Natural Environment Study

Unincorporated Community of Ramona
San Diego County, California
District 11-SD

October 2020

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Natural Environment Study

STATE OF CALIFORNIA
Department of Transportation
COUNTY OF SAN DIEGO
Department of Public Works

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Summary

The County of San Diego Department of Public Works (County), in cooperation with the California Department of Transportation (Caltrans), proposes to construct a bridge where 13th Street crosses Santa Maria Creek, in the unincorporated community of Ramona, in San Diego County, California. The project segment of 13th Street/Maple Street is a dirt roadway, with gravel at the Santa Maria Creek culvert crossing. The existing, undersized corrugated steel culvert does not have sufficient capacity to convey the creek water during storm events; flooding at this crossing makes the roadway impassable for motor vehicles and pedestrians during portions of the rainy season.

The objective of the project is to provide an adequate and safe crossing that allows for the conveyance of water from a 100-year storm event. The project would include replacement of the existing culvert crossing with a bridge designed to meet current federal standards, with roadway improvements along 13th Street/Maple Street and Walnut Street, and the addition of stormwater conveyance and treatment features that would ultimately discharge into Santa Maria Creek.

The proposed project consists of improvements to 13th Street/Maple Street between Main Street (State Route 67) and Walnut Street and construction of a bridge over Santa Maria Creek to replace the existing corrugated steel culvert. The proposed bridge would be a 4-span, cast-in-place pre-stressed, post-tensioned concrete box girder structure, approximately 480 feet long and approximately 42 feet wide with three singular-column bents and two abutments. The grade of 13th Street/Maple Street would be raised approximately 10 feet at the Santa Maria Creek crossing to comply with current Federal Highway Administration (FHWA) requirements.

Ground disturbance is anticipated within and immediately adjacent to Santa Maria Creek. Crews are anticipated to require access to the creek area beneath the proposed bridge. Storm drain systems are proposed directly to the north and south of the bridge to capture runoff and direct it toward the existing creek. Permeable pavement areas would be incorporated into the project as Green Street features to facilitate meeting water quality requirements and for stormwater management. An existing bioretention basin located south of the bridge that currently treats stormwater from the Ramona Library and associated parking lot would be redesigned to continue treating those existing areas in addition to the proposed paved roads south of Santa Maria Creek.

This Natural Environment Study describes the existing biological environment and contains technical analysis to support environmental documentation concerning plants, animals, natural vegetation communities, and jurisdictional resources that may be affected by the proposed bridge project. Construction of the proposed project would involve ground disturbance within and immediately adjacent to Santa Maria Creek.

The proposed project area includes the portion of 13th Street/Maple Street that crosses over Santa Maria Creek and the existing unpaved section of 13th Street/Maple Street from Walnut Street south to the north end of the Ramona Library parking lot. Surveys and assessments to inventory and evaluate biological resources were conducted within the Biological Study Area (BSA). The BSA includes the project area (i.e., temporary and permanent impact areas) plus a 350-foot buffer to assess indirect impacts as well as accommodate any changes to project limits and project design that may occur during project development.

Studies were initially completed for the proposed project from 2012 through 2014 by ICF International (ICF). Subsequent to the completion of ICF surveys in 2014, the proposed project changed in size due to design modifications. AECOM reinitiated survey efforts in 2018 through 2020 to update previous survey data, to collect data in areas not covered by ICF's surveys, and to address changes to report standards relating to jurisdictional water delineations.

A general survey, including vegetation mapping and habitat assessments, was conducted to assess the site for required surveys. In addition, jurisdictional wetlands/waters delineation surveys and rare plant surveys were conducted. Based on the results of database searches and habitat assessments, focused surveys were conducted for San Diego fairy shrimp (*Branchinecta sandiegonensis*), Riverside fairy shrimp (*Streptocephalus woottoni*), and least Bell's vireo (*Vireo bellii pusillus*; LBVI). Habitat assessments for southwestern arroyo toad (*Anaxyrus boreas halophilus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) were conducted but habitat was determined unsuitable for these species. Therefore, focused surveys were not conducted for these species.

Six vegetation communities and two land cover types are present within the BSA (Table S-1). The vegetation communities include southern cottonwood-willow riparian forest; southern willow scrub; Diegan coastal sage scrub – inland form; alkali seep; non-native grassland; and disturbed wetland. Urban/developed and eucalyptus woodland areas represent the two land cover types. Table S-1 provides the acres of permanent and temporary direct impacts to the vegetation communities within the project area.

Table S-1. Vegetation Communities and Cover Types within the BSA (Acres)

Vegetation Communities and Other Cover Types	Biological Study Area			
	Permanent Impact	Temporary Impact	350-foot Buffer	Total
Riparian and Wetlands	***0.10***	***0.98***	***6.94***	***8.02***
Alkali Seep	-	-	0.12	0.12
Disturbed Wetland	-	0.12	-	0.12
Southern Cottonwood-Willow Riparian Forest	0.06	0.79	6.82	7.67
Southern Willow Scrub	0.04	0.07	0.00	0.11
Uplands	***1.21***	***3.31***	***16.38***	***20.90***
Diegan Coastal Sage Scrub - Inland Form	0.05	-	0.01	0.06
Non-Native Grassland	1.16	3.31	16.37	20.84
Other Cover Types[1]	***1.97***	***1.66***	***34.39***	***38.02***
Eucalyptus Woodland	-	-	0.44	0.44
Urban/Developed	1.97	1.66	33.95	37.58
Total	**3.28**	**5.95**	**57.71**	**66.94**

[1] Other cover types are not considered sensitive vegetation communities and therefore do not require mitigation.

Santa Maria Creek and associated riparian vegetation would fall under the jurisdiction of the following resource agencies: U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). Approximately 3.94 acres of potential aquatic resources was identified within the delineation survey area for the proposed project. Of those, approximately 2.15 acres is considered under purview of the USACE, CDFW, and RWQCB. Approximately 1.35 acres is exclusively under purview of CDFW (Table 4). The remainder of the aquatic resources are associated with stormwater channels and the manufactured stormwater basin. These features do not fall under jurisdiction of the USACE or CDFW and qualify for the exemption to the RWQCB's wetland policy and the Porter-Cologne Water Quality Control Act due to their designed intent of stormwater detention.

The proposed project would result in <0.01 acre and 0.27 acre of permanent and temporary direct impacts to waters under purview of the USACE, CDFW, and RWQCB, respectively. The proposed project would result in 0.06 acre and 0.60 acre of permanent and temporary direct impacts to aquatic resources under purview of the CDFW, respectively. The proposed project would require a Section 404 permit from the USACE and a 401 certification from the RWQCB in accordance with the Clean Water Act. A Streambed Alteration Agreement from the CDFW would also be required

Focused rare plant surveys in 2012–2014 and 2018 detected one special status plant species, southern tarplant (*Centromadia parryi* ssp. *australis*), within the BSA along the northern and southern floodplain of Santa Maria Creek. Approximately 1,197 individuals were recorded during 2018 surveys. Approximately 27 and 25 individuals (i.e., 52 individuals) were located in the permanent and temporary impact area, respectively. This species is an annual species, meaning the

number of individuals within the impact areas will vary from year to year. Permanent and temporary direct impacts to non-native grassland (where the species is present), as detailed in Table S-1, provide a better representation of the direct impact that may occur to this species.

The 2018 LBVI surveys documented the presence of one breeding LBVI pair in the riparian vegetation within the BSA southeast of the intersection of 13th Street/Maple Street and Walnut Street. This pair built two nests; the first was outside the limits of disturbance and failed. The second nest was located within the temporary impact area and was successful with at least one fledgling. Permanent and temporary impacts would occur to occupied LBVI willow riparian habitat (Table S-1). As the project could affect federally listed species (i.e., LBVI), the FHWA, as the federal lead agency, in conjunction with Caltrans, must undergo a Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS). The project would also require a consistency determination (Section 2080.1 of the California Fish and Game Code) for take of state-listed LBVI.

Four non-listed special status wildlife species that forage and breed within the BSA were detected during surveys, including orange-throated whiptail (*Aspidoscelis hyperythra*), Cooper's hawk (*Accipiter cooperii*), yellow warbler (*Setophaga petechia*), and western bluebird (*Sialia mexicana*). Two special status species detected, turkey vulture (*Cathartes aura*) and great blue heron (*Ardea herodias*), are only expected to forage in the BSA because there is no nesting habitat present for these species. Permanent and temporary impacts would occur to riparian and upland habitat suitable to support orange-throated whiptail (Table S-1). In addition, permanent and temporary impacts would occur to riparian habitat suitable to support Cooper's hawk, yellow warbler, and western bluebird (Table S-1).

Permanent direct impacts would occur in the form of replacement of habitat with permanent structures or hard surface. Temporary direct impact would occur as a result of grading associated with temporary work areas. Temporary indirect impacts such as construction fugitive dust, sedimentation and erosion, and construction-generated trash and unauthorized trespass could all adversely impact vegetation, jurisdictional waters and wetlands, and special status plant species adjacent to the work areas. Noise and the additional anthropogenic presence associated with construction may disturb special status wildlife species, including LBVI, and cause individuals to avoid the vicinity of the work areas.

Once construction is complete, operation and maintenance of the bridge is expected to provide a net benefit to sensitive biological resources in the surrounding area. Flooding across the existing dirt road that currently occurs during the rainy season likely degrades vegetation communities and habitat downstream of the road as result of erosion and sedimentation. Construction of the bridge and discontinuing use of the existing at-grade dirt road would allow water to move under the bridge during rain events, and installation of storm drain systems would minimize erosion and sedimentation downstream of the bridge.

Permanent and temporary impacts to the vegetation communities would be mitigated based on mitigation ratios provided in the County of San Diego's *Guidelines for Determining Significance and Report Format and Content Requirements Biological Resources* and *Resource Protection Ordinance* (County of San Diego 2010). Permanent direct impacts to sensitive vegetation communities, jurisdictional wetlands or waters, and special status species habitat will be mitigated on- or off-site through coordination with the resource agencies. On-site mitigation may occur in the form of creation, restoration, or habitat enhancement. All areas of temporary direct impacts (grading and work areas) will be restored on-site.

Avoidance and minimization measures would be implemented to limit indirect impact to sensitive biological resources, including demarking sensitive area, implementing best management practices to minimize dust and erosion, and retaining a qualified biologist to monitor activities. To avoid impacts on nesting migratory birds/raptors and/or active nests including LBVI, vegetation clearing would be initiated prior to the nesting season (defined as February 15 through September 15) to the extent practicable. If work is proposed to start during the LBVI or other avian species breeding season, a pre-activity nesting bird survey will be conducted within 7 days prior to starting work to identify any nesting vireos or other riparian birds. If work stops for more than 7 days, the pre-activity survey will be repeated before restarting work during the breeding season. If active nests are found, the qualified biologist will flag the active nests and project activities will avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged and/or the biologist determines that no impacts are anticipated to the nesting birds or their young.

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List of Abbreviated Terms

APS	Advanced Planning Study
ARTO	southwestern arroyo toad
BMP	best management practice
BO	Biological Opinion
BSA	Biological Study Area
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
County	County of San Diego
CWA	Clean Water Act
cy	cubic yards
dBA	A-weighted decibel(s)
DOT	Department of Transportation
E.O.	Executive Order
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FP	Fully Protected
HLP	Habitat Loss Permit
ICF	ICF International
LVBI	least Bell's vireo
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Program
NCCP	Natural Community Conservation Planning
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NRCS	Natural Resources Conservation Service
PAMA	Pre-Approved Mitigation Area
Porter-Cologne	Porter-Cologne Water Quality Control Act
RECON	Regional Environmental Consultants

ROWD	Report of Waste Discharge
RPO	Resource Protection Ordinance
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SDNHM	San Diego Natural History Museum
SSC	Species of Special Concern
SWFL	southern willow flycatcher
SWRCB	State Water Resources Control Board
TAIC	Technology Associates
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WDR	Waste Discharge Requirement
WL	Watch List

Chapter 1 – Introduction

This Natural Environment Study (NES) for the 13th Street Bridge Project located in the unincorporated community of Ramona, in San Diego County, California, has been prepared pursuant to California Department of Transportation (Caltrans) guidelines. The purpose of this NES is to document the biological resources in the Biological Study Area (BSA) and provide an assessment of the impact of the proposed project on these resources.

1.1 Project Purpose and Need

The proposed 13th Street Bridge Project is located on 13th Street and Maple Street between Main Street (State Route 67) and Walnut Street in the unincorporated community of Ramona (Figures 1 and 2, Appendix A). The project segment of 13th Street/Maple Street is a dirt roadway, with gravel at the Santa Maria Creek culvert crossing. The existing, undersized corrugated steel culvert does not have sufficient capacity to convey the creek water during storm events; flooding at this crossing makes the roadway impassable for motor vehicles and pedestrians during portions of the rainy season. Santa Maria Creek runs east to west in the vicinity of the proposed project area and is fed year-round (in varying degrees) by urban runoff, and precipitation/stormwater runoff during the wet season.

The objective of the proposed project is to provide an adequate and safe crossing that allows for conveyance of water from a 100-year storm event. The project would include replacement of the existing culvert crossing with a bridge designed to meet current federal standards, with roadway improvements along 13th Street/Maple Street and Walnut Street, and the addition of stormwater conveyance and treatment features that would ultimately discharge into Santa Maria Creek.

1.2 Project Description

The proposed project consists of improvements to 13th Street/Maple Street between Main Street and Walnut Street and construction of a bridge over Santa Maria Creek to replace the existing corrugated steel culvert.

The proposed bridge would be a 4-span, cast-in-place, pre-stressed, post-tensioned concrete box girder structure, approximately 480 feet long and approximately 42 feet wide with three singular-column bents and two abutments. The bridge and approaches would include two 12-foot-wide travel lanes, 3-foot shoulders on each side, and an approximately 8-foot-wide multi-use pathway to accommodate pedestrians, bicyclists, and equestrians. In addition, three bridge barriers with a total width of approximately 4 feet, consisting of two edge deck rails and one pedestrian barrier would be installed to separate pathway users from the travel lane and creek. The pathway across the bridge would connect to the existing southern segment near the Ramona Library and transition users across the bridge to existing and planned facilities north of the bridge. The grade of

13th Street/Maple Street would be raised approximately 10 feet at the Santa Maria Creek crossing to comply with current Federal Highway Administration (FHWA) requirements. An overview of the project plans is provided in Figure 3, Appendix A.

Storm drain systems are proposed directly to the north and south of the bridge to capture runoff and direct it toward the existing creek. Permeable pavement areas would be incorporated into the project as Green Street features to facilitate meeting water quality requirements and for stormwater management. An existing bioretention basin located south of the bridge that currently treats stormwater runoff from the library and associated parking lot would be redesigned to continue treating those existing areas in addition to the proposed paved roads south of Santa Maria Creek.

The total quantity of cut for the project is approximately 6,200 cubic yards (cy), the total quantity of fill is approximately 8,442 cy, and the total quantity of import is approximately 13,000 cy. Construction is anticipated to last approximately 12 months. During the bridge foundation construction, dewatering may be required for the project. Two potential detour alternatives have been identified for the single stage construction of the 13th Street Bridge Project. Detour Alternative 1: from Main Street, go north onto Montecito Road and continue west on Montecito Road, turn north on Alice Street, and turn east on Walnut Street. Detour Alternative 2: from Main Street, go north on 10th Street/Pine Street, turn west on Olive Street, and turn south on Maple Street/13th Street.

Chapter 2 – Study Methods

Judgments regarding the conditions, habitats, and resources are based on a complex and carefully evaluated array of information. This includes (1) published and unpublished information on local and regional ecosystems and resources, (2) prior and current field identification and evaluation of resources, (3) extensive personal and professional experience and training, and (4) careful observations made during field visits. Based on this information, it was determined that potential exists for federally listed species and sensitive resources to occur in the vicinity of the proposed bridge. These species are discussed in Chapter 3. Appendix B provides photographs of the BSA during the various field visits.

2.1 Regulatory Requirements

The proposed project would result in impacts to resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) and, therefore, would require the following permits/approvals: 404 Nationwide Permit verification (#14 Linear Transportation Crossing and/or #27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities) from the USACE, 401 Water Quality Certification from the RWQCB, and a Streambed Alteration Agreement from the CDFW.

Potential impacts to the least Bell's vireo (*Vireo bellii pusillus*, LBVI), a federally and state-listed species may occur, and consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Federal Endangered Species Act (FESA) would be required. Coordination with the CDFW would also need to occur to obtain a California Fish and Game Code, Section 2080.1 Consistency Determination on the take authorization associated with the federal consultation.

2.2 Federal Regulations

2.2.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970. NEPA requires federal agencies to assess the environmental impacts of their proposed actions prior to making decisions. Using the NEPA process, agencies evaluate the environmental and related social and economic effects of their proposed actions. Agencies also provide opportunities for public review and comment on those evaluations. NEPA policy requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony. Federal agencies must incorporate environmental considerations in their planning and decision-making through a systematic interdisciplinary approach. Each federal agency maintains its own procedures for implementing NEPA. The NEPA process begins when an agency proposes to take an action (this can include proposals to adopt rules and regulations,

and formal plans that direct future actions, programs, and specific projects). Once the proposal is conceptualized and any reasonable alternatives have been developed, the agency must determine if the action has the potential to affect the quality of the human environment. The FHWA requires that California consent to the jurisdiction of federal courts for actions taken by Caltrans, under the NEPA Assignment Memorandum of Understanding, and waiving California's immunity under the Eleventh Amendment to the U.S. Constitution. On March 30, 2017, the FHWA acknowledged the waiver of immunity was adequately reinstated; therefore, Caltrans is authorized to continue to participate in the NEPA Assignment Program. The project is funded in part with federal money. Caltrans, in its assumption of FHWA responsibility, is required to review and approve biological resources surveys and studies including (but not limited to) those prepared pursuant to the FESA, the federal Clean Water Act (CWA), and the Migratory Bird Treaty Act (MBTA).

NEPA is required for federal activities, including the development of infrastructure, land acquisitions, or other federal activities. Categorical Exclusions, Environmental Assessments, and Environmental Impact Statements are common examples of NEPA documents, which are assessments of the likelihood of impacts from alternative courses of action and are required from all federal agencies. While NEPA is a requirement of the environmental review process, Caltrans provides guidance that the NES should not discuss the determination of significance of any project impacts; the determination of significance should be addressed in the dedicated NEPA document.

2.2.2 Federal Endangered Species Act

Under the FESA, *take* (defined as *hunt, pursue, catch, capture, harm, or kill; or attempt to hunt, pursue, catch, capture, harm, or kill*) of listed species is prohibited unless authorized by the USFWS. A project that could potentially affect federally listed endangered or threatened species, species proposed for listing, or candidate species, would require that Caltrans, on behalf of the FHWA, is the federal lead agency. The County is the project proponent. Caltrans would consult with the USFWS, pursuant to Section 7 of the FESA. As part of the Section 7 consultation, a Biological Assessment would need to be submitted to the USFWS outlining potential species impacts and measures to avoid and minimize project effects. The USFWS would issue a Biological Opinion (BO) to assess the impacts of the proposed project on the long-term viability of the species affected and provide Caltrans with an incidental take statement. The BO incorporates "reasonable and prudent measures" designed to reduce or mitigate, if needed, adverse effects on listed species. These measures are implemented through "terms and conditions" that are nondiscretionary actions that must be implemented during the proposed action. In addition to the "terms and condition," the BO will include discretionary "conservation measures" that should be considered by Caltrans as measures that may be incorporated by design or implementation of the action that would benefit species conservation and recovery.

2.2.3 Section 404 of the Clean Water Act

The federal government, acting through the USACE and the U.S. Environmental Protection Agency (USEPA), has jurisdiction over all waters of the U.S.[1] (federal jurisdictional waters, which include wetlands[2] and non-wetland waters) as authorized under Section 404 of the 1972 CWA.[3] The USEPA and USACE published a Final Rule (April 21, 2020) that revises and amends the definition of WOTUS in 33 CFR 328 and specifically excludes ephemeral features (e.g., streams, swales, and pools) from coverage under the Clean Water Act; this new definition is scheduled to become effective June 22. 2020. Section 404 prohibits the discharge of dredged or fill material[4] into waters of the U.S. without a permit from the USACE, even if the jurisdictional area is dry when the activity takes place.

Activities that require a permit under Section 404 include, but are not limited to, placing fill or riprap, grading, mechanized land clearing, and dredging within jurisdictional waters. Under the USACE's rules, a "discharge of dredged material" occurs when dirt or other material is removed from a USACE jurisdictional water and is then placed back in that water at the same or another location.

Projects that include regulated activities must be reviewed by the USACE and receive technical input from the USEPA, USFWS, and other agencies as applicable (e.g., the Office of Historic Preservation). Foremost, however, as a result of 2006 U.S. Supreme Court decisions,[5] the USACE and USEPA must formally determine the presence and extent of federal jurisdictional waters before a permit under Section 404 can be issued (currently, for non-notifying general permits, or in emergency situations, federal jurisdiction can be assumed). Applicants should discuss with the USACE the information that will be required for a federal jurisdictional determination, including

1 As defined by the U.S. Army Corps of Engineers (USACE) at 33 Code of Federal Regulations (CFR) 328.3(a), "waters of the U.S." are those that "are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;" tributaries and impoundments of such waters; and all interstate waters including interstate wetlands; and territorial seas. On December 2018, the U.S. Environmental Protection Agency (USEPA) and USACE issued a prepublication document, signed by both agencies, of a proposed rule revising the definition of "waters of the United States" to clarify federal authority under the Clean Water Act (CWA) taking a more "common sense" approach. This definition would remove ephemeral features from CWA Section 404 jurisdiction therefore reducing the protections in Southern California. The proposed definition replaces the current one. As of April 21, 2020, the new definition has an implementation date of June 22, 2020.

2 As defined by the USACE at 33 CFR 328.3(b); 40 CFR 230.3(t), "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

3 33 United States Code Sections 1251-1387.

4 As defined by the USACE at 33 CFR Part 323.2(e) and the USEPA at 40 CFR Part 232.2 (as published in the May 9, 2002 Fed. Reg.), the term "fill material" is defined by the USACE and USEPA to mean "… material placed in waters of the United States where the material has the effect of (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of a water of the United States." The term fill does not include trash or garbage.

5 Rapanos v. United States and Carabell v. United States, 126 S. Ct. 2208 (2006).

applicable form, and whether the information should be submitted prior to, or concurrent with, the 404 application submittal.

2.2.4 Section 401 of the Clean Water Act

Through a programmatic agreement between the federal government and the States, the State Water Resources Control Board (SWRCB) and the RWQCB have primary authority for permit and enforcement activities under the 1969 Porter-Cologne Water Quality Control Act (Porter-Cologne; Cal. Water Code 13000-13999.10) and the CWA. Section 401 of the CWA requires certification from the RWQCB that the proposed issuance of a Section 404 permit is in compliance with established water quality standards. Projects that have the potential to discharge pollutants are required to comply with established water quality objectives.

Under Section 401 of the CWA, the RWQCB implements the water quality certification process for any activity that requires a federal permit or license and that may result in the discharge of pollutants into waters of the U.S., including wetlands. The RWQCB reviews the proposal to determine whether the activity would comply with state water quality objectives and, subsequently, either issues a certification with conditions or denies the certification. Water quality standards, according to the CWA (40 Code of Federal Regulations [CFR] 131), include beneficial uses, water quality objectives, and the antidegradation policy.

No license or permit may be issued by a federal agency until certification required by Section 401 has been granted. Under the CWA, USACE Section 404 permits are subject to RWQCB Section 401 water quality regulation. The USACE cannot issue a 404 permit until a 401 certification has been obtained from the RWQCB.

2.2.5 Migratory Bird Treaty Act

The MBTA restricts the killing, collection, selling, or purchasing of migratory bird species, as defined by listed bird taxonomic families, or their parts, nests, or eggs. Certain gamebird species are allowed to be hunted for specific periods determined by federal and state governments. The intent of the MBTA is to eliminate any commercial market for migratory birds, feathers, or bird parts, especially for eagles and other birds of prey. Although no permit is issued under the MBTA, the USFWS has required that surveys be conducted to locate nests within a project area if vegetation removal is to occur during the breeding season for raptors and migratory birds. The U.S. Department of the Interior (USDOI) Solicitor General's Office has recently published new guidance (Solicitor's Opinion) which states that "take" of nesting birds, eggs, nests, or parts thereof, is not prohibited under the MBTA if it occurs incidental to an otherwise lawful activity (USDOI 2017). The federal government is reviewing the applicability of the MBTA, including this new interpretation.

2.2.6 Invasive Species

Executive Order (E.O.) 11900 was signed on February 3, 1999 (FHWA 1999), which calls for the Executive Branch agencies to work to prevent and control the introduction and spread of invasive species. E.O. 11900 was followed by a Memorandum/Policy Statement on Invasive Alien Species from The Secretary of the Department of Transportation (DOT) (April 22, 1999), which directed Secretarial offices and operating administrations to implement E.O. 13112.

Under E.O. 13112, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered. Complying with the E.O. means that federal-aid and Federal Lands Highway Program funds cannot be used for construction, revegetation, or landscaping activities that purposely include the use of known invasive plant species. Until an approved national list of invasive plants is defined by the National Invasive Species Council, "known invasive plants" are defined as those listed on the official noxious weed list of the state in which the activity occurs. The FHWA recommends use of federal-aid funds for new and expanded invasive species control efforts under each state DOT roadside vegetation management program.

2.3 State Regulations

2.3.1 California Environmental Quality Act

Enacted in 1970, the California Environmental Quality Act (CEQA) requires state and local government agencies to inform decision-makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible. CEQA requires the disclosure of potential environmental impacts and the identification of enforceable measures to avoid or reduce environmental damage through feasible mitigation or project alternatives. A key feature of the CEQA process is the opportunity for the public to review and provide input throughout the environmental process. The CEQA process allows a robust public disclosure of a project's potential environmental impact and provides for informed governmental decisions.

CEQA requirements apply to public agency projects including activities directly undertaken by a governmental agency, activities financed in whole or in part by a governmental agency, and private activities that require discretionary approval from a governmental agency, as well as private projects that involve governmental participation, financing, or approval. Caltrans, acting as the CEQA lead agency, will review, consider, and take appropriate action on the CEQA document prepared for the proposed project. One of the many purposes of CEQA is to disclose to the public the significant environmental effects of a proposed discretionary project, through the preparation of an Initial Study, Negative Declaration, or Environmental Impact Report. Additionally, CEQA

is intended to prevent or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring. While CEQA is a requirement of the environmental review process, Caltrans provides guidance that the NES should not discuss the determination of significance of any project impacts; the determination of significance should be addressed in the dedicated CEQA document.

2.3.2 California Endangered Species Act (California Fish and Game Code Sections 2050 et seq.)

The purpose of the California Endangered Species Act (CESA) is to conserve, protect, restore, and enhance endangered and threatened species and their habitat. Consistent with this purpose, CESA prohibits take of endangered, threatened, and candidate species, except as authorized by the CDFW. The CESA generally parallels the main provisions of the FESA and is administered by the CDFW. Unlike the CESA, however, the FESA does not prohibit take of species being considered for listing as endangered or threatened, which under the CESA are referred to as "candidate species" (California Fish and Game Code, Section 2068). Section 86 of the California Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

2.3.3 California Fish and Game Code Sections 2080 and 2081

Sections 2080.1 and 2081 of the California Fish and Game Code regulate the "take" of endangered, threatened, and candidate species under the CESA by authorizing take under certain circumstances. Such authorization may be in the form of a "consistency determination" for species listed under both the FESA and the CESA (under Section 2080.1), or an "incidental take permit" (under Section 2081(b) and (c)). Any proposed impact to state-listed species would require one of these types of take authorization under the CESA.

2.3.4 Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning (NCCP) Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. The CDFW is the principal state agency implementing the NCCP Act Program. Conservation plans developed in accordance with the Act (i.e., NCCP plans) provide for comprehensive management and conservation of multiple wildlife species and identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth. Project-specific permits under the NCCP Act are not issued; however, projects proposed to be authorized under approved NCCP conservation plans must comply with the state's NCCP Act Program.

2.3.5 State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State

In August 2019, the SWRCB (and RWQCB) released a "State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State (Procedures), which will be included in the future Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The procedures included the following four major elements: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the state; (3) wetland delineation procedures; and (4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements (WDRs) for dredge or fill activities.

These procedures were adopted to create additional state protections over sensitive water resources that may no longer be protected under the CWA. The procedures are intended to prevent losses of wetlands in California. Each regional board may require different levels of analysis prior to issuance of a water quality certification.

2.3.6 Porter-Cologne Water Quality Control Act

In addition to its authority under CWA Section 401 and the State's wetland policy, the SWRCB and RWQCB have regulatory authority over state waters under Porter-Cologne.[6] Under Porter-Cologne, the SWRCB and the RWQCB regulate the "discharge of waste" to waters of the state.[7] The term "discharge of waste" is broadly defined in Porter-Cologne, such that discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may directly or indirectly impact waters of the state relative to implementation of Section 401 of the CWA. Waters of the state that are not also waters of the U.S. (e.g., most vernal pools in southern California), are provided protection under Porter-Cologne.

Porter-Cologne is the state equivalent of the CWA. Specifically, Porter-Cologne requires each RWQCB to formulate and adopt water quality plans for all areas within their region (aka "Basin Plans").[8] Basin Plans establish beneficial uses,[9] water quality standards, and water quality objectives for major watershed areas (i.e., RWQCB boundaries) throughout the state. Parties proposing to discharge waste that could affect state waters (other than into a community sewer system) must file a Report of Waste Discharge (ROWD) with the appropriate RWQCB.[10] The

6 California Water Code Sections 13000–13999.10.
7 "Waters of the state" is defined in California Water Code Section 13050(e).
8 California Water Code Chapter 4, Article 3 (Regional Water Quality Control Plans [Sections 13240–13247]) and Article 4 (Waste Discharge Requirements [Sections 13260–13274]).
9 California Water Code Section 13050(f) describes the beneficial uses of surface and ground waters that may be protected against quality degradation. These include, but may not be limited to, domestic, municipal, agricultural and industry supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.
10 California Water Code Section 13260.

RWQCB will respond to an ROWD by issuing WDRs in a public hearing, or by waiving the WDR (with or without conditions) for the proposed discharge into jurisdictional waters.

While 401 certification is typically issued or waived by RWQCB staff,[11] WDRs must be issued by the RWQCB. Generally, when staff issue or waive 401 certification, WDRs are simultaneously waived. However, for large or multi-year projects that are being reviewed under Section 401 of the CWA, staff may determine that WDRs should also be issued, whereby additional review by the RWQCB and a public hearing will be necessary.

2.3.7 Section 1600 et seq. of the California Fish and Game Code

The limits of CDFW jurisdiction are defined as the "bed, channel or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit." The California Code of Regulations (14 CCR 1.72) defines a stream as:

> [A] stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

In practice, the CDFW usually extends its jurisdictional limit to the top of a stream or lake bank, or outer edge of the riparian vegetation, whichever is wider. Riparian habitats do not always have identifiable hydric soils, or clear evidence of wetland hydrology, as defined by the USACE; therefore, CDFW jurisdiction often extends beyond the boundaries regulated by the USACE.

Under Section 1602 of the California Fish and Game Code, any project proponent must provide the CDFW with written notification through the Streambed Alteration Agreement process before activities begin that will:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake.

Notification is generally required for any activity that will take place in or in the vicinity of a river, stream, lake, or their tributaries. Generally, the CDFW is concerned with activities that have the

[11] Projects that span more than one region require 401 certification or waiver from the State Water Resources Control Board.

potential to impact state-regulated resources at the activity site, as well as the effects of those actions on the ecosystem at and surrounding the activity (i.e., upstream, downstream, and neighboring).

Section 1600 et seq. does not extend to isolated wetlands and waters, such as small ponds not located on a drainage course, wet meadows, vernal pools, or tenajas. Furthermore, CDFW jurisdiction does not cover tidal waters. However, Section 1600 et seq. would apply to all riparian habitats supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

2.4 Local Regulations

2.4.1 North County Multiple Species Conservation Program

The North County Multiple Species Conservation Program (MSCP) plan area encompasses about 316,000 acres roughly in the areas north of the San Dieguito River, Elfin Forest and Harmony Grove, north of Camp Pendleton, DeLuz, Fallbrook, Rainbow, Pauma Valley, Lilac, Valley Center, Rancho Guejito, and the majority of Ramona. This Subregional Plan currently proposes to cover 29 species (ICF 2019). The County produced a preliminary administrative draft of this Subregional Plan in 2009 and then was subsequently put on hold through 2011 while staff focused on the General Plan Update (ICF 2019). The County reinitiated work in 2012; a revised working draft North County MSCP was provided to the wildlife agencies in 2017. The County is currently considering options and direction based on stakeholder, Steering Committee, and wildlife agency interviews and review of the 2017 Preliminary Draft North County Plan (ICF 2019).

The proposed project falls within the draft North County MSCP plan area, but outside the Pre-Approved Mitigation Areas (PAMAs). The PAMAs represent areas with highest biological value in the North County Plan Area. The North County Plan will encourage development outside of the PAMAs and encourage preservation within the PAMAs with lower mitigation ratios outside of the PAMAs and higher mitigation ratios inside of the PAMAs. The North County Plan will be applicable to the proposed project if adopted prior to approval of the project.

2.4.2 County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements

These guidelines (County of San Diego 2010) are used by County staff for the review of discretionary projects and environmental documents pursuant to CEQA. These guidelines present a range of quantitative, qualitative, and performance levels for particular environmental effects. In addition, the County's guidelines set forth habitat mitigation ratios required for impacts to vegetation communities within San Diego County. These ratios only apply outside of approved MSCP plan areas. For lands inside of approved MSCP plan areas, the appropriate plan should be consulted for required mitigation ratios.

2.4.3 County of San Diego Code of Regulatory Ordinances Sections 86.601–86.608, Resource Protection Ordinance

The Resource Protection Ordinance (RPO) restricts, to varying degrees, impacts to natural resources including environmentally sensitive lands such as wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands, and historical sites (County of San Diego 2012). Certain discretionary permit types are subject to the requirement to prepare Resource Protection Studies under the RPO. The RPO requires that applicable discretionary projects protect sensitive habitat lands as defined by CEQA Guidelines. Sensitive habitat lands include unique vegetation communities and/or the habitat that is necessary to support a viable population of special status species, is critical to the proper functioning of a balanced natural ecosystem, or serves as a functioning wildlife corridor. The proposed project qualifies as an essential public facility and therefore is exempt from the RPO as detailed in Section 86.605 of the ordinance.

2.4.4 County of San Diego Code of Regulatory Ordinances Sections 86.101–86.105, Habitat Loss Permit Ordinance

The Habitat Loss Permit (HLP) Ordinance was adopted in March 1994 in response to both the listing of the coastal California gnatcatcher (*Polioptila californica californica*) as a federally threatened species and the adoption of the NCCP Act by the State of California. Pursuant to the Special 4(d) Rule under FESA (50 CFR 17.41(b)), the County is authorized to issue "take permits" for the coastal California gnatcatcher (in the form of HLPs) in lieu of Section 7 or Section 10(a) permits, which are typically required from the USFWS. Although issued by the County, the wildlife agencies (USFWS and CDFW) must concur with the issuance of an HLP for it to become valid as take authorization under FESA. The HLP ordinance states that projects must obtain an HLP prior to the issuance of a grading permit, clearing permit, or improvement plan if the project will directly or indirectly impact any coastal sage scrub habitat types. The HLP is required if coastal sage scrub or related habitat will be impacted, regardless of whether the site is currently occupied by coastal California gnatcatcher. HLPs are not required for projects within the boundaries of an adopted MSCP plan area since take authorization is conveyed to those projects through compliance with the MSCP Plan. HLPs are also not required for projects that have separately obtained Section 7 or 10(a) permits for take of the gnatcatcher.

2.5 Studies Required

Surveys and assessments to inventory and evaluate biological resources were conducted within the BSA. The BSA includes the project area (i.e., temporary and permanent impact areas) plus a 350-foot buffer to assess indirect impacts as well as accommodate any changes to project limits and project design that may occur during project development.

