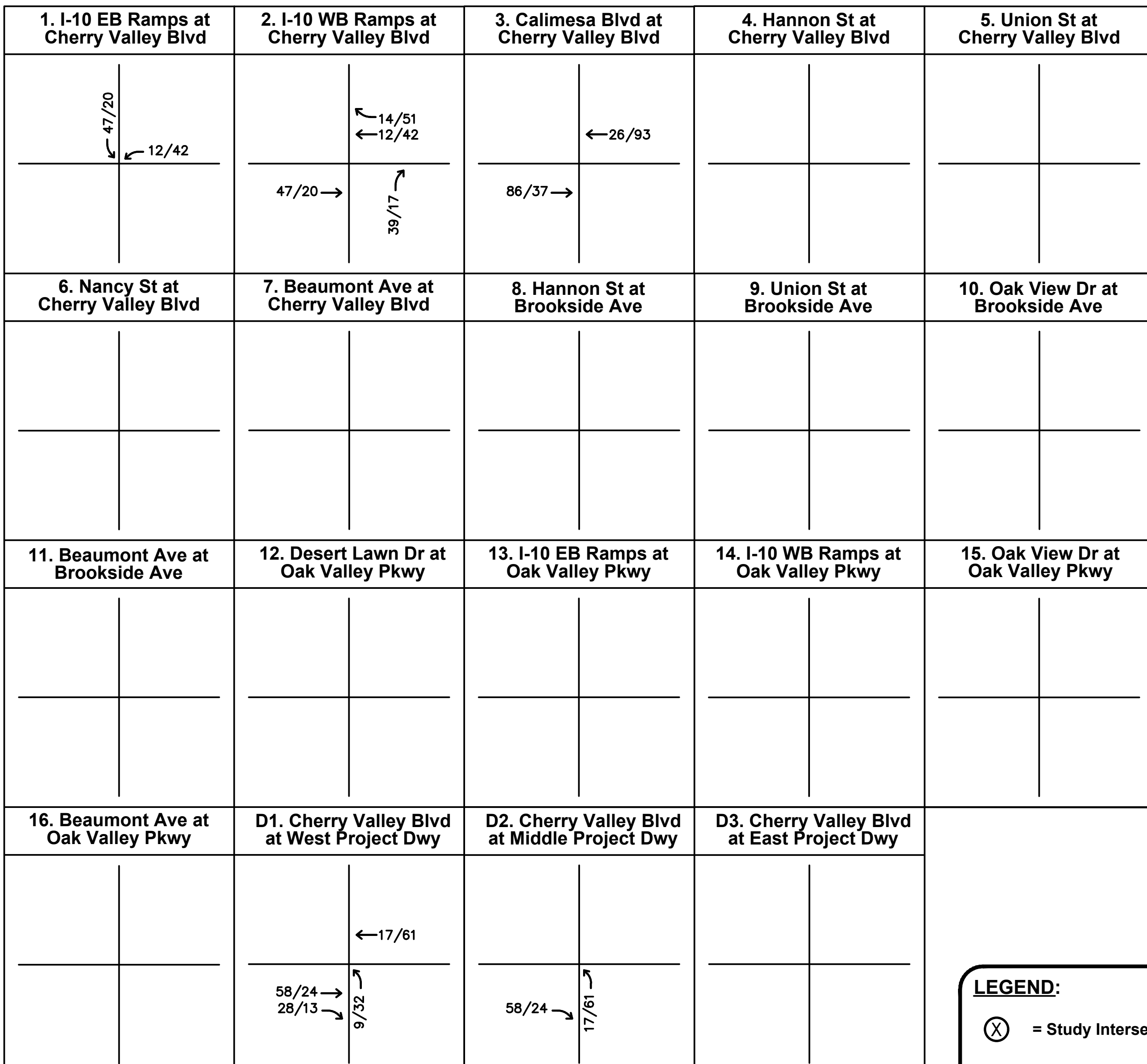
(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 7A
PROJECT-RELATED TRAFFIC VOLUMES
(PHASE 1) - PASSENGER CARS

Kimley»Horn





LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 7B
PROJECT-RELATED TRAFFIC VOLUMES (PHASE 1) - TRUCKS (PCE)

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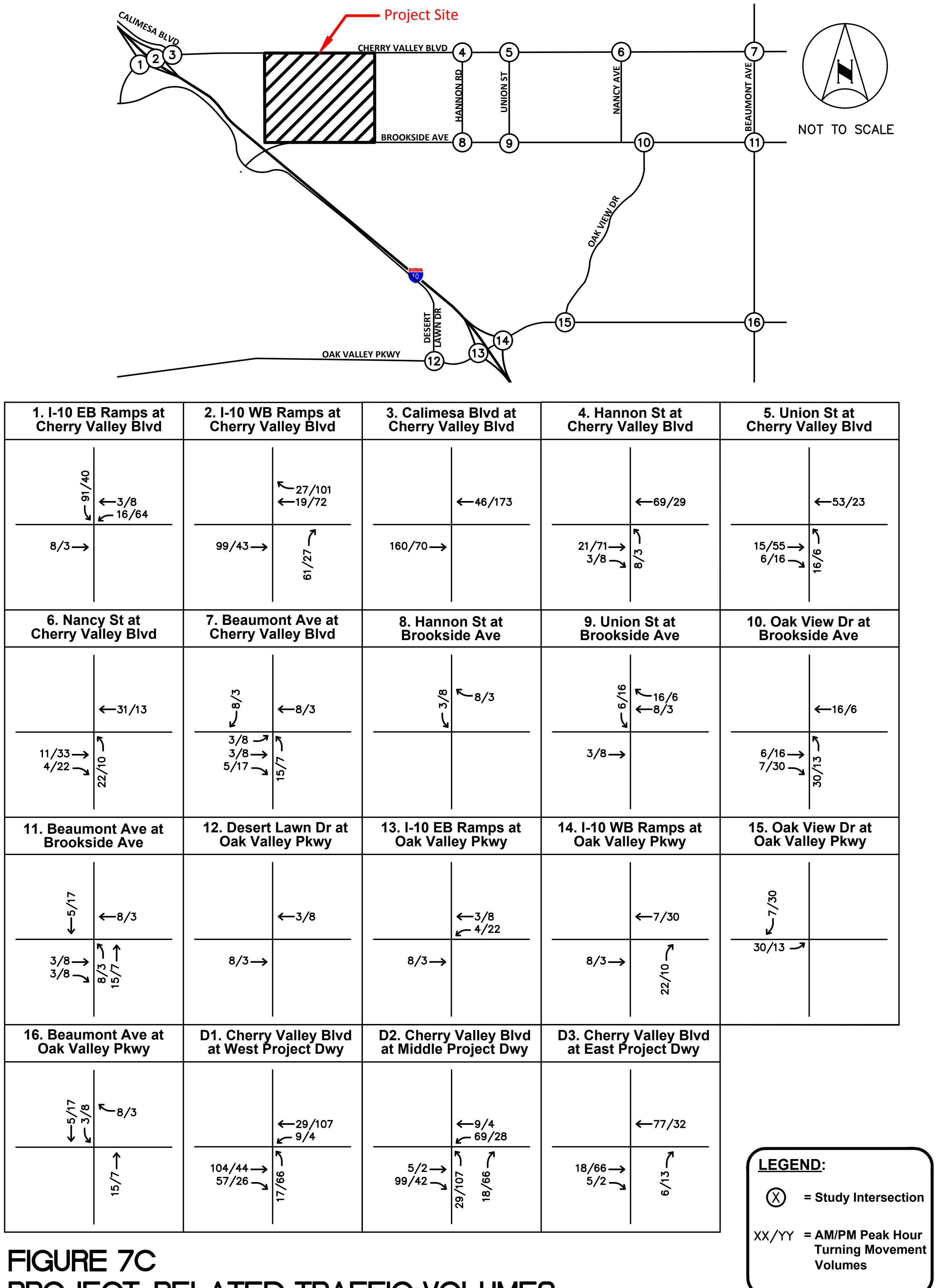
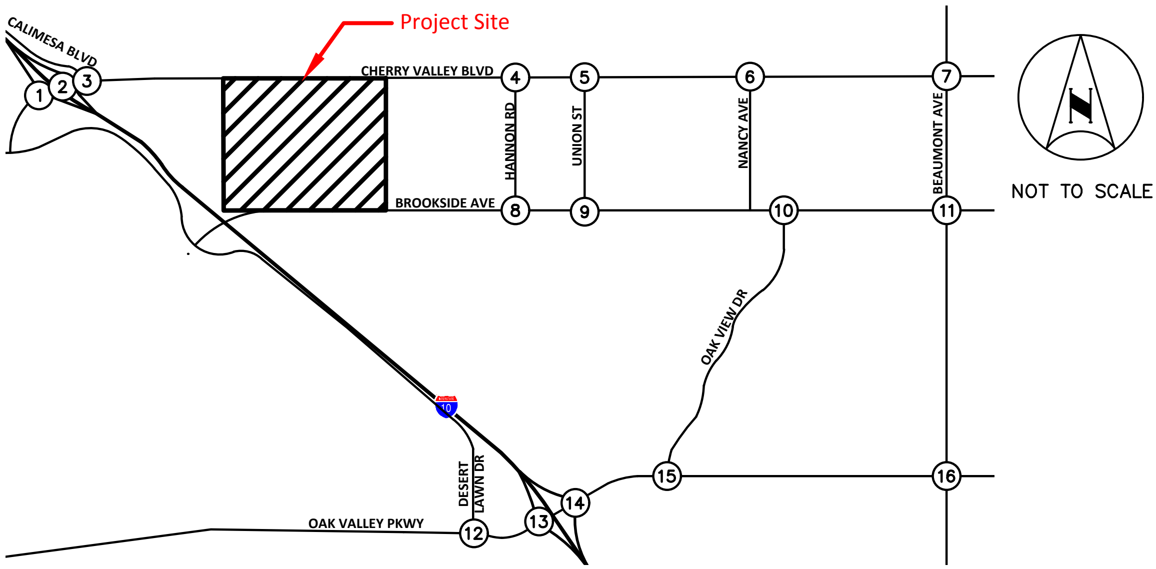
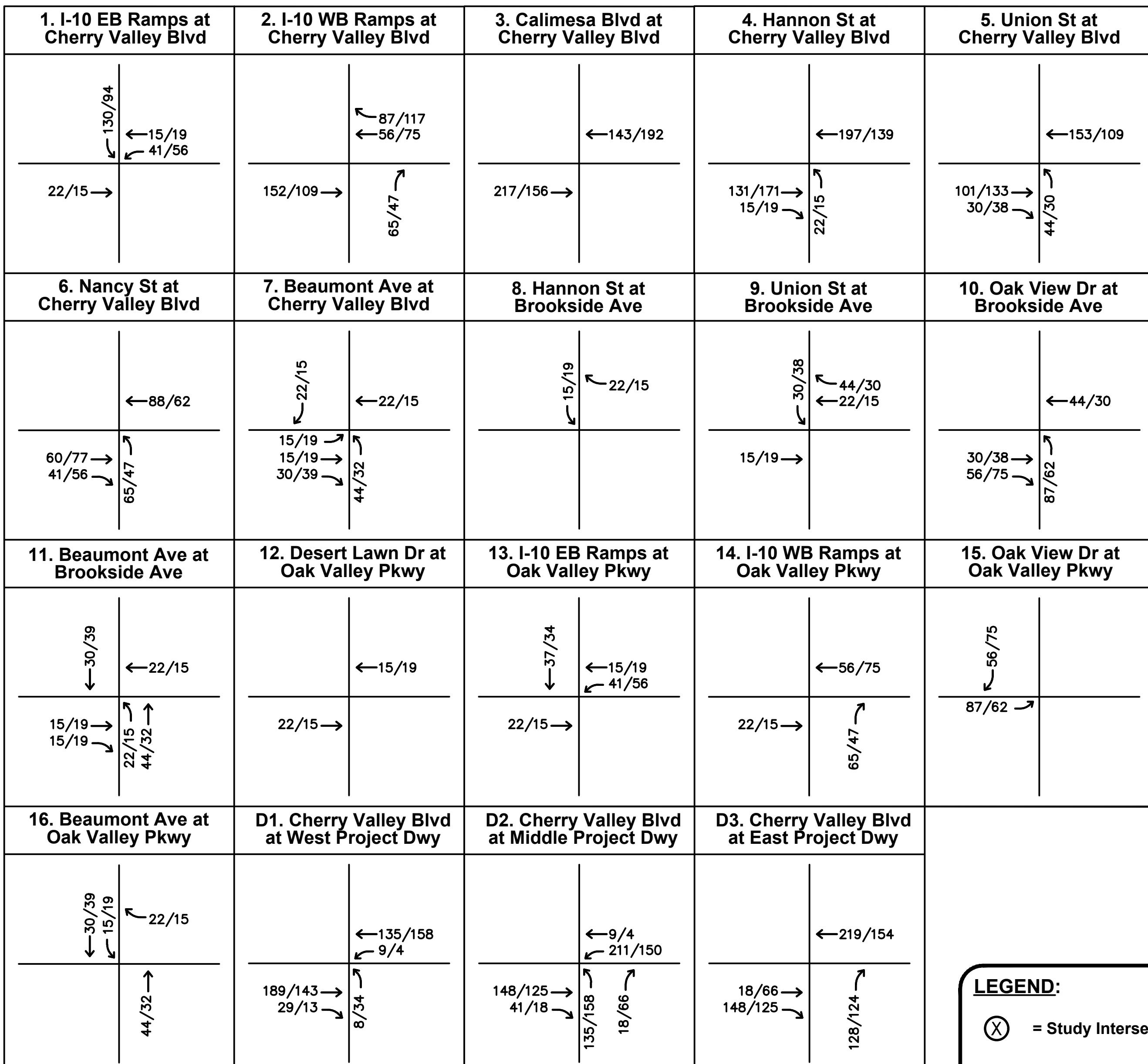


FIGURE 7C
PROJECT-RELATED TRAFFIC VOLUMES
(PHASE 1)