Prior to conducting fieldwork, regionally occurring plant and animal species and natural vegetation communities with special regulatory status were evaluated for their potential to occur in the vicinity of the BSA. This included a review of the California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) Electronic Inventory, San Diego History Museum (SDNHM) San Diego Plant Atlas (SDNHM 2018), and the USFWS species occurrence and critical habitat database. Biologists searched special status species records within the U.S. Geological Survey 7.5-minute Ramona Quadrangle. In addition, the surrounding eight quadrangles were also reviewed for regional context: San Pasqual, Rodriguez Mountain, Mesa Grande, Warner Ranch, Santa Ysabel, Tule Springs, El Cajon Mountain, and San Vicente Reservoir. For purposes of this report, species are considered special status if they meet at least one of the following criteria:

- Listed or proposed for listing (including candidate species[12]) under FESA or CESA.
- CDFW Species of Special Concern (SSC) (CDFW 2020).
- CDFW fully protected species (FP) (CDFW 2020).
- CDFW watch list species (WL) (CDFW 2020).
- Listed by CNPS as California Rare Plant Ranks (CRPRs) 1A (presumed extinct in California and rare/extinct elsewhere), 1B (rare, threatened, and endangered in California and elsewhere), 2A (presumed extinct in California, but more common elsewhere), or 2B (rare, threatened, or endangered in California, but more common elsewhere) (CNPS 2020). All plants constituting CRPR 1A, 1B, 2A, or 2B meet the definition of Sections 2062 and 2067 (CESA) of the California Fish and Game Code (CNPS 2020).
- Some, but not all, CRPR 3 and 4 species. Some plants constituting CRPR 3 and 4 meet the definitions of Sections 2062 and 2067 (CESA) of the California Fish and Game Code (CNPS 2020). CRPR 3 plants are those for which more information is needed (a review list) and CRPR 4 plants are those of limited distribution (watch list) (CNPS 2020).
- Species considered sensitive by the County (County of San Diego 2010).

Studies were initially completed for the proposed project from 2012 through 2014 by ICF International (ICF). Subsequent to the completion of ICF surveys in 2014, the proposed project changed in size due to design modifications. AECOM reinitiated survey efforts in 2018 through 2020 to update previous survey data, to collect data in areas not covered by ICF's surveys, and to

[12] Candidate species are those petitioned species that are actively being considered for listing under the Federal Endangered Species Act (FESA), as well as those species for which the U.S. Fish and Wildlife Service has initiated a FESA status review, as announced in the *Federal Register*. Proposed species are those candidate species that were found to warrant listing and have been officially proposed for listing in the *Federal Register*. Under the California Endangered Species Act, candidate species are those species currently petitioned for state-listing status.

address changes to report standards relating to jurisdictional water delineations. Methods and results of ICF's surveys and AECOM's biological surveys are described in this document.

A general survey, including vegetation mapping and habitat assessments, was conducted to assess the site for required surveys. In addition, jurisdictional wetlands/waters delineation surveys and rare plant surveys were conducted. Based on the results of database search and habitat assessment, focused surveys were conducted for San Diego fairy shrimp (*Branchinecta sandiegonensis*), Riverside fairy shrimp (*Streptocephalus woottoni*), and LBVI. Biologists incidentally recorded plant and wildlife sign, track, and direct observations and evaluated the potential for other special status species to occur within the BSA during focused protocol surveys. Habitat assessments for southwestern arroyo toad (*Anaxyrus californicus*; ARTO) and southwestern willow flycatcher (*Empidonax traillii extimus*; SWFL) were conducted but habitat was determined unsuitable for these species. Therefore, focused surveys were not conducted for these species.

2.5.1 Vegetation Mapping

Vegetation mapping was initially conducted by ICF on May 11, 2012. AECOM updated vegetation mapping on April 27 and May 29, 2018, using a 0.25-acre mapping unit. Vegetation communities were classified based on the presence of dominant and/or characteristic plant species in accordance with vegetation community classifications following Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), as modified by Oberbauer in *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008).

2.5.2 Aquatic Resource Delineation

A jurisdictional delineation was initially performed on May 11, 2012, by ICF biologists Dale Ritenour and Cheryl Rustin. The purpose of the delineation was to assess the limits of state and federal jurisdiction within and adjacent to the proposed project area. This wetland delineation identifies the resources subject to regulation by the USACE, RWQCB, and CDFW. The methods for delineating jurisdictional features follow the guidelines set forth by the USACE in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008).

Following completion of this delineation, additional standards for delineations and reporting were established in March 2017 per the *Army Corps Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (USACE 2017). AECOM conducted additional fieldwork in July 2019 and March 2020 to update the previous delineation results to be consistent with the latest Army Corps Minimum Standards.

On July 19, 2019 and March 20, 2020, AECOM biologists Keely Craig and Brenda McMillan conducted an aquatic resource delineation within the project area. The delineation field methods described below were conducted within the project area and a 100-foot buffer around the project area (Aquatic Resource Study Area). Aquatic features can include both wetlands and non-wetland waters. To be considered a wetland, all three parameters (wetland hydrology, hydric soils, and dominance of wetland vegetation) outlined in the 2008 USACE Arid West Supplement must be met (USACE 2008). The USACE defines non-wetland waters based on the presence of an Ordinary High Water Mark.[13] Aquatic features that exhibit only one of the three parameters required to qualify as a wetland by the USACE may nonetheless be considered wetlands by the RWQCB and CDFW. As relevant to the project, this is discussed further below.

Aquatic features were assessed to determine whether they meet the definition of a waters of the U.S. in 33 CFR 328[14]. A case-specific significant nexus test[15] was not warranted for the aquatic features within the project area and is not discussed further in this report. The delineation and vegetation classification were conducted in accordance with the guidance and reference documents listed below:

- *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar and McColley 2008)
- Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Curtis and Lichvar 2010)
- Clean Water Act Jurisdiction Following the Supreme Court Decision in *Rapanos v. United States and Carabell v. United States* (USEPA 2008)
- *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008)
- *Field Indicators of Hydric Soils in the United States,* version 8.2 (USDA-NRCS 2018)
- National Wetland Plant List Indicator Rating Definitions. (Lichvar et al. 2016)

[13] Federal regulations (33 CFR 328.3(e)) define the "ordinary high water mark" (OHWM) as "that 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 and debris, or other appropriate means that consider the characteristics of the surrounding areas."
[14] On December 2018, the USEPA and USACE issued a prepublication document, signed by both agencies, of a proposed rule revising the definition of "waters of the United States" to clarify federal authority under the Clean Water Act taking a more “common sense” approach. This definition would remove ephemeral features from CWA Section 404 jurisdiction therefore reducing the protections in Southern California. The proposed definition replaces the current one. As of April 21, 2020, the new definition has an implementation date of June 22,2020.
[15] Significant nexus is described in the USEPA’s 2008 Clean Water Act Jurisdiction Following the Supreme Court Decision *in Rapanos v. United States and Carabell v. United States* (USEPA 2008).

- *Vegetation Communities of San Diego County* (Oberbauer et al. 2008)

Prior floral surveys and protocol-level surveys for fairy shrimp had mapped features as seasonal ponds and potential fairy shrimp habitat within the study area; however they were not mapped based on formal field wetland delineations per the USACE agency guidelines noted above. Each of the seasonal ponds previously mapped during fairy shrimp surveys was formally delineated during these July 2019 and March 2020 field visits to determine whether these features meet the criteria for wetlands that would be regulated by the RWQCB, CDFW, and/or the USACE.

If the basin or depressional feature did not support wetland vegetation, hydric soils, or wetland hydrology, it was not considered a wetland or a vernal pool. Data forms from the 2008 USACE Arid West Supplement were used to document the presence/absence of wetlands. Subsurface investigations for determining the presence (or absence) of hydric soil were conducted within all potential wetlands/basins.

Complete details regarding the field methods can be found in the Aquatic Resource Delineation Report provided in Appendix C.

2.5.3 Rare Plant Surveys

The rare plant surveys were conducted following the *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations* (CDFG 2009) and the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). The undeveloped portion of the BSA was traversed by wandering transects. Any rare plant occurrences detected were mapped in the field with a global positioning system unit. Field botanists also recorded a floral inventory during rare plant surveys.

Rare plant surveys were conducted by ICF on October 10, 2012; July 6 and 22, 2013; and June 25, 2014. Rare plant surveys were conducted by AECOM on April 27 and May 29, 2018.

2.5.4 San Diego and Riverside Fairy Shrimp

Focused protocol surveys were conducted for federally listed vernal pool branchiopods, specifically San Diego fairy shrimp and Riverside fairy shrimp, per the criteria set by the *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (USFWS 1996). A complete survey consists of sampling for either of the following:

1. two full wet-season surveys performed within a 5-year period; or
2. two consecutive seasons of one full wet-season survey and one dry-season survey (or one dry-season survey and one full wet-season survey).

ICF biologist Dale Ritenour conducted a wet season protocol survey from December 26, 2012 through May 22, 2013. ICF biologist Dale Ritenour (TE-58888A-0) and Doug Allen (TE-837448-5) conducted a dry season soil collection survey on September 17, 2013. The dry season soil samples were delivered to Ecological Restoration Service and analyzed by Chuck Black, PhD (TE-837448-5) on October 25, 2013.

AECOM biologist Rick Bailey (TE-101151-3) conducted a wet season protocol survey from January 16 through March 26, 2018. AECOM biologist Andrew Fisher (TE-820658-7) conducted a dry season soil collection survey on May 25, 2018. The dry season soil samples were delivered to Helm Biological Consulting and analyzed by Brent Helm, PhD (TE-795930-10.2) on June 7 and 8, 2018.

Detailed methods and results of the San Diego and Riverside fairy shrimp surveys are presented in the survey reports (ICF 2013a, 2013b, AECOM 2018, Helm 2018).

2.5.5 Least Bell's Vireo Surveys

Focused protocol surveys were conducted within suitable habitat to determine presence or absence of LBVI in the BSA. Protocol-level surveys were conducted by ICF in 2012 and AECOM in 2018, following current USFWS survey protocol for the species (USFWS 2001). Biologists walked potential LBVI habitat and conducted passive surveillance (i.e., listening and looking for the species). Per the current USFWS protocol, suitable habitats within the survey area were surveyed eight times, at least 10 days apart, during the LBVI breeding period (April 10 through July 31). In addition to any LBVI observations/detections, other avian species detected were recorded.

Detailed methods and results of the focused LBVI surveys are presented in the survey reports (ICF 2012, Sage 2018) .

2.6 Personnel and Survey Dates

Table 1 lists survey dates and personnel that conducted the surveys identified in Section 2.5.

Table 1. Survey Dates and Personnel for Fieldwork

Date	Survey Type	Personnel[1]
05/09/12	Least Bell's vireo	Cheryl Rustin
05/11/12	General survey, habitat assessment, jurisdictional delineation	Dale Ritenour; Cheryl Rustin
05/20/12	Least Bell's vireo	Cheryl Rustin
05/31/12	Least Bell's vireo	Cheryl Rustin
06/10/12	Least Bell's vireo	Cheryl Rustin
06/21/12	Least Bell's vireo	Cheryl Rustin
07/03/12	Least Bell's vireo	Cheryl Rustin
07/13/12	Least Bell's vireo	Cheryl Rustin
07/24/12	Least Bell's vireo	Cheryl Rustin
10/10/12	General survey, jurisdictional delineation, rare plant survey	Dale Ritenour
12/26/12	Wet season fairy shrimp	Dale Ritenour
1/9/2013	Wet season fairy shrimp	Dale Ritenour
1/23/2013	Wet season fairy shrimp	Dale Ritenour
1/30/2013	Wet season fairy shrimp	Dale Ritenour
2/7/2013	Wet season fairy shrimp	Dale Ritenour
2/19/2013	Wet season fairy shrimp	Dale Ritenour
3/9/2013	Wet season fairy shrimp	Dale Ritenour
3/25/2013	Wet season fairy shrimp	Dale Ritenour
4/7/2013	Wet season fairy shrimp	Dale Ritenour
5/2/2013	Wet season fairy shrimp	Dale Ritenour
5/11/2013	Wet season fairy shrimp	Dale Ritenour
5/22/2013	Wet season fairy shrimp	Dale Ritenour
7/06/2013	Rare plant	Lindsay Willrick
7/22/2013	Rare plant	Lindsay Willrick
9/17/2013	Dry season fairy shrimp	Doug Allen
6/25/2014	Rare plant	Dale Ritenour
4/27/2018	Vegetation mapping and rare plant survey	John Messina
5/29/2018	Vegetation mapping and rare plant survey	John Messina
7/6/2018	Rare plant survey and wetland assessment	John Messina
1/16/2018	Wet season fairy shrimp	Rick Bailey
1/23/2018	Wet season fairy shrimp	Rick Bailey
2/27/2018	Wet season fairy shrimp	Rick Bailey
3/7/2018	Wet season fairy shrimp	Rick Bailey
3/14/2018	Wet season fairy shrimp	Rick Bailey
3/19/2018	Wet season fairy shrimp	Rick Bailey
3/26/2018	Wet season fairy shrimp	Rick Bailey
5/25/2018	Dry season fairy shrimp	Andrew Fisher
4/14/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
4/24/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
5/4/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
5/14/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
5/24/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
6/3/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
6/13/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
6/23/2018	Least Bell's vireo	Reneè Owens; Patrick Lee Hord
7/19/2019	Aquatic Resource Delineation	Keely Craig; Brenda McMillan
3/20/2020	Aquatic Resource Delineation	Keely Craig; Brenda McMillan

[1] Surveys listed in Table 1 were led by qualified biologists that possess the experience or necessary permits to conduct the survey. Permit numbers for biologists that conducted fairy shrimp surveys are provided in Section 2.5.4

2.7 Agency Coordination and Professional Contacts

The following section lists coordination by County staff with resource agency personnel.

2.7.1 California Department of Transportation

On February 4, 2015, a Project Development Team Meeting was held at Caltrans to discuss environmental issues and bridge width determination for the 13th Street Bridge Project. Due to the potential for the 13th Street Bridge Project to result in an environmental impact to recreation (trail connectivity) in the area if a trail is not included as part of the bridge design, County staff will begin compiling the data for the 4(f) analysis. This will help facilitate discussion on how the bridge project could accommodate a trail, and how the proposed project could potentially be implemented to avoid or minimize this potential impact, as the trail was shown in the County's Trail Master Plan and shown to be developed in the 13th Street Gap Project (the 13th Street Gap Project would connect the existing improved roadway, sidewalks, and pathway on 13th Street to the bridge approach). Caltrans and County environmental staff agreed that the NEPA/CEQA technical studies can include the analysis of the impacts associated with the 13th Street Gap Project. Therefore, the 13th Street Bridge and Gap will now become one project from an environmental standpoint.

On June 29, 2016, a Project Development Team Meeting was held at Caltrans to discuss environmental alternatives for the 13th Street Bridge Project. County staff developed an Advanced Planning Study (APS) to evaluate the viability of the shorter bridge alternative based on previous comments provided by the Caltrans functional units. This short span bridge would require extensive channel grading, as demonstrated in the APS provided to Caltrans and documented in the Alternatives Matrix. County staff summarized the five bridge alternatives and explained that the two alternatives that included channel grading were not feasible from an environmental standpoint. Caltrans concurred that extensive channel grading would not be supported and removed the alternatives that included it as viable options.

2.7.2 U.S. Fish and Wildlife Service

On May 2, 2012, County staff hosted a resource agency meeting at County offices with representatives from the USACE, RWQCB, CDFW, and USFWS. County staff presented on the conceptual bridge design for the 13th Street Bridge Project, discussed the habitats and potential special status species on-site, and solicited feedback on the proposed project. Agency representatives suggested the use of piers/bents to hold the bridge above water and minimize impacts to the creek, determined that a jurisdictional delineation should be conducted for all potential waters in the review area (such as including vernal pools), and suggested that the bridge design accommodate bats roosting.

2.7.3 U.S. Army Corps of Engineers

See Section 2.7.2 for a description of project coordination with the USACE.

2.7.4 California Department of Fish and Wildlife

See Section 2.7.2 for a description of project coordination with the CDFW.

2.7.5 Regional Water Quality Control Board

See Section 2.7.2 for a description of project coordination with the RWQCB.

2.8 Limitations That May Influence Results

Potential limitations associated with each of the studies include the following:

- Vegetation mapping: No survey limitations were associated with the vegetation mapping. Although mapping occurred during below average rainfall years, the habitat could still be characterized to the appropriate vegetation community based on the species present.
- Aquatic resource delineation: The delineation was conducted within 1 week of a storm event, which may have influenced more positive findings for wetlands. All wetland delineations are subject to review and approval by the USACE, CDFW (previously California Department of Fish and Game [CDFG]), and RWQCB.
- LBVI surveys: There were no survey limitations while performing focused LBVI surveys in 2012 and 2018 and all surveys were completed per protocol requirements.
- Fairy shrimp surveys: The region received less than average rainfall during 2012–2013 and 2017–2018. This low rainfall may have limited the detectability of fairy shrimp during wet season surveys in 2012–2013 and 2017–2018, if pools were not inundated long enough for fairy shrimp cysts to hatch if present. However, protocol dry season surveys were done after the wet season surveys and would detect fairy shrimp regardless of the precipitation of any given year.
- Rare plant surveys: The 2012–2013 and 2018 rare plant surveys were conducted during below average rainfall years so many annual and herbaceous perennial plant species may not have germinated or flowered during those years. If germination and flowering did occur, it was likely in smaller numbers than other years.

Chapter 3 – Results: Environmental Setting

3.1 Description of the Existing Biological and Physical Conditions

The following section addresses general conditions and biological resources detected within the BSA.

3.1.1 Biological Study Area

The proposed project area includes the portion of 13th Street/Maple Street between Main Street and Walnut Street and construction of a bridge over Santa Maria Creek to replace the existing corrugated steel culvert (Figures 1, 2, and 3, Appendix A). The BSA includes areas that could potentially be impacted by the proposed project plus a 350-foot buffer to assess indirect impacts as well as accommodate any changes to project limits and project design that may occur during project development. While the proposed project area is within County right-of-way, most of the parcels within the BSA are private parcels.

3.1.2 Physical Conditions

The proposed project area is relatively flat with a man-made earthen berm along the northwest portion of Santa Maria Creek and a row of boulders situated along the southeast portion of the creek. Santa Maria Creek, and its associated riparian woodland, is an ephemeral creek that flows from east to west along the northern portion of the BSA. A man-made depression (detention basin) that contained standing water and non-native wildflowers occurs north of the library parking lot.

Soils located within the BSA consist of Riverwash (Rm); Placentia sandy loam, 2 to 9 percent slopes (PeC); Visalia sandy loam, 0 to 2 percent slopes (VaA); Fallbrook sandy loam, 15 to 30 percent slopes, eroded (FaE2); Fallbrook sandy loam 9 to 15 percent slopes, eroded (FaD2); and Chino silt loam, saline, 0 to 2 percent slopes (CkA) (USDA 1973) (Figure 4, Appendix A). Rm occurs in intermittent stream channels. The material is typically sandy, gravelly, or cobbly. It is excessively drained and rapidly permeable. Many areas are barren; however, scattered shrubs and forbs often occur in patches. The soil within Santa Maria Creek and the surrounding area is composed of Rm.

The proposed project is located on 13th Street and crosses over Santa Maria Creek, which runs east to west and contains mature cottonwood-willow riparian forest habitat. Developed and disturbed land occurs to the northeast, northwest, and southwest and disturbed non-native grassland occurs to the southeast. Adjacent developed land consists of industrial and commercial (automotive body repair, towing yards, propane sales, wrecking yard, and solid waste collection / transfer) uses.

3.1.3 Vegetation Communities

The vegetation present within the BSA is typical for a disturbed riparian/non-native grassland setting. Six vegetation communities and two land cover types are present within the BSA. The vegetation communities are southern cottonwood-willow riparian forest; southern willow scrub; Diegan coastal sage scrub – inland form; alkali seep; non-native grassland; and disturbed wetland. Urban/developed and eucalyptus woodland areas represent the two land cover types. These areas are described below, summarized in Table 2, and depicted in Figure 5 (Appendix A). A list of the 59 plant species detected within the BSA is provided in Appendix E.

Table 2. Vegetation Communities and Cover Types within the BSA

Vegetation Communities and Other Cover Types[1]	Total (Acres)
Riparian and Wetlands	***8.02***
61330 Southern Cottonwood-Willow Riparian Forest	7.67
63320 Southern Willow Scrub	0.11
45320 Alkali Seep	0.12
11200 Disturbed Wetland	0.12
Uplands	***20.90***
32520 Diegan Coastal Sage Scrub - Inland Form	0.06
42200 Non-Native Grassland	20.84
Other Cover Types	***38.02***
79100 Eucalyptus Woodland	0.44
12000 Urban/Developed	37.58
Total	**66.94**

[1] Oberbauer et al. 2008; as modified from Holland 1986

3.1.3.1 Riparian and Wetland Vegetation Communities

Southern Cottonwood-Willow Riparian Forest (61330)

This vegetation community is typically open, winter-deciduous riparian woodland dominated by southern cottonwood (*Populus fremontii*), and several species of willow such as black willow (*Salix gooddingii*) and arroyo willow (*Salix lasiolepis*). It can be found on moist, bare mineral soil that is sub-irrigated or frequently overflowed. The area of this community present within the BSA consists of cottonwoods, arroyo willow, black willow, sandbar willow (*Salix exigua*), mulefat (*Baccharis salicifolia*), and tamarisk (*Tamarix* sp.). This vegetation community occurs throughout the length of Santa Maria Creek within the BSA. This habitat is of high quality, but it is surrounded on all sides by disturbed habitat and developed land. Several smaller remnant stands contain black willow but not southern cottonwood and these areas have been included within this community.

Southern Willow Scrub (63320)

There are small areas within the BSA that support small stands of arroyo willows, which may be remnant stands of once more extensive riparian forest along Santa Maria Creek, or more likely the result of recent land uses that may have created microhabitats from runoff that allowed the establishment of these small patches of arroyo willow.

Alkali Seep (45320)

Alkali seep is a community dominated by perennial, emergent monocots that grow in soils that are saturated during at least part of the year. High evaporation rates combined with low flow levels of freshwater create high saline conditions, which are particularly prevalent during the summer months. This community occurs along ephemeral streams and floodplains and occurs within the stand of southern willow scrub described above.

Disturbed Wetland (11200)

Disturbed wetlands consist of areas that are occasionally inundated by water and may support hydrophytic vegetation. These areas can be natural or man-made and often contain non-native vegetation and trash or are regularly subjected to human disturbance. The disturbed wetland within the BSA occurs adjacent to the Ramona Library parking lot; this feature was created during construction of the library to serve as a detention basin to treat stormwater runoff from the impermeable surfaces at the library site and to reduce the volume of stormwater flows from the site. This ponded area supports some ephemeral species that are typically found in vernal pools such as water pygmyweed (*Crassula aquatic*), pale spike moss (*Eleocharis macrostachya*), and grass poly (*Lythrum hyssopifolia*). Additional non-native and ornamental plants, including garden flax (*Linum grandiflorum*), winter vetch (*Vicia villosa*), and birds-foot trefoil (*Lotus corniculatus*), occur along the edge of this basin.

3.1.3.2 Upland Vegetation Communities

Diegan Coastal Sage Scrub – Inland Form (32520)

Small areas of coastal sage scrub species such as California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*) occur sporadically throughout the BSA; most of these areas are too small to map (less than the 0.25-acre mapping unit). However, there is a patch along the eastern edge of the disturbed wetland just south of the library.

Non-Native Grassland (42200)

Ripgut grass (*Bromus diandrus*) is one of the main non-native species present within the BSA, and grasslands dominated by this species have been mapped and classified as *Bromus diandrus* Semi-Natural Stand. Other grass and broadleaved species such as wild oats (*Avena* sp.), red brome

(*Bromus madritensis* subsp. *rubens*), soft chess *(Bromus hordeaceus*, short-beak filaree (*Erodium brachycarpum*), and doveweed (*Croton setigerus*) are also present. This community occurs throughout the BSA generally in the drier, non-developed areas away from the floodplain.

Portions of the floodplain of Santa Maria Creek where the riparian forest is absent supports in many areas a mixed grassland of native and non-native species. The dominant grass in these areas is native saltgrass (*Distichlis spicata*). This species is dominant on the portions of the floodplain that retain soil moisture longer, due to bank overflow during flooding events. Ripgut grass is the most common associate in this community, but western ragweed (*Ambrosia psilostachya*), salt heliotrope (*Heliotropium curassavium*), and Baltic rush (*Juncus baltricus* subsp. *ater*) are also present.

Large areas within the BSA are dominated by broadleaved species such as star thistle (*Centaurea melitensis*), long-beaked filaree (*Erodium botrys*), and short pod mustard (*Hirschfeldia incana*). A high number of other non-native broadleaved species occur throughout this area but in lesser amounts.

3.1.3.3 Other Cover Types

Eucalyptus Woodland (79100)

Small areas of eucalyptus (*Eucalyptus* sp.) occur along the northern floodplain of Santa Maria Creek between the creek and Walnut Street. Other areas of non-native trees have been included within the areas classified as developed and disturbed.

Urban/Developed (12000)

Urban/developed is used to classify areas of hardscape (buildings, roads, etc.) as well as areas so disturbed that they support little vegetation (e.g., bare areas). Developed areas represent the most common land use type (Figure 5) within the BSA and consist of auto storage yards, a recycling center, and the Ramona Library and associated parking areas.

3.1.4 Noxious Weeds

In addition to the native and naturalized vegetation communities discussed above, noxious weeds were detected within the BSA. Noxious weed species include species designated as federal noxious weeds by the United States Department of Agriculture (USDA), species listed by the California Department of Food and Agriculture, and other exotic pest plants designated by California Invasive Plant Council (Cal-IPC). Roads, highways, and related construction projects are some of the principal dispersal vectors for noxious weeds. This introduction and spread of exotic pest plants adversely affect natural plant communities by displacing native plant species that provide shelter

and foraging habitat for wildlife species. Table 3 identifies the surveyed noxious weed species found in the BSA.

Table 3. Noxious Weeds within the Biological Study Area

Scientific Name	Common Name	California Food and Agriculture Code[1]	Cal-IPC Inventory[2]
Avena fatua	Wild Oat		M
Brassica nigra	Black Mustard		M
Bromus diandrus	Ripgut Brome		M
Bromus hordeaceus	Soft Chess		L
Bromus madritensis ssp. *rubens*	Red Brome		H
Centaurea melitensis	Tocalote	B	M
Cynara cardunculus	Artichoke Thistle	B	M
Cynodon dactylon	Bermuda Grass	C	M
Erodium cicutarium	Redstem Filaree		L
Hirschfeldia incana	Short-Pod Mustard		M
Hordeum murinum	Barley		M
Lythrum hyssopifolium	Grass Poly		M
Nicotiana glauca	Tree Tobacco		M
Raphanus sativus	Radish		L
Rumex crispus	Curly Dock		L
Salsola tragus	Russian Thistle	C	L
Schinus molle	Peruvian Peppertree		L
Silybum marianum	Milk Thistle		L
Tamarix sp.	Salt-Cedar, Tamarisk	B	H
Tribulus terrestris	Puncture Vine	C	L
Washingtonia robusta	Mexican Fan Palm		M

[1] Codes (California Department of Food and Agriculture 2016).
B = eradication, containment, control or other holding action at the discretion of the commissioner.
C = state endorsed holding action and eradication only when found in a nursery; action to retard spread outside of nurseries at the discretion of the commissioner; reject only when found in a cropseed for planning or at the discretion of the commissioner.

[2] Codes (Cal-IPC 2020)
H=High – These species have several ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
M=Moderate – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
L=Limited - These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

3.1.5 Wildlife Species

The wildlife species detected within the BSA are typical of riparian and grassland communities in eastern San Diego County. A total of 81 species were detected including 21 invertebrate, 1 amphibian, 4 reptile, 49 bird, and 6 mammal species. A complete list of the wildlife species detected during biological surveys is provided in Appendix E. Wildlife species detected or with the potential to occur on-site are described below.

3.1.5.1 Amphibians

Most amphibians require moisture for at least a portion of their life cycle, with many requiring a permanent water source for habitat and reproduction. Terrestrial amphibians have adapted to more arid conditions and are not completely dependent on a perennial or standing source of water. These species avoid desiccation by burrowing beneath the soil or leaf litter during the day and during the dry season. Baja California treefrog (*Pseudacris hypochondriaca*) tadpoles were detected in standing pools of water along Santa Maria Creek.

3.1.5.2 Reptiles

The diversity and abundance of reptile species vary with habitat type. Many reptiles are restricted to certain vegetation communities and soil types, although it is expected that some of these species also forage in adjacent communities. Other species are more ubiquitous, using a variety of vegetation types for foraging and shelter. Reptile species commonly detected within the BSA include western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*).

3.1.5.3 Birds

The diversity of bird species varies with respect to the character, quality, and diversity of vegetation communities present. Riparian habitats typically have a high number of bird species because they provide protection and food even throughout the dry summer months. Disturbed areas are used by bird species adapted to urban settings.

The common birds detected within the BSA include mourning dove (*Zenaida macroura*), cliff swallow (*Petrochelidon pyrrhonota*), house finch (*Carpodacus mexicanus frontalis*), Nuttall's woodpecker (*Picoides nuttallii*), turkey vulture (*Cathartes aura*), common yellowthroat (*Geothlypis trichas*), black phoebe (*Sayornis nigricans*), and red-tailed hawk (*Buteo jamaicensis*).

3.1.5.4 Mammals

Naturally vegetated areas provide cover and foraging opportunities for a variety of mammal species. Disturbed areas provide limited opportunities for mammals. Most mammal species are nocturnal and are difficult to detect during daytime surveys. Common mammal species detected within the BSA include California ground squirrel (*Spermatocelis beeychi*), cottontail rabbit (*Sylvilagus auduboni*), and Botta's pocket gopher (*Thomomys bottae*).

3.1.6 Wildlife Movement Corridors

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance.

Natural features such as canyon drainages, ridgelines, and areas with vegetation cover can provide corridors for wildlife travel. Wildlife movement corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations. Wildlife movement corridors are considered sensitive by resource and conservation agencies.

In an urban context, a wildlife migration corridor is generally a linear landscape feature of sufficient width and buffer to allow wildlife movement between two patches of comparatively undisturbed habitat, or between a patch of habitat and some vital resources. Regional corridors are defined as those linking two or more large patches of habitat, and local corridors are defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development. A viable wildlife migration corridor consists of more than an unobstructed path between habitat areas. Appropriate vegetation communities must be present to provide food and cover for both transient species and resident populations of less mobile animals. There must also be a sufficient lack of stressors and threats within and adjacent to the corridor for species to use it successfully.

Regionally, the BSA is not part of any designated corridors identified in regional conservation programs such as the MSCP. The BSA is part of the Pacific Flyway, a major migration route for birds that travel north and south. Santa Maria Creek likely provides stop-over habitat for migrant species.

At a local scale, avian species may use this riparian corridor to move through the unincorporated community of Ramona and rural residential development. Development and roads crossing Santa Maria Creek may limit many terrestrial species from using this corridor extensively to disperse to open space habitat. This BSA is surrounded by developed and disturbed land to the north and south. Santa Maria Creek and its associated riparian vegetation provide an east-west wildlife linkage. Although the creek bed is dry much of the year, it provides cover for wildlife to move from expanses of undeveloped land to the east and west of the proposed project area. Santa Maria Creek provides cover nearly continuously from the forest to the east to the Ramona Grasslands to the west. As Santa Maria Creek is the main drainage channel running through the community of Ramona, it is unlikely that this linkage will be lost through future development, but it will likely be encroached upon. In addition to avian species, terrestrial species likely to use the corridor include bobcat (*Lynx rufus*), coyote (*Canis latrans*), and raccoon (*Procyon lotor*).

3.2 Regional Species and Habitats and Natural Communities of Concern

Plant and animal species are considered special status if they have been listed under the FESA or CESA or if they are included in comprehensive lists for plants and animals through the CNDDB (CDFW 2020). These include taxa officially listed by the state and federal governments as

Endangered, Threatened, or Rare, and candidates for state or federal listing. The County also considers a list of narrow endemic plant species and wildlife as sensitive biological resources (County of San Diego 2010). In addition, habitats that support a listed species, wetlands, and wetland buffers are also considered sensitive biological resources. The assessment of the sensitivity of plant communities follows Oberbauer et al. 2008, as modified from the Holland classification.

3.2.1 Sensitive Vegetation Communities

The following plant communities located within the BSA are considered sensitive by local, state, and federal resource agencies because they support a variety of special status plant and animal species or because much of their historic range has been lost or degraded through development: Southern cottonwood-willow riparian forest; southern willow scrub; eucalyptus woodland; Diegan coastal sage scrub – inland form; alkali seep; non-native grassland; and disturbed wetland.

3.2.2 Wetlands and Jurisdictional Waters

Wetlands and other waters are considered sensitive biological resources and are protected by various federal, state, and local jurisdictions. The USACE and the RWQCB regulate waters of the U.S., including wetlands, under the authority of Sections 404 and 401, respectively, of the CWA. The term "waters of the U.S." encompasses many types of waters, including waters currently or historically used in interstate or foreign commerce; all waters subject to the ebb and flow of tides; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including ephemeral and intermittent streams), mudflats, sandflats, wetlands, sloughs, etc., the use, degradation or destruction of which could affect interstate or foreign commerce; all impoundments of waters otherwise defined as waters of the U.S.; tributaries of waters of the U.S.; territorial seas; and wetlands adjacent to waters of the U.S. (Environmental Laboratory 1987). Under the SWRCB's new policy and Porter-Cologne, described above in Section 2.3.5 and Section 2.3.6, respectively, the RWQCB's jurisdiction also includes isolated wetlands and other waters that are not jurisdictional under the CWA. The CDFW takes jurisdiction over lakes, rivers, and streams under Section 1600 et seq. of the California Fish and Game Code.

The USACE defines wetlands as areas that are dominated by hydrophytic plant species, exhibit wetland hydrology, and have hydric soils. Areas that do not meet these criteria but exhibit a defined channel are considered "non-wetland waters of the U.S." CDFW jurisdiction extends across the bed, banks, and channels of these features and includes areas beneath a riparian canopy, even if the canopy areas are well away from the stream channel (such as in riparian areas). The RWQCB takes jurisdiction of waters of the U.S. as defined by the USACE as well as other surface waters, which include isolated wetlands (e.g., vernal pools) and stream channel.

Santa Maria Creek passes through the BSA and would fall under the jurisdiction of the USACE, RWQCB, and CDFW (Figure 6). Santa Maria Creek passes through a 6-foot-diameter culvert under 13th Street and is regarded as a culverted water of the U.S. at this location. The creek is impounded by the 13th Street culvert during storm events, and overflows into two secondary channels. These secondary channels are each a 3-foot-wide wetland water of the U.S., RWQCB water of the state, and CDFW state streambed. These channels converge next to 13th Street, south of the culvert, and cross 13th Street. Santa Maria Creek is coded on NWI as an intermittent feature; however, within the Study Area the feature was not observed flowing during surveys, but was flowing later in the year after another late rain event. As a result, under the new definition of WOTUS the USACE may not take jurisdiction over Santa Maria Creek since it flows only in direct response to rainfall. Given the survey and this report were completed prior to the date the new definition is in effect (i.e., June 22, 2020), this report assumes these features would potentially fall under the jurisdiction of the USACE.

Approximately 3.94 acres of potential aquatic resources was identified within the delineation survey area for the proposed project (Table 4; Appendix A, Figure 6). Of those, approximately 2.15 acres is considered under purview of the USACE, CDFW, and RWQCB (Table 4). Approximately 1.35 acres is exclusively under purview of CDFW (Table 4). The remainder of the aquatic resources are associated with stormwater channels and the manufactured stormwater basin. These features do not fall under jurisdiction of the USACE or CDFW and qualify for the exemption to RWQCB's wetland policy and Porter Cologne Act due to their designed intent of stormwater detention.

Based on the results of the formal field delineation (including the evaluation of watershed and hydrological spatial data), it was determined that all aquatic features identified as potential jurisdictional waters of the U.S. have the following features:

- possess physical and biological characteristics that may meet the definition of both wetland and non-wetland waters of the U.S. (33 CFR 328.3), and
- may possess an indirect hydrologic connection (or significant nexus) to a traditional navigable water.

Further details can be found in the Aquatic Resource Delineation Report provided in Appendix C.

Table 4
Aquatic Resources Occurring within the Study Area (acres)[1]

Type of Potential Jurisdictional Aquatic Resources	Type of Habitat	Total
Non-Jurisdictional Water (RWQCB Exempt)		
Wetland (Stormwater Basin & Channels)	Non-Native Grassland, Disturbed Wetland, Southern Cottonwood Willow Riparian Forest	0.12
Non-Wetland (Stormwater Basin & Channels)	Non-Native Grassland, Disturbed Wetland, Southern Cottonwood Willow Riparian Forest	0.32
Subtotal Non-Jurisdictional Water (RWQCB Exempt)		*0.44*
Potential Jurisdictional Aquatic Resources of the U.S. and State (USACE, CDFW, and RWQCB)		
Non-Wetland (Ordinary High Water) / Unvegetated Streambed	Southern Cottonwood Willow Riparian Forest	0.33
Wetland (Active Floodplain) / Vegetated Streambed	Southern Cottonwood Willow Riparian Forest	1.82
Subtotal Jurisdictional Aquatic Resources of the U.S. and State		*2.15*
Potential Jurisdictional* Aquatic Resources *Exclusively CDFW		
Streambanks and Associated Riparian Canopy	Southern Cottonwood Willow Riparian Forest	1.35
Subtotal Jurisdictional Aquatic Resources Exclusively CDFW		*1.35*
Total Potential Jurisdictional Aquatic Resources		**3.50**

[1]Aquatic Resource Study Area includes the project area plus a 100-foot buffer. Acreages of potential waters of the U.S. (including wetlands) occurring within the study area were determined by using ArcGIS. All acreages are rounded to the nearest hundredth after summation.

3.2.3 Special Status Plant Species

Prior to the field surveys, a search was conducted to identify special status plant species historically noted in the vicinity of the proposed project (Ramona Quadrangle and eight surrounding quadrangles) using the CDFW's RareFind database. Close to 100 plant species were identified in this search, many of which would have no potential for occurrence within the BSA due to range restrictions, absence of required soils (e.g., gabbro or clay soils) or habitats (mafic chaparral, oak woodlands, etc.). This initial list was further refined using the SDNHM San Diego Plant Atlas Project (SDNHM 2018) to identify species known from the vicinity of the BSA (i.e., Santa Maria Valley, Ramona grasslands, etc.) and eliminate species that might occur only in the surrounding hills.

Based on the results of the database searches and habitat assessments during field surveys, 14 special status plant species were identified with having low, moderate, or high potential to occur within the BSA. These species' potential for occurrence within the BSA, sensitivity, and habitat requirement are detailed in Table 5. Appendix D contains a list of other special status plant species evaluated for potential to occur in the BSA, but are considered absent because there is no suitable habitat within the BSA or because the species no longer is known to occur in the vicinity of the BSA.

Table 5. Special Status Species Potentially Occurring or Known to Occur in the Biological Study Area

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur
Plant Species					
San Diego ambrosia	*Ambrosia pumila*	FE CRPR 1B.1 SDC Group A	Chaparral, coastal scrub, valley and foothill grassland	HP	Low. Marginally suitable habitat and soils present on-site.
Coulter's saltbush	*Atriplex coulteri*	CRPR 1B.2	Alkaline or clay areas in coastal dune and bluff scrub, coastal sage scrub, grasslands	HP	Low. Known from alkali playas and vernal pools at the Ramona grasslands. Vernal pools have been historically documented in the proposed project area, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of the library functions as a disturbed vernal pool. BSA is very disturbed.
Parish's brittlescale	*Atriplex parishii*	CRPR 1B.1	Playas and vernal pools	HP	Low. Known from alkali playas and vernal pools at the Ramona grasslands. Vernal pools have been historically documented in the proposed project area, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of the library functions as a disturbed vernal pool. BSA is very disturbed.
San Diego goldenstar	*Bloomeria [Muilla] clevelandii*	CRPR 1B.1 SDC Group A	Chaparral, coastal scrub, valley and foothill grassland, vernal pool, wetland	HP	Low. Marginally suitable habitat and soils present on-site. Site is heavily disturbed and unlikely to support this species.
Orcutt's brodiaea	*Brodiaea orcuttii*	CRPR 1B.1 SDC Group A	Chaparral, cismontane woodland, closed-cone coniferous forest, ultramafic, valley and foothill grassland, vernal pools, wetland	HP	Low. Vernal pools have been historically documented in the proposed project area, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of library functions as a disturbed vernal pool. No occurrences are known from Ramona; the closest occurrence is in hills adjacent to San Diego Country Estates

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur
southern tarplant	*Centromadia parryi* subsp. *australis*	CRPR 1B.1 SDC Group A	Marsh and swamp, salt marsh, valley and foothill grassland, wetland	HP	Present. This species was detected within the BSA, and within the proposed project area (primarily along the east side of Maple Street/13th Street, and the east end of Walnut Street.
Smooth tarplant	*Centromadia pungens* ssp. *Laevis*	CRPR 1B.1 SDC Group A	Alkali playa, chenopod scrub, meadow and seep, riparian woodland, valley and foothill grassland, wetland	HP	Low. Marginally suitable habitat and soils present on-site. Not known from Ramona.
Long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	CRPR 1B.2 SDC Group A	Often on clay soils in chaparral, coastal scrub, meadow and seep, ultramafic, valley and foothill grassland, vernal pools	HP	Low. Vernal pools have been historically documented in the study area, but none were observed during 2012 or 2018 surveys.
San Diego gumplant	*Grindelia hallii*	CRPR 1B.2 SDC Group A	Chaparral, lower montane conifer forest, meadow and seep, valley and foothill grassland	HP	Low. Marginally suitable habitat and soils present on-site.
graceful tarplant	*Holocarpha virgata* subsp. *elongata*	CRPR 4.2	Grasslands, chaparral, coastal sage scrub	HP	Moderate. This species is known from Ramona grasslands and has a moderate potential for occurrence within the BSA. Though the BSA is disturbed, this species can tolerate some disturbance. Rare plant surveys conducted within the BSA were outside of this species' traditional blooming period of August through November.
Small-flowered microseris	*Microseris douglasii* subsp. *platycarpha*	CRPR 4.2	Clay lenses in perennial grasslands on the periphery of vernal pools or in broad openings in sage scrub	HP	Low. Vernal pools have been historically documented in the proposed project area, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of the library functions as a disturbed vernal pool.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur
Little mousetails	*Myosurus minimus* subsp. apus	CRPR 3.1	Vernal pools	HP	Low. Known from vernal pools in Ramona grasslands. Vernal pools have been historically documented in the BSA, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of the library functions as a disturbed vernal pool.
Mud nama	*Nama stenocarpum*	CRPR 2B.2 SDC Group A	Marsh and swamp, riverbanks	HP	Low. Suitable habitat present on-site but of low quality
spreading navarretia	*Navarretia fossalis*	FT CRPR 1B.1 SDC Group A	Alkali playa, chenopod scrub, marsh and swamp, vernal pools, wetland	HP	Low. Vernal pools have been historically documented in the BSA, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of the library functions as a disturbed vernal pool. Known from Ramona grasslands.
San Bernardino aster	*Symphyotrichum defoliatum*	1B.2 SDC Group A	Cismontane woodland, coastal scrub, lower montane coniferous forest, marsh and swamp, meadow and seep, valley and foothill grassland, wetland	HP	Low. Marginally suitable habitat present on-site.
Invertebrates					
Riverside fairy shrimp	*Streptocephalus woottoni*	FE SDC Group 1	Vernal pools	HP	Not present. Protocol surveys conducted in 2013 and 2018 confirmed absence from BSA.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE SDC Group 1	Vernal pools	HP	Not present. Protocol surveys conducted in 2013 and 2018 confirmed absence from BSA.
Amphibians					
arroyo toad	*Anaxyrus californicus*	FE/SSC SDC Group 1	Desert wash, riparian scrub, riparian woodland, south coast flowing waters, south coast standing waters	HP	Low. Creek bed in the proposed project area is below a dense canopy and water is present only intermittently.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur
Western spadefoot	*Spea hammondii*	SSC SDC Group 2	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools, wetland	HP	Moderate. This species was not detected during fairy shrimp survey conducted in 2013 and 2018. Seasonal ponding in basins within the BSA provides potential breeding habitat for this species depending on rainfall and the species is known to occur in the vicinity of the BSA.
Reptiles					
southern California legless lizard	*Anniella stebbinsi*	SSC SDC Group 2	Chaparral, coastal dunes, coastal scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks	HP	Low. Suitable habitat on-site.
orange-throated whiptail	*Aspidoscelis hyperythra*	WL SDC Group 2	A variety of habitats including sage scrub, chaparral, coniferous and broadleaf woodlands; found on sandy or friable soils with open scrub	HP	Present. This species was detected incidental to the 2018 LBVI protocol surveys.
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	SSC SDC Group 2	Dry open areas with sparse foliage – chaparral, woodland, and riparian areas	HP	Moderate. Suitable habitat occurs on-site and the species is known to occur in the vicinity.
Coronado Island skink	*Plestiodon skiltonianus interparietalis*	SSC SDC Group 2	Grasslands, chaparral, cismontane woodland, pinon and juniper woodlands	HP	Moderate. Suitable habitat occurs on-site and the species is known to occur in the vicinity.
Two-striped garter snake	*Thamnophis hammondii*	SSC SDC Group 1	Marsh and swamp, riparian scrub, riparian woodland, wetland	HP	Low. This species is not likely present on-site due to the disturbed nature of the site.
Birds					
Cooper's hawk	*Accipiter cooperii*	WL SDC Group 1	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest	HP	Present. This species was detected within the BSA in 2012 and again during the 2018 LBVI surveys, but no nests were detected in either year.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur
grasshopper sparrow	*Ammodramus savannarum*	SSC SDC Group 1	Valley and foothill grassland	HP	Moderate. This species was not detected during surveys.
Great blue heron	*Ardea herodias*	SDC Group 2	Breeds in tall trees adjacent to water where abundant food sources are present; in the Ramona area, the species is seen in grasslands eating Botta's pocket gophers (*Thomomys bottae*)	HP	Present. Detected during the 2018 protocol LBVI surveys. Unlikely to breed on-site.
burrowing owl	*Athene cunicularia*	SSC SDC Group 1	Coastal prairie, coastal scrub, Sonoran desert scrub, valley and foothill grassland	HP	Low. No burrowing owls or sign have been detected in the proposed project vicinity.
Red-shouldered hawk	*Buteo lineatus*	SDC Group 1	Common within suburban and rural areas in San Diego County with suitable tall trees and adjacent riparian areas for foraging	HP	Moderate. Suitable breeding and nesting habitat within the BSA.
Turkey vulture	*Cathartes aura*	SDC Group 1	Searches for carrion in a variety of habitats; nests in rocky outcrops	HP	Present. Detected during the 2018 protocol LBVI surveys. No breeding habitat within the BSA.
White-tailed kite	*Elanus leucurus*	FP SDC Group 1	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, wetland	HP	Moderate. Suitable breeding and foraging habitat present. This species has not been detected during surveys.
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE/SE SDC Group 1	Riparian woodland	HP	Low. Marginal habitat is too sparse and dry. No southwestern willow flycatchers were detected during protocol LBVI surveys.
California horned lark	*Eremophila alpestris actia*	WL SDC Group 2	Open grassy and semi-open habitats	HP	Moderate**.** The grassland habitat provides suitable foraging opportunities, but human disturbance may preclude breeding.
Prairie falcon	*Falco mexicanus*	WL SDC Group 1	Sonoran desert scrub, valley and foothill grassland	HP	Low. This species has not been detected during surveys.
Yellow-breasted chat	*Icteria virens*	SSC SDC Group 1	Riparian forest, riparian scrub, riparian woodland	HP	Low. No yellow-breasted chats were detected during protocol LBVI surveys.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur
Loggerhead shrike	*Lanius ludovicianus*	SSC SDC Group 1	Prefers open habitats, with scattered shrubs for perching and nesting	HP	Moderate**.** The grassland habitat provides suitable foraging opportunities, but human disturbance may preclude breeding.
Yellow warbler	*Setophaga petechia*	SSC SDC Group 2	Riparian forest, riparian scrub, riparian woodland	HP	Present. Several individuals were detected during the 2018 protocol LBVI surveys.
Western bluebird	*Sialia mexicana*	SDC Group 2	Open woodlands for foraging; nests primarily in oak woodlands and riparian woodlands adjacent to grassland habitats	HP	Present. Detected during the 2018 protocol LBVI surveys. Breeding and foraging habitat within the BSA.
Barn owl	*Tyto alba*	SDC Group 2	Grasslands, deserts, marshes, agricultural fields, narrow forest strips, brushy fields, and suburbs and cities; nests in tree cavities, caves, and in buildings	HP	High. Suitable nesting and foraging habitat within the BSA.
Least Bell's vireo	*Vireo bellii pusillus*	FE/SE SDC Group 1	Riparian forest, riparian scrub, riparian woodland	HP	Present. Suitable habitat and LBVI were detected during 2018 surveys, but not 2012.
Mammals					
pallid bat	*Antrozous pallidus*	SSC SDC Group 2	Chaparral, coastal scrub, desert wash, riparian woodland, upper montane coniferous forest, valley and foothill grassland	HP	Low. No roosting habitat on-site.
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	SSC SDC Group 2	Chaparral, coastal scrub, valley and foothill grassland	HP	Moderate. Suitable habitat within the BSA.
Northwestern San Diego pocket mouse	*Chaetodipus fallax*	None/SSC SDC Group 2	Chaparral, coastal scrub, grassland	HP	Moderate. Suitable habitat within the BSA.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC SDC Group 2	Broadleaved upland forest, chaparral, chenopod scrub, meadow and seep, riparian forest, riparian woodland, upper montane coniferous forest, valley and foothill grassland	HP	Low. No roosting habitat on-site.
western red bat	*Lasiurus blossevillii*	SSC SDC Group 2	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland	HP	Low. No suitable roosting habitat on-site.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	None/SSC SDC Group 2	Grasslands, coastal scrub	HP	Moderate. Suitable grassland habitat on-site. Not detected during surveys.

[1]Status:
FE – Federally Endangered
FT – Federally Threatened
SE – State Endangered
ST – State Threatened
FP – State Fully Protected
WL – Watch List
SSC – California Species of Special Concern

[1]CA Rare Plant Rank (CRPR):
1B - Plants Rare, Threatened, or Endangered in California and Elsewhere
2 - Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
Threat Ranks -
•0.1-Seriously threatened in California
•0.2-Fairly threatened in California
•0.3-Not very threatened in California

[1]San Diego County Group
Plants
A – Rare, threatened or endangered in California and elsewhere
B – Rare, threatened or endangered in California but more common elsewhere
Animals
Group 1 – includes those that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirement that must be met.
Group 2 – includes those species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action

[2]Habitat:
Absent [A] – no habitat present and no further work needed.
Habitat Present [HP] – habitat is, or may be present. The species may be present.

One special status plant species, southern tarplant (CRPR 1B.1 species), was detected during rare plant surveys by ICF and AECOM. AECOM surveys in April and May 2018, relocated most of the occurrences recorded by ICF during rare plant surveys in July 2013 and June 2014. One additional occurrence was found in 2018. This species was detected along the shoulder of Walnut and Maple Streets in populations of 10s to 100s. A population of approximately 1,000 individuals was detected in the parcel to the northeast of the intersection of Walnut and Maple Streets (Figure 7, Appendix A). Southern tarplant is an annual species and the number of individuals is expected to vary year to year.

3.2.4 Special Status Wildlife Species

Prior to the field surveys, a search of the CNDDB was conducted to identify special status wildlife species historically noted in the vicinity of the BSA. Over 50 species were evaluated for potential to occur within the BSA. Based on the results of the database searches and habitat assessments during field surveys, 22 special status wildlife species were identified with having low, moderate, or high potential to occur within the BSA. These species' potential for occurrence within the BSA, sensitivity, and habitat requirement is detailed in Table 5. Appendix D contains a list of other wildlife species evaluated for potential to occur in the BSA, but that are considered absent because there is no suitable habitat within the BSA or because the species no longer is known to occur in the vicinity of the BSA.

Seven special status wildlife species were detected during surveys, including one reptile and six avian species. Two special status species detected, turkey vulture and great blue heron (*Ardea herodias*), are only expected to forage in the BSA because there is no nesting habitat present for these species. These species are discussed in Table 5 and not discussed further herein. Special status species detected and that may breed or nest within the BSA are discussed in the following sections. In addition, results of focused protocol surveys and habitat assessments for federally and/or state-listed species are discussed in detail below.

3.2.4.1 Riverside Fairy Shrimp

The Riverside fairy shrimp is a tiny freshwater crustacean that typically inhabits relatively large, long-lived vernal pools. Its distribution is highly restricted, with most of the known populations located in coastal San Diego and Orange Counties, western Riverside County, and northern Baja California (Eriksen and Belk 1999). The species requires larger basins with prolonged inundation, such as stock ponds and detention basins, to provide the approximately 2 months required to attain sexual maturity.

Focused vernal pool and fairy shrimp surveys were conducted in the southern extent of the BSA in 2008 as part of the Ramona Library Project (TAIC 2008). Five vernal pools were identified in the library site during that time, but no Riverside fairy shrimp were documented on-site. The

Ramona Library Project created a detention basin that ponds with sufficient duration to support Riverside fairy shrimp. Ruts on the shoulder of 13th Street have some potential to pond with sufficient duration to be suitable for Riverside fairy shrimp. There are no known records for Riverside fairy shrimp in the vicinity of the Ramona valley (CDFW 2020). This species was not detected during protocol wet and dry season surveys conducted by ICF and AECOM in 2012–2013 and 2018, respectively (ICF 2013a, 2013b, AECOM 2018, Helm 2018).

3.2.4.2 San Diego Fairy Shrimp

The San Diego fairy shrimp is a federally endangered species found in vernal pools of the coastal mesas of San Diego County. It is the most common fairy shrimp within a 50-kilometer coastal strip of vernal pools that mostly range in elevation from 15–125 meters. Disjunct populations of this species occur in northern Baja and southern Orange County (Eriksen and Belk 1999). However, coastal mesas are also one of the most popular sites for development and consequently this species has declined dramatically. It was originally identified as the relatively common versatile fairy shrimp (*Branchinecta lindahlii*) and was not described as a separate species until 1993.

San Diego fairy shrimp are minute (< 1 inch) crustaceans found in vernal pools and other seasonally filled water holes. These shrimp may appear after late fall, winter, or spring rains sufficiently fill their small, shallow pools (<12 inches deep). Fairy shrimp are filter feeders that digest microscopic particles of plant and animal detritus. Predators include birds and larger invertebrates that develop in their pools if water persists. One of the most unique features of fairy shrimp biology is the ability of their progeny to remain in soil, as egg-like cysts, for many years without hatching and then under appropriate conditions to hatch and reproduce.

Focused vernal pool and fairy shrimp surveys were conducted in the southern extent of the BSA in 2008 as part of the Ramona Library Project (TAIC 2008). Five vernal pools were identified within the library site during that time and San Diego fairy shrimp were documented in four of those pools. ICF sampled 25 water holding depressions (e.g., road ruts, depressions in a graded lot, a detention basin) for San Diego fairy shrimp in 2012–2013. No San Diego fairy shrimp were detected during protocol wet or dry season surveys (ICF 2013a, 2013b).

In 2018, AECOM conducted surveys of 22 basins, including 21 basins from the 2012–2013 ICF surveys. No San Diego fairy shrimp were detected during protocol wet or dry season surveys conducted in 2018 (AECOM 2018, Helm 2018).

3.2.4.3 Arroyo Toad

The USFWS listed the ARTO as an endangered species on December 16, 1994. On June 8, 2000, the USFWS finalized the designation of critical habitat for the ARTO (USFWS 2001). On

October 30, 2002, the Federal Circuit Court vacated critical habitat for the federally endangered ARTO. The Federal Judge also instructed the USFWS to begin the process of re-designating critical habitat for this species. This re-designation was completed in early 2011. The proposed project area is not located within currently designated critical habitat for the ARTO; however, ARTO critical habitat occurs approximately 0.84 mile southwest of the proposed project area within Santa Maria Creek (USFWS 2011).

The ARTO range extends along the coast from San Luis Obispo County south into northwestern Baja California and is known from six drainages in the desert. ARTO have been found in the basins formed by San Juan Creek (Orange County), San Mateo Creek (Orange and San Diego Counties), San Onofre Creek, Santa Margarita River, San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River, Otay River, San Felipe Creek, Vallecitos Creek, and the Tijuana River in San Diego County (USFWS 1999). This toad breeds in brooks and streams with still or slow-moving water and shallow, sandy-bottomed pools with an open canopy. Upland habitat for this species includes sandy banks with an overstory of willows, cottonwoods, or sycamores.

A habitat assessment was performed to determine whether the BSA could potentially support ARTO. The portion of Santa Maria Creek within the BSA contains a dense canopy and generally lacks the regularly flowing or standing water during the breeding season that ARTO require for development. The upland habitat surrounding the creek is highly disturbed and supports dense non-native grasses that would not be conducive to toad movement or burrowing. This species is known to occur downstream of this location in the Ramona Grasslands County Preserve and along Santa Maria Creek near the Ramona Airport approximately 3 miles west of the BSA. There are no known locations of ARTO upstream of the Ramona Airport. Therefore, ARTO is not likely to occur within the BSA and focused surveys were not conducted.

3.2.4.4 Orange-throated Whiptail

The orange-throated whiptail (*Aspidoscelis hyperythra*), is a CDFW WL species and is categorized as a Group 2 Species on the County of San Diego's Sensitive Animals List. The species is known to occur within a variety of habitats including sage scrub, chaparral, and coniferous and broadleaf woodlands across its range. It requires open areas, bushes, and fine loose or friable soils. However, it can use dense vegetation for protective cover. At least two orange-throated whiptails were detected during the 2018 protocol surveys for LBVI.

3.2.4.5 Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is a CDFW SSC and is categorized as a Group 1 Species on the County of San Diego's Sensitive Animals List. This species occurs in wooded portions of California including live oak, riparian deciduous, and other forested habitat (CDFG 1988). It generally nests in deciduous trees 20 to 50 feet above the ground within riparian habitat, where it

also commonly forages. This species is mostly a year-long resident in San Diego County and forages on small birds, mammals, reptiles, and amphibians.

Cooper's hawk was detected during 2012 and 2018 LBVI surveys. Cooper's hawks likely utilize the BSA to forage and potentially nest in areas of riparian or wooded habitat; however, no nests were observed during either year of surveys.

3.2.4.6 Southwestern Willow Flycatcher

There are five subspecies of willow flycatcher (*Empidonax traillii*). The SWFL (*Empidonax. traillii extimus*) breeds in southern California and was listed as an endangered species by the USFWS in 1995. Critical habitat for this species was designated by the USFWS in 2005 (USFWS 2005).

This small, insectivorous, migratory bird is usually found foraging in dense riparian vegetation occurring along streams or other wetlands (Sogge et al. 2010). The structure of these habitats typically consists of a dense midstory and understory and can also include a dense canopy (USFWS 1995). However, suitable vegetation is not uniformly dense and typically includes interspersed patches of open habitat. Typical plant species associated with their habitat include willow (*Salix* spp.), mulefat, box-elder (*Acer negundo*), stinging nettle (*Urtica diocia*), cottonwood (*Populus* spp.), tamarisk (*Tamarix* spp.), and Russian olive (*Elaeagnus angustifolia*).

SWFL usually arrive on their breeding grounds in southern California in early May and remain through late July. Timing of departure of locally breeding birds is difficult to determine because of their extremely secretive behavior at that time, coupled with more abundant migrants of other willow flycatcher subspecies passing through the area. Migrants of subspecies other than SWFL, such as the northwestern subspecies (*E. t. brewsteri*), are widespread as they pass through southern California. Their occurrence is mainly late May through mid-June, but generally uncommon at that time of year, and late-July through September, when fairly common. In light of these migration windows, definitive identification of a willow flycatcher as the southwestern subspecies usually occurs between June 14 and July 17 (Sogge et al. 1997).

A habitat assessment for SWFL determined that the habitat within the BSA is not suitable to support breeding SWFL. The riparian habitat on-site contains a dense overstory of mature cottonwoods and willows, but lacks a dense midstory and understory with open patches preferred by this species. The riparian habitat occurs in a strip that is relatively narrow to support this species, and generally lacks aboveground water during the height of the breeding season (June–August). SWFL breed in areas in proximity to water and would not be expected in a riparian area without flowing water. In addition, the nearest observation of SWFL occurs over 9 miles to the southeast

and was documented in 2001 (CDFW 2020). No protocol surveys for this species were performed for the proposed project in 2012. No SWFL were incidentally detected during LBVI surveys.

3.2.4.7 Yellow Warbler

The yellow warbler (*Setophaga petechia*) is a CDFW SSC and is categorized as a Group 2 Species on the County of San Diego's Sensitive Animals List. The yellow warbler breeds from northern Alaska and Canada southward to the middle of the United States and in the western United States southward into Mexico. This species occurs most commonly in riparian woodlands dominated by willows.

The yellow warbler is primarily associated with southern willow scrub habitat but can be found in other riparian communities. This species can also be found foraging in other habitats within the BSA during migration and post-breeding dispersal. This species is known to utilize the suitable riparian habitat in the BSA and was recorded during the 2018 protocol level LBVI surveys conducted for the proposed project.

3.2.4.8 Western Bluebird

Western bluebird (*Sialia mexicana*) is categorized as a Group 2 Species on the County of San Diego's Sensitive Animals List. This species occurs in open coniferous, deciduous, and riparian woodlands, and grasslands and agricultural areas with adjacent nesting cavities. Western bluebird is a secondary cavity nester, typically nesting in cavities excavated by woodpeckers but also man-made nest boxes. It forages on insects, fruit, berries, and seeds; therefore, both suitable nest cavities and prey base are necessary for successful nesting. This species breeds in the western half of the United States from Washington to southern California and into Mexico. The resident breeding population in southern California is augmented by additional wintering birds.

Western bluebird was detected during 2018 LBVI surveys. No on-site nesting was observed; however, suitable nesting habitat occurs within the southern cottonwood-willow riparian forest present within the BSA.

3.2.3.9 Least Bell's Vireo

There are four subspecies of the Bell's vireo (*Vireo bellii*); the westernmost—LBVI (*V.b. pusillus*)—breeds in California and northern Baja California. LBVI is a small, migratory insectivore that prefers dense riparian vegetation for foraging and nesting. LBVI was federally listed as endangered in 1986 (USFWS 1986) and state listed as endangered in 1980. Critical habitat was designated for this subspecies in 1994 along the southwestern coastline of California below Santa Barbara (USFWS 1994).

LBVI typically begin to arrive on their breeding grounds by mid to late March and begin to depart by late July; most having left by September. Males tend to arrive first and establish territories; females arrive a few days later. Site fidelity is high among adult LBVI, with many birds returning to the same territory each year and even using the same shrub as previous years (Salata 1983, Kus 2002). Nests are typically placed within 3 feet of the ground in dense shrubby riparian habitat, and a diverse canopy height is required for foraging, with willows often dominating the canopy layer (Salata 1983). In southern California, LBVI nest sites were most frequently located in riparian stands between 5 and 10 years old (SANDAG and RECON 1990). Based on rigorous statistical analysis of LBVI habitat structure and composition, this species appears to preferentially select sites with large amounts of shrub and tree cover, a large degree of vertical stratification, and small amounts of aquatic and herbaceous cover (SANDAG and RECON 1990).

The cottonwood-willow riparian habitat within the BSA contains a dense overstory of mature cottonwoods and willows, but lacks a dense midstory and understory with open patches preferred by this species. In addition, Santa Maria Creek is ephemeral and does not provide the open water preferred by this species for foraging. Prior to the completion of surveys for the proposed project, the nearest documented LBVI occurrence is over 6 miles northeast of the BSA and occurred in 1991 (CDFW 2020).

Protocol surveys for LBVI were completed in 2012 and 2018 (ICF 2012, Sage 2018). The focused surveys followed the 2001 USFWS protocol. During both 2012 and 2018, eight separate surveys were conducted at least 10 days apart within the survey area. Surveys were conducted between April 10 and July 31, 2012, and between April 14 and Junes 23, 2018, in all potentially suitable habitats and during suitable weather conditions. Surveys were conducted by biologists during morning hours prior to 1100, when vireos are most active, and included frequent stops to look and listen for LBVI vocalizations (songs and/or scolds). Surveys were not conducted during inclement weather, such as extreme hot or cold temperatures, fog, high winds, or rain. No LBVI were detected in the LBVI BSA during protocol surveys in 2012.

LBVI were detected during each of the eight protocol surveys in 2018. One pair of LBVI was detected during the protocol surveys, using riparian habitat on both sides (east and west) of 13th Street along the Santa Maria Creek corridor. Throughout the course of the surveys, the pair was observed building two nests; the first sighting was on April 24, 2018, with both parents intermittently incubating eggs, This nest was predated and a second nest observed on May 24, 2018, just west of the first one, successfully fledged at least one juvenile (Figure 5, Appendix A; ICF 2012, Sage 2018).

Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

4.1 Sensitive Vegetation Communities

4.1.1 Survey Results

4.1.1.1 Southern Cottonwood-Willow Riparian Forest

Within the BSA, approximately 7.67 acres of southern cottonwood-willow riparian forest occurs along Santa Maria Creek and its adjacent floodplain (Table 2). Some of this vegetation community exists as small disjunct patches of previously larger extents of habitat.

4.1.1.2 Southern Willow Scrub

Within the BSA, approximately 0.11 acre of southern willow scrub occurs as small patches along the northern and western berm of the small detention area north of the library (Table 2).

4.1.1.3 Alkali Seep

Approximately 0.12 acre of alkali seep occurs in a few small areas in the northwest corner of the BSA (Table 2).

4.1.1.4 Disturbed Wetland

Within the BSA, approximately 0.12 acre of disturbed wetland occurs within the BSA (Table 2). This is an engineered stormwater detention facility meant to drain stormwater runoff from both the road and the Ramona Library parking lot.

4.1.1.5 Diegan Coastal Sage Scrub – Inland Form

Within the BSA, approximately 0.06 acre of Diegan coastal sage scrub – inland form occurs in a small strip adjacent to the disturbed wetland just north of the library along 13th Street (Table 2).

4.1.1.6 Non-Native Grassland

Within the BSA, approximately 20.84 acres of non-native grassland occurs along Walnut Street and north of the library between 12th and 13th Streets (Table 2).

4.1.2 Project Impacts

Table 6 provides the acres of permanent and temporary direct impacts to the vegetation communities within the project area. Permanent direct impacts would occur in the form of replacement of habitat with permanent structures or hard surface. Temporary direct impacts would occur as a result of grading associated with temporary work areas. Five sensitive vegetation

communities would be directly impacted by the proposed project (Table 6). Although the disturbed wetland (i.e., retention basin) occurs within the permanent impact area, it has been classified as a temporary impact because it is subject to regular maintenance and will be redesigned to continue treating stormwater from the library and associated parking lot in addition to the proposed paved roads south of Santa Maria Creek. The final design is still in progress, but it is anticipated the redesigned basin would be equal to or larger than the current retention basin.

Table 6. Permanent and Temporary Direct Impacts to Sensitive Vegetation Communities (acres)

Vegetation Community[1]	Permanent Impact	Temporary Impact	Total Impacts
Riparian and Wetlands	***0.10***	***0.98***	***1.08***
Disturbed Wetland		0.12	0.12
Southern Cottonwood-Willow Riparian Forest	0.06	0.79	0.85
Southern Willow Scrub	0.04	0.07	0.11
Uplands	***1.21***	***3.31***	***4.52***
Diegan Coastal Sage Scrub - Inland Form	0.05		0.05
Non-Native Grassland	1.16	3.31	4.47
Total	**1.31**	**4.29**	**5.60**

[1] Vegetation communities not listed are not impacted by the proposed project.

Temporary indirect impacts such as construction fugitive dust, sedimentation and erosion, and construction-generated trash and unauthorized trespass could all adversely impact vegetation. Because 13th Street and a portion of Maple Street are dirt roads, construction-generated dust is not likely to adversely affect the vegetation as the vegetation is already subjected to high levels of dust from normal daily road traffic. Similarly, much of the area around Santa Maria Creek is heavily used by transients. There is a large amount of trash and frequent trespassing, which have severely degraded the BSA. Potential indirect impacts from construction activity would not significantly contribute to current ongoing impacts.

Once construction is complete, operation and maintenance of the bridge is expected to provide a net benefit to vegetation communities in the surrounding area. Flooding across the existing dirt road that currently occurs during the rainy season likely degrades vegetation communities downstream of the road as result of erosion and sedimentation. Construction of the bridge and discontinuing use of the existing at-grade dirt road would allow water to move under the bridge during rain events, and installation of storm drain systems would minimize erosion and sedimentation downstream of the bridge. In addition, removal of the existing dirt road would eliminate generated dust that currently affects vegetation in the vicinity of the road.

4.1.3 Avoidance and Minimization Efforts

The proposed project has been designed to avoid and minimize adverse impacts to biological resources. The following best management practices (BMPs) are recommended to further minimize impacts especially indirect impacts:

AMM-1: The project has incorporated storm drain systems to facilitate meeting water quality requirements and for stormwater management, which will minimize erosion and degradation of habitat downstream of the bridge.

AMM-2: The limits of grading and temporary work areas will be demarked with construction exclusion fencing for all of these areas of natural communities of special concern to avoid unintentional encroachment into these sensitive areas. Signage will be posted identifying the excluded areas as Environmentally Sensitive Areas.

AMM-3: A qualified biologist will be retained to supervise construction activities, including installation of exclusion fencing, construction and grading activities, and contractor education. The qualified biologist will conduct pre-construction surveys for any nesting bird species potentially occurring within the habitats within the BSA; including pre-construction surveys for LBVI and other nesting avian species (see BIO-4).

AMM-4: Standard fugitive dust BMPs, e.g., a water truck, are recommended to reduce effects of construction-generated erosion and sedimentation into the adjacent Environmentally Sensitive Areas.

AMM-5: Where applicable, implement all relevant BMPs as required by a Storm Water Pollution Prevention Plan and the National Pollutant Discharge Elimination System.

AMM-6: BMPs will be implemented to ensure invasive plant material is not spread from the project site to other areas by disposal off-site or by tracking seed on equipment, clothing, and shoes. Equipment/material imported from an area of invasive plants must be identified and measures implemented to prevent importation and spreading of non-native plant material within the project site. All construction equipment will be cleaned with water to remove dirt, seeds, vegetative material, or other debris that could contain or hold seeds of noxious weeds before arriving to and leaving the project site. Weeds removed will be appropriately bagged and disposed of in a sanitary landfill.

4.1.4 Compensatory Mitigation

Tables 7 and 8 provide the acres of mitigation that would be required as a result of permanent and temporary impacts to the vegetation communities within the project area. Mitigation ratios for

permanent impacts to vegetation communities are based on the County's *Guidelines for Determining Significance and Report Format and Content Requirements Biological Resources* (County of San Diego 2010) (Table 7). Temporary direct impacts would be mitigated in-place at a 1:1 ratio (with the exception of grasslands at 0.5:1 ratio) through on-site restoration (Table 8).

Table 7. Mitigation for Permanent Direct Impacts to Sensitive Vegetation Communities

Vegetation Community[1]	Permanent Impact (acres)	Mitigation Ratio	Mitigation Acreage
Riparian and Wetlands			
Southern Cottonwood-Willow Riparian Forest	0.06	3:1	0.18
Southern Willow Scrub	0.04	3:1	0.12
Uplands			
Diegan Coastal Sage Scrub - Inland Form[2,3]	0.05	1:1	0.05
Non-Native Grassland[3]	1.16	0.5:1	0.58
Total	**1.31**		**0.93**

[1] Vegetation communities not listed are not permanently impacted by the proposed project.
[2] The County's Guidelines mitigation ratios for coastal sage scrub habitat types are subject to the NCCP Process guidelines and are typically 1:1 to 3:1 depending on habitat value for long-term conservation. The coastal sage scrub within the BSA is very small and surrounded by non-native grasslands and would not support species dependent on coastal sage scrub habitat. It therefore has a low value for long-term conservation as coastal sage scrub habitat and a mitigation ratio of 1:1 will be used to offset impacts.
[3] Mitigation for Diegan coastal sage scrub and non-native grassland may be out of kind through enhancement and/or restoration of riparian and wetland communities.