Kimley»Horn





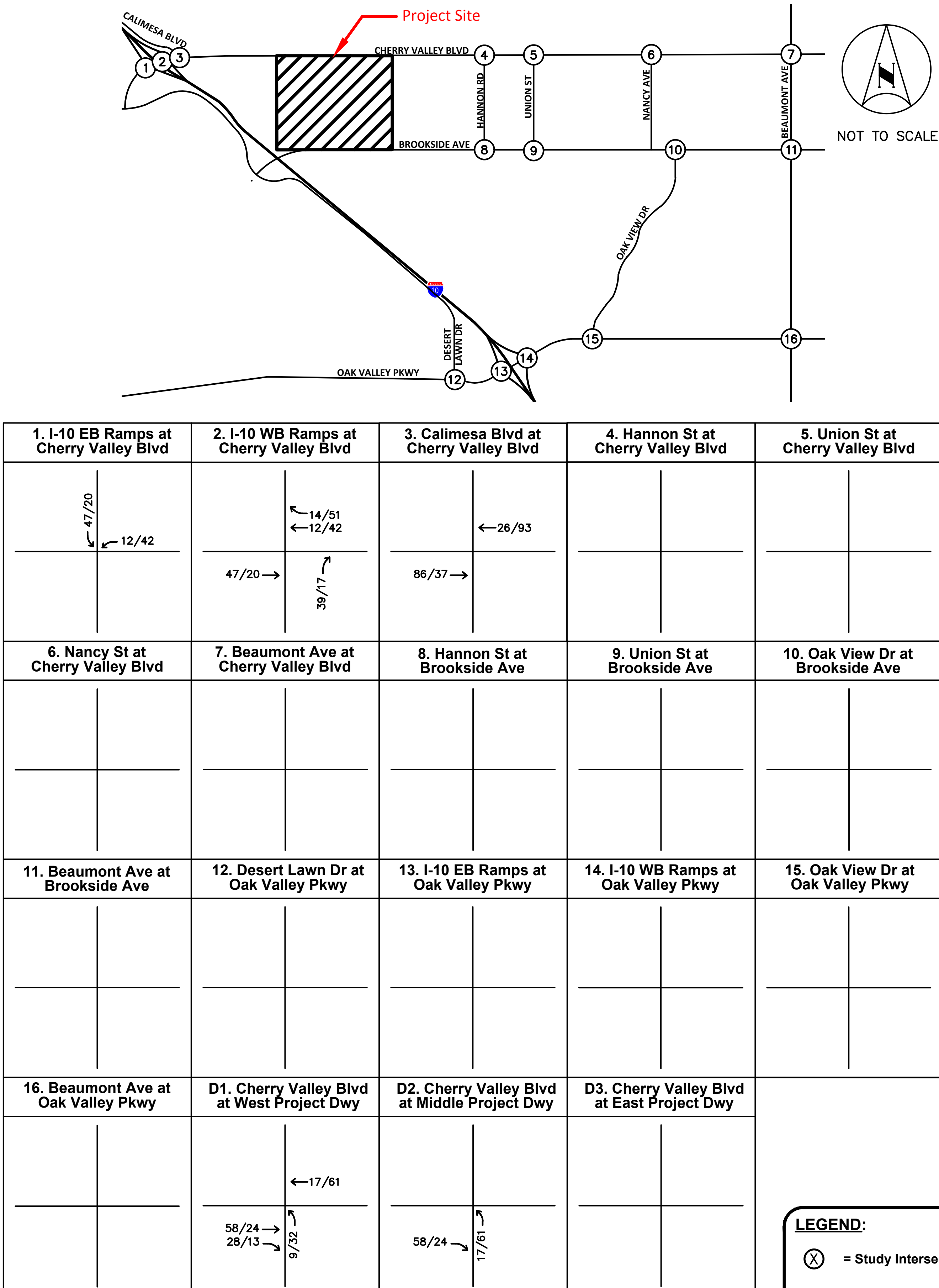
LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 8A
PROJECT-RELATED TRAFFIC VOLUMES (PHASE 1 AND 2) - PASSENGER CARS

Kimley»Horn



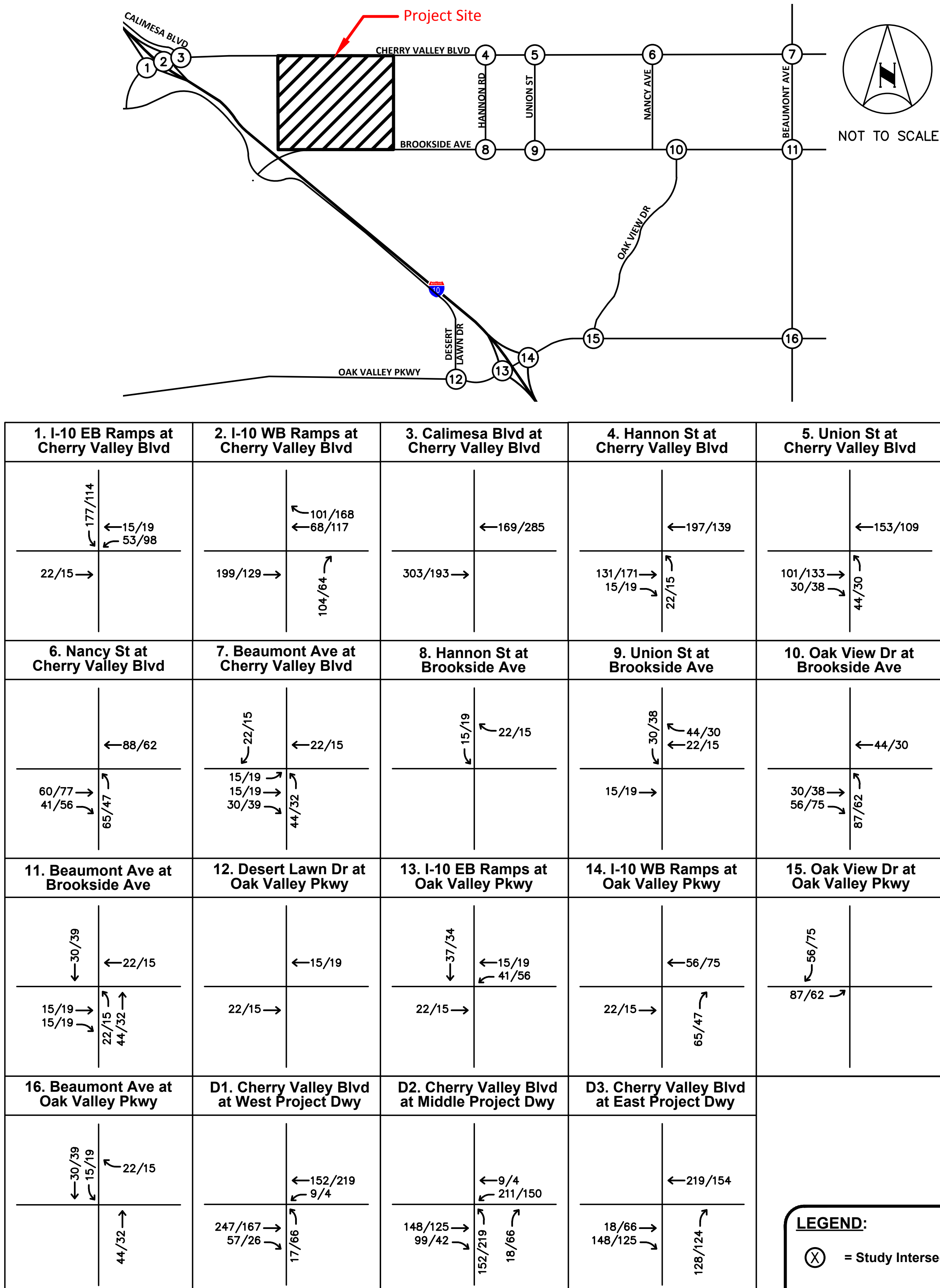
LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 8B
PROJECT-RELATED TRAFFIC VOLUMES (PHASE 1 AND 2) - TRUCKS (PCE)

Kimley»Horn



LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 8C
PROJECT-RELATED TRAFFIC VOLUMES
(PHASE 1 AND 2)

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OPENING YEAR 2024 CUMULATIVE CONDITIONS

The project Opening Year for Phase 1 is anticipated to be Year 2024. Opening Year 2024 traffic forecasts have been developed by adding an ambient growth factor of 2.0 percent per to existing traffic volumes at the study intersections.

Cumulative Projects

In addition to ambient growth, traffic from Cumulative Projects in the Project vicinity are added to the Opening Year forecasts to develop Opening Year 2024 Cumulative Conditions forecasts. Cumulative Projects consist of any project that has been approved and is not yet occupied, and projects that are in various stages of the application and approval process but have not yet been approved.

Information regarding Cumulative Projects in the area was obtained from previously approved traffic studies in the area. A summary of the Cumulative Projects, including the associated trip generation is provided on Table 4. The trip generation estimates for the Cumulative Projects were obtained from approved traffic studies, where available; and were developed by Kimley-Horn if approved traffic studies were not available. The locations of the Cumulative Projects are shown on Figure 9.

Trip distribution and assignment for the Cumulative Projects were obtained from approved traffic studies, where available; and were developed by Kimley-Horn if approved traffic studies were not available. Traffic volumes associated with the Cumulative Projects were compiled for each of the study intersections and are shown on Figure 10. The Cumulative Projects traffic volumes were added to the Opening Year 2024 traffic volumes to develop Opening Year 2024 Cumulative forecasts, which are shown on Figure 11.

Peak Hour Intersection Operation

The results of the Opening Year 2024 Cumulative intersection analysis are summarized on Table 5. Review of this table shows that, with the addition of ambient growth and Cumulative Project volumes, the following study intersections would operate at an unacceptable Level of Service:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS E; PM: LOS F
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

Intersection analysis worksheets are provided in *Appendix D*.

TABLE 4
SUMMARY OF CUMULATIVE PROJECTS

Proj #	Description	Land Use	Quantity	Units	Trip Generation Estimates						
						AM Peak Hour			PM Peak Hour		
					Daily	In	Out	Total	In	Out	Total
1	Noble Creek Vistas	Single-Family Detached Housing	648	DU	6,117	120	360	480	404	237	641
2	Cougar Ranch	Single-Family Detached Housing	148	DU	1,397	27	82	109	92	54	146
3	Oak Valley Greens Senior Center	Senior Adult Housing-Detached	372	DU	1,588	29	60	89	68	44	112
4	Oak Valley Village	Shopping Center	490.000	KSF	18,498	286	175	461	896	971	1,867
5	Kirkwood Ranch	Single-Family Detached Housing	403	DU	3,804	75	224	299	251	147	398
6	Sundance Corporate Center	General Office Building	300.000	KSF	2,922	299	49	348	55	290	345
7	Beaumont Commons	Single-Family Detached Housing	120	DU	878	13	42	55	42	25	67
8	Tuscany Townhomes	Multifamily Housing (Low-Rise)	188	DU	1,376	20	67	87	66	39	105
9	Prologis	General Light Industrial	2,200.000	KSF	10,912	1,355	185	1,540	180	1,206	1,386
10	Beaumont Industrial Park	Industrial Park	2,890.000	KSF	9,739	936	220	1,156	243	913	1,156
11	San Gorgonio Village	Shopping Center	130.000	KSF	4,908	76	46	122	238	258	496
12	Jerome Taurek	Single-Family Detached Housing	244	DU	2,303	45	135	180	152	89	241
13	Legacy Highlands (Phase 1)	Single-Family Detached Housing	1,159	DU	6,963	128	346	474	394	231	625
14	Hidden Canyon Industrial Park	No Land Use	2,890.000	KSF	5,438	221	119	340	125	253	378
15	Fairway Canyon	Single-Family Detached Housing	1,650	DU	15,576	305	916	1,221	1,030	604	1,634
16	Potrero Creek Estates	Single-Family Detached Housing	700	DU	6,608	130	389	519	437	256	693
17	High-Cube Fullfillment Center	High-Cube Parcel Hub Warehouse	4,500.000	KSF	34,875	1,575	1,575	3,150	1,958	923	2,881
	General Light Industrial	General Light Industrial	500.000	KSF	2,480	308	42	350	41	274	315
	Hotel	Hotel	125	Room	1,045	35	24	59	38	37	75
	Multipurpose Recreational Facility (Go-Cart)	Multipurpose Recreational Facility	77.00	KSF	-	-	-	-	152	124	276
	Rock Climbing	Rock Climbing Gym	26.000	KSF	-	12	24	36	24	18	42
	Miniature Golf	Miniature Golf Course	36	Hole	-	-	-	-	4	8	12
	Trampoline Park	Trampoline Park	24.000	KSF	-	-	-	-	17	19	36
	Bowling Alley	Bowling Alley	40.000	KSF	-	31	2	33	30	16	46
18	Beyond Beaumont Commercial		6.580	KSF	229	14	4	18	6	16	22
19	CUP 03629	Mini-Warehouse	90	Storage Units	1,616	64	61	125	88	88	176
20	TR 31966	Single-Family Detached Housing	60	DU	566	11	33	44	37	22	59
21	TTM 30545 Holbert Ranch	Single-Family Detached Housing	131	DU	1,237	24	73	97	82	48	130
22	Borstein Property	Single-Family Detached Housing	209	DU	1,973	39	116	155	130	76	206
	San Gorgonio Crossing	High-Cube Warehouse	1,861	KSF	3,126	141	64	205	69	154	223
23	Heartland	Single-Family Detached Housing	988	DU	9,327	183	548	731	617	362	979
		Shopping Center	126.000	KSF	4,757	73	45	118	230	250	480
24	American Villas	Single-Family Detached Housing	36	DU	340	7	20	27	22	13	35
	8th Street Condos	Multifamily Housing (Low-Rise)	16	DU	117	2	6	8	6	3	9
	Pennsylvania Ave Apartments	Multifamily Housing (Low-Rise)	8.000	DU	59	1	3	4	3	2	5
25	Sundance	Single-Family Detached Housing	4,716	DU	44,519	872	2,617	3,489	2,943	1,726	4,669
26	Rolling Hills Ranch Industrial Prologis	Warehousing	1,200.000	KSF	2,088	157	47	204	61	167	228
27	Dowling Orchard Business Park	Warehousing	548.820	KSF	955	72	21	93	28	76	104
28	Farmer Boys	Shopping Center	6.752	KSF	255	4	2	6	12	13	25
	Ramona Tire / Firestone	Shopping Center	4.792	KSF	181	3	2	5	9	9	18
29	Aspen Creek (TT 31426)	Single-Family Detached Housing	106	DU	1,001	20	59	79	66	39	105
30	Taurek (Tract No. 31162)	Single-Family Detached Housing	244	DU	2,303	45	135	180	152	89	241
31	Pacific Scene (Tract No. 32850)	Single-Family Detached Housing	95	DU	897	18	53	71	59	35	94
32	Jack Rabbit Trail	Single-Family Detached Housing	2,000	DU	18,880	370	1,110	1,480	1,248	732	1,980
		Shopping Center	49.005	KSF	1,850	29	17	46	90	97	187
33	Four Seasons (Tract NO. 31462)	Single-Family Detached Housing	2,041	DU	19,267	378	1,133	1,511	1,274	747	2,021
		Shopping Center	95.832	KSF	3,618	56	34	90	175	190	365
34	TTM 33931 Fiesta Oak Valley / Mesa Verde Estates	Single Family Residential	3535	DU	33,370	654	1,962	2,616	2,206	1,294	3,500
		Condos/Townhomes	453	DU	3,316	48	160	208	160	94	254
		Active Park	48.000	Acre	37	1	0	1	3	2	5
		Recreational Community Center	9.000	KSF	259	10	5	15	10	11	21
		Elementary School	1200	Student	2,268	434	370	804	98	106	204
		Commercial Retail	200.000	KSF	7,550	117	71	188	366	396	762