Table 8. Mitigation for Temporary Direct Impacts to Sensitive Vegetation Communities

Vegetation Community[1]	Temporary Impact (acres)	Mitigation Ratio	Mitigation Acreage
Riparian and Wetlands			
Disturbed Wetland	0.12	1:1	0.12
Southern Cottonwood-Willow Riparian Forest	0.79	1:1	0.79
Southern Willow Scrub	0.07	1:1	0.07
Uplands			
Non-Native Grassland[2]	3.31	0.5:1	1.66
Total	**4.29**		**2.64**

[1] Vegetation communities not listed are not temporarily impacted by the proposed project.
[2] Mitigation for non-native grassland may be out of kind through enhancement and/or restoration of riparian and wetland communities.

Mitigation for permanent and temporary direct impacts to riparian and wetland communities would be "in-kind." While mitigation for direct impacts to upland habitats of Diegan coastal sage scrub and non-native grassland may be mitigated "out of kind." The County's Guidelines (County of San Diego 2010) note that mitigation using an "out of kind" habitat type may be appropriate in cases that meet the following criteria:

- The biological function and value of the habitat used for mitigation is similar to that which was impacted.
- For non-native grassland habitats that have been created by past legal human activity, it may be appropriate to mitigate with the native habitat type that the land formerly supported.

Examination of historical aerial imagery in Google Earth indicates that most areas where impacts to Diegan coastal sage scrub and non-native grassland would occur have been heavily disturbed over the past 20 years. The isolated patch of Diegan coastal sage scrub in particular has only recently appeared within the BSA based on historical imagery. Although the non-native grassland is more expansive within the BSA, both of these habitats likely have low biological value for the species that inhabit them due to the developed setting and ongoing disturbance. As a result, it may be more appropriate to mitigate for the loss of Diegan coastal sage scrub and non-native grassland by creating additional riparian and wetland communities, thereby increasing the function and value of the Santa Maria Creek corridor.

Implementation of BIO-1 and BIO-2 would mitigate direct impacts to sensitive vegetation communities and address in-kind versus out of kind mitigation.

BIO-1: All permanent direct impacts to sensitive vegetation communities, habitat, and jurisdictional wetlands or waters will be mitigated on- or off-site consistent with the ratios in the County's Guidelines (County of San Diego 2010; Table 7), and through coordination with the resource agencies. Mitigation will be accomplished on-site as feasible. On-site mitigation may occur in the form of restoration or habitat enhancement. A conceptual mitigation plan will be prepared to address the on-site mitigation proposed for the project. The conceptual mitigation plan will include the identification and location of areas that could be used for creation, restoration, or habitat enhancement. The conceptual mitigation plan will include lists of native plant species, by habitat-type, that may be used in potential on-site revegetation efforts (e.g., planting and seeding). In addition, if needed to meet mitigation needs, the conceptual mitigation plan will identify opportunities for additional enhancements of habitats in temporary impact areas, such as supplemental planting of trees, weeding of adjacent buffer habitat, or other opportunities. The enhancement opportunities will include acreage estimates of treated areas, acreage of invasive removal, and figures to illustrate the treatment area and mapped invasive species. The conceptual mitigation plan will ultimately be used to inform the Mitigation Monitoring Plan. A habitat restoration specialist will determine the optimal areas for habitat establishment and restoration and prepare a Mitigation Monitoring Plan that provides details on the concept. The plan will specifically discuss habitat restoration implementation, including plant establishment methods, performance standards, maintenance and monitoring period, and reporting.

BIO-2: All areas of temporary direct impacts (grading and work areas) will be restored on-site. The conceptual mitigation plan described in BIO-1 will be prepared to address the on-site mitigation proposed for the project.

4.1.5 Cumulative Impacts

Implementation of this project, as well as other projects within the region, would contribute to cumulative impacts to sensitive vegetation communities through direct, incremental loss of habitat. However, the proposed project would only contribute a small amount (1.30 acres) of permanent impacts to sensitive vegetation communities and these impacts would be mitigated per the County's mitigation ratios as detailed in Table 7. Furthermore, the project is anticipated to provide a net benefit to sensitive vegetation communities by reducing the magnitude of existing indirect impacts that affect adjacent habitat. Therefore, cumulative impacts to sensitive vegetation communities would not be considered adverse.

4.2 Jurisdictional Waters and Wetlands

Jurisdictional waters and wetlands are areas that have been determined to be regulated by the USACE, RWQCB, and CDFW. This section describes the resources located on-site; anticipated impacts; and proposed avoidance, minimization, and mitigation measures.

4.2.1 Survey Results

Within the BSA, approximately 2.15 acres of aquatic resources delineated along Santa Maria Creek is under purview of the USACE, CDFW, and RWQCB. The southern cottonwood willow riparian forest that extends beyond the purview of USACE and RWQCB would also qualify as CDFW riparian habitat and totals approximately 1.35 acres within the BSA.

4.2.2 Project Impacts

Table 9 provides the acres and linear feet of permanent and temporary direct impacts to the jurisdictional waters and wetlands within the project area. The proposed project would result in <0.01 acre and 0.27 acre of permanent and temporary direct impacts to waters under purview of the USACE, CDFW, and RWQCB, respectively (Table 9). The proposed project would result in 0.06 acre and 0.60 acre of permanent and temporary direct impacts to aquatic resources under purview of CDFW, respectively (Table 9). Permanent direct impacts would occur in the form of replacement of habitat permanent structures or hard surface. Temporary direct impacts would occur as a result of grading associated with temporary work areas.

Table 9. Impacts to Potential Jurisdictional Waters of the U.S. and State (acres)

Type of Potential Jurisdictional Aquatic Resources	Permanent		Temporary		Total	
	Acres	LF	Acres	LF	Acres	LF
Potential Jurisdictional Aquatic Resources of the U.S. and State (USACE, CDFW, and RWQCB)						
Non-Wetland (Ordinary High Water) / Unvegetated Streambed	-	-	0.03	-	0.03	<1
Wetland (Active Floodplain) / Vegetated Streambed	<0.01	9	0.24	336	0.24	345
Subtotal Jurisdictional Aquatic Resources of the U.S. and State	<0.01	*9*	*0.27*	*336*	*0.27*	*346*
Potential Jurisdictional Aquatic Resources Exclusively CDFW						
Streambanks and Associated Riparian Canopy	0.06	216	0.33	695	0.39	911
Subtotal Jurisdictional Aquatic Resources Exclusively CDFW	*0.06*	*216*	*0.33*	*695*	*0.39*	*911*
Total Potential Jurisdictional Aquatic Resources	***0.06***	***225***	***0.60***	***1,031***	***0.66***	***1,257***

LF = linear feet

Temporary indirect impacts such as construction sedimentation and erosion could adversely jurisdictional waters and wetlands. Once construction is complete, operation and maintenance of the bridge is expected to provide a net benefit to jurisdictional waters and wetlands in the surrounding area. Flooding across the existing dirt road that currently occurs during the rainy season likely degrades jurisdictional waters and wetlands downstream of the road as result of erosion and sedimentation. Construction of the bridge and discontinuing use of the existing at-grade dirt road would allow water to move under the bridge during rain events, and installation of storm drain systems would minimize erosion and sedimentation downstream of the bridge.

4.2.3 Avoidance and Minimization Efforts

Implementation of AMM-1 through AMM-6 would avoid and minimize impacts to jurisdictional waters and wetlands (see Section 4.1.3).

4.2.4 Compensatory Mitigation

Mitigation for unavoidable permanent impacts to jurisdictional waters and wetlands could be mitigated via a combination of habitat creation, restoration, and/or enhancement. Compensation at the ratios detailed in Table 7 and BIO-1 would be required (see Section 4.1.4). Final mitigation ratios would need to be reviewed and determined through coordination with the USACE, RWQCB, and CDFW.

Mitigation for unavoidable temporary impacts jurisdictional waters and wetlands would be mitigated in-place at a 1:1 ratio per BIO-2 and Table 8 (see Section 4.1.4).

4.2.5 Cumulative Impacts

Implementation of this project, as well as other projects within the region, would contribute to cumulative impacts to jurisdictional waters and wetlands through direct, incremental loss of habitat. However, the proposed project would only contribute a small amount (<0.01 acre to USACE, CDFW, and RWQCB resources, 0.06 acre to CDFW resources) of permanent impacts and these impacts would be mitigated per the County's mitigation ratios as detailed in Table 7 and as determined through coordination with the USACE, RWQCB, and CDFW. Furthermore, the project is anticipated to provide a net benefit to jurisdictional waters and wetlands by reducing the magnitude of existing indirect impacts that affect downstream habitat. Therefore, cumulative impacts to sensitive jurisdictional waters and wetlands would not be considered adverse.

4.3 Special Status Plant Species

4.3.1 Survey Results

Southern tarplant was found present within the BSA. Most of the occurrences reported by ICF within the BSA in 2012 were observed again in 2018 by AECOM with few exceptions (Figure 7). The large occurrence on the eastern end of the Burch Living Trust parcel was still extant and estimated at approximately 1,000 individuals in 2018. Approximately 27 individuals were relocated on the east side of Maple Street along the boundary of the Burch parcel.

Approximately 175 individuals were detected on the Russell Family Trust parcels south of Santa Maria Creek. All but one of these occurrences were previously documented by ICF. The occurrence just east of 13th Street of 25 individuals is new and was not previously reported.

Patches of individuals observed in 2012 along either side of Walnut Street just east of 13th Street were not detected during surveys in 2018.

4.3.2 Project Impacts

Approximately 27 southern tarplant individuals were located in the permanent impact area near the entrance to the Burch parcel (Figure 7). Another 25 individuals were located in the temporary impact area (Figure 7). This species is an annual species, meaning the number of individuals within the impact areas will vary from year to year. Permanent and temporary direct impacts to non-native grassland (where the species is present) as detailed in Table 7 provide a better representation of the direct impact that may occur to this species as a result of grading associated with construction of the bridge.

Indirect impacts could arise from fugitive construction dust and trampling from construction activity. Most of the occurrences are already subjected to high levels of human-generated dust from the normal traffic along 13th and Walnut Streets. Most of the 27 individuals along the edge

of Maple Street just outside of the Burch parcel fence appear to be experiencing some type of trampling by vehicles parking or pedestrian traffic.

Once construction is complete, operation and maintenance of the bridge is expected to provide a net benefit to this species. The removal of the existing dirt road would eliminate generated dust that currently affects this species.

4.3.3 Avoidance and Minimization Efforts

Implementation of AMM-1 through AMM-6 would avoid and minimize impacts to this species (see Section 4.1.3).

4.3.4 Compensatory Mitigation

Compensatory mitigation for permanent and temporary impacts to southern tarplant would be implemented through habitat-based mitigation for impacts to non-native grassland per BIO-1 and BIO-2 (see Tables 7 and 8 in Section 4.1.4).

4.3.5 Cumulative Impacts

Implementation of this project, as well as other projects within the region, would contribute to cumulative impacts to southern tarplant through direct, incremental loss of individuals and habitat. However, the proposed project would only contribute a small amount (1.16 acres) of permanent impacts to non-native grassland and these impacts would be mitigated per the County's mitigation ratios as detailed in Table 7. Furthermore, the project is anticipated to provide a net benefit to habitat for this species by reducing the magnitude of existing indirect impacts that affect adjacent habitat. Therefore, cumulative impacts to this species would not be considered adverse.

4.4 Special Status Wildlife Species

The ecology and habitat of special status species known to occur in the BSA are discussed in Section 3.2.4. One federally and state listed species, LBVI, was detected in the BSA. Four non-listed special status wildlife species that forage and breed within the BSA were detected during surveys: orange-throated whiptail, Cooper’s hawk, yellow warbler, and western bluebird.

4.4.1 Discussion of Least Bell’s Vireo

4.4.1.1 Survey Results

LBVI was not detected during 2012 surveys; however, this species was detected during each of the eight protocol surveys conducted in 2018. A pair of LBVI was detected building two nests in the BSA over the course of the survey period (April 14 through June 23, 2018). The first nest was predated and deemed inactive on May 14, 2018, and a second nest was detected under construction,

within 15 feet of the first nest, on May 24, 2018. The second nest (located within the temporary impact area) was successful with at least one fledgling. LBVI are not known to occur upstream or downstream of the BSA based on a review of CNDDB and USFWS databases.

4.4.1.2 Project Impacts

Permanent and temporary impacts would occur to occupied LBVI willow riparian habitat (i.e., southern cottonwood-willow riparian forest and southern willow scrub) (Table 6). Permanent and temporary removal of habitat would result from grading associated with construction of the bridge. Indirect temporary impacts may occur as a result of unauthorized access and construction-related noise created during construction activities from the proposed project. Noise and the additional anthropogenic presence associated with construction may disturb nesting LBVI and cause individuals to avoid the vicinity of the work areas. These impacts would only occur during nesting season for this species.

Indirect temporary impacts from construction-generated fugitive dust, sedimentation, and erosion may degrade habitat for this species. In addition, ground disturbance could promote the establishment and spread of opportunistic non-native plants; however, many non-native plant species are already present given the disturbance on-site and proximity to development.

Once construction is complete, operation and maintenance of the bridge is expected to provide a net benefit to habitat in the surrounding area. Flooding across the existing dirt road during the rainy season likely degrades habitat downstream of the road as result of erosion and sedimentation. Construction of the bridge would allow water to move under the road during rain events, and installation of storm drain systems would minimize erosion and sedimentation downstream of the bridge. In addition, removal of the existing dirt road would eliminate generated dust that currently affects habitat in the vicinity of the road.

4.4.1.3 Avoidance and Minimization Efforts

In addition to implementation of AMM-1 through AMM-6 in Section 4.1.3, LBVI and nesting bird avoidance measure BIO-4 would be implemented:

BIO-4. Least Bell's Vireo and Nesting Birds Avoidance and Minimization. To the extent possible, vegetation clearing will occur outside of the breeding season for LBVI (March 15 through September 15) and other avian species (February 15 through September 15) If work is proposed to start during the LBVI or other avian species breeding season, a pre-activity nesting bird survey will be conducted within 7 days prior to starting work to identify any nesting vireos or other riparian birds within 500 feet of the project area. If work stops for more than 7 days, the pre-activity survey will be repeated before restarting work during the breeding season.

If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, vegetation trimming and other project activities will be allowed to proceed.

If nesting birds are found, the qualified biologist will flag the active nests and project activities will avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged and/or the biologist determines that no impacts are anticipated to the nesting birds or their young. Project activities within 300 feet of a nest (500 feet for raptors) that could generate noise in excess of 60 A-weighted decibels (dBA) or ambient sound level, if it is higher than 60 dBA, at the edge of occupied habitat, will either (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint and/or around the piece of equipment to ensure that noise levels are reduced to below 60 dBA or ambient sound level. Buffer distances may be adjusted as recommended by the qualified biologist depending on the sensitivity of the species**.**

4.4.1.4 Compensatory Mitigation

Compensatory mitigation for permanent and temporary impacts to occupied LBVI habitat would be implemented through habitat-based mitigation for impacts to southern cottonwood-willow riparian forest and southern willow scrub per BIO-1 and BIO-2 (see Tables 7 and 8 in Section 4.1.4).

4.4.1.5 Cumulative Impacts

Implementation of this project, as well as other projects within the region, would contribute to cumulative impacts to LBVI habitat through direct, incremental loss of habitat. However, the proposed project would only contribute a small amount (0.10 acre) of permanent impacts to willow riparian habitat and these impacts would be mitigated per the County's mitigation ratios as detailed in Table 7. Furthermore, the project is anticipated to provide a net benefit to habitat for this species by reducing the magnitude of existing indirect impacts that affect adjacent habitat. Therefore, cumulative impacts to this species would not be considered adverse.

4.4.2 Non-Listed Species Status Species

4.4.2.1 Survey Results

Orange-throated whiptail, Cooper’s hawk, yellow warbler, and western bluebird were detected within the BSA during LBVI surveys in 2018. Orange-throated whiptail likely forages and breeds within the habitat found throughout the BSA. Cooper’s hawk, yellow warbler, and western bluebird forage and potentially nest in the riparian and wooded areas found within the BSA.

4.4.2.2 Project Impacts

Permanent and temporary impacts would occur to riparian and upland habitat occupied by orange-throated whiptail (Table 5). In addition, permanent and temporary impacts would occur to riparian habitat suitable occupied by Cooper's hawk, yellow warbler, and western bluebird (Table 5). Permanent and temporary removal of habitat would result from grading associated with construction of the bridge.

Indirect temporary impacts may occur as a result of unauthorized access and construction-related noise created during construction activities from the proposed project. Noise and the additional anthropogenic presence associated with construction may disturb these species and cause individuals to avoid the vicinity of the work areas. Indirect temporary impacts from construction-generated fugitive dust, sedimentation, and erosion may degrade habitat for this species. In addition, ground disturbance could promote the establishment and spread of opportunistic non-native plants; however, many non-native plant species are already present given the disturbance on-site and proximity to development.

Once construction is complete, operation and maintenance of the bridge is expected to provide a net benefit to habitat in the surrounding area. Flooding across the existing dirt road during the rainy season likely degrades habitat downstream of the road as result of erosion and sedimentation. Construction of the bridge would allow water to move under the road during rain events and installation of storm drain systems would minimize erosion and sedimentation downstream of the bridge. Construction of the bridge would also facilitate safe passage of orange-throated whiptail because the species would no longer need to cross the road at grade to move upstream and downstream within the Santa Maria Creek corridor.

4.4.2.3 Avoidance and Minimization Efforts

Implementation of AMM-1 through AMM-6 would avoid and minimize impacts to non-listed special status wildlife species (see Section 4.1.3).

4.4.2.4 Compensatory Mitigation

Compensatory mitigation for permanent and temporary impacts to habitat for non-listed special status species would be implemented through habitat-based mitigation for impacts to upland and riparian habitat per BIO-1 and BIO-2 (see Tables 7 and 8 in Section 4.1.4).

4.4.2.5 Cumulative Impacts

Implementation of this project, as well as other projects within the region, would contribute to cumulative impacts to non-listed special status species habitat through direct, incremental loss of

habitat. However, the proposed project would only contribute a small amount (1.31 acres) of permanent impacts to riparian and upland habitat and these impacts would be mitigated per the County's mitigation ratios as detailed in Table 7. Furthermore, the project is anticipated to provide a net benefit to habitat for non-listed special status species by reducing the magnitude of existing indirect impacts that affect adjacent habitat. Therefore, cumulative impacts to this species would not be considered adverse.

Chapter 5 – Conclusions and Regulatory Determinations

The potential federal and state regulatory requirements for the proposed project are discussed below.

5.1 Federal Endangered Species Act Consultation Summary

As the project could affect federally listed species (i.e., LBVI), the FHWA, as the federal lead agency, in conjunction with Caltrans, must undergo a Section 7 consultation with the USFWS.

5.2 Essential Fish Habitat Consultation Summary

No fish or essential fish habitat are present within the BSA.

5.3 California Endangered Species Act Consultation Summary

The state-listed LBVI was detected during focused surveys in 2018. No other state-listed species have reasonable potential to occur within the BSA. The project would require a consistency determination (Section 2080.1 of the California Fish and Game Code) for take of state-listed LBVI.

5.4 Wetlands and Other Waters Coordination Summary

A jurisdictional wetland delineation conducted in July 2019 and March 2020 resulted in the identification of jurisdictional wetlands and waters within the proposed project area. As the proposed project would result in impacts to resources under the jurisdiction of the USACE, RWQCB, and CDFW, and the following permits/approvals would be required: A 404 Nationwide Permit verification (#14 Linear Transportation Crossing and/or #27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities) from the USACE, a 401 Water Quality Certification from the RWQCB, and a Streambed Alteration Agreement from the CDFW. Prior to project construction, all required approvals/verifications from the USACE, CDFW, and RWQCB would be obtained.

5.5 Invasive Species

In accordance with E.O. 13112, the proposed project would not result in the introduction or spread of invasive wildlife or plant species. The proposed project would involve construction of a bridge to replace an existing culvert and would not involve landscape plantings. Temporarily impacted areas would be restored with native species.

Chapter 6 – References

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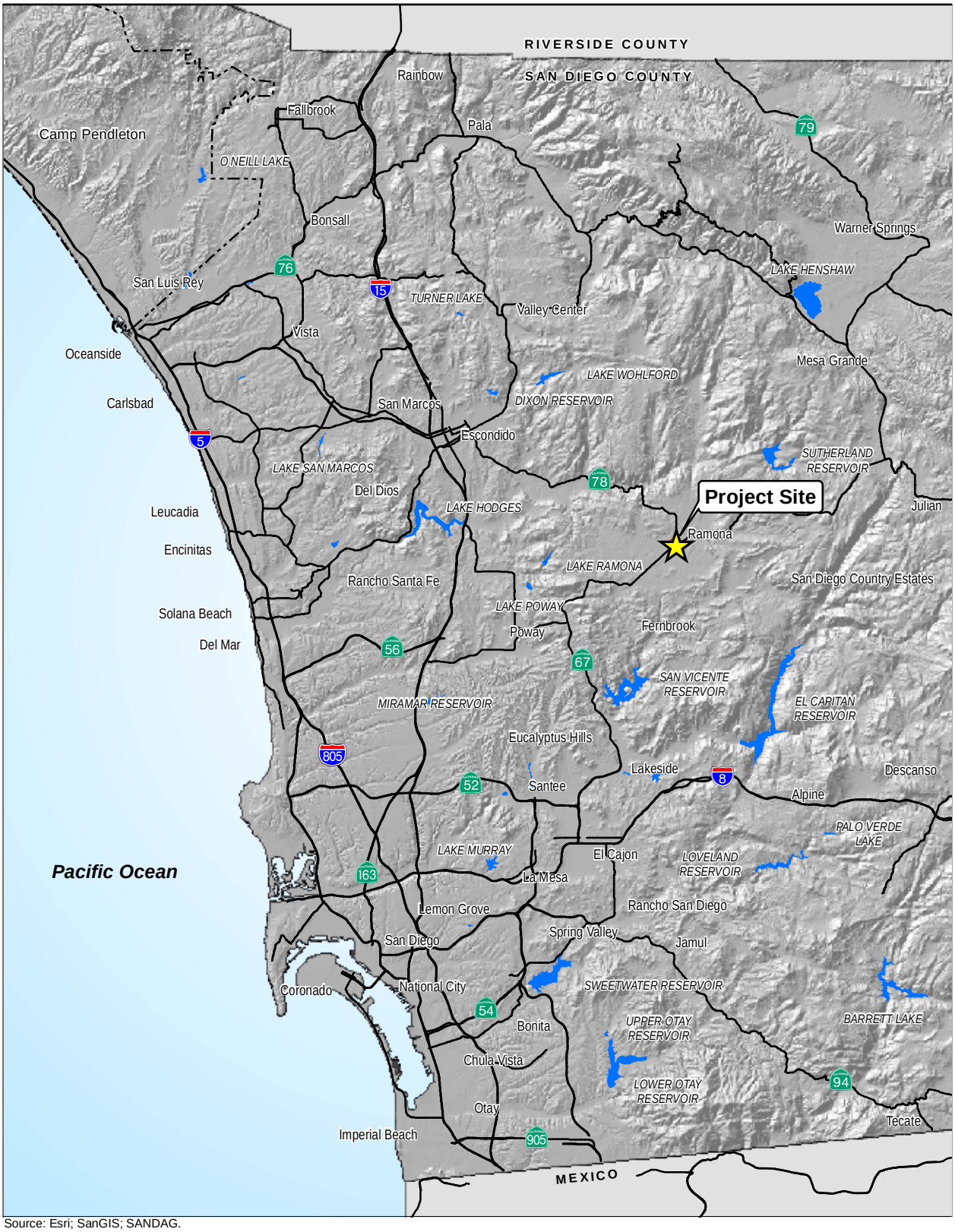
Appendix A

Project Map Figures



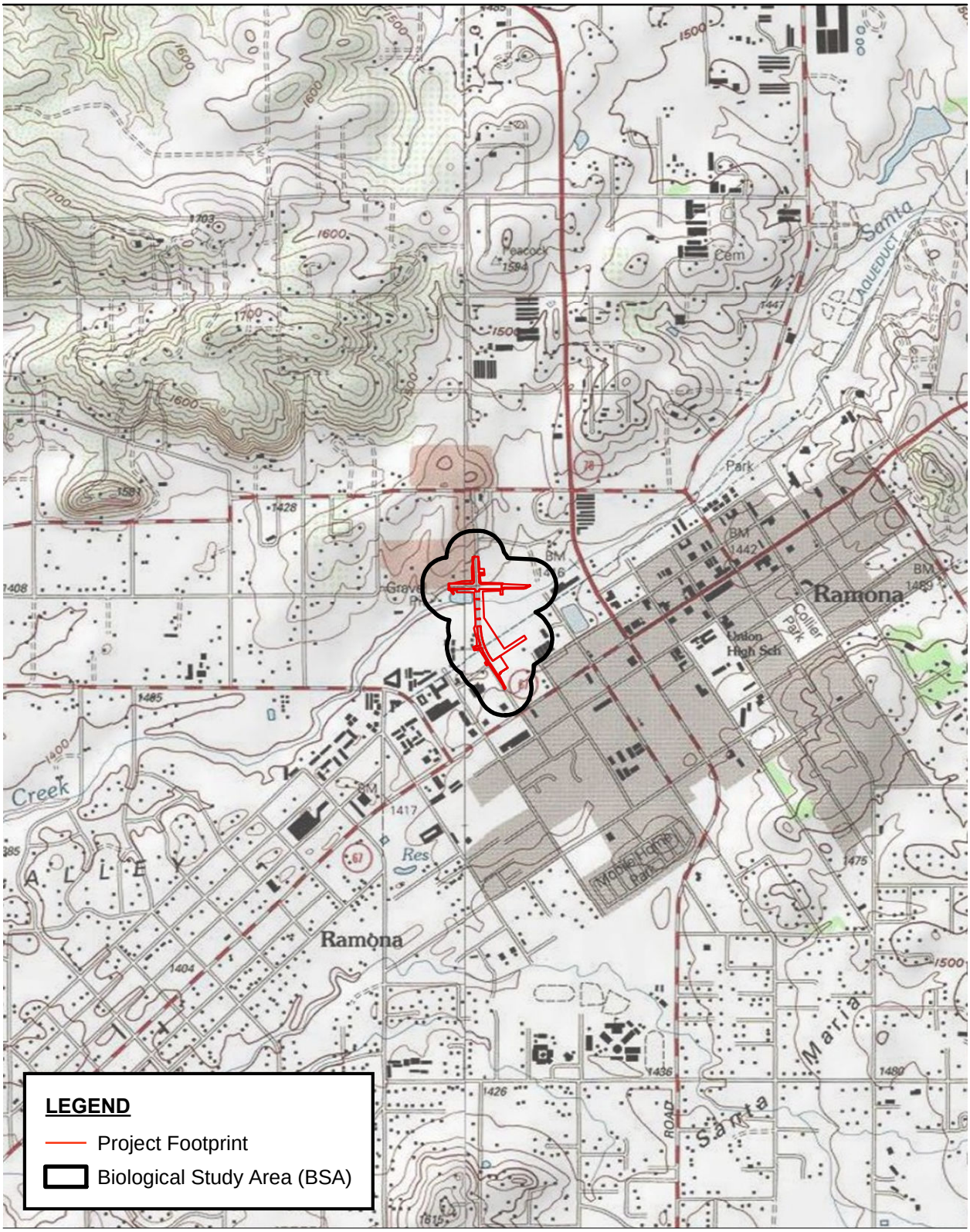
Source: Esri; SanGIS; SANDAG.

8 4 0 8 Miles

Scale: 1:506,880; 1 inch = 8 miles

Figure 1
Regional Map

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\Bio\NES\Fig1_Regional.mxd, 7/16/2018, augellop



Source: USGS 7.5' Quadrangle San Pasqual, Calif 1984, Ramona, Calif. 1985; Esri, Copyright:© 2013 National Geographic Society, i-cubed

2,000 1,000 0 2,000 Feet

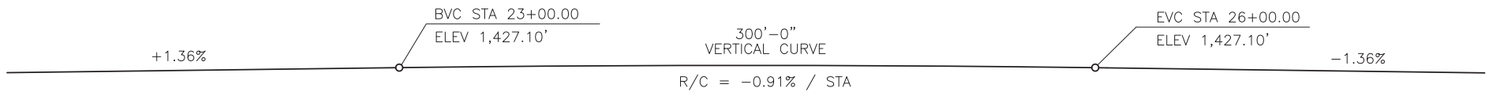
Scale: 1:24,000; 1 inch = 2,000 feet

Figure 2
Vicinity Map

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\Bio\NES\Fig2_VicinityMap.mxd, 11/26/2018, daniel.arellano

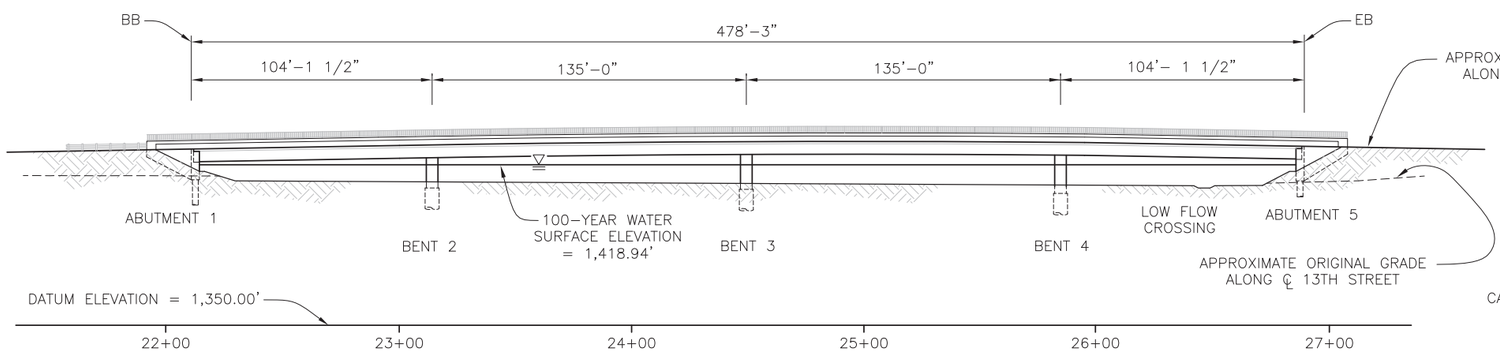
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

-1 0 1 2 3 4 5 6 7 8 9 10



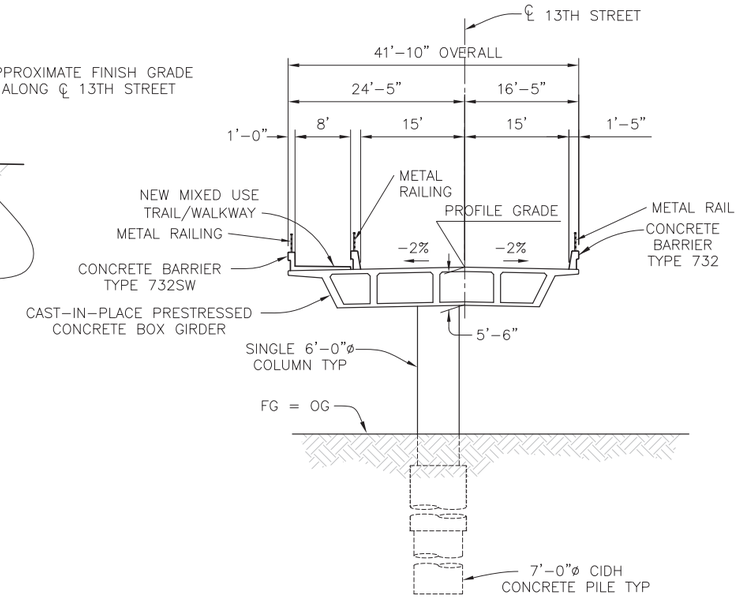
PROFILE GRADE

NO SCALE



ELEVATION

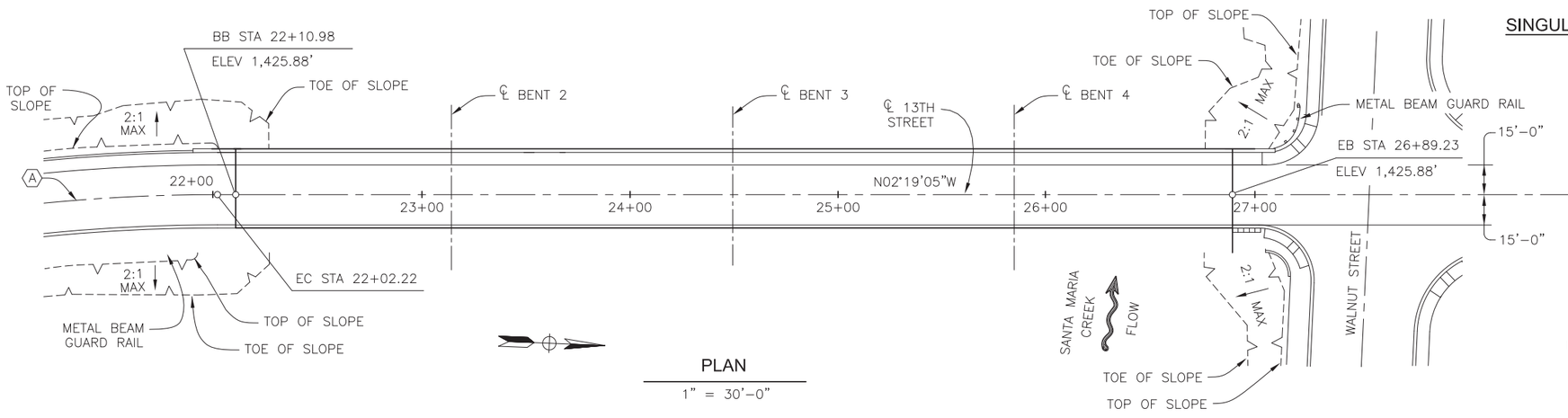
1" = 30'–0"



SINGULAR COLUMN BENT BRIDGE TYPICAL SECTION

1" = 10'–0"

CURVE DATA (A)
R = 850.00'
△ = 30°30'36"
L = 452.62'



PLAN

1" = 30'–0"

NOTES:

1. FOR "INDEX TO PLANS", GENERAL NOTES", AND "STANDARD PLANS", SEE "INDEX TO PLANS" SHEET.
2. FOR HYDROLOGIC SUMMARY, SEE "FOUNDATION PLAN" SHEET.