TABLE 4
SUMMARY OF CUMULATIVE PROJECTS

Proj #	Description	Land Use	Quantity	Units	Trip Generation Estimates						
						AM Peak Hour			PM Peak Hour		
					Daily	In	Out	Total	In	Out	Total
35	Summerwind Ranch	Single-Family Detached Housing	3,683	DU	34,768	681	2,044	2,725	2,298	1,348	3,646
		Elementary School	1,200	Student	2,268	434	370	804	98	106	204
		Middle School/Junior High School	900	Student	1,917	282	240	522	75	78	153
		Business Park	1,579.000	KSF	19,643	385	246	631	305	358	663
		Shopping Center	1,000.000	KSF	37,750	583	357	940	1,829	1,981	3,810
36	Sun Cal / Various Builders	Single-Family Detached Housing	2,366	DU	22,335	438	1,313	1,751	1,476	866	2,342
		Shopping Center	505.296	KSF	19,075	295	180	475	924	1,001	1,925
37	World Logistics Center	Warehousing	21,450.000	KSF	37,323	2,810	837	3,647	1,094	2,982	4,076
38	TAZ 28	Single-Family Detached Housing	193	DU	1,822	36	107	143	120	71	191
		General Office Building	182.342	KSF	1,776	182	30	212	34	176	210
		Shopping Center	130.244	KSF	4,917	76	46	122	238	258	496
39	TAZ 29	General Light Industrial	59.512	KSF	295	37	5	42	5	33	38
		General Office Building	49.876	KSF	486	50	8	58	9	48	57
		Business Park	26.737	KSF	333	7	4	11	5	6	11
		Shopping Center	69.827	KSF	2,636	41	25	66	128	138	266
40	TAZ 30	General Office Building	2.363	KSF	23	2	0	2	0	2	2
		Shopping Center	1.688	KSF	64	1	1	2	3	3	6
41	TAZ 31	General Office Building	86.826	KSF	846	87	14	101	16	84	100
		Shopping Center	62.019	KSF	2,341	36	22	58	113	123	236
42	TAZ 32	Single-Family Detached Housing	94	DU	887	17	52	69	59	34	93
43	TAZ 33	General Light Industrial	35.109	KSF	174	22	3	25	3	19	22
		Multifamily Housing (Low-Rise)	41	DU	300	4	15	19	14	8	22
		General Office Building	9.605	KSF	94	10	2	12	2	9	11
		Business Park	78.147	KSF	972	19	12	31	15	18	33
		Shopping Center	6.861	KSF	259	4	2	6	13	14	27
44	TAZ 34	General Office Building	76.459	KSF	745	76	12	88	14	74	88
		Shopping Center	54.613	KSF	2,062	32	19	51	100	108	208
45	TAZ 35	Single-Family Detached Housing	28	DU	264	5	16	21	17	10	27
46	TAZ 36	Single-Family Detached Housing	17	DU	160	3	9	12	11	6	17
47	TAZ 37	Single-Family Detached Housing	6	DU	57	1	3	4	4	2	6
		General Office Building	16.618	KSF	162	17	3	20	3	16	19
		Shopping Center	11.870	KSF	448	7	4	11	22	24	46
48	TAZ 38	General Office Building	97.269	KSF	947	97	16	113	18	94	112
		Shopping Center	69.478	KSF	2,623	41	25	66	127	138	265
49	TAZ 39	General Office Building	42.460	KSF	414	42	7	49	8	41	49
		Shopping Center	103.023	KSF	3,889	60	37	97	188	204	392
50	TAZ 40	Single-Family Detached Housing	478	DU	4,512	88	265	353	298	175	473
51	Singleton Heights (Mastercraft) TR 26811	Single-Family Detached Housing	268	DU	2,530	50	149	199	167	98	265
52	Sunset Ranch (Osborne/Dunham) TR 31450	Single-Family Detached Housing	231	DU	2,181	43	128	171	144	85	229
53	JP Ranch[5]	Single-Family Detached Housing	689	DU	6,504	127	382	509	430	252	682
		Shopping Center	72.700	KSF	2,744	42	26	68	133	144	277
54	Beaumont Potrero Warehosue	High-Cube Warehouse	577.920	KSF	971	44	20	64	21	48	69
Total Project Trips					527,905	17,187	20,909	38,096	27,768	25,176	52,944

DU = Dwelling Unit, KSF = 1,000 square feet, FP = Fueling Position

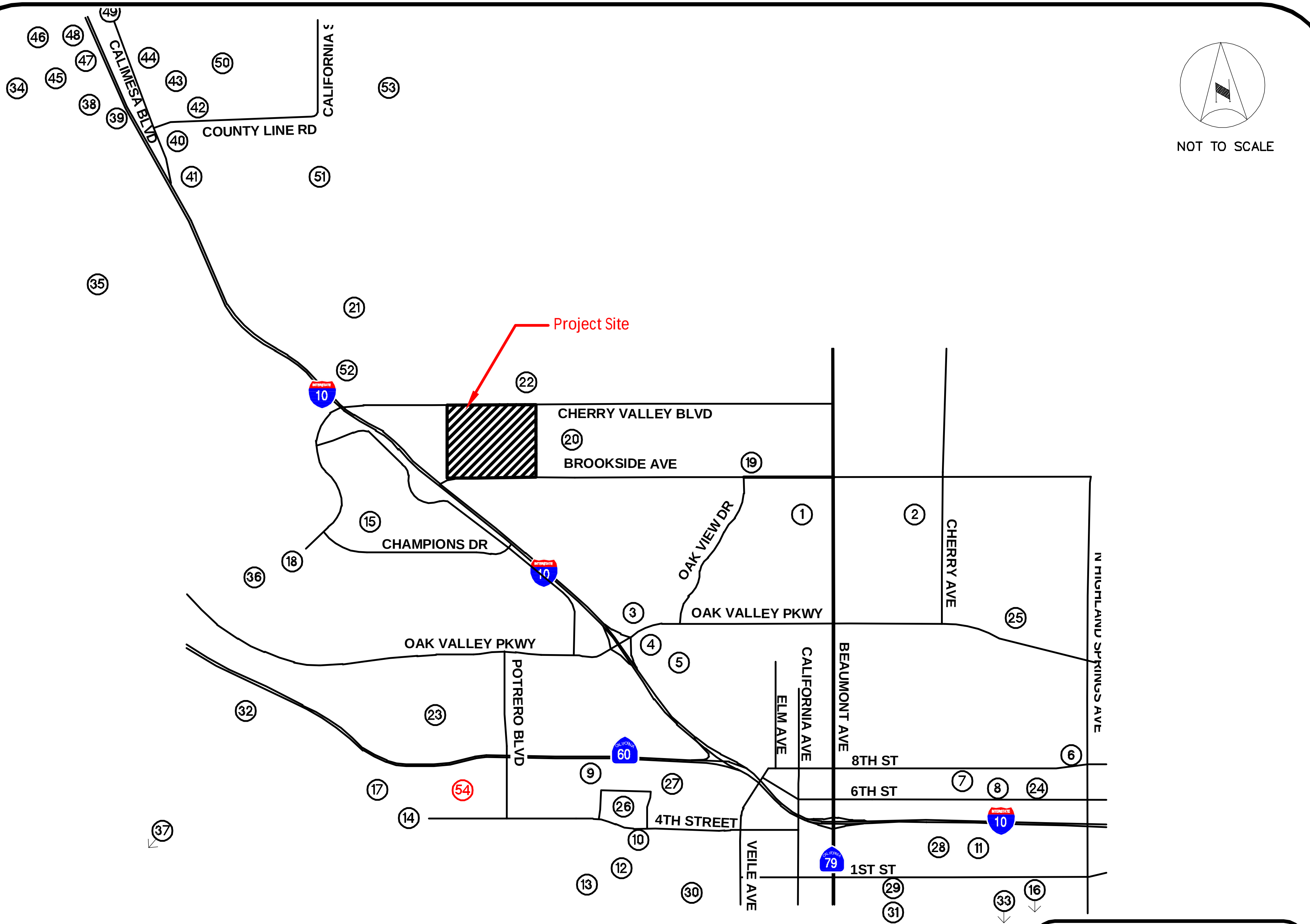

FIGURE 9
LOCATION OF CUMULATIVE PROJECTS

LEGEND:
(X) = Cumulative Project

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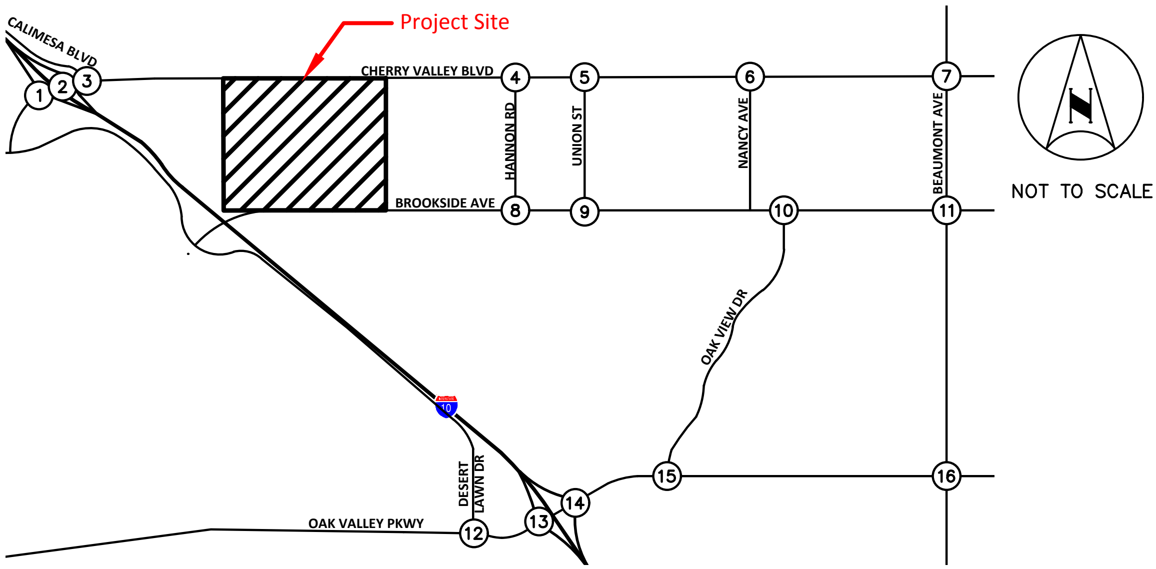

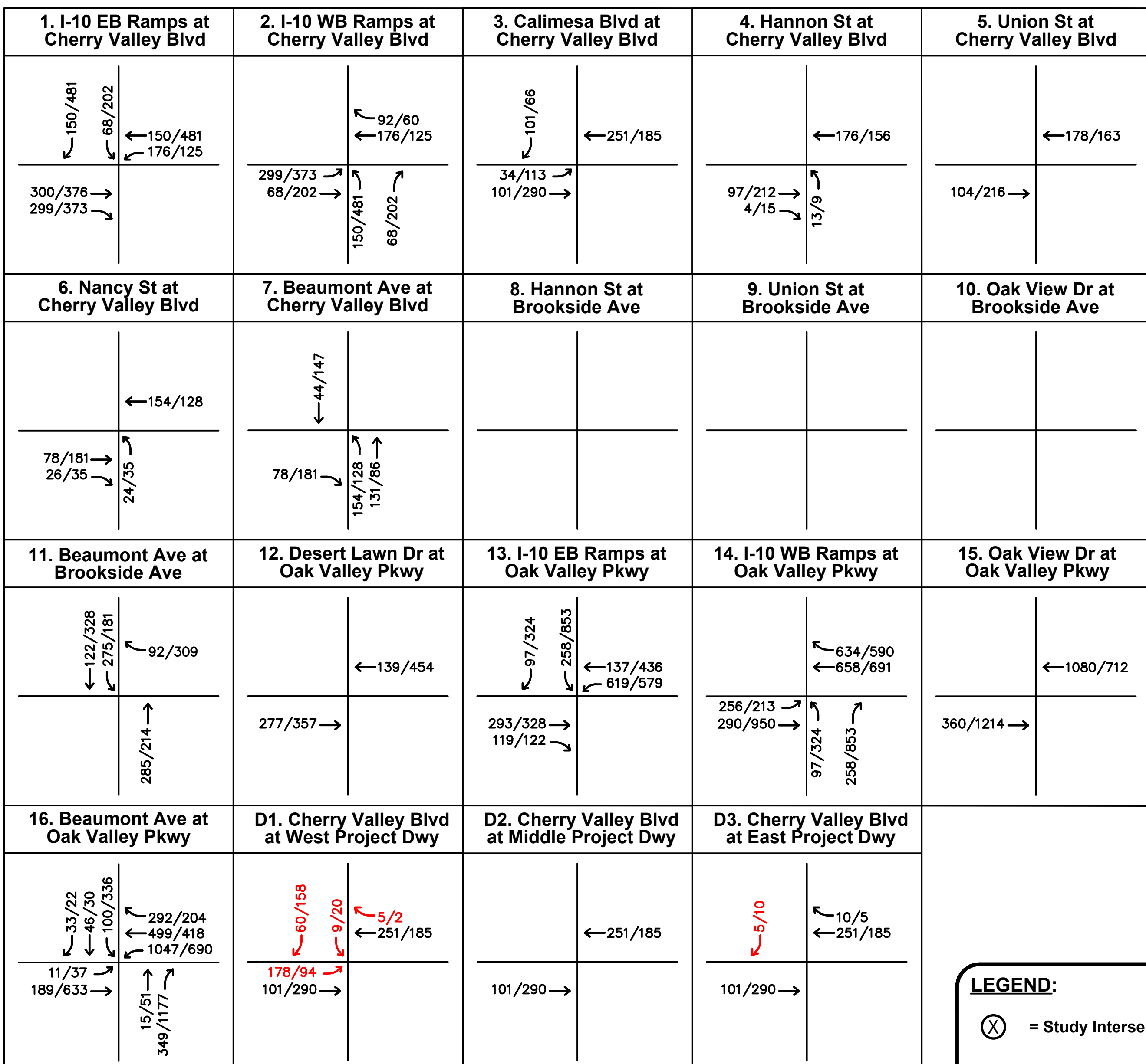

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 10
CUMULATIVE PROJECT TRAFFIC VOLUMES

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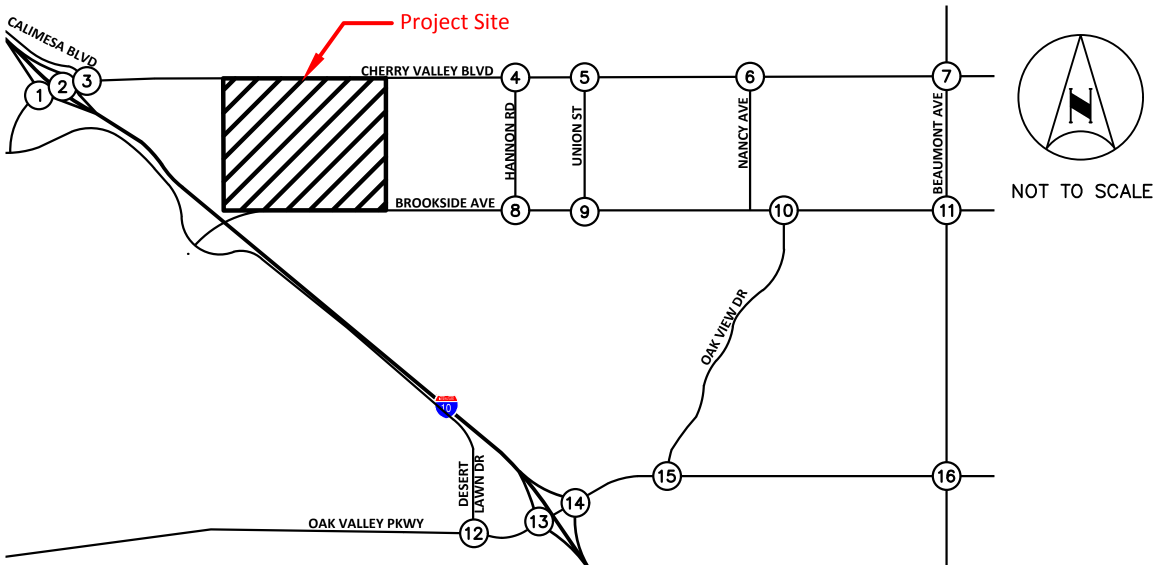

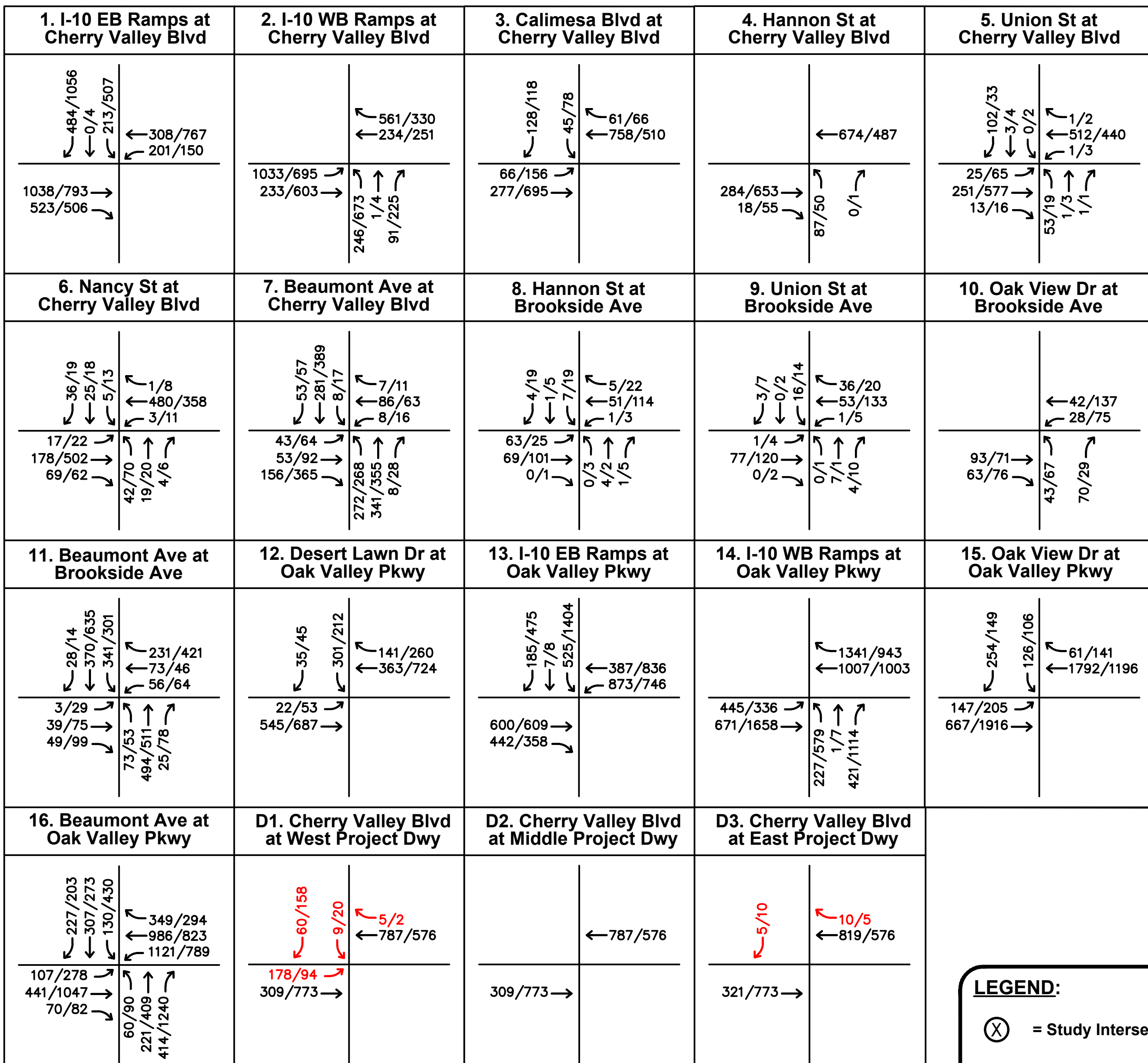

LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 11
OPENING YEAR 2024 CUMULATIVE TRAFFIC VOLUMES

TABLE 5
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 CUMULATIVE CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	I-10 EB Ramps at Cherry Valley Boulevard	U	295.0	F	537.9	F
2	I-10 WB Ramps at Cherry Valley Boulevard	U	220.6	F	289.1	F
3	Calimesa Boulevard at Cherry Valley Boulevard	U	46.0	E	229.3	F
4	Hannon Road at Cherry Valley Boulevard	U	25.6	D	29.7	D
5	Union Street at Cherry Valley Boulevard	U	15.6	C	26.0	D
6	Nancy Avenue at Cherry Valley Boulevard	U	16.0	C	22.2	C
7	Beaumont Avenue at Cherry Valley Boulevard	S	26.0	C	31.1	C
8	Hannon Road at Brookside Avenue	U	11.2	B	12.1	B
9	Union Street at Brookside Avenue	U	10.1	B	11.8	B
10	Oak View Drive at Brookside Avenue	U	8.4	A	8.8	A
11	Beaumont Avenue at Brookside Avenue	S	33.4	C	54.8	D
12	Desert Lawn Drive at Oak Valley Parkway	U	60.0	F	115.2	F
13	I-10 EB Ramps at Oak Valley Parkway	S	359.2	F	1007.7	F
14	I-10 WB Ramps at Oak Valley Parkway	S	388.6	F	544.6	F
15	Oak View Drive at Oak Valley Parkway	S	23.0	C	96.9	F
16	Beaumont Avenue at Oak Valley Parkway	S	200.5	F	384.8	F

Note:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

Opening Year 2024 Plus Cumulative Projects Plus Project (Phase 1) Conditions

Project-related traffic volumes for the Project were added to the Year 2024 Plus Cumulative Projects forecasts to develop Opening Year 2024 Plus Project (Phase 1) traffic forecast volumes. The resulting traffic volumes are shown on Figure 12.

The results of the Year 2024 Plus Project (Phase 1) intersection analysis are shown on Table 6. Review of this table shows that, with the addition of ambient growth, cumulative project volumes, and the project volumes, the following study intersections would operate at an unacceptable Level of Service:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #4 – Hannon Road at Cherry Valley Boulevard – PM: LOS E
- #5 – Union Street at Cherry Valley Boulevard – PM: LOS E
- #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 Westbound Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

Intersection analysis worksheets are provided in *Appendix D*.

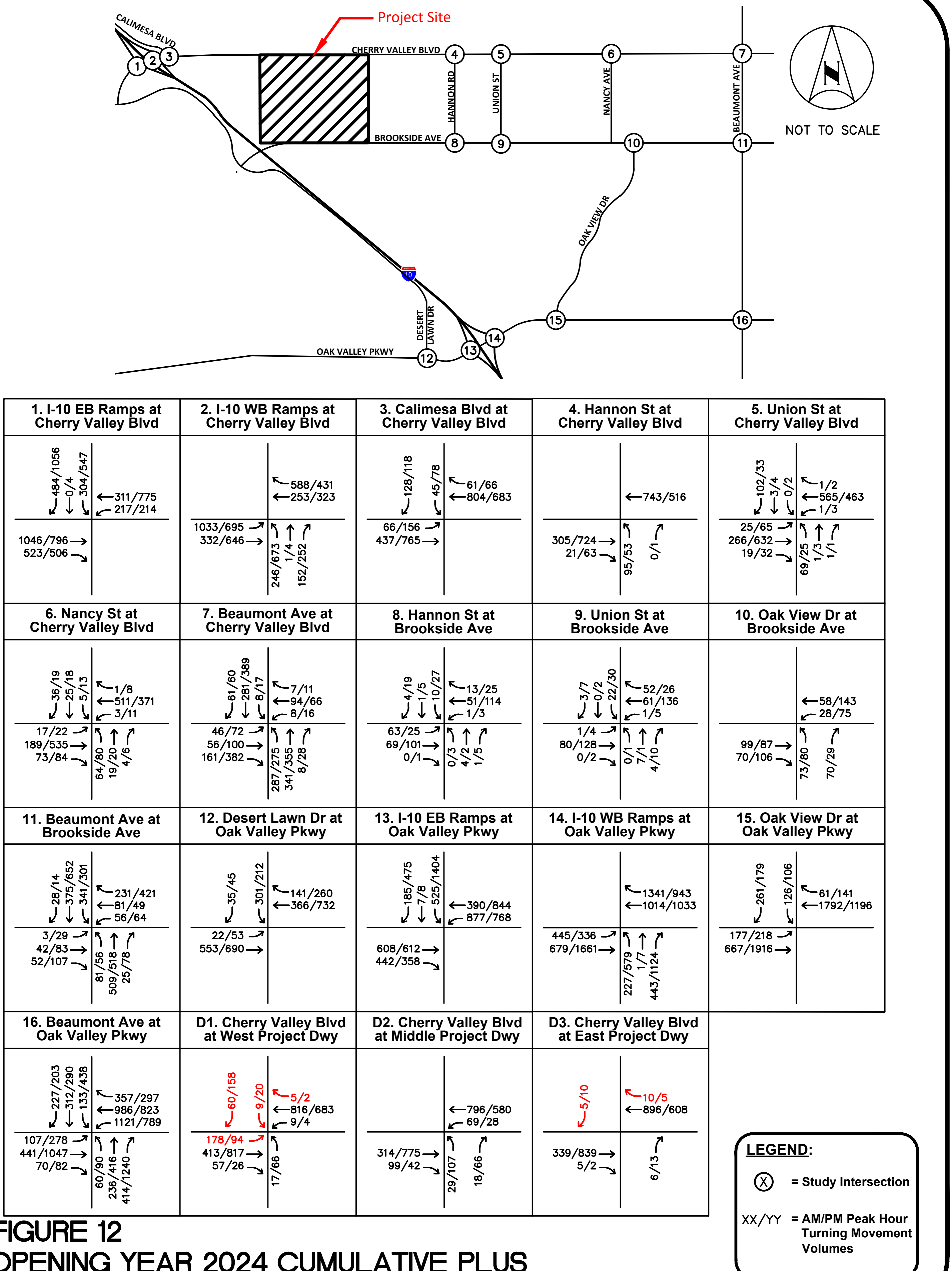

FIGURE 12
OPENING YEAR 2024 CUMULATIVE PLUS PROJECT (PHASE 1) TRAFFIC VOLUMES

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TABLE 6
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 CUMULATIVE PLUS PROJECT (PHASE 1) CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Change in Delay	Sig Effect?	Without Project		With Project		Change in Delay	Sig Effect?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	I-10 EB Ramps at Cherry Valley Boulevard	U	295.0	F	316.2	F	21.2	Yes	537.9	F	561.6	F	23.7	Yes
2	I-10 WB Ramps at Cherry Valley Boulevard	U	220.6	F	253.9	F	33.3	Yes	289.1	F	322.9	F	33.8	Yes
3	Calimesa Boulevard at Cherry Valley Boulevard	U	46.0	E	71.1	F	25.1	Yes	229.3	F	548.9	F	319.6	Yes
4	Hannon Road at Cherry Valley Boulevard	U	25.6	D	31.7	D	6.1	No	29.7	D	36.2	E	6.5	Yes
5	Union Street at Cherry Valley Boulevard	U	15.6	C	19.9	C	4.3	No	26.0	D	39.7	E	13.7	Yes
6	Nancy Avenue at Cherry Valley Boulevard	U	16.0	C	19.0	C	3.0	No	22.2	C	27.2	D	5.0	No
7	Beaumont Avenue at Cherry Valley Boulevard	S	26.0	C	26.5	C	0.5	No	31.1	C	31.9	C	0.8	No
8	Hannon Road at Brookside Avenue	U	11.2	B	11.2	B	0.1	No	12.1	B	12.3	B	0.1	No
9	Union Street at Brookside Avenue	U	10.1	B	10.3	B	0.2	No	11.8	B	12.2	B	0.4	No
10	Oak View Drive at Brookside Avenue	U	8.4	A	8.8	A	0.4	No	8.8	A	9.1	A	0.3	No
11	Beaumont Avenue at Brookside Avenue	S	33.4	C	34.2	C	0.8	No	54.8	D	56.2	E	1.4	Yes
12	Desert Lawn Drive at Oak Valley Parkway	U	60.0	F	62.9	F	2.9	No	115.2	F	116.7	F	1.5	No
13	I-10 EB Ramps at Oak Valley Parkway	S	359.2	F	361.6	F	2.4	No	1007.7	F	1008.0	F	0.3	No
14	I-10 WB Ramps at Oak Valley Parkway	S	388.6	F	392.6	F	4.0	No	544.6	F	551.3	F	6.7	Yes
15	Oak View Drive at Oak Valley Parkway	S	23.0	C	25.4	C	2.4	No	96.9	F	104.8	F	7.9	Yes
16	Beaumont Avenue at Oak Valley Parkway	S	200.5	F	200.5	F	0.0	No	384.8	F	384.9	F	0.1	No
D1	Cherry Valley Boulevard at West Project Dwy	S	-	-	22.4	C	-	-	-	-	24.5	C	-	-
D2	Cherry Valley Boulevard at Middle Project Dwy	S	-	-	4.1	A	-	-	-	-	7.8	A	-	-
D3	Cherry Valley Boulevard at East Project Dwy	U	-	-	11.8	B	-	-	-	-	11.5	B	-	-