PLANS	BY	DATE
DESIGNED		
CHECKED		

REGISTERED PROFESSIONAL ENGINEER
SAMSON ENGEDA
No. 52241
Exp. 12–30–20
CIVIL
STATE OF CALIFORNIA

5500 OVERLAND AVE SUITE 301
SAN DIEGO, CALIFORNIA 92123

REGISTERED CIVIL ENGINEER _____ DATE _____

70% SUBMITTAL - NOT FOR CONSTRUCTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
5500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295

REVISIONS	BY	APPROVED	DATE

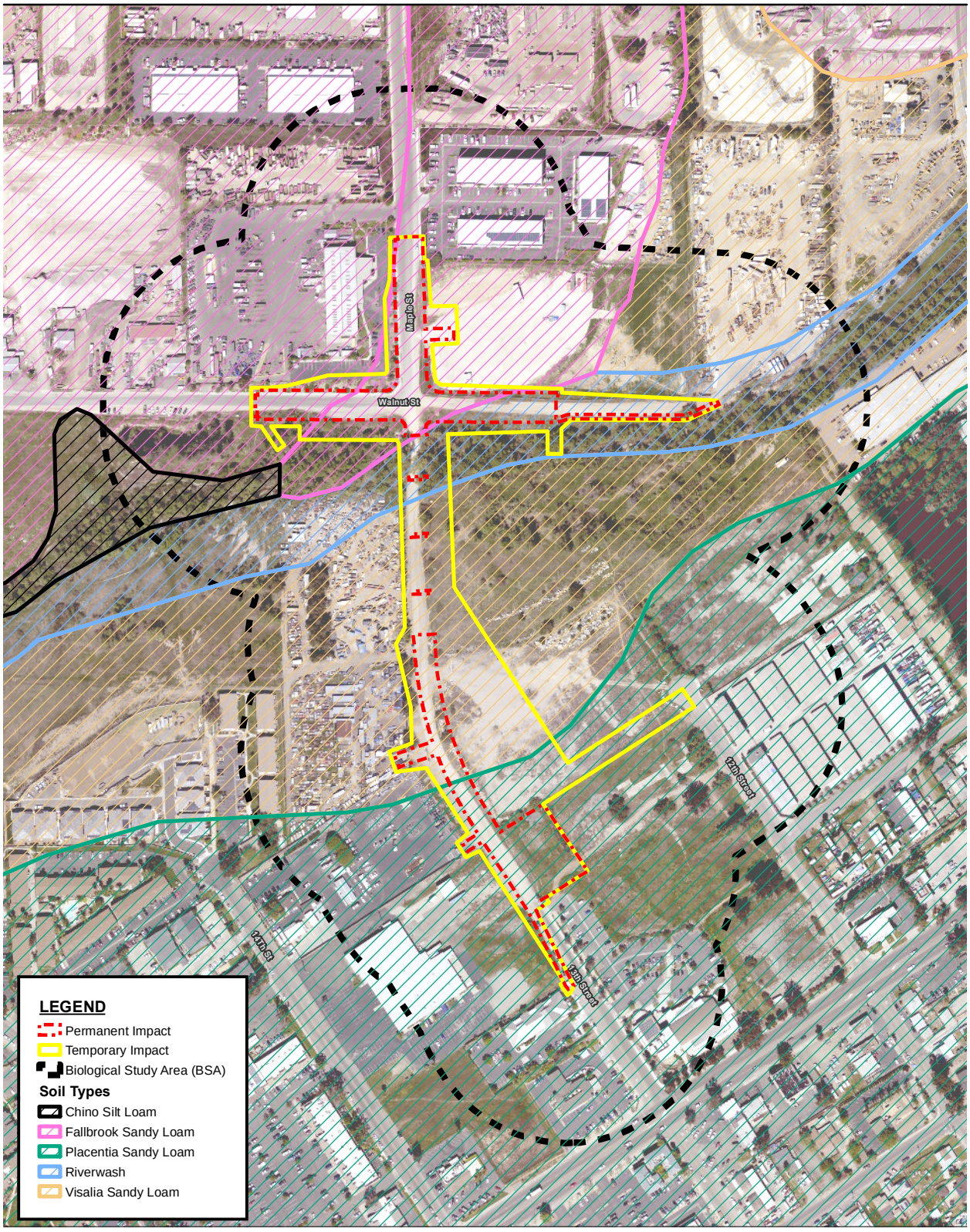
COORDINATE INDEX
XXXX N. XXXX E.
CONST. COMPL. _____
FIELD REVISIONS _____

13TH STREET BRIDGE OVER
SANTA MARIA CREEK

CIP BOX GIRDER - ALT 2

SCALE: HOR. NOTED VERT. NOTED
W.A. XXXX R.S. XXXX
SHEET 31 OF 54 SHEETS

Figure 3
Project Plans



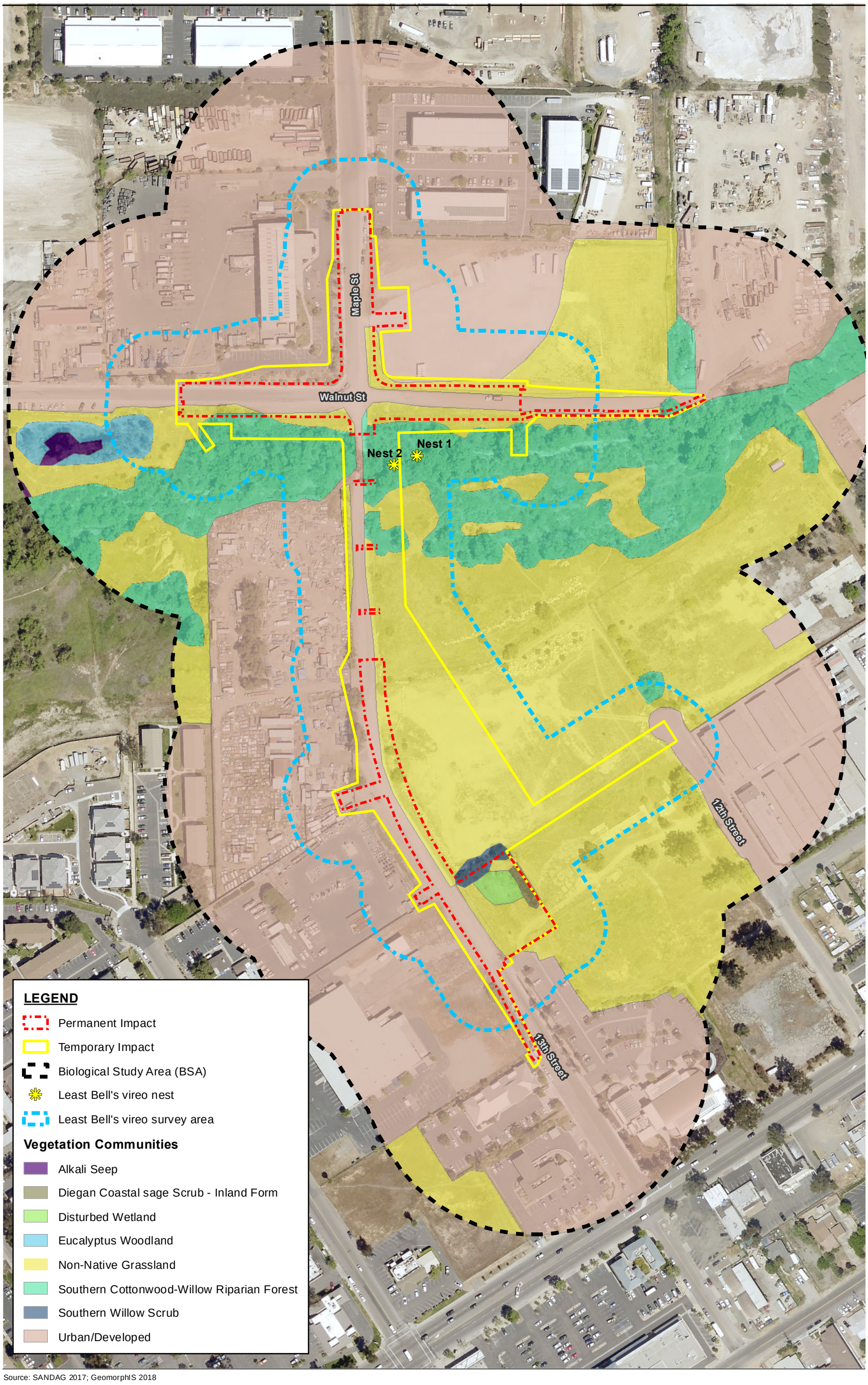
Source: SANDAG 2017; Esri 2009.; NRCS 2007

350 175 0 350 Feet

Scale: 1:4,200; 1 inch = 350 feet

Figure 4
Soils

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\Bio\NES\Fig3_Soils.mxd, 5/15/2020, augellop



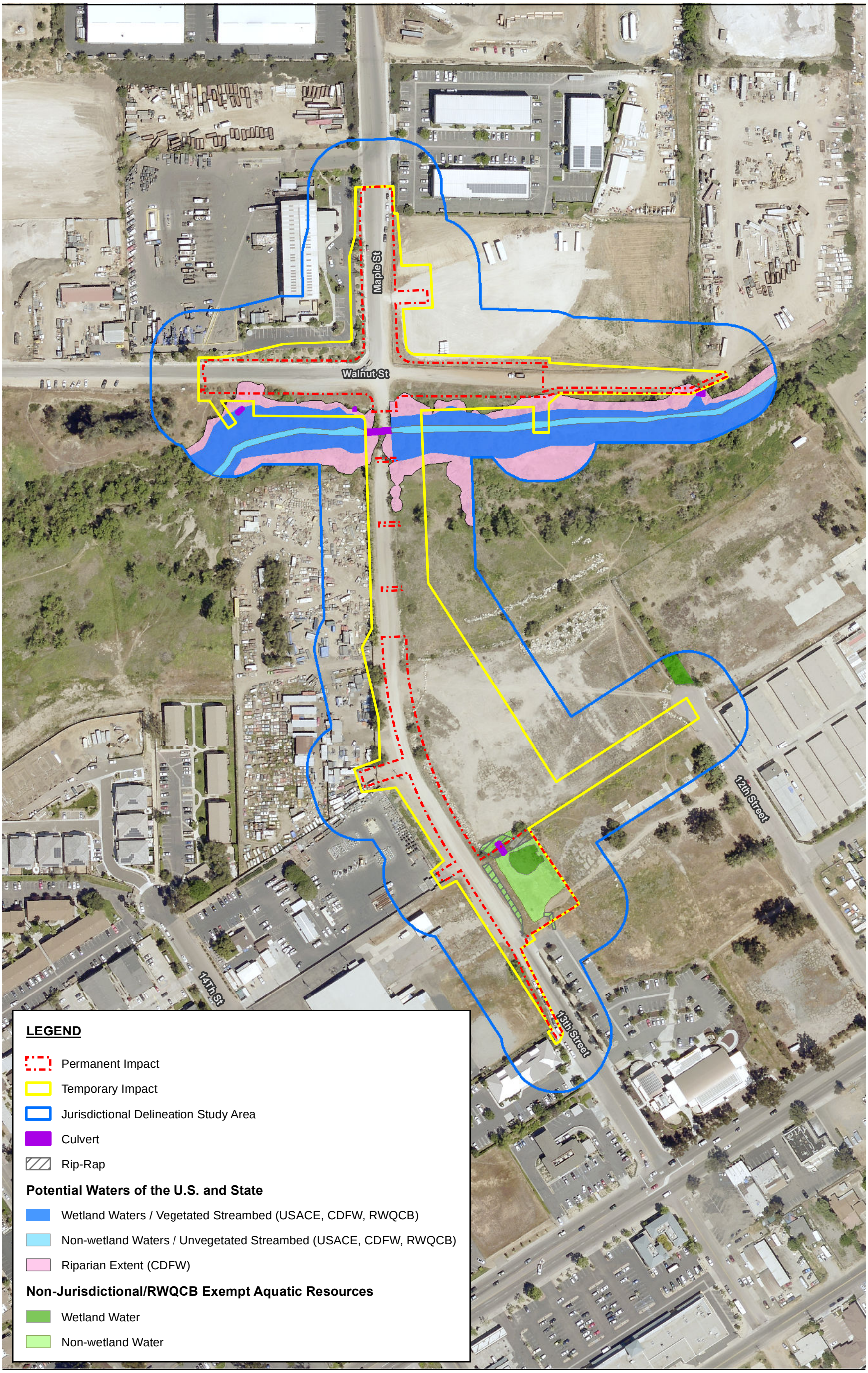
Source: SANDAG 2017; GeomorphIS 2018

200 100 0 200 Feet

Scale: 1:2,400; 1 inch = 200 feet

Figure 5
Biological Resources Map

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\Bio\NES\Fig4_BiologicalResources_1.mxd, 5/21/2020, AnguianoM



Source: SANDAG 2017

200 100 0 200 Feet

Scale: 1:2,400; 1 inch = 200 feet

Figure 6
Jurisdictional Waters and Wetlands

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\Bio\NES\Fig5_JD_waters_wetlands.mxd, 5/15/2020, augellop

Source: SANDAG 2017

225 112.5 0 225 Feet

Scale: 1:2,700; 1 inch = 225 feet

Figure 7
Rare Plant Map

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\Bio\NES\Fig6_RarePlant.mxd, 5/15/2020, augellop

Appendix B

Site Photographs

APPENDIX B. PHOTOGRAPHS FROM THE 13TH STREET BRIDGE PROJECT

Source of Photographs: ICF International

Photo 1 – View of the cottonwood-willow riparian forest habitat and least Bell's vireo survey area, facing southwest.

Photo 2 – View of Santa Maria Creek from the 13th Street crossing, facing west (downstream).

APPENDIX B. PHOTOGRAPHS FROM THE 13TH STREET BRIDGE PROJECT

Source of Photographs: ICF International

Photo 3 – View of Santa Maria Creek from the 13th Street crossing, facing east (upstream).

Photo 4 – View of the 13th Street crossing of Santa Maria Creek, facing south.

APPENDIX B. PHOTOGRAPHS FROM THE 13TH STREET BRIDGE PROJECT

Source of Photographs: ICF International

Photo 5 – View of 13th Street, facing north.

Photo 6 – View of the non-native grassland habitat, facing southeast.

APPENDIX B. PHOTOGRAPHS FROM THE 13TH STREET BRIDGE PROJECT
Source of Photographs: ICF International

Photo 7 – View of the settling basin adjacent to the library parking lot, facing south.

Photo 8 – View of 13th Street and adjacent disturbed habitat, facing northeast.

APPENDIX B. PHOTOGRAPHS FROM THE 13TH STREET BRIDGE PROJECT

Source of Photographs: ICF International

Appendix C

Aquatic Resource Delineation Report

AECOM Imagine it. Delivered.

13th Street Bridge, Ramona, California Aquatic Resource Delineation Report

Prepared for:

County of San Diego, Department of Public Works

Project Applicant:
County of San Diego Department of Public Works
Gail Getz
Environmental Services Unit
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(Located in Appendix A)

1. SUMMARY/PURPOSE

The County of San Diego Department of Public Works, in cooperation with the California Department of Transportation, proposes the 13th Street Bridge Project (proposed Project), which includes construction of a bridge where 13th Street crosses Santa Maria Creek, in the unincorporated community of Ramona, in San Diego County, California. The project segment of 13th Street/Maple Street is a dirt roadway, with gravel at the Santa Maria Creek culvert crossing. The existing, undersized corrugated steel culvert does not have sufficient capacity to convey the creek water during storm events; flooding at this crossing makes the roadway impassable for motor vehicles and pedestrians during portions of the rainy season. The objective of the project is to provide an adequate and safe crossing that allows for the conveyance of water from a 100-year storm event. The project would include replacement of the existing culvert crossing with a bridge designed to meet current federal standards, with roadway improvements along 13th Street/Maple Street and Walnut Street, and the addition of stormwater conveyance and treatment features that would ultimately discharge into Santa Maria Creek.

Wetland and non-wetland waters (e.g., streams, rivers, ephemeral drainages) and associated riparian corridors occurring within California may be regulated under federal and state laws. AECOM conducted an aquatic resource delineation for the proposed Project to determine the extent of aquatic resources under the jurisdictional purview of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The purpose of this report is to present the results of this delineation.

1.1 PROJECT SETTING/LOCATION

The proposed Project is located within the unincorporated community of Ramona in San Diego County, California (Figures 1 and 2; see Appendix A for all figures referenced herein). The project area includes a section of 13th Street that begins just north of the Ramona Library on Main Street and extends to the north where it terminates adjacent to the southwestern boundary of 405 North Maple Street. The site also includes an approximately 800-foot-long, east-west–trending section of road on Walnut Street, just north of Santa Maria Creek. The project area includes both paved and unpaved sections of road.

North of Santa Maria Creek, the proposed Project area slopes south towards the creek. South of the Santa Maria Creek, the proposed Project area slopes north towards the creek. The elevation for the majority of the Site ranges between 1,419 feet above mean sea level (amsl) and 1,426 feet amsl. The proposed Project area is highly disturbed from foot traffic and traversed by multiple pedestrian footpaths.

To access the proposed Project, take Highway 78 then turn right onto Highway 67. Turn right onto 13th Street and the project begins in approximately 0.1 mile at the end of the asphalt. The center point of the Site is located at Latitude 33.043095°and Longitude -116.875291°.

PART A

2. AQUATIC RESOURCE DELINEATION METHODOLOGY

The aquatic resource delineation included two components: desktop review and field assessment.

2.1 DESKTOP METHODS

Prior to the field investigation, a desktop review was conducted to determine the existing conditions and historical uses of the study area and the surrounding area. The following resources and previous studies were utilized:

- Natural Resources Conservation Service Soil Survey Mapping (USDA-NRCS 2016)
- Hydric soils: Hydric Soils – Criteria and 2014 State List for California (USDA-NRCS 2014); Field Indicators of Hydric Soils in the United States, version 8.2 (USDA-NRCS 2018)
- National Wetlands Inventory (NWI) (USFWS 2018)
- Watershed Boundary Dataset accessed via WATERS GeoViewer (USGS 2018)
- National Hydrography Dataset (NHD) accessed via WATERS GeoViewer (USGS 2018)
- Historical Aerial Imagery (1994 – 2019) (Google 2019)
- Wetland (WETS) Climate Tables (NOAA 2019)
- San Diego Basin Plan (SDRWQCB 2016)
- *The Ecology of Southern California Vernal Pools: A Community Profile* (Zedler 1987)
- *Ramona Vernal Pool Conservation Study, Ramona, California* (TAIC and EDAW 2005)
- 2018 13th Street Bridge Project, Listed Branchiopod Species 90-Day Report of Protocol Wet-Season Surveys, Ramona, San Diego County, California (AECOM 2018)
- 13th Street Bridge Project Natural Environment Study (AECOM 2020)
- Topographic Maps (2 foot contours)

2.2 FIELD ASSESSMENT METHODS

On July 19, 2019 and March 20, 2020, AECOM biologists Keely Craig and Brenda McMillan conducted an aquatic resource delineation for the proposed Project. The delineation field methods described below were conducted within the proposed Project limits and a surrounding 100-foot buffer (i.e., study area). Aquatic features can include both wetlands and non-wetland waters. To be considered a wetland, all three parameters (wetland hydrology, hydric soils, and dominance of wetland vegetation) outlined in the 2008 USACE Arid West Supplement must be met (USACE 2008). USACE defines non-wetland waters based on the presence of an ordinary high water mark.[1] Aquatic features that exhibit only one of the three parameters required to qualify as a

[1] Federal regulations (33 Code of Federal Regulations Part 328.3(e)) define the "ordinary high water mark" (OHWM) as "that 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 and debris, or other appropriate means that consider the characteristics of the surrounding areas."

wetland by USACE may nonetheless be considered wetlands by RWQCB and CDFW. As relevant to the proposed Project, this is discussed further below.

Aquatic features were assessed to determine whether they meet the definition of a Waters of the United States (WOTUS) in 33 Code of Federal Regulations [CFR] Part 328[2]. A case-specific significant nexus test[3] was not warranted for the aquatic features within the proposed Project and is not discussed further in this report. The delineation and vegetation classification were conducted in accordance with the guidance and reference documents listed below:

- *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (Lichvar and McColley 2008)
- Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Curtis and Lichvar 2010)
- Clean Water Act Jurisdiction Following the Supreme Court Decision in Rapanos v. U.S. and Carabell v. U.S. (USEPA 2008)
- *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (*USACE 2008)
- *Field Indicators of Hydric Soils in the United States*, version 8.2 (USDA-NRCS 2018)
- National Wetland Plant List Indicator Rating Definitions. (Lichvar et al. 2016)
- *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008)

Prior floral surveys and protocol-level surveys for fairy shrimp within the Study Area had mapped features that ponded water long enough to meet the USFWS criteria to be potential fairy shrimp habitat (Figure 3; fairy shrimp surveys were negative). The potential basins/depressions mapped during the fairy shrimp surveys were not mapped based on formal field wetland delineations per the USACE agency guidelines noted above. Each of the features previously mapped during fairy shrimp surveys, was surveyed during the July 2019 and March 2020 field visits to determine whether these features meet the criteria for wetlands that would be regulated by RWQCB, CDFW, and/or USACE. If the temporarily ponded area did not support wetland vegetation, hydric soils, or wetland hydrology, it was not considered a wetland or a vernal pool. For this Aquatic Resource Delineation Report, the Data Forms from the 2008 USACE Arid West Supplement were used to document the presence/absence of wetlands. Representative wetland sample points were taken at four of these temporarily ponded areas.

An Apple iPad, Arrow 1 Trimble unit (<1 meter accuracy), and the ESRI Collector application (ESRI 2019) were used to collect data to map the boundaries of the aquatic resources present.

[2]On December 2018, the USEPA and USACE issued a prepublication document, signed by both agencies, of a proposed rule revising the definition of "waters of the United States" to clarify federal authority under the Clean Water Act taking a more “common sense” approach. This definition would remove ephemeral features from CWA Section 404 jurisdiction therefore reducing the protections in Southern California. The proposed definition replaces the current one. As of April 21, 2020, the new definition has an implementation date of June 22,2020.

[3] Significant nexus is described in the U.S. Environmental Protection Agency’s 2008 Guidance in Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision *in Rapanos v. United States and Carabell v. United States* (USEPA 2008).

Mapped polygons were visually adjusted, as needed, to match the resources as seen on the aerial imagery, the topographic data, and in the field.

3. RESULTS

The results of the desktop analyses, recent floral and faunal surveys conducted for the proposed Project, and the jurisdictional delineation are presented below.

3.1 HYDROLOGY AND RAINFALL

The proposed Project is located within the San Diego watershed (HUC 8 = 18070304). Further, it is located within the San Dieguito Hydrologic Unit, Santa Maria Valley Hydrologic Area and within the Ramona hydrological subarea. Figure 4 shows the location of the proposed Project within the watershed. A named intermittent water, Santa Maria Creek, flows east to west within the study area. Edge effect has significantly altered the hydrology in downtown Ramona, as well as the project area. The hydrological connect between the historical vernal pool complexes that are known to have existed pre-development is thought to be no longer functioning (TAIC and EDAW 2005). North of Santa Maria Creek, the study area slopes south towards the creek. South of Santa Maria Creek, the study area slopes north towards the creek. Aerial photos show the flood cycle of Santa Maria Creek; similarly, inundation and saturation are visible onsite on historical Google Earth images (see Appendix C, Aerial Photographs).

Santa Maria Creek flows to Santa Ysabel Creek, which ultimately flows to the San Dieguito River, a Traditionally Navigable Water (TNW) (USACE 2019). Santa Maria creek is considered a relatively permanent water and receives urban runoff from several Municipal Separate Storm Sewer System (MS4) outfall culverts within the study area. The San Dieguito River is on the Clean Water Act (CWA) Section 303(d) list of impaired waterbodies based on levels of enterococcus, fecal coliform, nitrogen, phosphorus, total dissolved solids, and toxicity. Per the San Diego Basin Plan, the beneficial uses for the Santa Maria Creek include municipal and domestic water supply (MUN), agriculture supply (AGR), industrial service supply (IND), industrial process supply (PROC), water contact recreation (REC1), noncontact water recreation (REC2), warm freshwater habitat (WARM), and wildlife habitat (WILD) (SDRWQCB 2016). The National Wetland Inventory shows only one intermittent stream (R4SBC), Santa Maria Creek, with no other aquatic features mapped within the study area (USFWS 2018).

Based on weather data collected at Ramona Airport Weather Station between 1998 and 2019, the average temperature within the study area is 60.9 degrees Fahrenheit (°F) with a mean low of 45.3°F and a mean high of 76.5°F. Average precipitation within the area of Ramona over the past 20 years is 9.78 inches (NOAA 2019). The majority of rain occurs between October through April. The Wetlands (WETS) Climate Table for the Ramona Airport Weather Station (nearest weather station to the Project) is presented as Table 1.

Table 1
WETS Table for Ramona Airport Weather Station-Ramona, CA.
(Data are representative of years 1998 through 2018.)

Month	Avg Max Temp (F)	Avg Min Temp (F)	Avg Mean Temp (F)	Avg Precip (in)	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more
Jan	66.8	35.4	51.1	2.44	0.78	2.91	4
Feb	65.9	36.8	51.3	–	–	–	–
Mar	68.5	39	53.8	1.3	0.58	1.59	3
Apr	71.3	41.7	56.5	1.02	0.45	1.21	3
May	75.9	47.8	61.9	0.35	0.1	0.36	1
Jun	83.3	51.6	67.4	0.02	0	0.02	0
Jul	89.1	57.4	73.2	0.18	0	0.07	0
Aug	90.4	57.5	74	0.06	0.02	0.06	0
Sep	88	54.3	71.1	0.17	0	0.16	0
Oct	80	47.8	63.9	0.82	0.15	0.7	1
Nov	72.5	39.9	56.2	1.08	0.49	1.28	2
Dec	65.7	34.8	50.2	2.34	0.72	2.78	4
Annual Avg	76.5	45.3	60.9	0.89	–	–	

Source: NOAA 2019- Some results missing due to lack of data available.

The amount of rainfall recorded in Ramona between November 2018 and April 2019 is presented in Table 2. During the 2018–2019 winter and spring months, approximately 17.99 inches fell, well above the average rainfall for that period in the average year. The high precipitation received during that year provides a favorable setting for the field investigations of the study area.

Table 2
Rainfall Data from November 2018 through April 2019 as Recorded at the Ramona Airport Weather Station

Month	Observed Rainfall (inches)
November 2018	1.34
December 2018	2.70
January 2019	3.21
February 2019	8.77
March 2019	1.74
April 2019	0.23
TOTAL	**17.99**

Source: NOAA 2019

3.2 SOILS

Soil survey mapping shows the soils within the Study Area as primarily riverwash, Visalia sandy loam, 0-2% slopes (VaA); Placentia sandy loam, 2 to 9% slopes, warm MAAT, MLRA 19 (PeC); and Fallbrook sandy loam, 15 to 30 percent slopes, eroded (Figure 5). Both VaA and PeC soil

types are classified as a hydric soil on the National Hydric Soils List (USDA-NRCS 2014) and are commonly associated with vernal pools in Ramona (TAIC and EDAW 2005).

Historical Google Earth aerial photography shows continual disturbance throughout the entire study area since it is surrounded by development (see Appendix C, Aerial Photographs). Several walking paths throughout the study area have been present and stayed the same throughout the historical imagery.

3.3 VEGETATION AND VERNAL POOL FLORAL/FAUNAL SPECIES

The vegetation present within the study area is typical for a disturbed riparian/non-native grassland setting. Six vegetation communities and two land cover types were mapped within the Project site and a surrounding 350-foot buffer area (AECOM 2020). The cover types that occur within the Study Area are listed in Table 3 and depicted in Figure 6.

Table 3
Vegetation Communities within the Study Area

Vegetation Communities/ Land Cover Types (Oberbauer et al. 2008)
Riparian and Wetlands
Southern Cottonwood-Willow Riparian Forest
Southern Willow Scrub
Alkali Seep
Disturbed Wetland
Uplands
Diegan Coastal Sage Scrub – Inland Form
Non-Native Grassland
Other Cover Types
Eucalyptus Woodland
Urban/Developed

Per the 2018 vegetation mapping, the riparian habitat along Santa Maria Creek was characterized as southern cottonwood-willow riparian forest and the manufactured stormwater basin (Basin 1) that lies southeast of 13th Street/Maple Street and south of Santa Maria creek was characterized as disturbed wetland with patches of southern willow scrub neighboring the basin.

Note that numerous seasonally ponded areas were recorded as occurring in the study area, primarily southeast of the creek and Maple street, within the gravel lot; others were recorded alongside the roadways that traverse the study area. These features were considered part of the non-native grassland habitat and urban/developed cover within the study area and did not warrant mapping as a separate cover type.

Twenty-two of the seasonally ponded areas within the study area were considered potential fairy shrimp habitat, of which 19 met the wet season sampling criteria (contained at least 3 centimeters of water 24 hours after a rain event and remained inundated for at least 7 days). These 19 basins were sampled for listed vernal pool branchiopod species January through March 2018 by AECOM. Then, in May 2018, dry season sampling within the basins was conducted by AECOM (AECOM 2018). Previous fairy shrimp surveys conducted by ICF International during 2012 and

2013 coincided with the current Study Area. No listed or special-status vernal pool wildlife species were detected within the onsite basins during these surveys, and the study area does not support designated critical habitat for listed fairy shrimp species.

The *Ramona Vernal Pool Conservation Study* (TAIC and EDAW 2005) documents the presence of seasonal ponds in several parcels in downtown Ramona. In this study, pools are documented in the parcel southwest of 13th Street and A Street as well as in the parcel two blocks south of the proposed Project site (i.e., between B Street and Main Street); however, no vernal pools were documented as occurring within the study area.

The City of San Diego Vernal Pool Habitat Conservation Plan notes that a seasonally flooded depression is considered a vernal pool when it contains at least one or more indicator species (City of San Diego 2017). An initial floral survey of the basins onsite was conducted by AECOM as part of the 2018 wet season fairy shrimp surveys noted above. A late season visit to the study area to check floral conditions was conducted July 19, 2019. Additionally, a growing season survey was conducted in March 2020. Regionally, 2019 was an important year for vernal pool surveys both for plants and wildlife due to the amount of rain received and the duration of ponding. Spring and early summer 2019 were unseasonably cool resulting in an extended flowering season throughout San Diego County. Vernal pool plant species were still identifiable by flowers and fruits and vegetative features on the July 19, 2019 visit.

The results of the recent floral and faunal species surveys conducted by AECOM for the basins onsite are summarized in Table 4. As noted above, the large Basin 1 that lies southeast of 13th Street and A Street is manufactured. Except for Basin 1, all have shallow topography. Vernal pool indicator plants and/or invertebrate species were observed in three basins; see other notes in Table 4. None of the basins, including the three with indicator species, are considered a vernal pool.

Table 4
Basins with Vernal Pool Indicator Species Detected Onsite or within Study Area

Basin ID[1]	Indicator Plant Species Observed (2018 and/or 2019)[2] [3, 4]	Fairy Shrimp Wet Season Survey Indicator Species Observed (2018)	Vernal Pool Determination
1	*Crassula aquatica*, OBL (2018, 2019) *Eleocharis macrostachya* (2018, 2019) *Lythrum hyssopifolium*, OBL (2018, 2019) *Marsilea vestita*, OBL (2019)	Copepods (*Acanthocyclops* sp.)	No. This disturbed wetland supports a small number of vernal pool species but does not function like a vernal pool.
19	*Juncus bufonius* (2019) *Lythrum hyssopifolium*, OBL (2019)	–	No, the indicator plant species were sparse (fewer than five plants observed).
24	*Juncus bufonius* (2019) *Lythrum hyssopifolium*, OBL (2019)	–	No, the indicator plant species were sparse (fewer than five plants observed).

[1] Basins 3, 4, 5, and 14 were part of a previous study that included areas outside of the current study area; these four basins are not considered herein. No vernal pool indicator species were detected in Basins 2, 6–13, 15–18, 20–23, and 25–26; a representative wetland datasheet is included in Appendix D and these basins are not discussed further herein.

[2] Because vernal pool plants and animals are so restricted to vernal pool ecosystems, presence or absence of certain species is an indication that the seasonal pond is a vernal pool. The floral and faunal species listed above are considered vernal pool indicator species (City of San Diego 2017).

[3] Obligate (OBL) plant species occur almost always (estimated probability >99%) under natural conditions in wetlands; Facultative Wetland (FACW) plant species usually occur in wetlands (estimated probability 67% to 99%)

but occasionally are found in non-wetlands; Facultative (FAC) plant species are equally likely to occur in wetlands or non-wetlands (estimated probability 34% to 66%).
[4] An area is determined to support hydrophytic vegetation if more than 50% of the dominant species are listed as Obligate Wetland (OBL), Facultative Wetland (FACW), or Facultative (FAC) species on the 2016 National Wetland Plant List (Arid West) (Lichvar et al. 2016).

3.4 AQUATIC RESOURCE DELINEATION FIELD RESULTS

AECOM delineated 3.94 acres of wetlands and other waters within the Study Area, including 1.94 acres of wetland waters. As previously noted, in accordance with the Arid West Supplement (USACE 2008), a feature must meet three parameters—wetland hydrology, hydric soils, and dominance of wetland vegetation—to qualify as a wetland. Table 5 below presents the jurisdictional resources present within the Study Area by feature type. Aquatic resources delineated within the Study Area are also shown in Figure 7. Approximately 111 photos were taken within the study area and a photolog with map are included in Appendix B.

Table 5
Aquatic Resources within the Study Area

Feature Name *Vegetation community/Feature Width*	**Classification (Cowardin)**	**Non-wetland (acres)**	**Linear Feet[1]**	**Wetland (acres)**	**Total (acres)**
Santa Maria Creek-(Streambed) *Southern Cottonwood Willow Riparian Forest/ 8 to 22 ft*	Riverine-Intermittent-Streambed-Seasonally Flooded	0.33	1,239	1.82	**2.15**
Santa Maria Creek -Streambanks & Riparian Extent *Southern Cottonwood Willow Riparian Forest*	Riverine-Intermittent-Streambed-Seasonally Flooded	1.35	1,239	0	**1.35**
Stormwater Basin *Non-native grassland/ Disturbed Wetland/102 ft*	(Not Applicable-Artificial)	0.28	N/A	0.07	**0.35**
Stormwater Detention Channel 1 *Non-native Grassland/ 10 ft*	(Not Applicable-Artificial)	0.04	162		**0.04**
Stormwater Detention Channel 2 *Southern Cottonwood Willow Riparian Forest/ 30 ft*	(Not Applicable-Artificial)	0	70	0.05	**0.04**
Total		**2.00**	**1,471**	**1.94**	**3.94**

[1]Linear feet are provided only for applicable non-wetland features, as required. Santa Maria creek is counted twice in this table to differentiate between streambed and banks; however, the linear feet is the same for both portions. This is only counted once in the total.

3.4.1 Stormwater Detention Basin

A portion of Basin 1 is a disturbed wetland as it met all three wetland parameters to qualify as a wetland, however, this feature is an engineered stormwater detention facility designed to drain stormwater runoff from both the road and the Ramona Library parking lot. It was dominated by *Rumex crispis* (FAC) with 15% coverage, and *Artemisia douglasiana* (FACU) and *Polypogon monspeliensis (FACW)* with 5% coverage each. This meets the wetland vegetation dominance test and has a prevalence index of 2.83 (see Appendix D, Wetland Sample Point 3 Datasheet). Basin 1 exhibited strong indicators of wetland hydrology based on the presence of aquatic

invertebrates, in addition to the observation of consistent inundation for multiple weeks during the 2019 and 2020 rainy season. Subsurface investigations were conducted within Basin 1 and the soils exhibited the depleted matrix (F3) hydric soil indicator.

Other areas within the basin were non-wetland waters dominated by non-native grasses such as *Bromus madritensis (UPL)* with 40% cover and *Salix gooddingii* (*FACW) at 25%.* This vegetation community shift, along with the change in elevation, delineated the line between wetland and non-wetland waters in the basin. There was no evidence that this stormwater detention basin connects to Santa Maria Creek as the basin was designed to capture the street and runoff from the Ramona Library parking lot and prevent it from reaching the creek. If the basin were to overflow, water would flow to the east towards the location of Wetland Sample point 2 rather than along 13th Street/Maple Street towards Santa Maria Creek.

3.4.2 Stormwater Detention Channel 1

AECOM biologists surveyed a riprap stormwater detention channel facility that feeds into Basin 1. The feature failed to meet all three parameters to be considered a wetland. The feature was dominated by *Ambrosia psilostachya* (FACU) at 60% cover and *Bromus madritensis* (UPL) at 25% cover. The feature also did not exhibit an OHWM. A datasheet is provided for this feature in Appendix D.

3.4.3 Stormwater Detention Channel 2

AECOM biologists visually mapped an observed potential wetland within a storm drain channel on the adjacent parcel north of the cul-de-sac on 12th street. The vegetation community within the channel is southern cottonwood willow riparian forest. Wetland sample points were not taken for this location as it is outside of proposed project disturbance limits; however, all potential aquatic resources found within the survey area were mapped. This channel is not discussed further in this report.

3.4.4 Santa Maria Creek

Santa Maria Creek flows through the northern portion of the Study Area. This creek is a typical ephemeral drainage in the arid west that changes physically based on flood cycles and effective discharges. As evident in aerial photos (see Appendix C), vegetation within Santa Maria Creek grows denser during the years between effective discharges; however, as the creek experiences flash flooding or high velocity rain events, the low flow channels shift within the bed and remove the vegetation. Several MS4 outlets release into the creek within the study area. Wetland sample points taken within the creek (outside of the ordinary high water) exhibited all three wetland parameters. There is a clear ordinary high water throughout the creek but in some locations vegetative and other debris have caused blockages that have created an active floodplain and allowed some vegetation to establish in these low terraces. The channel width varies within the creek between 8 feet and 22 feet. There is excessive trash and recently deposited sediment throughout the feature. To map the feature, an active floodplain and ordinary high water was delineated within the bank full channel. Representative datasheets are included in Appendix D.