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

OPENING YEAR 2027 CUMULATIVE CONDITIONS

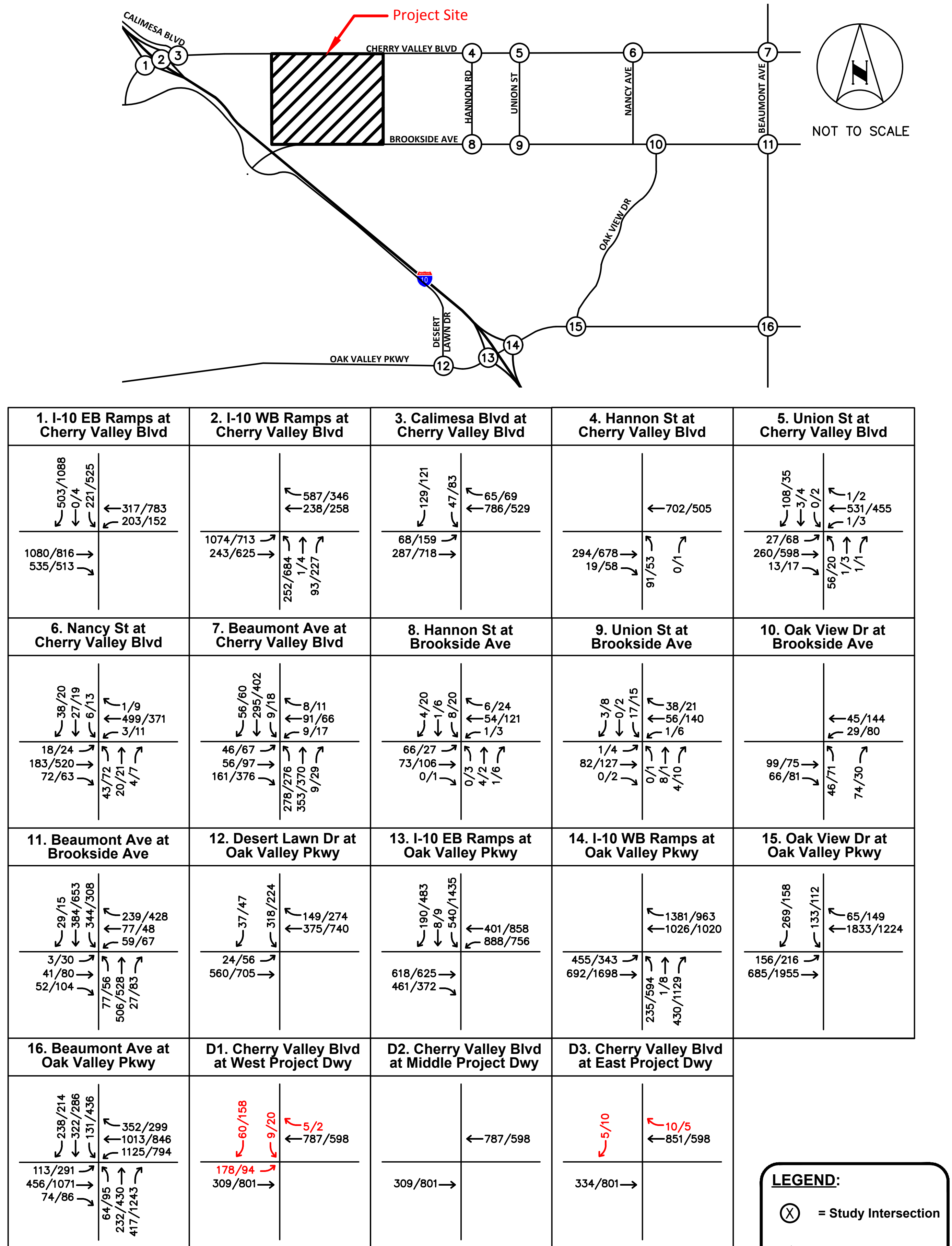
The project Opening Year for Phases 1 and 2 is anticipated to be Year 2027. Opening Year 2027 traffic forecasts have been developed by adding an ambient growth factor of 2.0 percent per year to Opening Year 2027 Cumulative traffic volumes at the study intersections. The resulting traffic volumes are shown on Figure 13.

Peak Hour Intersection Operation

The results of the Opening Year 2027 Cumulative intersection analysis are summarized on Table 7. Review of this table shows that, with the addition of ambient growth and Cumulative Project volumes, the following study intersections would operate at an unacceptable Level of Service:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

Intersection analysis worksheets are provided in *Appendix D*.



LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 13
OPENING YEAR 2027 CUMULATIVE TRAFFIC VOLUMES

TABLE 7
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2027 CUMULATIVE CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	I-10 EB Ramps at Cherry Valley Boulevard	U	319.9	F	566.0	F
2	I-10 WB Ramps at Cherry Valley Boulevard	U	239.0	F	306.7	F
3	Calimesa Boulevard at Cherry Valley Boulevard	U	53.1	F	310.2	F
4	Hannon Road at Cherry Valley Boulevard	U	28.0	D	32.6	D
5	Union Street at Cherry Valley Boulevard	U	17.0	C	30.6	D
6	Nancy Avenue at Cherry Valley Boulevard	U	17.4	C	25.2	D
7	Beaumont Avenue at Cherry Valley Boulevard	S	26.2	C	31.8	C
8	Hannon Road at Brookside Avenue	U	11.3	B	12.4	B
9	Union Street at Brookside Avenue	U	10.1	B	12.0	B
10	Oak View Drive at Brookside Avenue	U	8.5	A	8.9	A
11	Beaumont Avenue at Brookside Avenue	S	34.7	C	60.3	E
12	Desert Lawn Drive at Oak Valley Parkway	U	69.5	F	127.0	F
13	I-10 EB Ramps at Oak Valley Parkway	S	379.3	F	1036.3	F
14	I-10 WB Ramps at Oak Valley Parkway	S	409.9	F	566.0	F
15	Oak View Drive at Oak Valley Parkway	S	25.6	C	105.3	F
16	Beaumont Avenue at Oak Valley Parkway	S	200.5	F	388.7	F

Note:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

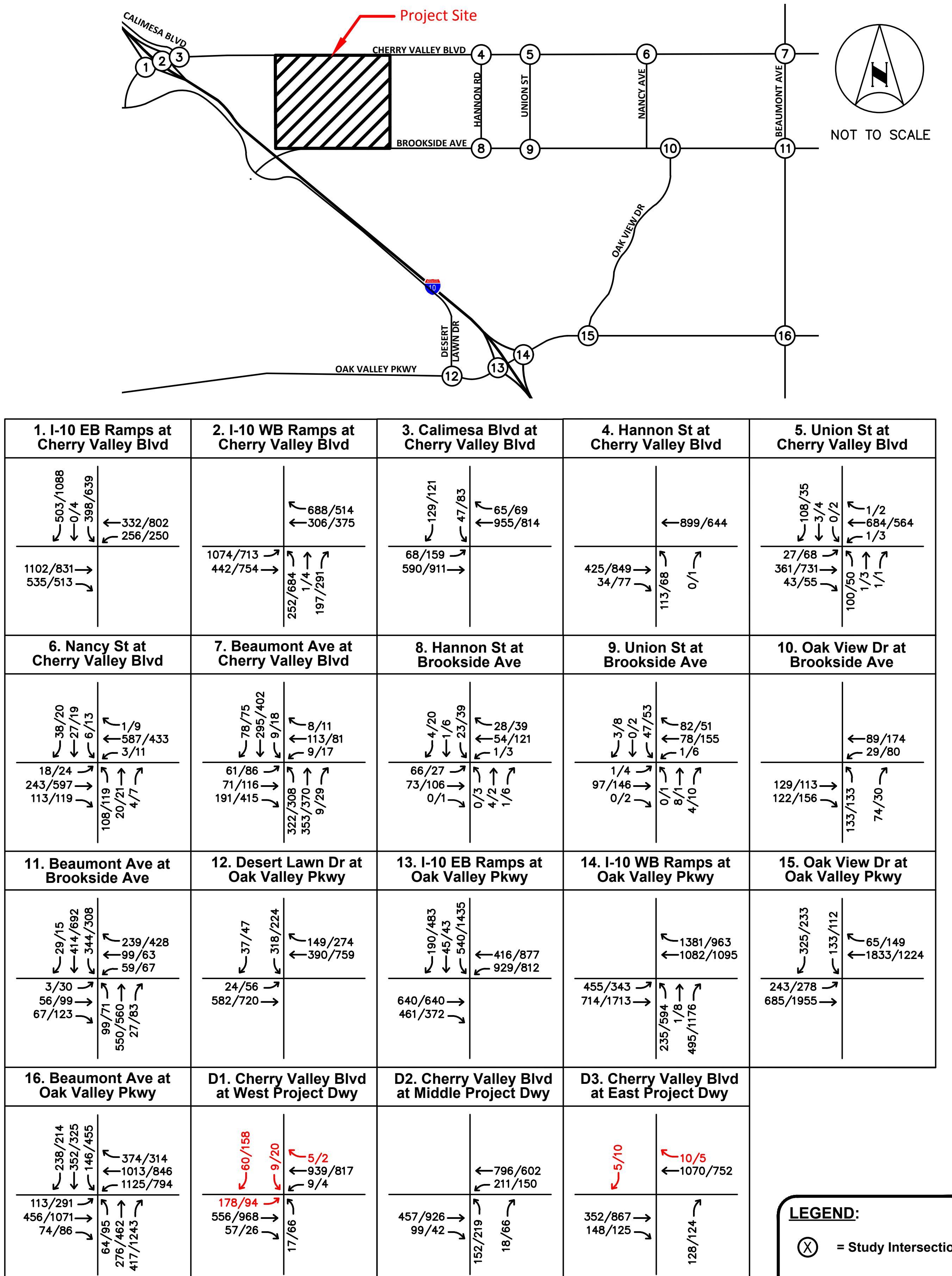
Opening Year 2027 Plus Cumulative Projects Plus Project (Phases 1 and 2) Conditions

Project-related traffic volumes for the Project were added to the Year 2027 Plus Cumulative Projects forecasts to develop Opening Year 2027 Plus Project (Phases 1 and 2) traffic forecast volumes. The resulting traffic volumes are shown on Figure 14.

The results of the Year 2027 Plus Project (Phases 1 and 2) intersection analysis are shown on Table 8. Review of this table shows that, with the addition of ambient growth, cumulative project volumes, and the project volumes, the following study intersections would operate at an unacceptable Level of Service:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #4 – Hannon Road at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #5 – Union Street at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #6 – Nancy Avenue at Cherry Valley Boulevard – AM: LOS E; PM: LOS E
- #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 Westbound Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

Intersection analysis worksheets are provided in *Appendix D*.



LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 14
OPENING YEAR 2027 CUMULATIVE PLUS PROJECT (PHASE 1 AND 2) TRAFFIC VOLUMES

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TABLE 8
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2027 CUMULATIVE PLUS PROJECT (PHASE 1 AND 2) CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Change in Delay	Sig Impact?	Without Project		With Project		Change in Delay	Sig Impact?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	I-10 EB Ramps at Cherry Valley Boulevard	U	319.9	F	371.4	F	51.5	Yes	566.0	F	631.2	F	65.2	Yes
2	I-10 WB Ramps at Cherry Valley Boulevard	U	239.0	F	323.1	F	84.1	Yes	306.7	F	377.3	F	70.6	Yes
3	Calimesa Boulevard at Cherry Valley Boulevard	U	53.1	F	199.6	F	146.5	Yes	310.2	F	1417.6	F	1107.4	Yes
4	Hannon Road at Cherry Valley Boulevard	U	28.0	D	81.0	F	53.0	Yes	32.6	D	77.2	F	44.6	Yes
5	Union Street at Cherry Valley Boulevard	U	17.0	C	52.5	F	35.5	Yes	30.6	D	92.2	F	61.6	Yes
6	Nancy Avenue at Cherry Valley Boulevard	U	17.4	C	36.7	E	19.3	Yes	25.2	D	49.9	E	24.7	Yes
7	Beaumont Avenue at Cherry Valley Boulevard	S	26.2	C	28.2	C	2.0	No	31.8	C	34.5	C	2.7	No
8	Hannon Road at Brookside Avenue	U	11.3	B	11.6	B	0.3	No	12.4	B	12.8	B	0.4	No
9	Union Street at Brookside Avenue	U	10.1	B	10.7	B	0.6	No	12.0	B	13.3	B	1.3	No
10	Oak View Drive at Brookside Avenue	U	8.5	A	10.3	B	1.8	No	8.9	A	10.3	B	1.4	No
11	Beaumont Avenue at Brookside Avenue	S	34.7	C	37.8	D	3.1	No	60.3	E	67.2	E	6.9	Yes
12	Desert Lawn Drive at Oak Valley Parkway	U	69.5	F	79.0	F	9.5	Yes	127.0	F	134.4	F	7.4	Yes
13	I-10 EB Ramps at Oak Valley Parkway	S	379.3	F	404.8	F	25.5	Yes	1036.3	F	1057.6	F	21.3	Yes
14	I-10 WB Ramps at Oak Valley Parkway	S	409.9	F	429.1	F	19.2	Yes	566.0	F	592.9	F	26.9	Yes
15	Oak View Drive at Oak Valley Parkway	S	25.6	C	44.6	D	19.0	No	105.3	F	125.5	F	20.2	Yes
16	Beaumont Avenue at Oak Valley Parkway	S	200.5	F	200.5	F	0.0	No	388.7	F	389.0	F	0.3	No
D1	Cherry Valley Boulevard at West Project Dwy	S	-	-	28.5	C	-	-	-	-	31.7	C	-	-
D2	Cherry Valley Boulevard at Middle Project Dwy	S	-	-	8.7	A	-	-	-	-	11.4	B	-	-
D3	Cherry Valley Boulevard at East Project Dwy	U	-	-	12.8	B	-	-	-	-	14.6	B	-	-

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

FUTURE HORIZON YEAR CONDITIONS

Horizon Year 2040 Forecasts

To derive intersection forecasts for the Horizon Year 2040 condition, the Riverside Transportation Analysis Model (RivTAM) Base Year 2012 and Horizon Year 2040 future traffic projections were used. The resulting traffic forecasts for Horizon Year conditions are shown on Figure 15.

The raw volumes obtained from the model output were post- processed by determining the annual growth between the base model year and the future model year and applying the growth increment to existing count volumes. This was accomplished using the B-Turns methodology developed by the Federal Highway Administration (FHWA). As a conservative approach, if a turning movement volume produced by this process was less than the Opening Year 2027 Cumulative forecast volume for that movement, manual adjustments were made to assure that all forecast Horizon Year volumes would not be less than the Opening Year 2027 Cumulative forecast volumes. The RivTAM Model plots and B-Turns worksheets are provided in *Appendix E*

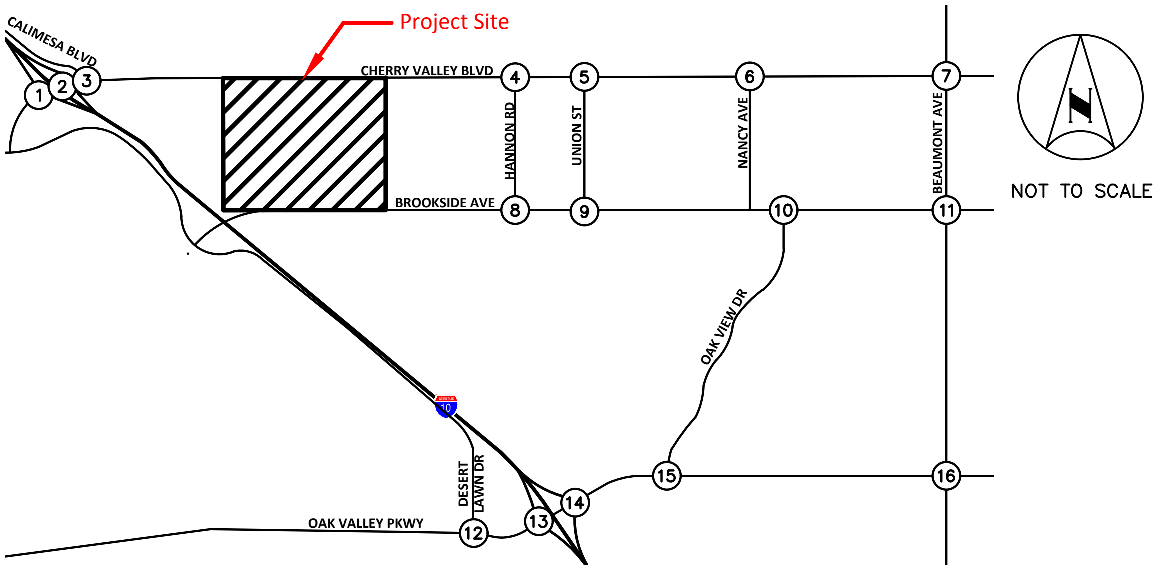
Horizon Year 2040 Operating Conditions

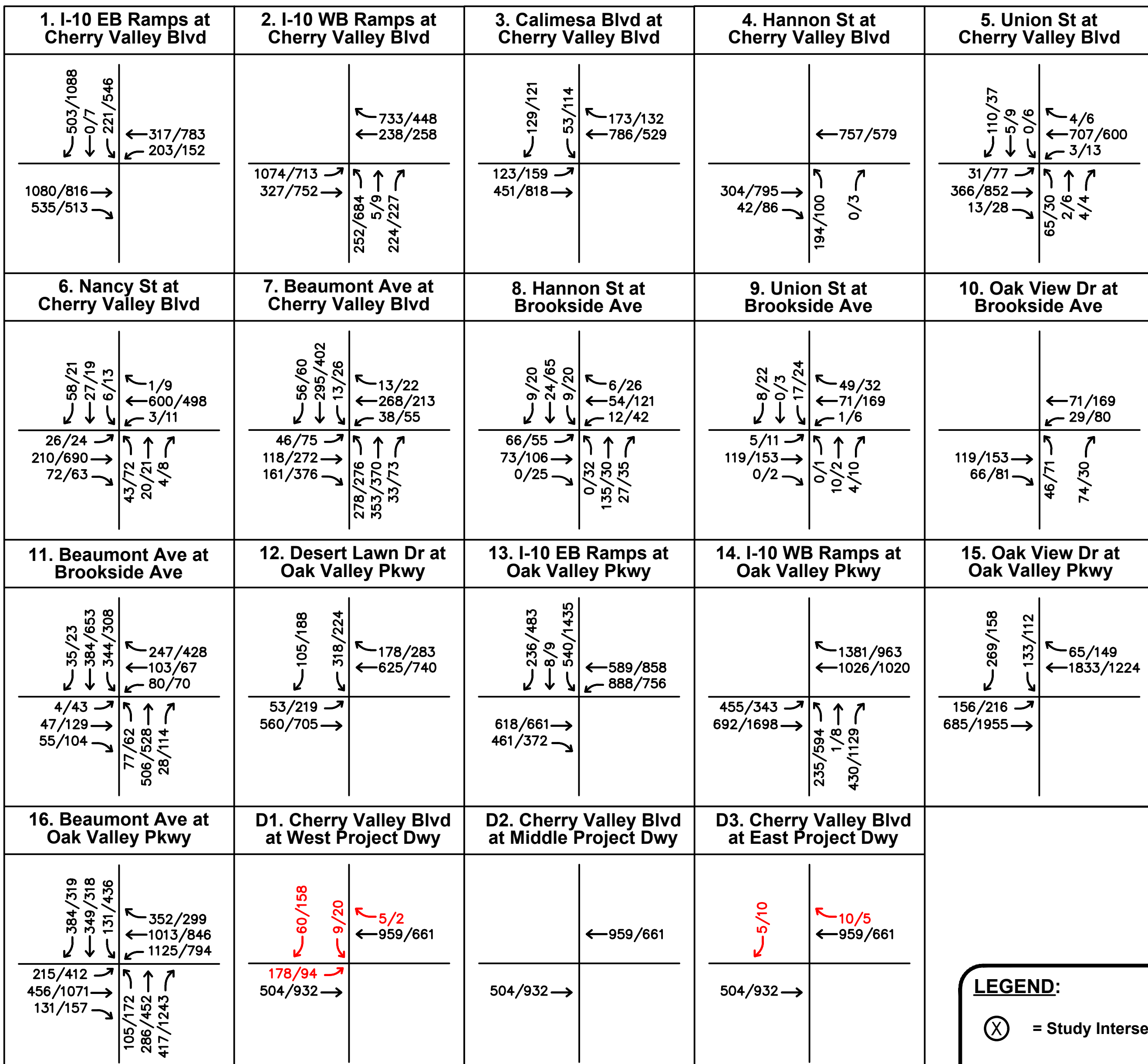
Intersection Level of Service analysis was conducted for the Horizon Year 2040 conditions. The resulting traffic volumes for Horizon Year 2040 conditions are shown on Figure 14 (previously mentioned). The results of the intersection analysis are shown on Table 9.

Review of this table indicates that, under Horizon Year 2040 conditions, the following intersections would operate at an unacceptable Level of Service:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #4 – Hannon Road at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #5 – Union Street at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #6 – Nancy Avenue at Cherry Valley Boulevard – PM: LOS F
- #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

Intersection analysis worksheets are provided in *Appendix D*.





LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 15
HORIZON YEAR 2040 TRAFFIC VOLUMES

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TABLE 9
SUMMARY OF INTERSECTION OPERATION
HORIZON YEAR 2040 CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	I-10 EB Ramps at Cherry Valley Boulevard	U	319.9	F	577.9	F
2	I-10 WB Ramps at Cherry Valley Boulevard	U	275.3	F	354.5	F
3	Calimesa Boulevard at Cherry Valley Boulevard	U	172.0	F	759.7	F
4	Hannon Road at Cherry Valley Boulevard	U	84.0	F	87.6	F
5	Union Street at Cherry Valley Boulevard	U	53.4	F	138.6	F
6	Nancy Avenue at Cherry Valley Boulevard	U	32.2	D	78.0	F
7	Beaumont Avenue at Cherry Valley Boulevard	S	29.4	C	32.9	C
8	Hannon Road at Brookside Avenue	U	13.3	B	15.2	C
9	Union Street at Brookside Avenue	U	10.7	B	12.1	B
10	Oak View Drive at Brookside Avenue	U	8.8	A	9.5	A
11	Beaumont Avenue at Brookside Avenue	S	36.8	D	71.0	E
12	Desert Lawn Drive at Oak Valley Parkway	U	92.9	F	158.5	F
13	I-10 EB Ramps at Oak Valley Parkway	S	379.3	F	1037.2	F
14	I-10 WB Ramps at Oak Valley Parkway	S	409.9	F	566.0	F
15	Oak View Drive at Oak Valley Parkway	S	25.6	C	105.3	F
16	Beaumont Avenue at Oak Valley Parkway	S	203.6	F	393.8	F

Note:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

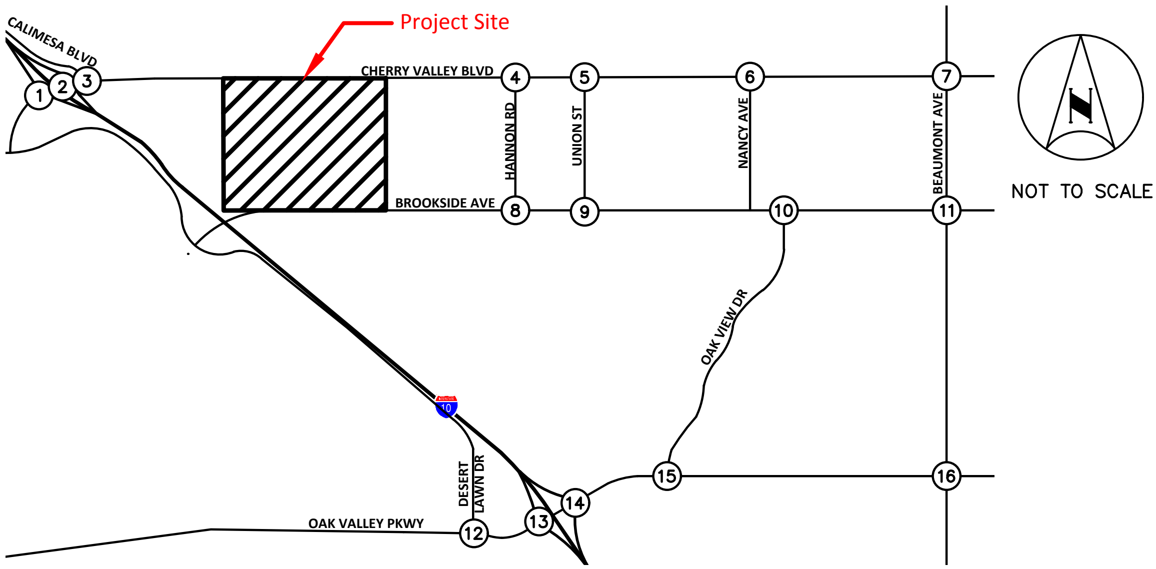
Horizon Year 2040 Plus Project (Phases 1 and 2) Conditions

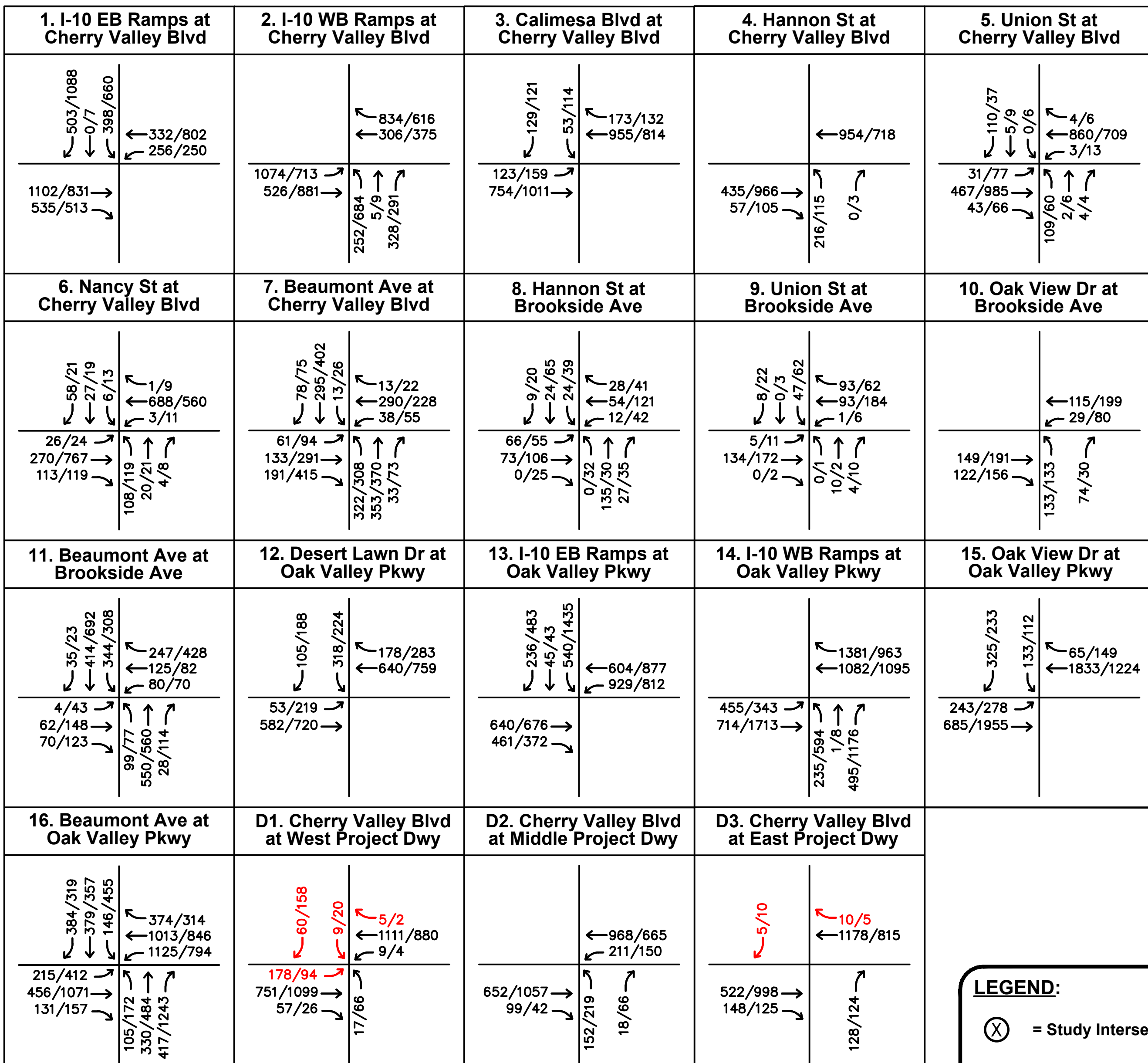
Project-related traffic volumes for the Project were added to the Horizon Year 2040 forecasts to develop Horizon Year 2040 Plus Project (Phases 1 and 2) traffic forecast volumes. The resulting traffic volumes are shown on Figure 16.