The extent of bed/banks and riparian canopy of Santa Maria Creek was also delineated. This was mapped to the edge of the drip line of the riparian extent (canopy) or the top of bank where a canopy did not exist. Additionally, some riparian extent on the southeastern side of the creek within the study area was mapped based upon its clear connection to the creek.

Part B

4 JURISDICTIONAL DETERMINATION AND IMPACT ANALYSIS

4.1 PROJECT PURPOSE

The 13th Street crossing at Santa Maria Creek frequently becomes impassable for motor vehicles and pedestrians due to flooding during the rainy season because the existing corrugated metal culvert crossing does not have sufficient capacity to convey the volume of water following storm events. The objective of the proposed Project is to provide an adequate and safe crossing that allows for conveyance of water from 100-year flood events.

4.2 PROJECT DESCRIPTION

The proposed Project consists of improvements to 13th Street/Maple Street between Main Street and Walnut Street and construction of a bridge over Santa Maria Creek to replace the existing undersized corrugated steel culvert. The proposed bridge would be a 4-span cast-in-place pre-stressed, post-tensioned concrete box girder structure, approximately 480-feet long and approximately 42-feet wide with three singular-column bents and two abutments. The bridge and approaches would include two 12-foot travel lanes, 3-foot shoulders on each side, and an approximately 8-foot wide multi-use pathway to accommodate pedestrians, bicyclists, and equestrians. In addition, three bridge barriers with a total width of approximately 4-feet, consisting of two edge deck rails and one pedestrian barrier would be installed to separate pathway users from the travel lane and creek. The pathway across the bridge would connect to the existing southern segment near the Ramona County Library and transition users across the bridge to existing and planned facilities north of the bridge. The grade of 13th Street/Maple Street would be raised approximately 10-feet at the Santa Maria Creek crossing to comply with current Federal Highway Administration requirements.

Storm drain systems are proposed directly to the north and south of the bridge to capture runoff and direct it towards the existing creek. Permeable pavement areas would be incorporated into the project as Green Street features to facilitate meeting water quality requirements and for storm-water management. An existing bio-retention basin located south of the bridge that currently treats stormwater from the library and associated parking lot would be redesigned to continue treating those existing areas in addition to the proposed paved roads south of Santa Maria Creek.

Construction is anticipated to last approximately 12 months and will require the placement of fill within the creek. During the bridge foundation construction, dewatering may be required for the proposed project.

4.3 USACE

4.3.1 Regulatory Setting

Under the CWA Section 404, USACE regulates the discharge of dredged or fill material into any aquatic feature that meets the definition of WOTUS as defined in 33 CFR 328. The U.S. Environmental Protection Agency (USEPA) and USACE published a Final Rule (April 21, 2020) that revises and amends the definition of WOTUS in 33 CFR 328 and specifically excludes ephemeral features (e.g., streams, swales, and pools) from coverage under the Clean Water Act; this new definition is scheduled to become effective June 22. 2020.

Per the USACE Regulatory Guidance Letter (RGL) No. 16-01 *Jurisdictional Determinations*, an official determination that there are, or are not, jurisdictional aquatic resources on a parcel can be made by USACE upon request. An Approved Jurisdictional Determination (AJD) prepared by USACE may remove or add portions of the delineated waters summarized herein from being considered jurisdictional and/or may include additional waters that were not considered as jurisdictional during the field delineation. In lieu of an AJD, the County of San Diego could elect to treat the aquatic resources on the parcel as jurisdictional and request a Preliminary Jurisdictional Determination (PJD) from USACE. Without an AJD or PJD, the aquatic resources that were delineated within the study area are considered potential WOTUS.

4.3.2 Jurisdictional Determination

The delineation and analysis presented herein indicate that "potential" (a)(5) WOTUS are present within the Study Area in the form of Santa Maria Creek; however, only USACE can make the official determination. Basin 1 and Stormwater Detention Channel 1 lack a connection to Santa Maria Creek and were therefore not considered WOTUS. Santa Maria Creek is coded on NWI as an intermittent feature; however, within the Study area the feature was not observed flowing during surveys , but was flowing later in the year after another late rain event. As a result, under the new definition of WOTUS the USACE may not take jurisdiction over Santa Maria Creek since it flows only in direct response to rainfall.. Given the survey and this report were completed prior to the date the new definition is in effect (i.e., June 22, 2020), this report assumes these features are potential WOTUS.

4.3.3 Impacts

The proposed project will temporarily impact 0.27 acre of WOTUS and permanently impact <0.01 acre (0.002 acre) of WOTUS. Table 6 presents the proposed impacts by water type. The purpose of the project is to improve water quality within the creek and replace the undersized culvert with a bridge. This project is an enhancement from its current condition. Figure 8 shows the proposed project impacts in relation to WOTUS in the study area.

Table 6
Proposed Impacts to (a)(5) WOTUS

	Permanent		Temporary		Total
Santa Maria Creek[1]	***Acres***	***LF***	***Acres***	***LF***	***Acres (LF)***
Non-Wetland (Ordinary High Water)	0	0	0.03	0	0.03 (<1)
Wetland (Active Floodplain)	<0.01	9	0.24	336	0.24 (345)
Total	**<0.01**	**9**	**0.27**	**336**	**0.27 (346)**

LF = linear feet
[1] Southern Cottonwood Willow Riparian Forest vegetation community

4.3.4 Permitting Discussion

Per the analysis presented herein and current regulations, proposed discharges of fill to Santa Maria Creek would require authorization by USACE. Per the Los Angeles District's Final Regional Conditions that were issued for USACE's 2017 Nationwide Permit (NWP) Program, the project may be authorized to proceed under NWPs 14- Linear Transportation Projects and/or 27- Aquatic Habitat Restoration, Establishment, and Enhancement Activities, with the submission of a Pre-Construction Notification.

Under the new definition of WOTUS scheduled to become effective June 2020, the USACE may or may not regulate proposed discharges of dredge or fill to Santa Maria Creek. An AJD may be required to determine whether the USACE considers the creek ephemeral and therefore, non-jurisdictional within the study area, or if it could be considered intermittent and thus jurisdictional. If the USACE takes jurisdiction over the creek under this new definition, then the same permitting is recommended as above. If the USACE does not take jurisdiction over the creek under the new definition, no permitting with USACE would be required.

4.4 RWQCB

4.4.1 Regulatory Setting

Under Section 401 of the CWA and in accordance with the 1969 Porter-Cologne Water Quality Control Act, RWQCB regulates the discharges of wastes, which include discharges of dredged or fill material, which may affect the quality of waters of the State (WOTS). WOTS include all natural wetlands and some, but not all, artificial wetlands, as well as other non-wetland features, including the oceans, lakes, and rivers. On May 28, 2020 the, State's Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019) will go into effect. The RWQCB, through these Procedures, adopted the first part of the "Wetland Riparian Area Protection Policy" that defines what constitutes a wetland and how wetlands should be delineated and protected in the state (SWRCB 2019). The extent of waters of the State (WOTS) subject to the authority of RWQCB was also considered to include all WOTUS, as discussed above.

4.4.2 Jurisdictional Determination

The delineation and analysis presented herein indicate that "potential" WOTS are present within the Study Area in the form of Santa Maria Creek; however, only RWQCB can make the official determination. As noted above, Basin 1 and Stormwater Detention Channel 1 lack a connection to Santa Maria Creek and were therefore, not considered WOTUS. Moreover, these two features would qualify for the exemption to RWQCB's wetland policy and Porter Cologne Act due to their designed intent of stormwater detention. As such, these are not discussed further in impacts.

4.4.3 Impacts

The proposed project will temporarily impact 0.27 acre of WOTS under the purview of RWQCB. The proposed project will permanently impact <0.01 acre (0.002 acre) of WOTS under the purview of RWQCB. Table 7 shows the proposed impacts by water type. The purpose of the project is to improve water quality within the creek and replace the undersized culvert with a bridge. This project is an enhancement from its current condition. Figure 9 shows the proposed project impacts in relation to WOTS in the study area.

Table 7
Proposed Impacts to Waters of the State (RWQCB)

Santa Maria Creek[1]	Permanent		Temporary		Total
	Acres	*LF*	*Acres*	*LF*	*Acres (LF)*
Non-Wetland (Ordinary High Water)	0	0	0.03	0	0.03 (<1)
Wetland (Active Floodplain)	<0.01	9	0.24	336	0.24(345)
Total[2]	**<0.01**	**9**	**0.27**	**336**	**0.27 (346)**

LF = linear feet
[1] Southern Cottonwood Willow Riparian Forest vegetation community

4.4.4 Permitting Discussion

Proposed discharges of dredge or fill to the aquatic resources within the Study Area that are regulated under RWQCB policy or the CWA would require a Water Quality Certification (WQC) and/or Waste Discharge Requirements (WDRs) issued by RWQCB. If proposed impacts qualify for authorization via an NWP, then an individual WQC would need to be obtained unless the applicable NWP has been pre-certified by the State. Currently, neither NWP 14 or NWP 27 (noted above as possible NWP authorizations) are pre-certified by the State.

If USACE determines through a formal AJD process or a PJD that the waters within the study area are non-jurisdictional under the CWA, then RWQCB would regulate proposed discharges of fill to Santa Maria Creek under the State's Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). In this case, the County of San Diego would need to obtain individual authorization from RWQCB, which would include Waste Discharge Requirements applicable to the proposed Project. Under the new Procedures, applications for discharges of dredge or fill in WOTS would need to include an alternatives analysis. Due to the low impacts of the project, it is not expected to require compensatory mitigation; therefore, it is unlikely that the RWQCB would require a full watershed profile as detailed in the Procedures.

4.5 CDFW

4.5.1 Regulatory Setting

Under California Fish and Game Code (CFGC) Sections 1600–1616, CDFW regulates activities that would result in (1) any potential detrimental impacts associated with the substantial diversion or the obstruction of the natural flow of a stream; (2) substantial changes to the bed, channel, or banks of a stream, or the use of any material from the bed, channel, or banks; and (3) the disposal of debris or waste materials that may pass into a stream.

4.5.2 Jurisdictional Determination

Santa Maria Creek and associated riparian habitat falls under the jurisdiction of CDFW. The types of CDFW waters identified in the Study Area are as follows: streambed, streambanks, and associated riparian extent.

4.5.3 Impacts

The proposed project will temporarily impact 0.64 acre and permanently impact 0.06 acre of stream and associated riparian, that would be subject to CFGC Sections 1600–1616. Table 8 shows the proposed impacts by water type. The purpose of the project is to improve water quality within the creek and replace the undersized culvert with a bridge. This project is an enhancement

from its current condition. Figure 10 shows the proposed project impacts in relation to CDFW jurisdictional resources in the study area.

Table 8
Proposed Impacts to CDFW Jurisdictional Resources

Santa Maria Creek[1]	Permanent		Temporary		Total
	Acres	LF	Acres	LF	Acres (LF)
Unvegetated streambed (non-wetland)	0	0	0.03	96	0.03 (96)
Vegetated streambed (wetland)	<0.01	9	0.24	373	0.24 (382)
Streambanks and Associated Riparian Canopy	0.06	216	0.33	695	0.39 (911)
Total	***0.06***	***225***	***0.64***	***1239***	***0.70 (1,464)***

Note: LF = linear feet
[1] Southern Cottonwood Willow Riparian Forest vegetation community

4.5.4 Permitting Discussion

Proposed impacts to the aquatic resources within the Study Area are regulated under CFGC Sections 1600–1616 and the proposed Project would need to obtain a Streambed Alteration Agreement from CDFW.

5 CONCLUSION

As presented above, the wetland delineation and analysis of potential jurisdiction have led to the conclusion that Santa Maria Creek is an aquatic resource that may be regulated by USACE, and would be regulated by RWQCB and CDFW. All jurisdictional determinations presented in this report are based upon the best available knowledge and considered preliminary until concurrence from the resource agencies is received. Impacts from the proposed project to Santa Maria Creek cannot be avoided, therefore, authorization from these agencies will be required. Compensatory mitigation is not expected to be required for the project based upon the net gain of wetlands and/or waters that will occur as a result of replacement of the undersized culvert and existing roadbed with a bridge. The bridge will allow for approximately 0.89 acres of wetlands/waters/streambed to be restored underneath the new bridge and enhance current conditions to encourage better water quality within Santa Maria Creek through the removal of the existing culvert.

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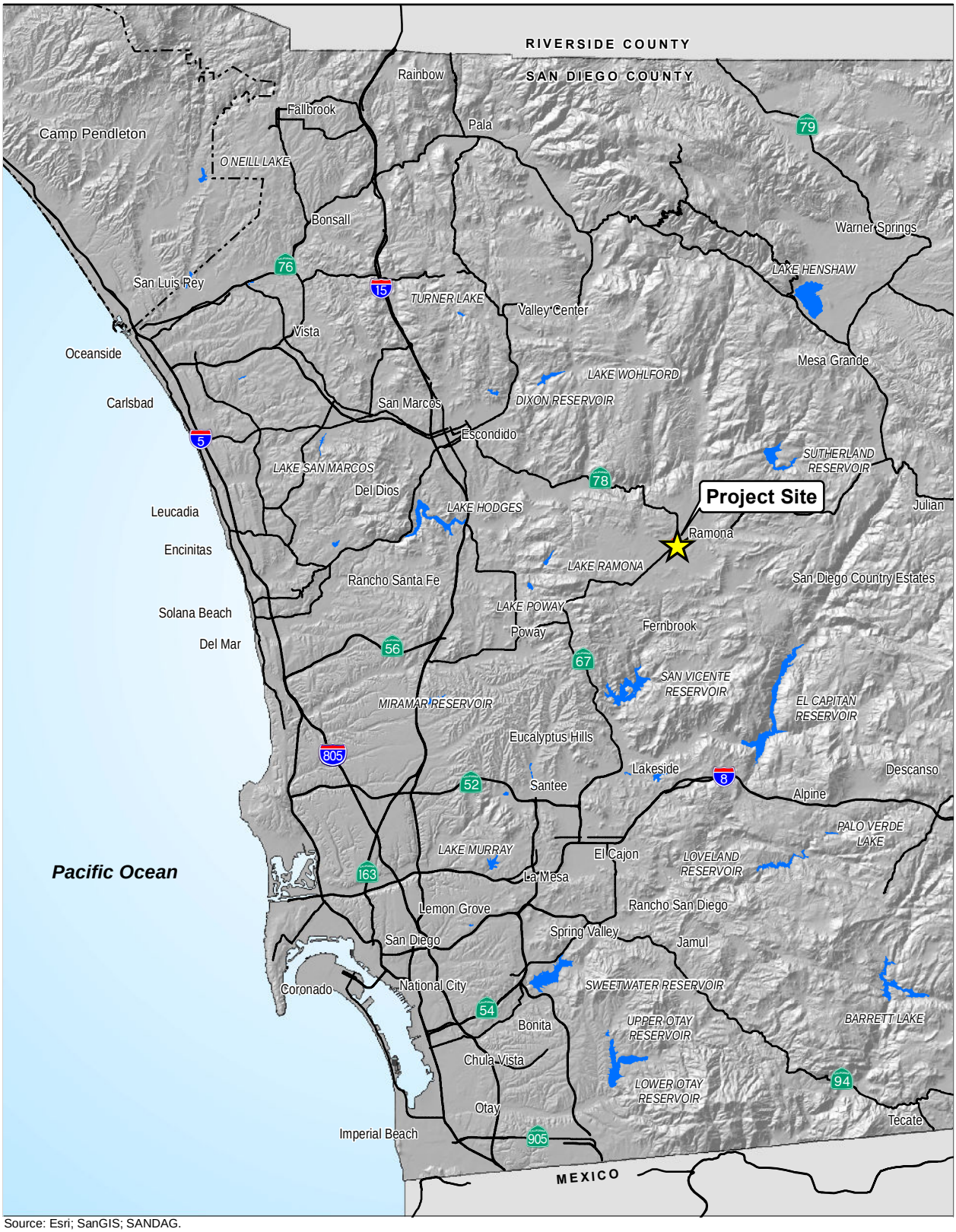
Appendix A

Figures



Source: Esri; SanGIS; SANDAG.

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Figure 1
Regional Map

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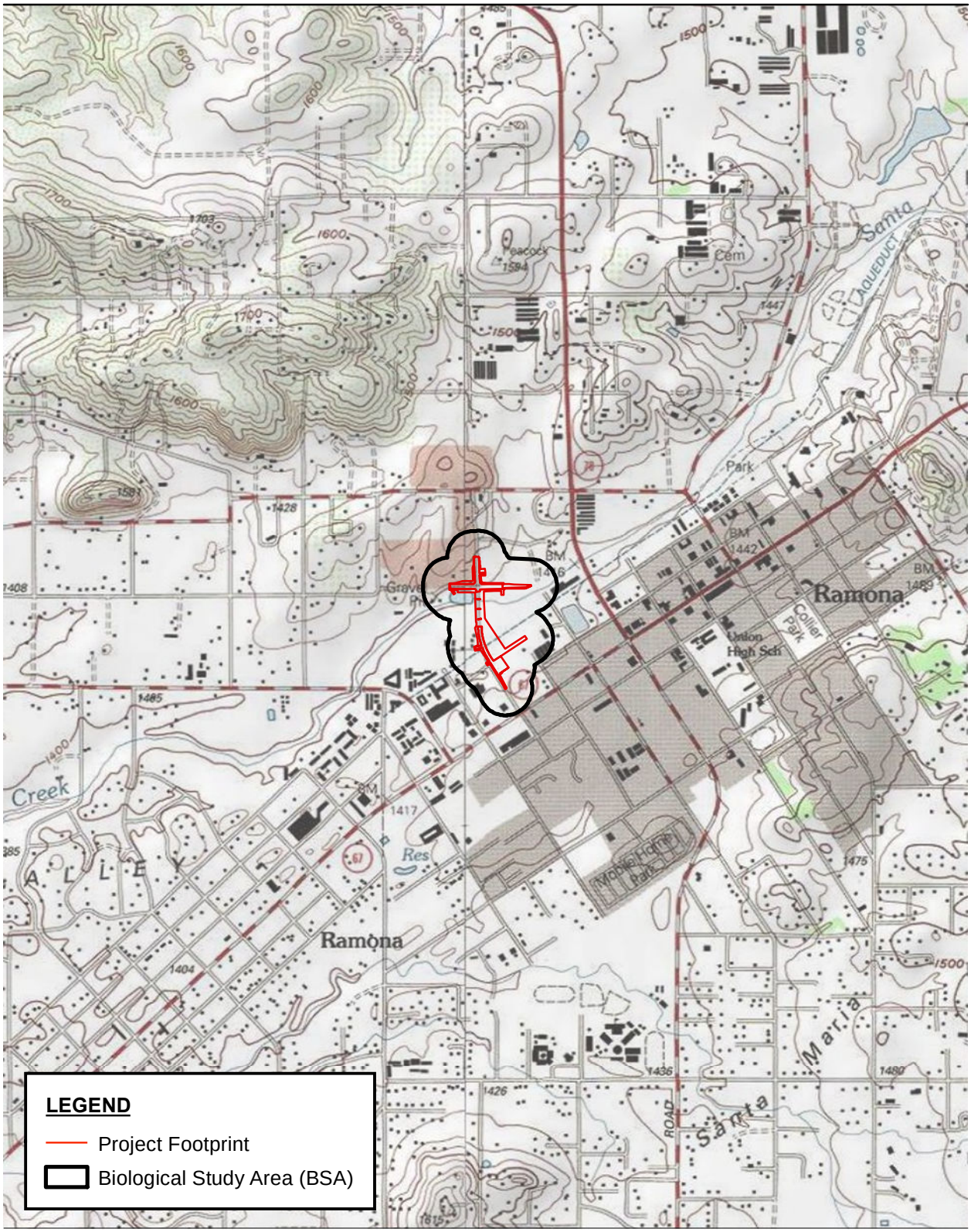

Source: USGS 7.5' Quadrangle San Pasqual, Calif 1984, Ramona, Calif. 1985; Esri, Copyright:© 2013 National Geographic Society, i-cubed

2,000 1,000 0 2,000 Feet

Scale: 1:24,000; 1 inch = 2,000 feet

Figure 2
Vicinity Map

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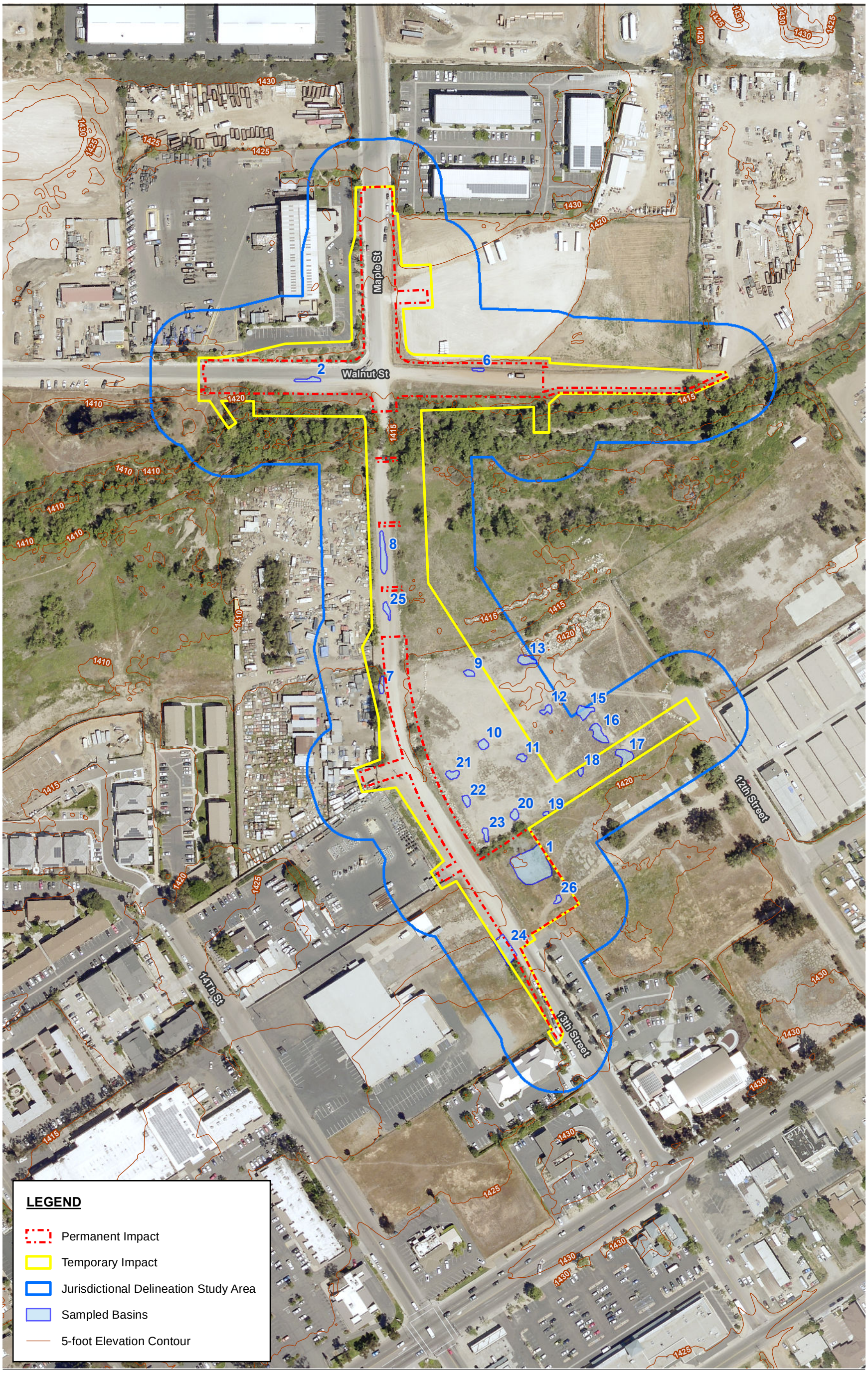

Source: SANDAG 2017; SanGIS 2015

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Scale: 1:2,400; 1 inch = 200 feet

Figure 3
Topography and Numbered Basins

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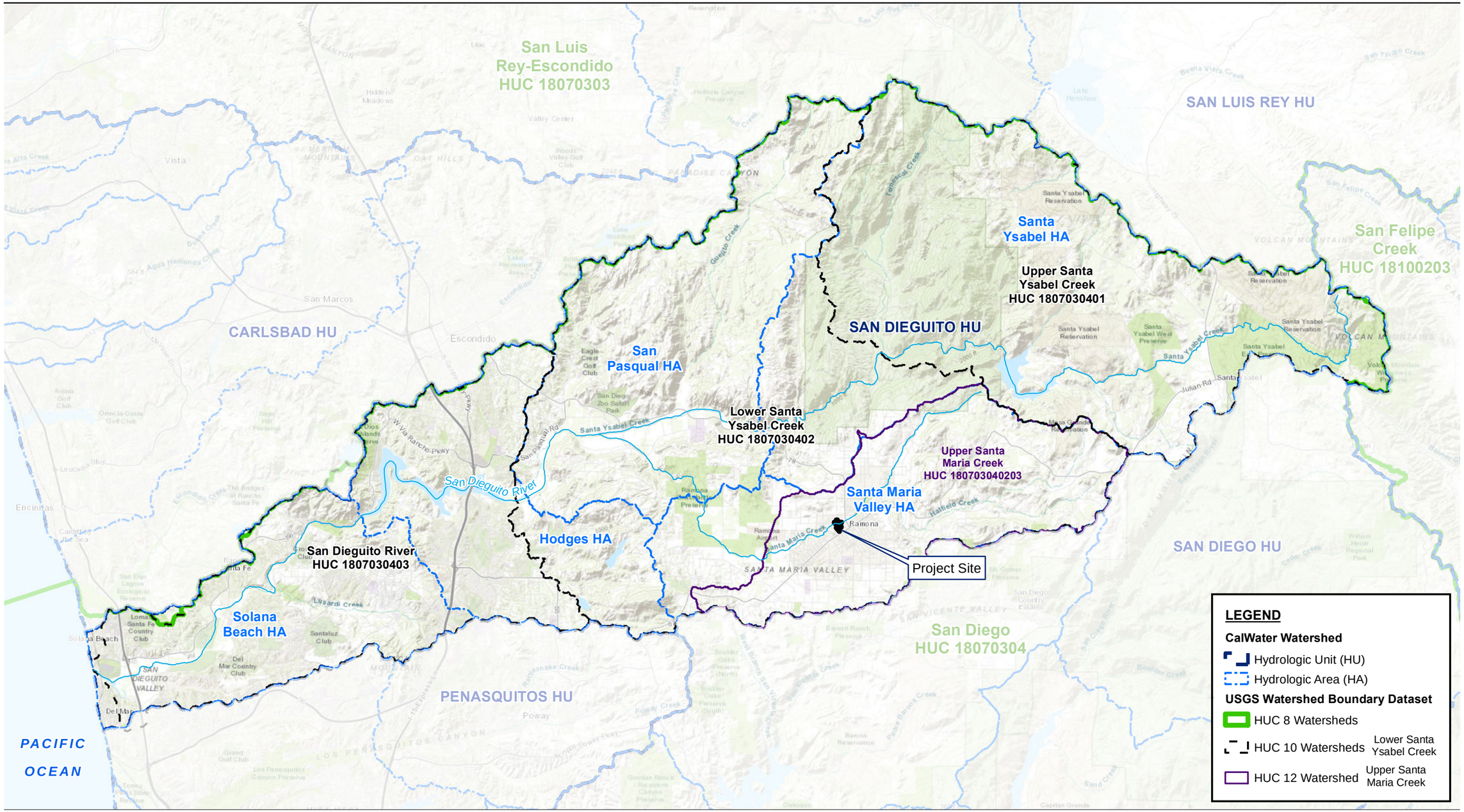

Source: California Interagency Watershed Mapping Committee 2004; USGS NHD 2018; Esri Basemaps, 2019

3 1.5 0 3 Miles

Scale: 1:190,080 1 inch = 3 miles

Figure 4
Watersheds

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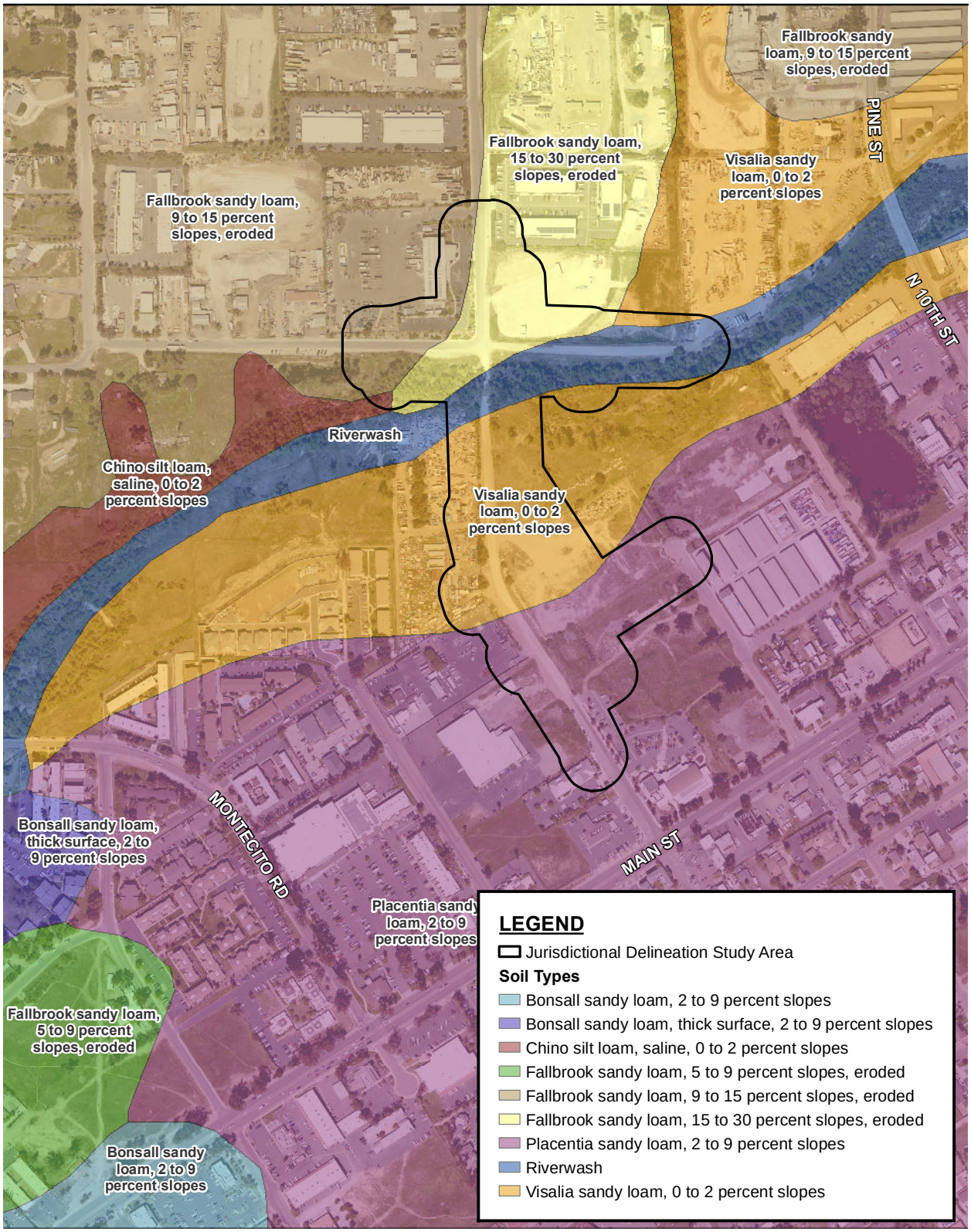

Source: SANDAG 2017; NRCS 2007

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Scale: 1:6,000; 1 inch = 500 feet

Figure 5
Soils

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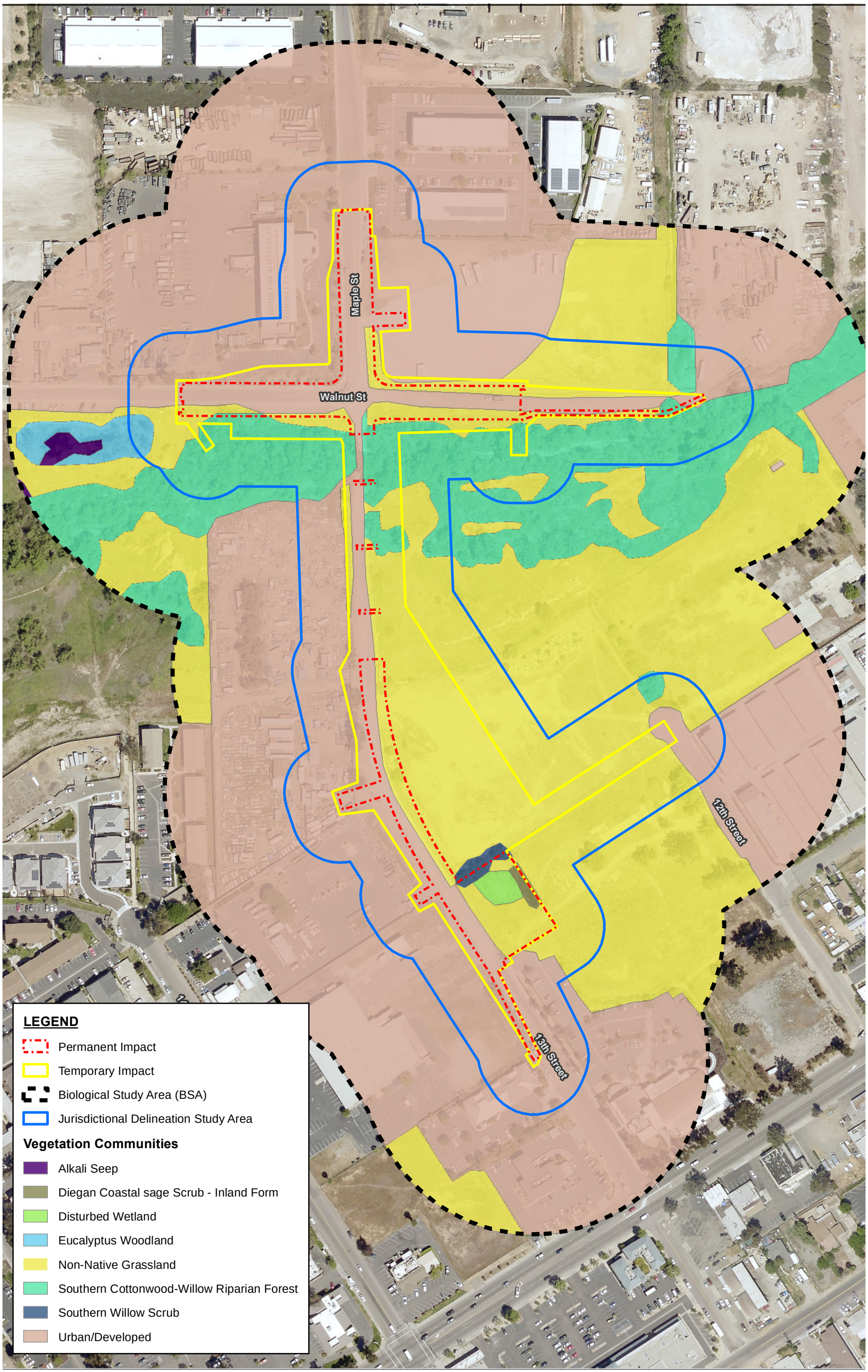

Source: SANDAG 2017; GeomorphIS 2018

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Scale: 1:2,400; 1 inch = 200 feet