The results of the Horizon Year 2040 Plus Project (Phases 1 and 2) intersection analysis are shown on Table 10. Review of this table indicates that, under Horizon Year 2040 conditions, the following intersections would operate at an unacceptable Level of Service:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #4 – Hannon Road at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #5 – Union Street at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #6 – Nancy Avenue at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

Intersection analysis worksheets are provided in *Appendix D*.





LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 16
HORIZON YEAR 2040 PLUS PROJECT (PHASE 1 AND 2) TRAFFIC VOLUMES

TABLE 10
SUMMARY OF INTERSECTION OPERATION
HORIZON YEAR 2040 PLUS PROJECT (PHASE 1 AND 2) CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Change in Delay	Sig Impact?	Without Project		With Project		Change in Delay	Sig Impact?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	I-10 EB Ramps at Cherry Valley Boulevard	U	319.9	F	371.4	F	51.5	Yes	577.9	F	643.3	F	65.4	Yes
2	I-10 WB Ramps at Cherry Valley Boulevard	U	275.3	F	370.6	F	95.3	Yes	354.5	F	422.0	F	67.5	Yes
3	Calimesa Boulevard at Cherry Valley Boulevard	U	172.0	F	729.8	F	557.8	Yes	759.7	F	3150.6	F	2390.9	Yes
4	Hannon Road at Cherry Valley Boulevard	U	84.0	F	380.7	F	296.7	Yes	87.6	F	334.0	F	246.4	Yes
5	Union Street at Cherry Valley Boulevard	U	53.4	F	141.4	F	88.0	Yes	138.6	F	235.1	F	96.5	Yes
6	Nancy Avenue at Cherry Valley Boulevard	U	32.2	D	72.5	F	40.3	Yes	78.0	F	127.3	F	49.3	Yes
7	Beaumont Avenue at Cherry Valley Boulevard	S	29.4	C	30.9	C	1.5	No	32.9	C	35.0	C	2.1	No
8	Hannon Road at Brookside Avenue	U	13.3	B	13.9	B	0.6	No	15.2	C	15.7	C	0.5	No
9	Union Street at Brookside Avenue	U	10.7	B	11.4	B	0.7	No	12.1	B	13.1	B	1.0	No
10	Oak View Drive at Brookside Avenue	U	8.8	A	10.8	B	2.0	No	9.5	A	11.6	B	2.1	No
11	Beaumont Avenue at Brookside Avenue	S	36.8	D	41.2	D	4.4	No	71.0	E	79.7	E	8.7	Yes
12	Desert Lawn Drive at Oak Valley Parkway	U	92.9	F	102.8	F	9.9	Yes	158.5	F	166.8	F	8.3	Yes
13	I-10 EB Ramps at Oak Valley Parkway	S	379.3	F	401.8	F	22.5	Yes	1037.2	F	1058.5	F	21.3	Yes
14	I-10 WB Ramps at Oak Valley Parkway	S	409.9	F	429.1	F	19.2	Yes	566.0	F	592.9	F	26.9	Yes
15	Oak View Drive at Oak Valley Parkway	S	25.6	C	44.6	D	19.0	No	105.3	F	125.5	F	20.2	Yes
16	Beaumont Avenue at Oak Valley Parkway	S	203.6	F	205.1	F	1.5	No	393.8	F	395.8	F	2.0	No
D1	Cherry Valley Boulevard at West Project Dwy	S	-	-	51.6	D	-	-	-	-	47.2	D	-	-
D2	Cherry Valley Boulevard at Middle Project Dwy	S	-	-	9.2	A	-	-	-	-	11.4	B	-	-
D3	Cherry Valley Boulevard at East Project Dwy	U	-	-	13.5	B	-	-	-	-	16.1	C	-	-

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

RECOMMENDED IMPROVEMENTS

Based on the impact criteria presented earlier in the report (page 5), the project effects would be considered significant at the following intersections under Opening Year 2024, Opening Year 2027, and Horizon Year 2040 conditions:

- #1 – I-10 EB Ramps at Cherry Valley Boulevard
- #2 – I-10 WB Ramps at Cherry Valley Boulevard
- #3 – Calimesa Boulevard at Cherry Valley Boulevard
- #4 – Hannon Road at Cherry Valley Boulevard
- #5 – Union Street at Cherry Valley Boulevard
- #6 – Nancy Avenue at Cherry Valley Boulevard
- #11 – Beaumont Avenue at Brookside Avenue
- #12 – Desert Lawn Drive at Oak Valley Parkway
- #13 – I-10 EB Ramps at Oak Valley Parkway
- #14 – I-10 WB Ramps at Oak Valley Parkway
- #15 – Oak View Drive at Oak Valley Parkway

Implementation of the following improvements under Opening Year 2024, Opening Year 2027, and Horizon Year 2040 are recommended to either bring the intersection to an acceptable Level of Service or mitigate the project's effect at the study intersection:

<u>#1 – I-10 EB Ramps at Cherry Valley Boulevard</u>

- Install a traffic signal
- Add a westbound left-turn lane
- Add an eastbound right-turn lane
- Add a southbound right-turn lane

<u>#2 – I-10 WB Ramps at Cherry Valley Boulevard</u>

- Install a traffic signal
- Add a northbound left-turn lane
- Add an eastbound left-turn lane
- Add a westbound right-turn lane

<u>#3 – Calimesa Boulevard at Cherry Valley Boulevard</u>

- Add a 2nd eastbound through lane
- Add a 2nd westbound through lane
- Install a traffic signal

<u>#4 – Hannon Road at Cherry Valley Boulevard</u>

- Add a 2nd eastbound through lane
- Add a 2nd westbound through lane
- Install a traffic signal

#5 – Union Street at Cherry Valley Boulevard

- Add a 2nd eastbound through lane
- Add a 2nd westbound through lane
- Install a traffic signal

#6 – Nancy Avenue at Cherry Valley Boulevard

- Add a 2nd eastbound through lane
- Add a 2nd westbound through lane
- Add a dedicated eastbound right-turn lane

#11 – Beaumont Avenue at Brookside Avenue

- Add EB right-turn overlap phase
- Add WB right-turn lane
- Add WB right-turn overlap phase
- Traffic Signal relocation and modification

#12 – Desert Lawn Drive at Oak Valley Parkway

- Add a 2nd eastbound through lane

#13 – I-10 EB Ramps at Oak Valley Parkway

- Add a 2nd southbound left-turn lane
- Add a 2nd eastbound through lane
- Add a 2nd westbound through lane

#14 – I-10 WB Ramps at Oak Valley Parkway

- Add a northbound left-turn lane
- Add a 2nd eastbound through lane
- Add a 2nd westbound through lane

#15 – Oak View Drive at Oak Valley Parkway

- Add a 2nd eastbound through lane
- Modify southbound right-turn lane to free right-turn lane
- Traffic Signal relocation and modification

A summary of the intersection operation before and after implementation of the recommended improvements is provided on Table 11. Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements toward future improvements, or a combination of these approaches. A summary of which improvements are part of the regional TUMF program are shown on Table 12. The project fair share proportion at deficient study intersections under Opening Year 2024, Opening Year 2027, and Horizon Year 2040 are shown on Tables 13, 14, and 15, respectively.

I-10/CHERRY VALLEY BOULEVARD INTERCHANGE

The City of Calimesa, with Caltrans and the County of Riverside proposes to reconstruct the Interstate 10 (I-10)/Cherry Valley Boulevard interchange to relieve congestion and improve traffic operations.

The Locally Preferred Alternative will include the following improvements:

- Widen Cherry Valley Boulevard to two lanes in each direction
- Add turn pockets along Cherry Valley Boulevard approaching on-ramps
- Add pedestrian crosswalks and curb ramps
- Reconstruct and realign on- and off-ramps
- Realign Calimesa Boulevard north of the I-10/Cherry Valley Boulevard interchange
- Provide channelized turning on Cherry Valley Boulevard to Calimesa Boulevard
- Install new traffic signals
- Construct sidewalks and bicycle lanes along Cherry Valley Boulevard
- Add a 1,300-foot-long auxiliary lane to the eastbound off-ramp and 3,400-foot-long auxiliary lane to the westbound on-ramp

The project proposes to contribute towards the planned improvements at the I-10/Cherry Valley Boulevard interchange by a payment of TUMF fee and or fair share contribution.

SITE ADJACENT ROADWAY IMPROVEMENTS

The project would construct the following site adjacent roadway improvements:

- Cherry Valley Boulevard
  - Construction along the Project frontage to its ultimate half width as an Arterial Highway (128-foot right-of-way). A raised median will be constructed by the San Gorgonio Crossing project to the north.
- Brookside Avenue
  - Construction along the Project frontage to its ultimate halfwidth as a Secondary Highway (88-foot right-of-way)

SITE ACCESS IMPROVEMENTS

Project access would consist of three driveways along Cherry Valley Boulevard. The west and middle project driveways would be signalized, and the east project driveway would be an unsignalized right-in-right-out (RIRO) driveway. The project would construct the following site access improvements:

- Cherry Valley Boulevard
  - West Project Driveway
    - A signal modification to provide a four-legged traffic signal (future traffic signal to be installed by adjacent development).
  - Middle Project Driveway
    - Install new traffic signal
    - Construct a 300-foot dedicated eastbound right-turn pocket into the project driveway.
    - One dedicated left-turn and one dedicated right-turn lane at the northbound approach
  - East Project Driveway
    - Install a stop sign on the northbound approach and permit right-in-right-out access only.
- Brookside Avenue
  - No project-related access is planned along Brookside Avenue.

TABLE 11
SUMMARY OF INTERSECTION OPERATION
RECOMMENDED IMPROVEMENTS

Int. #	Intersection	Improvements	Peak Hour	Traffic Control	Opening Year 2024						Opening Year 2027						Horizon Year 2040					
					Without Project		With Project		With Improvements		Without Project		With Project		With Improvements		Without Project		With Project		With Improvements	
					Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	I-10 EB Ramps at Cherry Valley Boulevard	Construct Traffic Signal (TUMF) Add WB left-turn lane (TUMF) Add EB right-turn lane (TUMF) Add SB right-turn lane (TUMF)	AM	S	295.0	F	316.2	F	85.1	F	319.9	F	371.4	F	115.1	F	319.9	F	371.4	F	115.1	F
			PM	S	537.9	F	561.6	F	168.6	F	566.0	F	631.2	F	222.2	F	577.9	F	643.3	F	228.0	F
2	I-10 WB Ramps at Cherry Valley Boulevard	Construct Traffic Signal (TUMF) Add NB left-turn lane (TUMF) Add EB left-turn lane Add WB right-turn lane	AM	S	220.6	F	253.9	F	82.5	F	239.0	F	323.1	F	88.7	F	275.3	F	370.6	F	113.4	F
			PM	S	289.1	F	322.9	F	21.7	C	306.7	F	377.3	F	21.5	C	354.5	F	422.0	F	21.5	C
3	Calimesa Boulevard at Cherry Valley Boulevar	Add 2nd EB through lane (TUMF) Add 2nd WB through lane (TUMF) Construct Traffic Signal	AM	S	46.0	E	71.1	F	8.6	A	53.1	F	199.6	F	8.5	A	172.0	F	729.8	F	9.7	A
			PM	S	229.3	F	548.9	F	10.0	A	310.2	F	1417.6	F	10.8	B	759.7	F	3150.6	F	12.9	B
4	Hannon Road at Cherry Valley Boulevard	Add 2nd EB through lane Add 2nd WB through lane Construct Traffic Signal	AM	S	--	--	--	--	--	--	28.0	D	81.0	F	6.1	A	84.0	F	380.7	F	9.8	A
			PM	S	29.7	D	36.2	E	3.7	A	32.6	D	77.2	F	4.1	A	87.6	F	334.0	F	5.8	A
5	Union Street at Cherry Valley Boulevard	Add 2nd EB through lane Add 2nd WB through lane Construct Traffic Signal	AM	S	--	--	--	--	--	--	17.0	C	52.5	F	14.5	B	53.4	F	141.4	F	22.2	C
			PM	S	26.0	D	39.7	E	4.0	A	30.6	D	92.2	F	4.8	A	138.6	F	235.1	F	5.5	A
6	Nancy Avenue at Cherry Valley Boulevard	Add 2nd EB through lane Add 2nd WB through lane Add dedicated EB right-turn lane	AM	U	--	--	--	--	--	--	17.4	C	36.7	E	12.5	B	32.2	D	72.5	F	14.6	B
			PM	U	--	--	--	--	--	--	25.2	D	49.9	E	13.8	B	78.0	F	127.3	F	19.5	C
11	Beaumont Avenue at Brookside Avenue	Add EB right-turn overlap Add WB right-turn lane with overlap Add WB right-turn lane Traffic Signal relocation and modification	AM	S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			PM	S	54.8	D	56.2	E	27.0	C	60.3	E	67.2	E	28.6	C	71.0	E	79.7	E	30.5	C
12	Desert Lawn Drive at Oak Valley Parkway	Add 2nd EB through lane (TUMF)	AM	U	--	--	--	--	--	--	69.5	F	79.0	F	19.2	C	92.9	F	102.8	F	30.5	D
			PM	U	--	--	--	--	--	--	127.0	F	134.4	F	27.0	D	158.5	F	166.8	F	47.0	E
13	I-10 EB Ramps at Oak Valley Parkway	Add 2nd SB left-turn lane (TUMF) Add 2nd EB through lane (TUMF) Add 2nd WB through lane (TUMF)	AM	S	--	--	--	--	--	--	379.3	F	404.8	F	145.4	F	379.3	F	401.8	F	144.3	F
			PM	S	--	--	--	--	--	--	1036.3	F	1057.6	F	428.1	F	1037.2	F	1058.5	F	427.0	F
14	I-10 WB Ramps at Oak Valley Parkway	Add NB left-turn lane (TUMF) Add 2nd EB through lane (TUMF) Add 2nd WB through lane (TUMF)	AM	S	--	--	--	--	--	--	409.9	F	429.1	F	290.8	F	409.9	F	429.1	F	290.8	F
			PM	S	544.6	F	551.3	F	217.6	F	566.0	F	592.9	F	235.6	F	566.0	F	592.9	F	235.6	F
15	Oak View Drive at Oak Valley Parkway	Add 2nd EB through lane (TUMF) Modify SB right-turn lane to free right-turn lane Traffic Signal relocation and modification	AM	S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			PM	S	96.9	F	104.8	F	10.0	B	105.3	F	125.5	F	11.5	B	105.3	F	125.5	F	11.5	B