Figure 6
Vegetation Communities

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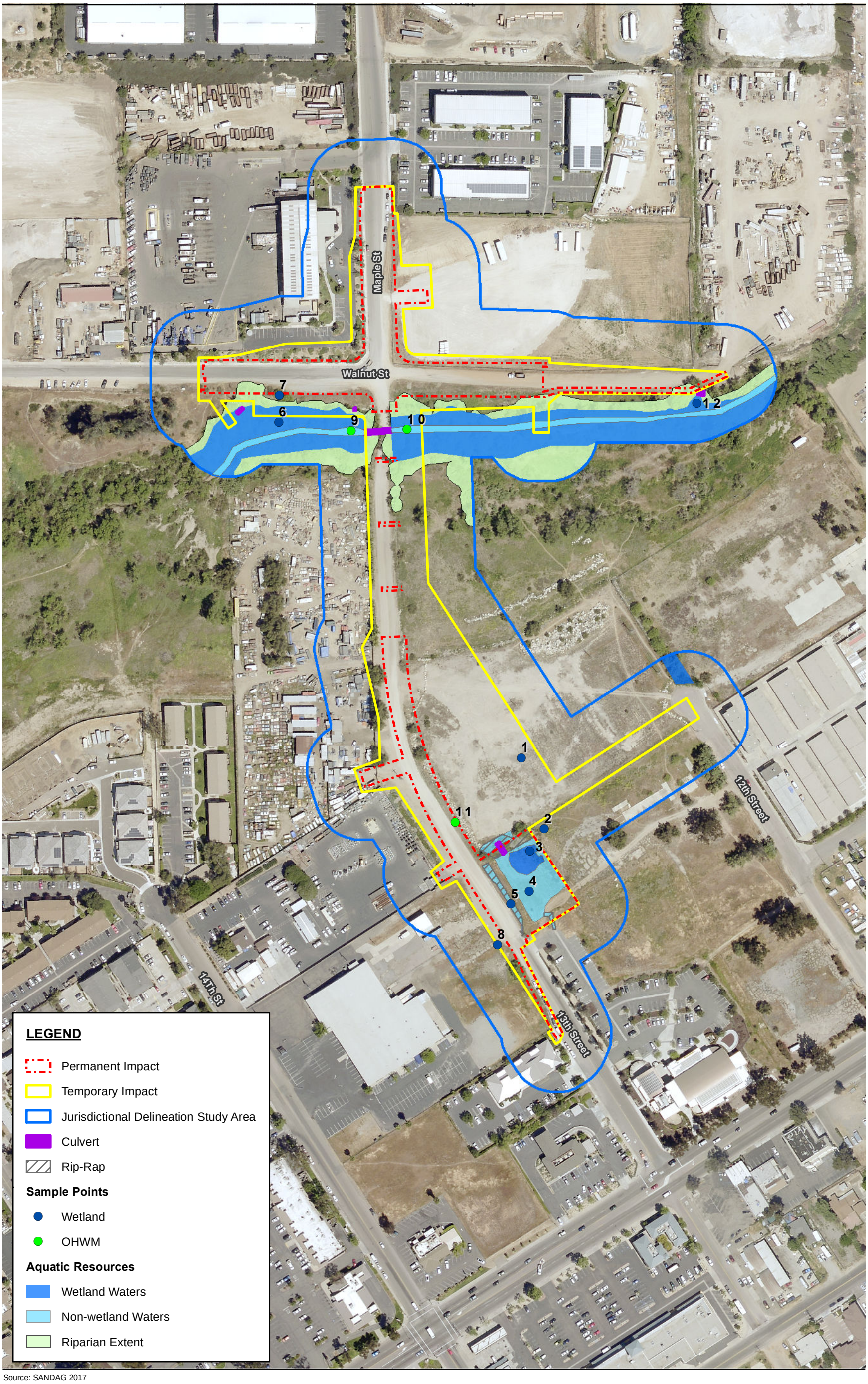

Source: SANDAG 2017

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Scale: 1:2,400; 1 inch = 200 feet

Figure 7
Aquatic Resource Delineation Results

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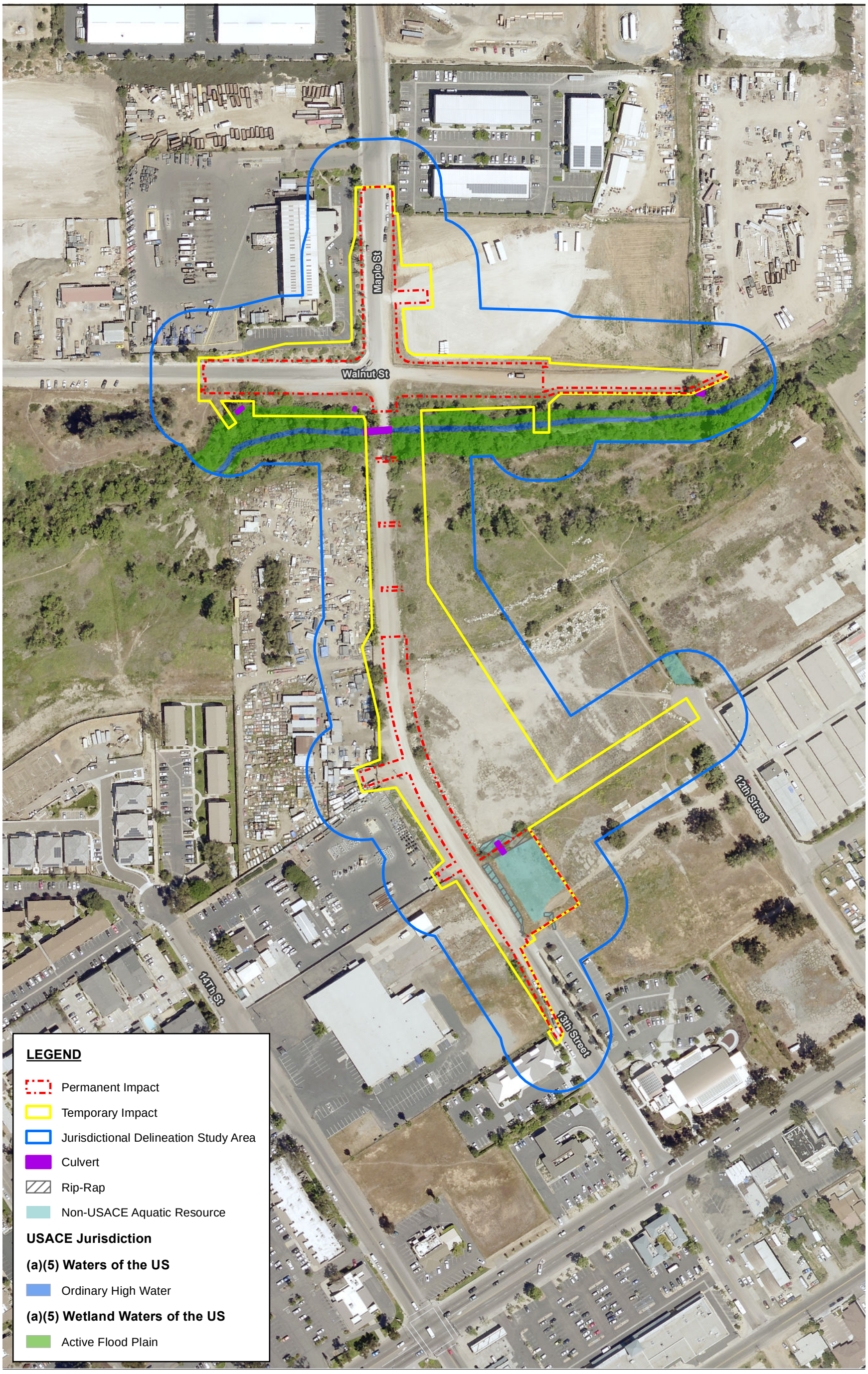

Source: SANDAG 2017

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Scale: 1:2,400; 1 inch = 200 feet

Figure 8
USACE Jurisdictional Impact Analysis

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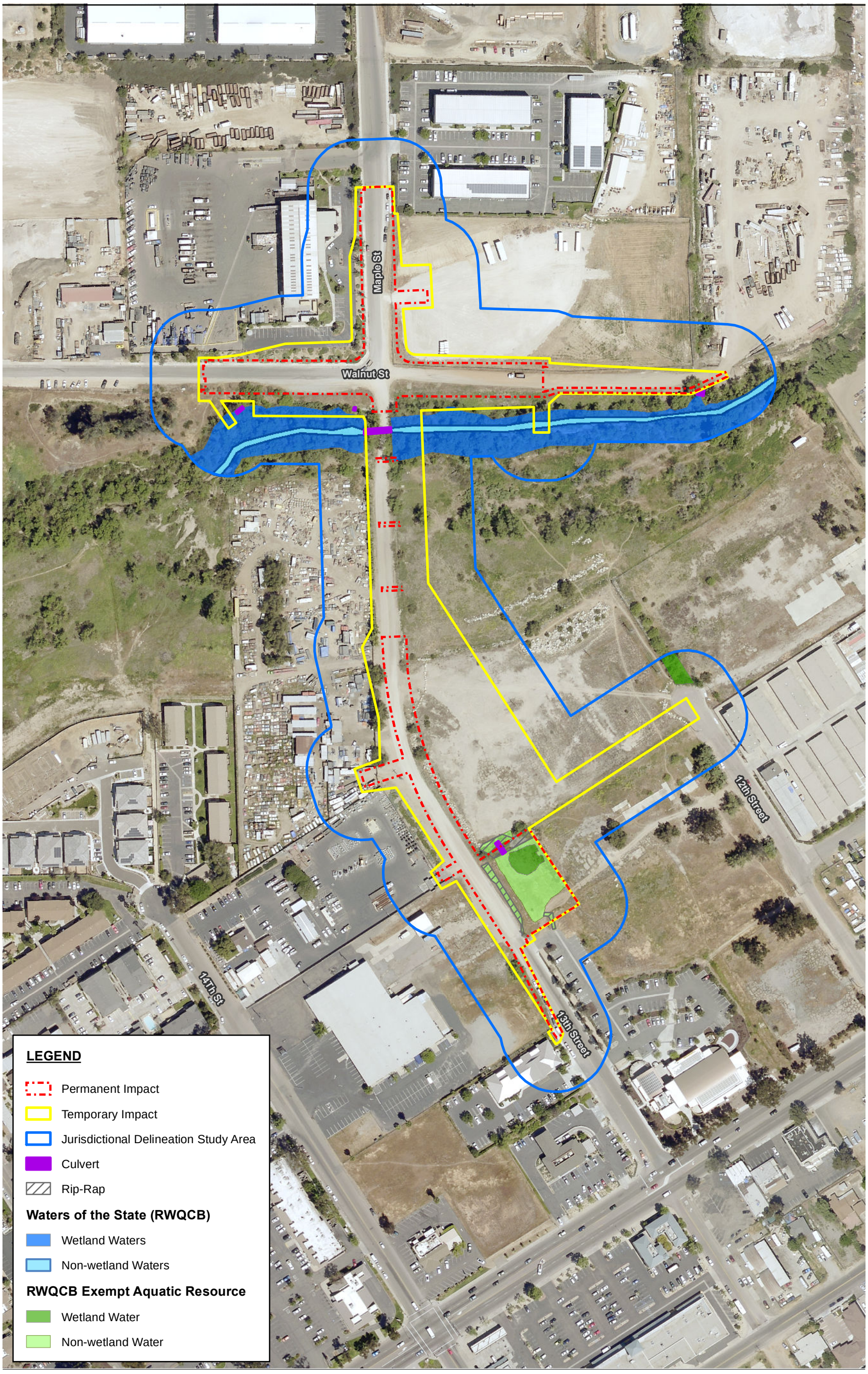

Source: SANDAG 2017

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Scale: 1:2,400; 1 inch = 200 feet

Figure 9
RWQCB Jurisdictional Impact Analysis

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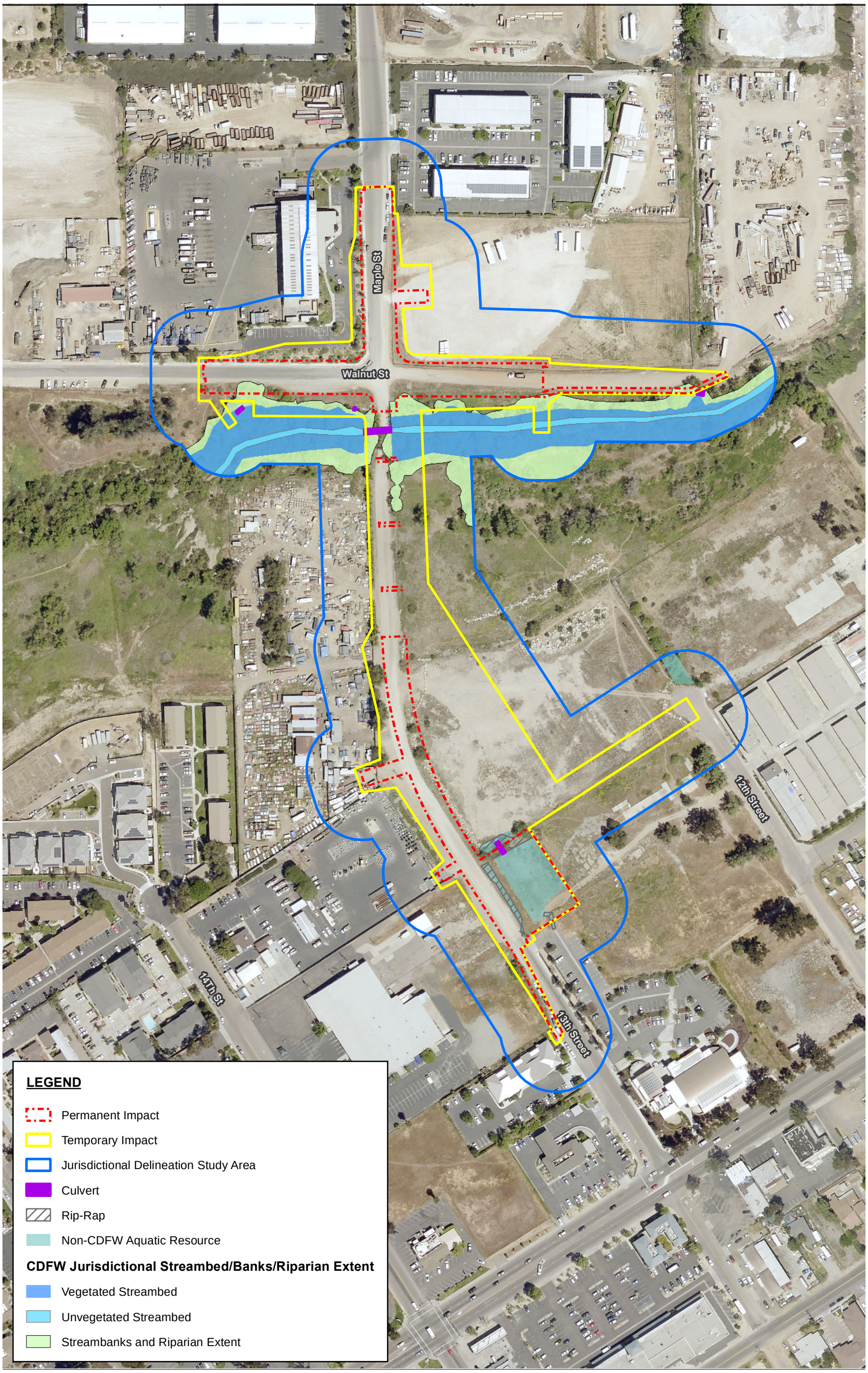

Source: SANDAG 2017

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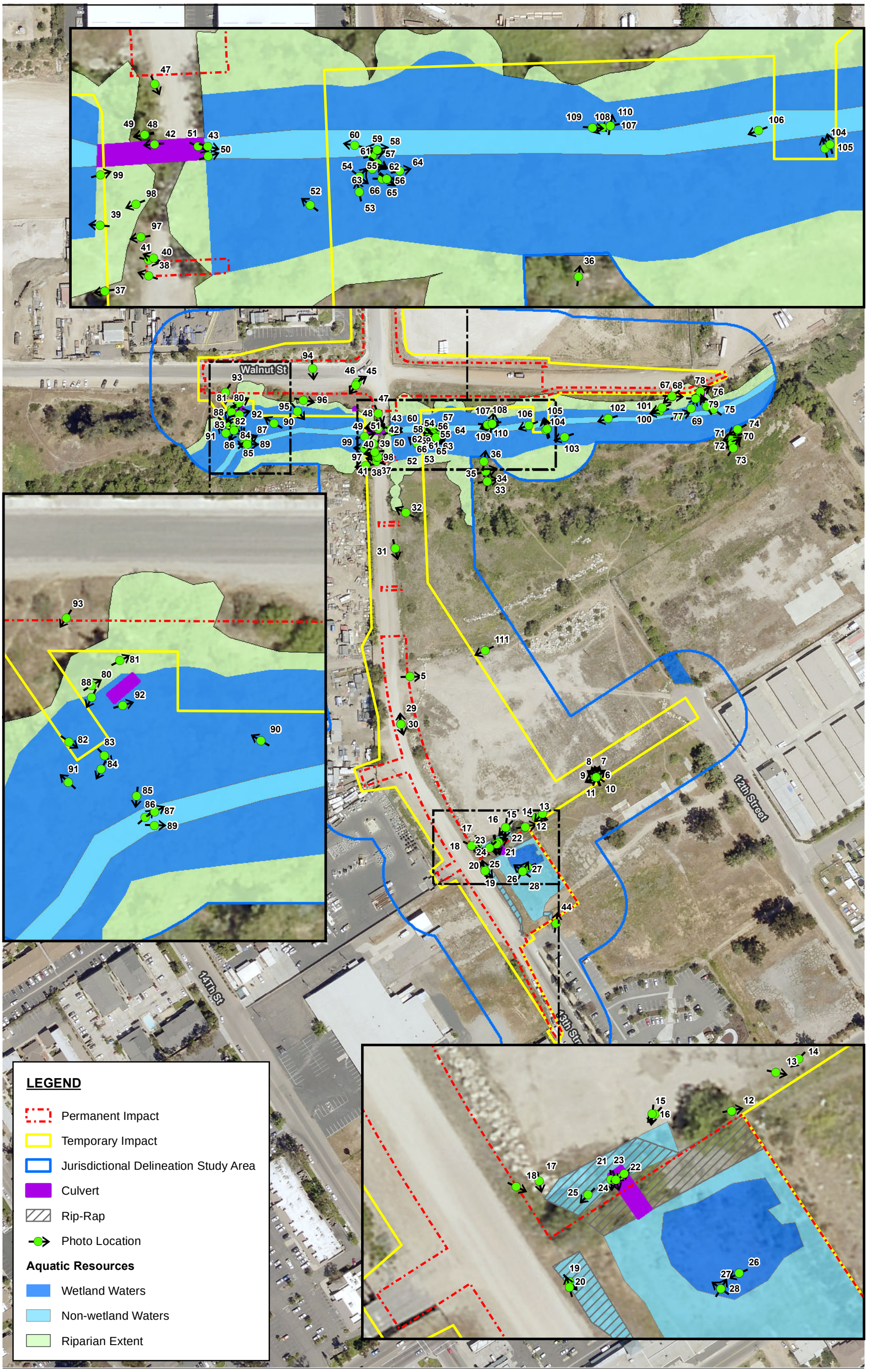
Scale: 1:2,400; 1 inch = 200 feet

Figure 10
Potential Impacts to CDFW Jurisdictional Streambed/Banks/Riparian Extent

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\JD\Fig10_JD_CDFW.mxd, 5/15/2020, augellop

Appendix B

Photolog



Source: SANDAG 2017

200 100 0 200 Feet

Scale: 1:2,400; 1 inch = 200 feet

Appendix B
Photolog Map

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\JD\appxB_photolog.mxd, 5/15/2020, augellop

1. View of wetland sample point 1.

2. View of wetland sample point 3.

3. View of wetland sample point 4.

4. View of wetland sample point 5.

5. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

6. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

7. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

8. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

9. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

10. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

11. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

12. View of vegetation to the east of the outfall of Basin 1. This area appears to have received some flow from Basin 1 in a large rain event.

13. View of vegetation to the east of the outfall of Basin 1. This area appears to have received some flow from Basin 1 in a large rain event.

14. View of vegetation to the east of the outfall of Basin 1. This area appears to have received some flow from Basin 1 in a large rain event.

15. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

16. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

17. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

18. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

19. View of stormwater detention swale between 13th street road and Basin 1. This receives water from the paved 13th street to the south.

20. View of stormwater detention swale between 13th street road and Basin 1. This receives water from the paved 13th street to the south.

21. View of stormwater culvert and detention basin that drains Basin 1. This receives water from the library parking lot and the stormwater detention swale/13th street.

22. View of stormwater detention basin where the water from Basin 1 drains. Debris surrounding basin.

23. View of stormwater culvert and basin that drains Basin 1. This receives water from the library parking lot and the stormwater detention swale/13th street.

24. View of stormwater culvert and basin that drains Basin 1. This receives water from the library parking lot and the stormwater detention swale/13th street.

25. View of stormwater detention basin where the water from Basin 1 drains. Debris surrounding basin.

26. View of biotic crusting and soil cracking within Basin 1.

27. View of culvert in Basin 1 taken from within Basin 1.

28. View of Basin 1 taken from within Basin 1.

29. View of 13th Street facing north.

30. View of 13th Street facing south.

31. View of riparian extent along Santa Maria Creek.

32. View within Santa Maria Creek.

33. View of riparian extent along Santa Maria Creek.

34. View of riparian extent along Santa Maria Creek.

35. View of riparian extent and Santa Maria Creek.

36. View of riparian extent and Santa Maria Creek.

37. View of riparian extent and Santa Maria Creek.

38. View of riparian extent and Santa Maria Creek.

39. View of riparian extent and Santa Maria Creek.

40. View of riparian extent and Santa Maria Creek.

41. View of riparian extent and Santa Maria Creek.

42. View of riparian extent and Santa Maria Creek.

43. View of riparian extent and Santa Maria Creek.

44. View of riprap stormdrain channel from the Ramona Library parking lot to Basin 1.

45. View along Maple St and Santa Maria Creek.

46. View along Maple St and Santa Maria Creek.

47. View along 13th Street and Santa Maria Creek.

48. View of Santa Maria creek.

49. View of Santa Maria creek.

50. View of Santa Maria creek.

51. View of Santa Maria creek.

52. View of Santa Maria creek.

53. View of Santa Maria creek.

54. View of Santa Maria creek.

55. View of Santa Maria creek.

56. View of Santa Maria creek.

57. View of Santa Maria creek.

58. View of Santa Maria creek.

59. View of Santa Maria creek.

60. View of Santa Maria creek.

61. View of Santa Maria creek.

62. View of Santa Maria creek.

63. View of Santa Maria creek.

64. View of Santa Maria creek.

65. View of Santa Maria creek.

66. View of Santa Maria creek.

67. View of Santa Maria creek.

68. View of Santa Maria creek.

69. View of Santa Maria creek.

70. View along southeastern side of Maria creek.

71. View along southeastern side of Maria creek.

72. View along southeastern side of Maria creek.

73. View along southeastern side of Maria creek.

74. View along southeastern side of Maria creek.

75. V iew of area surrounding wetland sample point 12.

76. V iew of area surrounding wetland sample point 12.

77. V iew of area surrounding wetland sample point 12.

78. V iew of area surrounding wetland sample point 12.

79. View of wetland sample point 12.

80. View of culvert outlet in Santa Maria Creek.

81. View of Santa Maria creek.

82. View of Santa Maria creek.

83. View of Santa Maria creek.

84. View of Santa Maria creek.

85. View of Santa Maria creek.

86. View of Santa Maria creek.

87. View of Santa Maria creek.

88. View of Santa Maria creek.

89. View of Santa Maria creek.

90. View of wetland sample point 6.

91. View of culvert outlet in Santa Maria Creek.

92. View of Santa Maria creek.

93. View of Santa Maria creek.

94. View of Santa Maria creek.

95. View of Santa Maria creek.

96. View of Santa Maria creek.

97. View of Santa Maria creek.

98. View of Santa Maria creek.

99. View of culvert outlet in Santa Maria Creek.

100. View of Santa Maria creek.

101. View of Santa Maria creek.

102. View of Santa Maria creek.

103. View of Santa Maria creek.

104. View of Santa Maria creek.

105. View of Santa Maria creek.

106. View of Santa Maria creek.

107. View of Santa Maria creek.

108. View of Santa Maria creek.

109. View of Santa Maria creek.

110. View of Santa Maria creek.

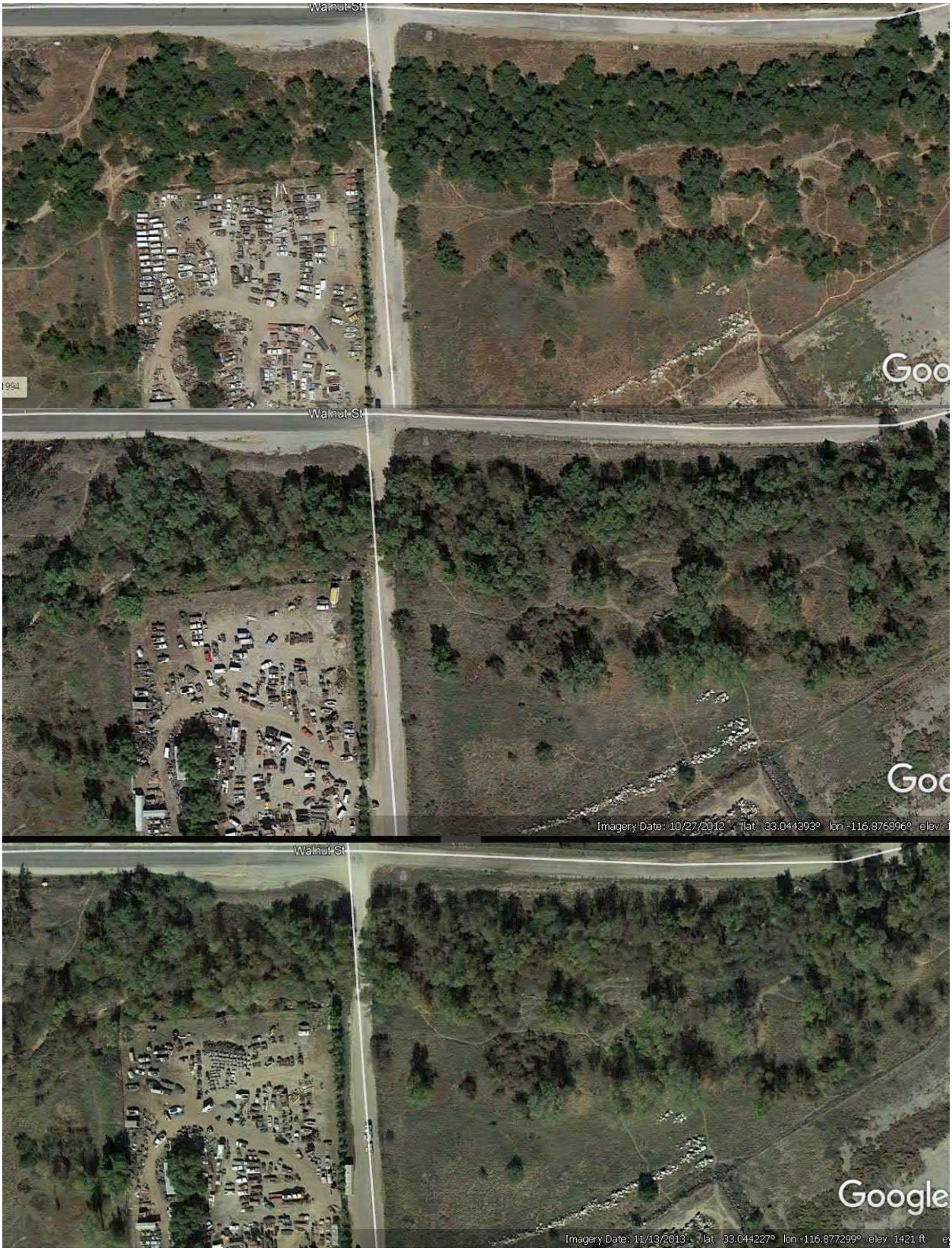
111. View of vacant lot within the temporary disturbance limits.

Appendix C

Aerial Photographs

13th Street Bridge Site Aerials 2008-2019

The following aerial photos dated 2008 – 2018 are from Google Earth.


Walnut St
Walnut St
Imagery Date: 10/27/2012
Walnut St
Imagery Date: 11/13/2013
Google


Walnut St
Imagery Date: 5/11/2014 lat 33.044694° lon -116.877403° elev 1425 ft
Walnut St
Google
Imagery Date: 12/22/2014 lat 33.044561° lon -116.877245° elev 1421 ft
Walnut St
Google
Imagery Date: 4/14/2015 lat 33.044091° lon -116.877628° elev 1420 ft


Walnut St
Google
Imagery Date: 3/22/2016 lat 33.044264° lon -116.876873° elev 1425 ft
Walnut St
Google
Imagery Date: 12/7/2017 lat 33.043992° lon -116.875039° elev 1416 ft
Walnut St
Google
Imagery Date: 9/13/2018 lat 33.044056° lon -116.877070° elev 1420 ft

Appendix D

Datasheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 1
Investigator(s) Keely Craig, Paula Jacks Section, Township, Range
Lanform (hillslope, terrace, etc.) depression Local relief (concave, convex, none concave Slope (%): 1-2
Subregion (LRR) lrr c Lat: 33.0418528333 Long: -116.873991 Datum: WGS84
Soil Map Unit Name placentia NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegeatation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegeatation X, Soil , or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes No X
Hydric Soil Present? Yes No X
Wetland Hydrology Present? Yes X No

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

Remarks: Recent storm explains water present.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size:)			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size:)			
Centaurea melitensis	15	Yes	UPL
Erodium cicutarium	2	No	UPL
Erigeron bonariensis	15	Yes	FACU
Spergularia bocconi	1	No	FACW
Crassula aquatica	1	No	OBL
Erodium moschatum	1	No	UPL
Sonchus asper	1	No	FAC
Deinandra fasciculata	1	No	FACU
Pectocarya linearis subsp. ferocula	1	No	UPL
Schismus barbatus	1	No	UPL
Hirschfeldia incana	2	No	UPL
Dittrichia graveolens	10	No	UPL
	51	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	1	x 2 =	2
FAC species	1	x 3 =	3
FACU species	16	x 4 =	64
UPL species	32	x 5 =	160
Column Totals:	51	(A)	230 (B)

Prevalence Index = B/A = 4.51

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

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

Hydrophytic Vegetation Present? **Yes** **No** X

Remarks:

SOIL

Sample Point: 33.041832,-116.87391183333332

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
0-12	5Y 3/2	100					Sandy	

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: rocks

Depth (inches): 12

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

Remarks: very large rocks an gavel. evidence of prior disturbance

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes X No ___ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 12

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

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

Remarks: .75 inch rain event in past 24 hours. This is seasonal flooding only due to that rain.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 2
Investigator(s) Keely Craig, Paula Jacks Section, Township, Range
Lanform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none concave Slope (%): 1-3
Subregion (LRR) LRR C Lat: 33.0414293333 Long: -116.874232833 Datum: WGS84
Soil Map Unit Name Pec NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegeatation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegeatation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Recent rain explain surface water present.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size:)	0	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
Eriogonum fasciculatum var. fasciculatum	1	No	UPL
	1	= Total Cover	
Herb Stratum (Plot Size:)			
Rumex crispus	10	Yes	FAC
Silybum marianum	25	Yes	UPL
Hirschfeldia incana	10	No	UPL
Polypogon monspeliensis	10	Yes	FACW
Dittrichia graveolens	1	No	UPL
Melilotus albus	1	No	UPL
Sonchus asper	5	No	FAC
Speragularia bocconi	1	No	FACW
Juncus bufonius var. bufonius	1	No	UPL
Schismus barbatus	1	No	UPL
Centaurea melitensis	15	Yes	UPL
Erodium brachycarpum	1	No	UPL
Bromus diandrus	1	No	UPL
Bromus madritensis	1	No	UPL
Eriaeron bonariensis	1	No	FACU
Amsinckia intermedia	1	No	UPL
	75	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species 50 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	11	x 2 =	22
FAC species	15	x 3 =	45
FACU species	1	x 4 =	4
UPL species	59	x 5 =	295
Column Totals:	86	(A)	366 (B)

Prevalence Index = B/A = 4.26

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

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

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sample Point: 33.04144083333333,-116.87421416666666

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
0-18	5YR 3/2	100					Sandy loam	

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 Fill in types, NA

Depth (inches): 18

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

Surface Water Present? Yes X No ___ Depth (inches): 1 cm

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

Saturation Present? Yes X No ___ Depth (inches): 18

(includes capillary fringe)

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

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

Remarks: Standing water is due to recent .75 inch rain event.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 3
Investigator(s) Keely Craig, Paula Jacks Section, Township, Range
Lanform (hillslope, terrace, etc.) depresion Local relief (concave, convex, none concave Slope (%): 1-3
Subregion (LRR) LRR C Lat: 33.0413413095 Long: -116.874280488 Datum: WGS84
Soil Map Unit Name PeC NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegeatation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegeatation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 10)	Absolute % Cover	Dominant Species?	Indicator Status
Salix gooddingii	20	Yes	FACW
Tamarix parviflora	25	Yes	FAC
	45	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size: 10)			
Rumex crispus	15	Yes	FAC
Artemisia douglasiana	5	No	FAC
Lythrum hyssopifolia	1	No	UPL
Polypogon monspeliensis	5	Yes	FACW
Dittrichia graveolens	1	No	UPL
Bromus madritensis	1	No	UPL
Erodium cicutarium	1	No	UPL
Centaurea melitensis	1	No	UPL
Avena barbata	1	No	UPL
	50	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	6	x 5 =	30
Column Totals:	76	(A)	215 (B)

Prevalence Index = B/A = 2.83

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

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

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sample Point: 33.041337411881464,-116.87428233224607

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
0-6	5YR 3/2	100					sandy loam.	organics mixed in layer
6-18	5YR 4/2	100					sandy loam	

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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric[3] Soils

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

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

Restrictive Layer (if present):

Type NA

Depth (inches): 18

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

Remarks: engineered and graded so prior disturbed soil as well. redox may not have had time to develop yet.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

Surface Water Present? Yes X No ___ Depth (inches): 6

Water Table Present? Yes X No ___ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 18

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

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

Remarks: recent rain explain large amount of water

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th St Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 4
Investigator(s) Keely Craig, Brenda M Section, Township, Range
Lanform (hillslope, terrace, etc.) depression Local relief (concave, convex, none concave Slope (%): 1-3
Subregion (LRR) LRR C Lat: 33.0409935862 Long: -116.874211086 Datum: WGS84
Soil Map Unit Name PeC NWI classification: NA- Engineered Stormwater Basin

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegeatation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegeatation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 10)	Absolute % Cover	Dominant Species?	Indicator Status
Salix gooddingii	25	Yes	FACW
	25	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size: 10)			
Bromus madritensis	40	Yes	UPL
Hirschfeldia incana	1	No	UPL
Erodium cicutarium	1	No	UPL
Dittrichia graveolens	1	No	UPL
Sonchus asper	1	No	FAC
Melilotus albus	1	No	UPL
	45	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species 50 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	1	x 3 =	3
FACU species	0	x 4 =	0
UPL species	44	x 5 =	220
Column Totals:	70	(A)	273 (B)

Prevalence Index = B/A = 3.9

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

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

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sample Point: 33.04094467780836,-116.87436020012653

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
4-18	2.5YR 5/1	100					sandy loam	
0-3	2.5 YR 3/2	100					sandy	

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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric[3] Soils

- ___ 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 na

Depth (inches): 18

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

Remarks: Previously graded

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

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

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 18

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

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

Remarks: false positive due to large recent rain events

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, County of San Diego Sampling Date: 3/20/2020

Applicant/Owner: County of San Diego State: CA Sampling Point: 5

Investigator(s): Keely Craig, Brenda MacMillan Section, Township, Range:

Landform (hillslope, terrace, etc.): roadside drainage Local relief (concave, convex, none): none Slope (%): 1-3

Subregion (LRR): LRR C Lat: 33.040905 Long: -116.87435 Datum: WGS84

Soil Map Unit Name: PeC NWI classification: NA

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

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

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

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

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

Remarks: Roadside and has definitely been graded.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Ambrosia psilostachya	60	Y	FACU
2. Avena barbata	1	N	UPL
3. Bromus madritensis	25	Y	UPL
4. Hypochaeris glabra	1	N	UPL
5. Amsinkia intermedia	1	N	UPL
6. Achillea millefolium	1	N	FACU
7. Hirschfeldia incana	1	N	UPL
8. Heterotheca grandiflora	1	N	UPL
Total Cover:	91		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 9 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species 60	x 4 =	240
UPL species 25	x 5 =	125
Column Totals: 85 (A)		365 (B)

Prevalence Index = B/A = 4.29

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.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 5

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
0-3	2.5 YR 4/2	100					clay loam	appears to be scum runoff from street
3-18	2.5 YR 4/4	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present):

Type: NA

Depth (inches): 18

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

Remarks: Soil has been graded and driven over many times. Stormwater detention channel so imported rock and soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Saturation (A3)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ 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 Plowed Soils (C6)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 6

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

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

Remarks: Recent rain event may be giving false positive.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 7/19/2019
Applicant/Owner County of San Diego State: CA Sampling Point: 6
Investigator(s) Brenda McMillan, Keely Craig Section, Township, Range
Lanform (hillslope, terrace, etc.) terrace Local relief (concave, convex, none concave Slope (%): 1-2
Subregion (LRR) LLR C Lat: 33.0411811333 Long: -116.874282717 Datum: WGS84
Soil Map Unit Name Riverwash NWI classification: Riverine,Intermittent,Unconsolidated Bottom,Sand

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegeatation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegeatation X, Soil X, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
Salix gooddingii	70	Yes	FACW
Salix lasiolepis	30	No	FACW
Salix exigua var. hindsiana	20	No	UPL
Populus fremontii subsp. fremontii	10	No	UPL
Tamarix sp.	5	No	FAC
Parkinsonia aculeata	10	No	FAC
	75	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 20)			
Baccharis salicifolia	60	Yes	FAC
	60	= Total Cover	
Herb Stratum (Plot Size: 10)			
Stipa miliacea var. miliacea	75	Yes	UPL
	75	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species 66.67 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 100	x 2 = 200
FAC species 75	x 3 = 225
FACU species 0	x 4 = 0
UPL species 105	x 5 = 525
Column Totals: 280 (A)	950 (B)

Prevalence Index = B/A = 3.39

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

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

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sample Point: 33.04374156666667,-116.87600644999999

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
0-18	10YR 3/1	100					loamy sand	Riverine active floodplain with sand/gravel bars throughout.