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

TABLE 12

SUMMARY OF RECOMMENDED IMPROVEMENTS IN TUMF PROGRAM

#	Intersection	Juridsiction	Recommended Improvements	Improvements in TUMF?
1	I-10 EB Ramps at Cherry Valley Boulevard	Caltrans	Construct Traffic Signal	Yes
			Add WB left-turn lane	Yes
			Add EB right-turn lane	Yes
			Add SB right-turn lane	Yes
2	I-10 WB Ramps at Cherry Valley Boulevard	Caltrans	Construct Traffic Signal	Yes
			Add NB left-turn lane	Yes
			Add EB left-turn lane	Yes
			Add WB right-turn lane	Yes
3	Calimesa Boulevard at Cherry Valley Boulevard	Calimesa	Add 2nd EB through lane	Yes
			Add 2nd WB through lane	Yes
			Construct Traffic Signal	No
4	Hannon Road at Cherry Valley Boulevard	Riverside County	Add 2nd EB through lane	No
			Add 2nd WB through lane	No
			Construct Traffic Signal	No
5	Union Street at Cherry Valley Boulevard	Riverside County	Add 2nd EB through lane	No
			Add 2nd WB through lane	No
			Construct Traffic Signal	No
6	Nancy Avenue at Cherry Valley Boulevard	Riverside County	Add 2nd EB through lane	No
			Add 2nd WB through lane	No
			Add dedicated EB right-turn lane	No
11	Beaumont Avenue at Brookside Avenue	Beaumont / Riverside County	Add EB right-turn overlap	No
			Add WB right-turn lane with overlap	No
			Add WB right-turn lane	No
12	Desert Lawn Drive at Oak Valley Parkway	Beaumont	Add 2nd EB through lane	Yes
13	I-10 EB Ramps at Oak Valley Parkway	Caltrans	Add a 2nd SB left-turn lane	Yes
			Add a 2nd EB through lane	Yes
			Add a 2nd WB through lane	Yes
14	I-10 WB Ramps at Oak Valley Parkway	Caltrans	Add NB left-turn lane	Yes
			Add 2nd EB through lane	Yes
			Add 2nd WB through lane	Yes
15	Oak View Drive at Oak Valley Parkway	Beaumont	Add 2nd EB through lane	Yes
			Modify SB right-turn lane to free right-turn lane	No

TABLE 13

SUMMARY OF PROJECT FAIR SHARE FOR RECOMMENDED IMPROVEMENTS - OPENING YEAR 2024

Int. #	Intersection	AM Peak Hour					PM Peak Hour				
		Total Volume		Total	Project		Total Volume		Total	Project	
		2021	2024	Growth	Trips	%-age	2021	2024	Growth	Trips	%-age
1	I-10 EB Ramps at Cherry Valley Boulevard	1,532	2,885	1,353	118	8.7%	1,646	3,898	2,252	115	5.1%
2	I-10 WB Ramps at Cherry Valley Boulevard	1,345	2,605	1,260	206	16.3%	1,056	3,024	1,968	243	12.3%
3	Calimesa Boulevard at Cherry Valley Boulevard	799	1,541	742	206	27.8%	915	1,866	951	243	25.6%
4	Hannon Road at Cherry Valley Boulevard	729	1,164	435	101	23.2%	806	1,357	551	111	20.1%
5	Union Street at Cherry Valley Boulevard	643	1,053	410	90	22.0%	742	1,265	523	100	19.1%
11	Beaumont Avenue at Brookside Avenue	951	1,824	873	42	4.8%	1,220	2,372	1,152	46	4.0%
12	Desert Lawn Drive at Oak Valley Parkway	935	1,418	483	11	2.3%	1,103	1,992	889	11	1.2%
13	I-10 EB Ramps at Oak Valley Parkway	1,413	3,034	1,621	15	0.9%	1,693	4,469	2,776	33	1.2%
14	I-10 WB Ramps at Oak Valley Parkway	1,811	4,150	2,339	37	1.6%	1,905	5,683	3,778	43	1.1%
15	Oak View Drive at Oak Valley Parkway	1,518	3,084	1,566	37	2.4%	1,686	3,756	2,070	43	2.1%

TABLE 14

SUMMARY OF PROJECT FAIR SHARE FOR RECOMMENDED IMPROVEMENTS - OPENING YEAR 2027

Int. #	Intersection	AM Peak Hour Total Volume 2021	AM Peak Hour Total Volume 2027	AM Total Growth	AM Project Trips	AM %-age	PM Peak Hour Total Volume 2021	PM Peak Hour Total Volume 2027	PM Total Growth	PM Project Trips	PM %-age
1	I-10 EB Ramps at Cherry Valley Boulevard	1,532	3,126	1,594	267	16.8%	1,646	4,127	2,481	246	9.9%
2	I-10 WB Ramps at Cherry Valley Boulevard	1,345	2,960	1,615	472	29.2%	1,056	3,335	2,279	478	21.0%
3	Calimesa Boulevard at Cherry Valley Boulevard	799	1,854	1,055	472	44.7%	915	2,157	1,242	478	38.5%
4	Hannon Road at Cherry Valley Boulevard	729	1,471	742	365	49.2%	806	1,639	833	344	41.3%
5	Union Street at Cherry Valley Boulevard	643	1,330	687	328	47.7%	742	1,518	776	310	39.9%
6	Nancy Avenue at Cherry Valley Boulevard	565	1,168	603	254	42.1%	689	1,392	703	242	34.4%
11	Beaumont Avenue at Brookside Avenue	951	1,986	1,035	148	14.3%	1,220	2,539	1,319	139	10.5%
12	Desert Lawn Drive at Oak Valley Parkway	935	1,500	565	37	6.5%	1,103	2,080	977	34	3.5%
13	I-10 EB Ramps at Oak Valley Parkway	1,413	3,221	1,808	115	6.4%	1,693	4,662	2,969	124	4.2%
14	I-10 WB Ramps at Oak Valley Parkway	1,811	4,363	2,552	143	5.6%	1,905	5,892	3,987	137	3.4%
15	Oak View Drive at Oak Valley Parkway	1,518	3,284	1,766	143	8.1%	1,686	3,951	2,265	137	6.0%

TABLE 15

SUMMARY OF PROJECT FAIR SHARE FOR RECOMMENDED IMPROVEMENTS - HORIZON YEAR 2040

Int. #	Intersection	AM Peak Hour					PM Peak Hour				
		Total Volume		Total	Project		Total Volume		Total	Project	
		2021	2040	Growth	Trips	%-age	2021	2040	Growth	Trips	%-age
1	I-10 EB Ramps at Cherry Valley Boulevard	1,532	3,126	1,594	267	16.8%	1,646	4,151	2,505	246	9.8%
2	I-10 WB Ramps at Cherry Valley Boulevard	1,345	3,325	1,980	472	23.8%	1,056	3,569	2,513	478	19.0%
3	Calimesa Boulevard at Cherry Valley Boulevard	799	2,187	1,388	472	34.0%	915	2,351	1,436	478	33.3%
4	Hannon Road at Cherry Valley Boulevard	729	1,662	933	365	39.1%	806	1,907	1,101	344	31.2%
5	Union Street at Cherry Valley Boulevard	643	1,638	995	328	33.0%	742	1,978	1,236	310	25.1%
6	Nancy Avenue at Cherry Valley Boulevard	565	1,324	759	254	33.5%	689	1,691	1,002	242	24.2%
11	Beaumont Avenue at Brookside Avenue	951	2,058	1,107	148	13.4%	1,220	2,668	1,448	139	9.6%
12	Desert Lawn Drive at Oak Valley Parkway	935	1,876	941	37	3.9%	1,103	2,393	1,290	34	2.6%
13	I-10 EB Ramps at Oak Valley Parkway	1,413	3,455	2,042	115	5.6%	1,693	4,698	3,005	124	4.1%
14	I-10 WB Ramps at Oak Valley Parkway	1,811	4,363	2,552	143	5.6%	1,905	5,892	3,987	137	3.4%
15	Oak View Drive at Oak Valley Parkway	1,518	3,284	1,766	143	8.1%	1,686	3,951	2,265	137	6.0%

SUMMARY OF FINDINGS AND CONCLUSIONS

- This study has been prepared to evaluate the traffic-related effects of the proposed Beaumont Summit Station project. The project consists of a 1,213,235 square-foot high-cube short-term storage building, with 20,000 square feet of office space, a 985,860 square-foot high-cube short-term storage building with 20,000 square feet of office space, a 358,370 square-foot general warehouse with 10,000 square feet of office space, a 220-room hotel, a 25,000 square foot shopping center, a 15,000 square foot high-turnover (sit-down) restaurant, and a 10,000 square foot fast-food restaurant with drive-through. The project will be conducted in two phases, with the Light Industrial uses being constructed in Phase 1 and completed in 2024, and the Commercial uses being constructed in Phase 2 and complete in 2027. The project is located immediately east of the I-10 Freeway and in between Cherry Valley Boulevard and Brookside Avenue.

- Weekday morning peak hour and weekday evening peak hour operating conditions were evaluated at 16 study intersections for the following study scenarios:

  - Existing Conditions
  - Opening Year 2024 Cumulative
  - Opening Year 2024 Cumulative Plus Project (Phase 1)
  - Opening Year 2027 Cumulative
  - Opening Year 2027 Cumulative Plus Project (Phases 1 and 2)
  - Horizon Year 2040
  - Horizon Year 2040 Plus Project (Phases 1 and 2)

- Under Existing Conditions, the following study intersections would operate at an unacceptable Level of Service:

  - #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS E, PM: LOS F
  - #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F
  - #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F

- Phase 1 of the project is estimated to generate 4,667 daily PCE trips, with 303 PCE trips during the morning peak hour and 362 PCE during the evening peak hour.

- Phases 1 and 2 of the project is estimated to generate 13,152 daily PCE trips, with 835 PCE trips during the morning peak hour and 832 PCE trips during the evening peak hour.

- Ambient traffic growth at a rate of 2.0 percent per year was added to Existing Conditions to develop Opening Year 2024 forecasts.

- Under Opening Year 2024 Cumulative Conditions, the following intersections would operate at an unacceptable Level of Service with the addition of ambient growth:

  - #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F

- #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS E; PM: LOS F
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

- Under Opening Year 2024 Cumulative Plus Project (Phase 1) Conditions, the following intersections would operate at an unacceptable Level of Service with the of project traffic:

  - #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #4 – Hannon Road at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #5 – Union Street at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
  - #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #14 – I-10 Westbound Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #15 – Oak View Drive at Oak Valley Parkway – AM: LOS E; PM: LOS F
  - #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

- Ambient traffic growth at a rate of 2.0 percent per year was added to Opening Year 2024 volumes to develop Opening Year 2027 forecasts.

- Under Opening Year 2027 Cumulative Conditions, the following intersections would operate at an unacceptable Level of Service with the addition of ambient growth:

  - #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
  - #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
  - #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

- Under Opening Year 2027 Cumulative Plus Project (Phases 1 and 2) Conditions, the following intersections would operate at an unacceptable Level of Service with the of project traffic:

  - #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F

- #4 – Hannon Road at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #5 – Union Street at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #6 – Nancy Avenue at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
- #11 – Beaumont Avenue at Brookside Avenue – PM: LOS F
- #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #14 – I-10 Westbound Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #15 – Oak View Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
- #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

- To derive forecasts for Horizon Year 2040 Conditions, RivTAM 2012 and 2040 forecasts were used.

- Under Horizon Year 2040 Conditions, the following intersections would operate at an unacceptable Level of Service.

  - #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #4 – Hannon Road at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #5 – Union Street at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #6 – Nancy Avenue at Cherry Valley Boulevard – PM: LOS F
  - #11 – Beaumont Avenue at Brookside Avenue – PM: LOS E
  - #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #15 – Oak View Drive at Oak Valley Parkway – PM: LOS F
  - #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

- Under Horizon Year 2040 Plus Project (Phases 1 and 2) Conditions, the following intersections would continue to operate at an unacceptable Level of Service:

  - #1 – I-10 EB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #2 – I-10 WB Ramps at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #3 – Calimesa Boulevard at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #4 – Hannon Road at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #5 – Union Street at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #6 – Nancy Avenue at Cherry Valley Boulevard – AM: LOS F; PM: LOS F
  - #11 – Beaumont Avenue at Brookside Avenue – AM: LOS E; PM: LOS F
  - #12 – Desert Lawn Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #13 – I-10 EB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #14 – I-10 WB Ramps at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #15 – Oak View Drive at Oak Valley Parkway – AM: LOS F; PM: LOS F
  - #16 – Beaumont Avenue at Oak Valley Parkway – AM: LOS F; PM: LOS F

- Recommended improvements to either bring the intersection to an acceptable Level of Service or mitigate the project's effect at deficient study intersections have been addressed.

- Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements toward future improvements, or a combination of these approaches.

Table A: Summary of Queuing Storage Capacity

TABLE A
SUMMARY OF QUEUEING STORAGE CAPACITY
BEAUMONT SUMMIT STATION

Intersection	Movement	Storage Capacity (ft)	95th Percentile PM Peak Hour Queue Length (ft/ln)			
			Opening Year 2024	Opening Year 2024 Plus Phase 1	Opening Year 2027	Opening Year 2027 Plus Phases 1 and 2
I-10 EB Ramps at Cherry Valley Blvd	Southbound	1,150	3,572	3,705	3,733	4,114
I-10 WB Ramps at Cherry Valley Blvd	Northbound	1,050	1,435	1,574	1,485	1,738