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)
- X Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type NA

Depth (inches): 18

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

Remarks: Riverine active channel with sand and gravel bars throughout. Recently deposited materials & sand/gravel bars qualify as problematic hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

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

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

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

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

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

Remarks: strong hydrology indicators present. Seed Shrimp found

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: San Diego, San Diego Sampling Date 7/19/2019
Applicant/Owner County of San Diego State: CA Sampling Point: 7 & upland rep for 12
Investigator(s) Keely Craig Section, Township, Range
Lanform (hillslope, terrace, etc.) top of bank Local relief (concave, convex, none none Slope (%): 1-3
Subregion (LRR) LRR C Lat: 32.7873209864 Long: -117.178445254 Datum: WGS84
Soil Map Unit Name Fallbrook sandy loam NWI classification: Riverine,Intermittent,top of bank

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegeatation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegeatation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 10)			
Baccharis salicifolia	25	Yes	FAC
	25	= Total Cover	
Herb Stratum (Plot Size: 10)			
Bromus diandrus	25	Yes	UPL
Brassica nigra	30	Yes	UPL
	55	= Total Cover	
Woody Vine Stratum (Plot Size: _____)			
	0	= Total Cover	

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species 33.33 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	55	x 5 =	275
Column Totals:	80	(A)	350 (B)

Prevalence Index = B/A = 4.38

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

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sample Point: 33.043934, -116.8761

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
0-18	7.5 YR 3/3	100					sandy loam	

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 Fill in types, Rocks

Depth (inches): 18

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

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

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

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

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

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

Remarks: not in the correct place in the landscape.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, County of San Diego Sampling Date: 3/20/2020

Applicant/Owner: County of San Diego State: CA Sampling Point: 8

Investigator(s): Keely Craig, Brenda MacMillan Section, Township, Range:

Landform (hillslope, terrace, etc.): roadside drainage Local relief (concave, convex, none): none Slope (%): 1-3

Subregion (LRR): LRR C Lat: 33.040776 Long: -116.874489° Datum: WGS84

Soil Map Unit Name: PeC NWI classification: NA

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

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

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

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

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

Remarks: Roadside and has definitely been graded.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	20	Y	FACW
2.			
3.			
4.			
Total Cover:	20		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Hordeum marinum	50	Y	UPL
2. Lythrum hyssopifolia	1	N	UPL
3. Vicia americana	1	N	FAC
4. Dittrichia graveolens	1	N	UPL
5. Avena barbata	1	N	UPL
6. Hirschfeldia incana	1	N	UPL
7.			
8.			
Total Cover:	55		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species 20	x 2 =	40
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species 50	x 5 =	250
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = 4.14

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.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 8

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
0-18	7.5 YR 3/2	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present):

Type: NA

Depth (inches): 18

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

Remarks: Soil has been graded and driven over many times.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ 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)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 4

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

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 18

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

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

Remarks: Recent rain event may be giving false positive.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: 13th Street Bridge Project **Date:** 7/19/2019 **Time:** 2:32 PM
Project Number **Town:** Ramona **State:** CA
Stream:Santa Maria Creek **Photo begin file#:** **Photo end file#:**
Investigator(s): Keely Craig

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

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: GCS WGS1984 **Datum:** WGS84
Coordinates:33.04351933333333,-116.87626421666667

Potential antheropogenic influences on the channel system

Fed by urban runoff. Several stormdrains. trash and debris throughout

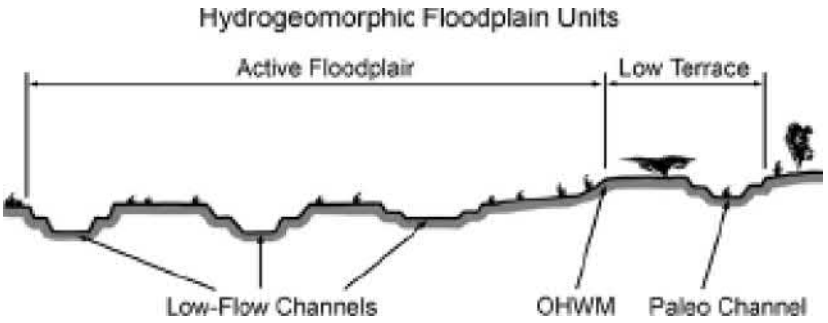
Brief site description:

intermittent stream run east to West

Checklist of resources (if available):

☑ Aerial Photography
Dates: 7/19/1994 to 7/19/2019
☐ 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 discharge
☐ 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



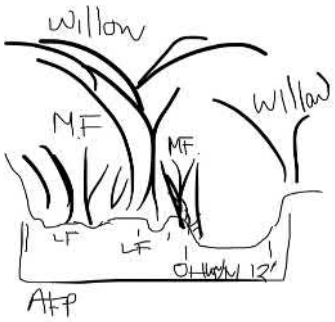
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW

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:

Project ID: 13th Street Br Cross section ID 9 Date 7/19/2019 Time: 2:35 PM

Cross section drawing:



1W

OHWM

GPS point: 33.0435109,-116.87626096666666

Indicators:

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

Comments Low flow channel appears

Floodplain unit:

☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: 33.043511683333335,-116.87625386666664

Floodplain unit:

Average sediment texture Sand

Total veg cover: 80% Tree: 60% Shrub 20% Herb: 40%

Community successional stage

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

Floodplain unit:

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

Comments Several Low flow channels and remnant low flow channels that appear to have filled in recently

Project ID: 13th Street Br Cross section ID 10 Date 7/19/2019 Time: 3:44 PM

Cross section drawing:

OHWM

GPS point: 33.043683083333335,-116.87539621666669

Indicators:

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

Comments Streambed Vegetated here.

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

GPS point: 33.04369198333333,-116.87541056666666

Floodplain unit:

Average sediment texture Sand

Total veg cover: 80% Tree: 40% Shrub 20% Herb: 75%

Community successional stage

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

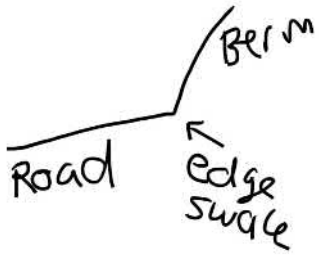
Floodplain unit:

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

Comments

Project ID: 13th Street Br Cross section ID 11 Date 7/19/2019 Time: 12:25 PM

Cross section drawing:



OHWM

GPS point: 33.041435, -116.874811

Indicators:

- ☐ Change in average sediment textur
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☑ Other: None observed

Comments no evidence observed of flow

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 7/15/2019
Applicant/Owner County of SD State: CA Sampling Point: 12
Investigator(s) Keely Craig Section, Township, Range
Lanform (hillslope, terrace, etc.) terrace Local relief (concave, convex, none concave Slope (%): 1-2
Subregion (LRR) LRR C Lat: 33.0409599329 Long: -116.874318794 Datum: WGS84
Soil Map Unit Name Riverwash NWI classification: Riverine,Intermittent,Emergent,Other

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegeatation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegeatation , Soil X, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 25)	Absolute % Cover	Dominant Species?	Indicator Status
Washingtonia robusta	5	No	FACW
Salix lasiolepis	40	Yes	FACW
	45	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size: 10)			
Xanthium strumarium	30	Yes	FAC
Cyperus esculentus	70	Yes	FACW
Raphanus sativus	10	No	UPL
Lythrum hyssopifolium	10	No	OBL
Sonchus asper subsp. asper	3	No	UPL
Oenothera elata	50	Yes	FACW
Heliotropium curassavicum	5	No	FACU
Apium graveolens	1	No	UPL
Chenopodium californicum	1	No	UPL
	90	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	165	x 2 =	330
FAC species	30	x 3 =	90
FACU species	5	x 4 =	20
UPL species	15	x 5 =	75
Column Totals:	225	(A)	525 (B)

Prevalence Index = B/A = 2.33

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

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

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sample Point: 33.043865266666664,-116.87314198333334

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
1-3	10yr3/2	100					sandy loam	roots & organics throughout
3-9	10YR 2/1	80	10yr3/2	20			sandy loam	

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- _X_ Sandy Redox (S5)
- _X_ 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[3] Soils

- ___ 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: Cobble

Depth (inches): 18

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

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

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

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

Wetland Hydrology Present? **Yes** _X_ **No** ___

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

Remarks:

AECOM
401 West A Street, Suite 1200
San Diego, CA 92101
aecom.com

Appendix D

Regional Special Status Species

APPENDIX D. SPECIAL STATUS SPECIES EVALUATED FOR POTENTIAL TO OCCUR WITHIN THE BIOLOGICAL STUDY AREA

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
Plant Species					
San Diego thorn-mint	*Acanthomintha ilicifolia*	FT/SE 1B.1 SDC Group A	Clay soils in chaparral, coastal scrub, valley and foothill grassland, vernal pool, wetland	HP	Not expected as heavy clay soils are absent from BSA. Vernal pools have been historically documented in the project area, but none were observed during 2012 and 2018 surveys.
San Diego ambrosia	*Ambrosia pumila*	FE/none 1B.1 SDC Group A	Chaparral, coastal scrub, valley and foothill grassland	HP	Low. Marginally suitable habitat and soils present onsite.
Dean's milk-vetch	*Astragalus deanei*	None/none 1B.1 SDC Group A	Chaparral, coastal scrub, riparian forest	A	Not Expected: Outside of the range of the species.
San Diego milk-vetch	*Astragalus oocarpus*	None/none 1B.2 SDC Group A	Chaparral, cismontane woodland, meadow and seep	A	Not Expected: No suitable habitat on site.
Coulter's saltbush	*Atriplex coulteri*	None/none 1B.2 SDC Group A	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland	HP	Low. BSA is very disturbed.
Parish's brittlescale	*Atriplex parishii*	None/none 1B.1 SDC Group A	Alkali playa, chenopod scrub, meadow and seep, vernal pool, wetland	HP	Low. BSA is very disturbed.
Encinitas baccharis	*Baccharis vanessae*	FT/SE 1B.1 SDC Group A	chaparral	A	Not Expected: No suitable habitat on site.
San Diego goldenstar	*Bloomeria [Muilla] clevelandii*	None/none 1B.1 SDC Group A	Chaparral, coastal scrub, valley and foothill grassland, vernal pool, wetland	HP	Low. Marginally suitable habitat and soils present onsite. Site is heavily disturbed and unlikely to support this species.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
Orcutt's brodiaea	*Brodiaea orcuttii*	None/none 1B.1 SDC Group A	Chaparral, cismontane woodland, ultramafic, valley and foothill grassland, vernal pool, wetland	HP	Low. Vernal pools have been historically documented in the study area, but none were observed during 2012 and 2018 surveys.
round-leaved filaree	*California [Erodium] macrophylla*	None/none SDC Group B	Cismontane woodland, valley and foothill grassland	A	Not Expected: No suitable habitat on site.
Dunn's mariposa-lily	*Calochortus dunnii*	None/SR 1B.2 SDC Group A	Chaparral, closed-cone coniferous forest, ultramafic	A	Not Expected: No suitable habitat on site.
Lakeside ceanothus	*Ceanothus cyaneus*	None/none 1B.2 SDC Group A	Chaparral, closed-cone coniferous forest	A	Not Expected: No suitable habitat on site.
southern tarplant	*Centromadia parryi* ssp. *australis*	None/none 1B.1 SDC Group A	Marsh and swamp, salt marsh, valley and foothill grassland, wetland	HP	Present. This species was observed within the BSA. .
smooth tarplant	*Centromadia pungens* ssp. *laevis*	None/none 1B.1 SDC Group A	Alkali playa, chenopod scrub, meadow and seep, riparian woodland, valley and foothill grassland, wetland	HP	Low. Marginally suitable habitat and soils present onsite. Not known from Ramona.
long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	None/none 1B.2 SDC Group A	Often on clay soils in chaparral, coastal scrub, meadow and seep, ultramafic, valley and foothill grassland, vernal pools	HP	Low. Vernal pools have been historically documented in the study area, but none were observed during 2012 and 2018 surveys.
delicate clarkia	*Clarkia delicata*	None/none 1B.2	Understory of oak woodlands and periphery of chaparral	A	Not expected. Species is known from the Ramona grasslands but not expected to occur on-site as the BSA is very disturbed.
San Miguel savory	*Clinopodium [Satureja] chandleri*	None/none 1B.2 SDC Group A	chaparral and oak woodland and may be restricted to gabbroic soils	A	Not Expected: No suitable habitat on site.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
Summer holly	*Comarostaphylis diversifolia ssp. diversifolia*	None/none 1B.2 SDC Group A	Chaparral, cismontane woodland	A	Not Expected: No suitable habitat on site.
Cuyamaca larkspur	*Delphinium hesperium* ssp. *cuyamacae*	None/SR 1B.2 SDC Group A	Lower montane coniferous forest, meadow and seep, wetlands	A	Not Expected: Montane species. No suitable habitat on site.
variegated dudleya	*Dudleya variegata*	None/none 1B.2 SDC Group A	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland	A	Not Expected: No suitable habitat present onsite.
Palmer's goldenbush	*Ericameria palmeri* var. *palmeri*	None/none 1B.1 SDC Group A	Chaparral, coastal scrub	A	Not Expected: No suitable habitat on site.
San Diego barrel cactus	*Ferocactus viridescens*	None/none 2.B1 SDC Group B	Chaparral, coastal scrub, valley and foothill grassland	A	Not Expected: No suitable habitat on site.
San Diego gumplant	*Grindelia hallii*	None/none 1B.2 SDC Group A	Chaparral, lower montane conifer forest, meadow and seep, valley and foothill grassland	HP	Low. Marginally suitable habitat and soils present onsite.
Palmer's grappling hook	*Harpagonella palmeri*	None/None4.2	Clay openings in grasslands and scrub habitats	A	Not expected. Occurs on clay soils in grassland and open sage scrub habitats. Known from hills adjacent to San Diego Country Estates. No clay soils apparent within the BSA.
Tecate cypress	*Hesperocyparis forbesii*	None/none 1B.1 SDC Group A	Chaparral, closed-cone coniferous forest	A	Not Expected: No suitable habitat on site.
Cuyamaca cypress	*Hesperocyparis stephensonii*	None/none 1B.1 SDC Group A	Chaparral, closed-cone coniferous forest, riparian forest, ultramafic	A	Not Expected: Montane species. No suitable habitat on site.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
graceful tarplant	*Holocarpha virgata* subsp. *elongata*	None/None 4.2	Grasslands, chaparral, coastal sage scrub	HP	Moderate. This species is known from Ramona grasslands and has a moderate potential for occurrence within the BSA. Though the BSA is disturbed, this species can tolerate some disturbance.
Ramona horkelia	*Horkelia truncata*	None/none 1B.3 SDC Group A	Chaparral, cismontane woodland	A	Not Expected: No suitable habitat on site.
Heart-leaved pitcher sage	*Lepechinia cardiophylla*	None/none 1B.2 SDC Group A	Closed-cone coniferous forest, chaparral, cismontane woodland	A	Not Expected: No suitable habitat on site.
Robinson's pepper-grass	*Lepidium virginicum* var. *robinsonii*	None/none 4.3 SDC Group A	Chaparral, coastal scrub	A	Not Expected: No suitable habitat on site.
Warner Springs lessingia	*Lessingia glandulifera* var. *tomentosa*	None/none 1B.1 SDC Group A	Chaparral	A	Not Expected. No suitable habitat on site. Known from Warner Springs.
lemon lily	*Lilium parryi*	None/none 1B.2 SDC Group A	Upper and lower montane coniferous forest, meadow and seep, riparian forest, wetland	A	Not Expected: Montane species. Only known in San Diego County from Palomar Mtn.
Parish's meadowfoam	*Limnanthes alba* ssp. *parishii*	None/SE 1B.2 SDC Group A	Meadow and seep, vernal pool, wetland	A	Not Expected: Montane species. No suitable habitat on site.
Small-flowered microseris	*Microseris douglasii* subsp. *platycarpha*	None/none 4.2	Clay lenses in perennial grasslands on the periphery of vernal pools or in broad openings in sage scrub	HP	Low. Vernal pools have been historically documented in the proposed project area, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of the library functions as a disturbed vernal pool.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
felt-leaved monardella	*Monardella hypoleuca* ssp. *lanata*	None/none 1B.2 SDC Group A	Chaparral, cismontane woodland	A	Not Expected: No suitable habitat on site.
Willowy monardella	*Monardella viminea*	FE/SE 1B.1 SDC Group A	Open cobbly stream benches	A	Not Expected. No suitable habitat on site
little mousetails	*Myosurus minimus subsp. apus*	None/none 3.1	Vernal pools	HP	Low. Known from vernal pools in Ramona grasslands. Vernal pools have been historically documented in the BSA, but none were detected during 2012 or 2018 surveys. However, disturbed wetland north of the library functions as a disturbed vernal pool.
mud nama	*Nama stenocarpa*	None/none 2B.2 SDC Group A	Marsh and swamp, riverbanks	HP	Low. Suitable habitat present on site, but it's low quality
spreading navarretia	*Navarretia fossalis*	FT/none 1B.1 SDC Group A	Alkali playa, chenopod scrub, marsh and swamp, vernal pool, wetland	HP	Low. Vernal pools have been historically documented in the study area, but none were observed during 2012 and 2018 surveys.
Baja navarretia	*Navarretia peninsularis*	None/none 1B.2 SDC Group A	Chaparral, lower montane coniferous forest,	A	Not Expected: Montane species. No suitable habitat on site.
Gander's ragwort	*Packera ganderi*	None/rare 1B.2 SDC Group A	Chaparral, ultramafic	A	Not Expected: No suitable habitat on site.
Moreno currant	*Ribes canthariforme*	None/none 1B.3 SDC Group A	Chaparral	A	Not Expected: No suitable habitat on site.
southern mountains skullcap	*Scutellaria bolanderi* ssp. *austromontana*	None/none 1B.2 SDC Group A	Chaparral, cismontane woodland, lower montane coniferous forest	A	Not Expected: No suitable habitat on site.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
purple stemodia	*Stemodia durantifolia*	None/none 2.B1 SDC Group A	Sonoran desert scrub	A	Not Expected: No suitable habitat on site.
San Bernardino aster	*Symphyotrichum defoliatum*	None/none 1B.2 SDC Group A	Cismontane woodland, coastal scrub, lower montane coniferous forest, marsh and swamp, meadow and seep, valley and foothill grassland, wetland	HP	Low. Marginally suitable habitat present onsite.
Parry's tetracoccus	*Tetracoccus dioicus*	None/none 1B.2 SDC Group A	Chaparral, coastal scrub, ultramafic	A	Not Expected: No suitable habitat or soils on site.
velvety false lupine	*Thermopsis californica* var. *semota*	None/none 1B.2 SDC Group A	Cismontane woodland, lower montane coniferous forest, meadow and seep, valley and foothill grassland, wetland	A	Not Expected: Montane species. No suitable habitat on site.
Coastal triquetrella	*Triquetrella californica*	None/none 1B.2 SDC Group A	Coastal bluff scrub, coastal scrub	A	Not Expected: No suitable habitat on site.
Invertebrates					
Quino checkerspot butterfly	*Euphydryas editha quino*	FE/none SDC Group 1	Coastal sage scrub	A	Not Expected. No suitable habitat on site.
Riverside fairy shrimp	*Streptocephalus woottoni*	FE/none SDC Group 1	Vernal pools	HP	Not present. Protocol surveys conducted in 2013 and 2018 confirmed absence from BSA.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE/none SDC Group 1	Vernal pools	HP	Not present. Protocol surveys conducted in 2013 and 2018 confirmed absence from BSA.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
Amphibians					
arroyo toad	*Anaxyrus californicus [Bufo microscaphus californicus]*	FE/SSC SDC Group 1	Desert wash, riparian scrub, riparian woodland, south coast flowing waters, south coast standing waters	HP	Low. Creek bed in the project area is under a dense canopy and water is present only intermittently. Habitat assessment determined focused surveys were not warranted.
Coast range newt	*Taricha torosa*	None/SSC SDC Group 2	Grassland, woodland, forest, ponds, reservoirs, slow-flowing streams.	A	Not Expected. No suitable breeding habitat on site.
Large-blotched salamander	*Ensatina klauberi [E.eschscholtzii k.]*	None/WL SDC Group 1	Chaparral, oak woodland, mixed grassland, evergreen forest.	A	Not Expected. Montane species. No suitable habitat on site.
western spadefoot	*Spea hammondii*	None/SSC SDC Group 2	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pool, wetland	HP	Moderate. This species was not detected during fairy shrimp survey conducted in 2013 and 2018. Season ponding within basins within the BSA provide potential breeding habitat for this species depending on rainfall and the species is known to occur in the vicinity of the BSA.
Reptiles					
southern California legless lizard	*Anniella stebbinsi*	None/SSC SDC Group 2	Chaparral, coastal dunes, coastal scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	HP	Low. Suitable habitat on site.
Orange-throated whiptail	*Aspidoscelis hyperythra*	None/WL SDC Group 2	Chaparral, cismontane woodland, coastal scrub	HP	Present. This species was detected incidental to the 2018 LBVI protocol surveys.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
coastal whiptail	*Aspidoscelis tigris stejnegeri*	None/SSC SDC Group 2	dry open areas with sparse foliage - chaparral, woodland, and riparian areas	HP	Moderate. Suitable habitat occurs on site and the species is known to occur in the vicinity.
red-diamond rattlesnake	*Crotalus ruber [C. r. ruber]*	None/SSC SDC Group 2	Chaparral, Mojavean desert scrub, Sonoran desert scrub	A	Not Expected. No suitable habitat on site.
western pond turtle	*Emys marmorata [Clemmys marmorata pallida]*	None/SSC SDC Group 1	Aquatic, artificial flowing waters, south coast flowing waters, south coast standing waters, wetland	A	Not Expected No suitable habitat on site.
California mountain kingsnake (San Diego population)	*Lampropeltis zonata (pulchra)*	None/none SDC Group 1	Chaparral, cismontane woodland, meadow and seep, riparian forest, riparian woodland, upper montane coniferous forest, wetland	HP	Not Expected. The BSA is outside the known range of this species
coast horned lizard	*Phrynosoma blainvillii*	None/SSC SDC Group 1	Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinon and juniper woodlands, riparian scrub, riparian woodland, valley and foothill grassland	A	Not Expected. No suitable habitat or harvester ant prey on site.
Coronado Island skink	*Plestiodon skiltonianus interparietalis*	None/WL SDC Group 2	Grasslands, chaparral, cismontane woodland, pinon and juniper woodlands	HP	Moderate. Suitable habitat occurs on site and the species is known to occur in the vicinity.
coast patch-nosed snake	*Salvadora hexalepis virgultea*	None/SSC SDC Group 2	Coastal scrub	A	Not Expected. No suitable habitat on site.
two-striped garter snake	*Thamnophis hammondii*	None/SSC SDC Group 1	Marsh and swamp, riparian scrub, riparian woodland, wetland	HP	Low. This species in not likely to be present on site due to the disturbed nature of the site and presence of adjacent development.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
south coast garter snake	*Thamnophis sirtalis ssp.infernalis*	None/SSC SDC Group 2	Artificial standing waters, marsh and swamp, riparian scrub, riparian woodland, south coast flowing waters, south coast standing waters, wetland	HP	Not Expected. The BSA is outside the known range of this species
Birds					
Cooper's hawk	*Accipiter cooperii*	None/WL SDC Group 1	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest	HP	Present. This species was observed within the BSA, but no nests were observed in 2012.
Tricolored blackbird	*Agelaius tricolor*	None/SSC SDC Group 1	Freshwater marsh, marsh and swamp, swamp, wetland	A	Not Expected. No suitable habitat on site.
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	None/WL SDC Group 1	Chaparral, coastal scrub	A	Not expected. No suitable habitat on site.
grasshopper sparrow	*Ammodramus savannarum*	None/SSC SDC Group 1	Valley and foothill grassland	HP	Moderate. This species was not observed during surveys.
golden eagle	*Aquila chrysaetos*	None/SFP SDC Group 1	Broadleaved upland forest, cismontane woodland, coastal prairie, lower montane coniferous forest, pinon and juniper woodlands, upper montane coniferous forest, valley and foothill grassland	HP	Not Expected. No suitable cliffs or dense mountain woodland present for nesting. Unlikely to forage on-site because of the surrounding development.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
Great blue heron	*Ardea herodias*	None/none SDC Group 2	Breeds in tall trees adjacent to water where abundant food sources are present. In the Ramona area, the species is seen in grasslands eating Botta's pocket gophers (*Thomomys bottae*).	HP	Present. Detected during the 2018 protocol LBVI surveys. Unlikely to breed on site.
burrowing owl	*Athene cunicularia*	None/SSC SDC Group 1	Coastal prairie, coastal scrub, Sonoran desert scrub, valley and foothill grassland	HP	Low. No BUOW or sign has been observed in the project vicinity.
red-shouldered hawk	*Buteo lineatus*	None/none SDC Group 1	Common within suburban and rural areas in San Diego County with suitable tall trees and adjacent riparian areas for foraging.	HP	Moderate. Suitable breeding and nesting habitat within the BSA
coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	None/SSC SDC Group 1	Dense cactus stands in coastal scrub	A	Not Expected. No suitable habitat on site.
Turkey vulture	*Cathartes aura*	None/none SDC Group 1	Searches for carrion in a variety of habitats. Nests in rocky outcrops	HP	Present. Detected during the 2018 protocol LBVI surveys. No breeding habitat within the BSA.
white-tailed kite	*Elanus leucurus*	None/SFP SDC Group 1	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, wetland	HP	Moderate. Suitable breeding and foraging habitat present. This species has not been detected during surveys.
southwestern willow flycatcher	*Empidonax traillii extimus*	FE/SE SDC Group 1	Riparian woodland	HP	Low. No SWFL were observed during protocol LBVI surveys. Habitat marginal for breeding.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
California horned lark	*Eremophila alpestris actia*	None/WL SDC Group 2	Open grassy and semi-open habitats	HP	Moderate**.** The grassland habitat provides suitable foraging opportunities, but human disturbance may preclude breeding.
Prairie falcon	*Falco mexicanus*	None/WL SDC Group 1	Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, valley and foothill grassland	HP	Low. This species has not been detected during surveys.
Yellow-breasted chat	*Icteria virens*	None/SSC SDC Group 1	Riparian forest, riparian scrub, riparian woodland	HP	Low. No chats were observed during protocol LBVI surveys.
Loggerhead shrike	*Lanius ludovicianus*	None/SSC SDC Group 1	Prefers open habitats, with scattered shrubs for perching and nesting	HP	Moderate**.** The grassland habitat provides suitable foraging opportunities, but human disturbance may preclude breeding.
coastal California gnatcatcher	*Polioptila californica californica*	FT/SSC SDC Group 1	Coastal bluff scrub, coastal scrub	A	Not Expected. No suitable habitat on site.
purple martin	*Progne subis*	None/SSC SDC Group 1	Broadleaved upland forest, lower montane coniferous forest	A	Not Expected. No suitable habitat on site.
yellow warbler	*Setophaga petechia*	None/none SSC SDC Group 2	Riparian forest, riparian scrub, riparian woodland	HP	Present. Several individuals were detected during the 2018 protocol LBVI surveys.
Western bluebird	*Sialia mexicana*	None/none SDC Group 2	Open woodlands for foraging. Nests primarily in oak woodlands and riparian woodlands adjacent to grassland habitats.	HP	Present. Detected during the 2018 protocol LBVI surveys. Breeding and foraging habitat within the BSA.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
barn owl	*Tyto alba*	None/none SDC Group 2	Grasslands, deserts, marshes, agricultural fields, narrow forest strips, brushy fields, and suburbs and cities. They nest in tree cavities, caves, and in buildings.	HP	High. Suitable nesting and foraging habitat within the BSA.
least Bell's vireo	*Vireo bellii pusillus*	FE/SE SDC Group 1	Riparian forest, riparian scrub, riparian woodland	HP	Present. Habitat suitable and LBVI were detected during 2018 surveys, but not 2012.
Mammals					
pallid bat	*Antrozous pallidus*	None/SSC SDC Group 2	Chaparral, coastal scrub, desert wash, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland	HP	Low. No roosting habitat on site.
Ringtail	*Bassaciscus astutus*	None/none SDC Group 2	Riparian habitat and in brush stands of moist forest and shrub habitats	HP	Not Expected. Suitable habitat is marginal and adjacent development likely deter this species from using the BSA.
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	None/SSC SDC Group 2	Chaparral, coastal scrub, valley and foothill grassland	HP	Moderate. Suitable habitat within the BSA.
northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	None/SSC SDC Group 2	Chaparral, coastal scrub, grassland	HP	Moderate. Suitable habitat within the BSA.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
Townsend's big-eared bat	*Corynorhinus townsendii*	None/SSC SDC Group 2	Broadleaved upland forest, chaparral, chenopod scrub, lower montane coniferous forest, meadow and seep, riparian forest, riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, upper montane coniferous forest, valley and foothill grassland	HP	Not Expected. No roosting habitat on site.
Stephens' kangaroo rat	*Dipodomys stephensi*	FE/ST SDC Group 1	Coastal scrub, valley and foothill grassland	A	Not Expected. Nearest population is approximately 2 miles from the site. No evidence of SKR was observed on site during previous focused surveys. Species is not expected to occur
western mastiff bat	*Eumops perotis californicus*	None/SSC SDC Group 2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland	A	Not Expected. No suitable roosting habitat on site.
western red bat	*Lasiurus blossevillii*	None/SSC SDC Group 2	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland	A	Not Expected. No suitable roosting habitat on site.
western yellow bat	*Lasiurus xanthinus*	None/SSC SDC Group 2	Desert wash	A	Not Expected. No suitable habitat on site.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	None/SSC SDC Group 2	Grasslands, Coastal scrub	HP	Moderate. Suitable grassland habitat on site. Not observed during surveys.
San Diego desert woodrat	*Neotoma lepida intermedia*	None/SSC SDC Group 2	Rocky outcrops in coastal scrub	A	Not Expected. No suitable habitat on site.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Potential to Occur On Site
pocketed free-tailed bat	*Nyctinomops femorosaccus*	None/SSC SDC Group 2	pinon and juniper woodlands, riparian scrub, Sonoran desert scrub	A	Not Expected. No suitable habitat on site.
big free-tailed bat	*Nyctinomops macrotis*	None/SSC SDC Group 2	Rocky, rugged canyons	A	Not Expected. No suitable habitat on site.
mule deer	*Odocoileus hemionus*	None/none SDC Group 2	Mountain forests, wooded hills, desert areas and in chaparral	HP	Not Expected. The narrow riparian habitat along with the surrounding developed and residential areas likely deter this species from using the BSA.
mountain lion	*Puma concolor*	None/none SDC Group 2	Rugged mountains, forests, deserts, and swamps	HP	Not Expected. The narrow riparian habitat along with the surrounding developed and residential areas likely deter this species from using the BSA.
American badger	*Taxidea taxus*	None/SSC SDC Group 2	Preferred habitats include grasslands, meadows, agricultural areas, savannas, and openings in forests, with friable soils for digging.	A	Low. This species is not likely to occur in the project area because it is surrounded by development.

[1]Legend for Status:

Federal

FE - Listed as endangered under the federal Endangered Species Act.
FT - Listed as threatened under the federal Endangered Species Act.

State

SE - Listed as endangered under the California Endangered Species Act.
ST – Listed as threatened under California Endangered Species Act.
SR – Listed as rare under California Endangered Species Act.
SFP - Listed as State Fully Protected.
SSC - Listed as a California Species of Special Concern.
WL- Listed as a Watch List species.

CA Rare Plant Rank (CRPR) – Formerly known as CNPS List

1A. Presumed extinct in California
1B. Rare or Endangered in California and elsewhere
2. Rare or Endangered in California, more common elsewhere
3. Plants for which we need more information - Review list

4. Plants of limited distribution - Watch list

Threat Ranks

.1 - Seriously endangered in California

.2 – Fairly endangered in California

.3 – Not very endangered in California

San Diego County Group

Plants

A – Rare, threatened or endangered in California and elsewhere

B – Rare, threatened or endangered in California but more common elsewhere

C – Maybe quite rare, but more information is needed to determine their status

D – Limited distribution and are uncommon but not presently rare or endangered

Animals

Group 1 - includes those that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirement that must be met.

Group 2 - includes those species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action

[2]Habitat:

Absent [A] - no habitat present and no further work needed.

Habitat Present [HP] -habitat is, or may be present. The species may be present.

Appendix E

Plant and Wildlife Species Detected

APPENDIX E.1. PLANT SPECIES DETECTED
13th Street Bridge Project

Scientific Name	Common Name
EUDICOTS	
Amaryanthaceae	
Salsola tragus	Russian thistle
Anacardiaceae	
Schinus molle	Peruvian pepper tree
Asteraceae	
Ambrosia psilostachya	Western ragweed
Artemisia californica	California sagebrush
Artemisia douglasiana	Douglas mugwort
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mulefat
Centaurea sp.	Star thistle
Centromadia parryi subsp. a*ustralis*	Southern tarplant
Corethrogyne filaginifolia	Sand aster
Cynara cardunculus	Artichoke thistle
Hedypnois cretica	Crete hedypnois
Isocoma menziesii	Godenbush
Lactuca serriola	Prickly lettuce
Matricaria discoidea	Pineapple weed
Silybum marianum	Milk thistle
Xanthium strumarium	Cocklebur
Boraginaceae	
Amsinckia menziesii var. *intermedia*	Rancher's fiddlenect
Eucrypta chrysanthemiflora var. *chrysanthemiflora*	Common eucrypta
Phacelia ramosissima var. *latifolia*	Branching phacelia
Brassicaceae	
Hirschfeldia incana	Short pod mustard
Raphanus sativus	Radish
Cactaceae	
Convolvulaceae	
Convolvulus arvensis	Bindweed
Crassulaceae	
Crassula aquatic	Water pygmyweed

APPENDIX E.1. PLANT SPECIES DETECTED
13th Street Bridge Project

Scientific Name	Common Name
Cucurbitaceae	
Cucurbita palmata	Coyote melon
Euphorbiaceae	
Croton setigerus	Doveweed
Euphorbia peplus	Petty spurge
Fabaceae	
Acmispon glaber	Deerweed
Lotus corniculatus	Birdfoot trefoil
Parkinsonia aculeata	Mexican palo verde
Vicia villosa	Vetch
Geraniaceae	
Erodium brachycarpum	Short-beak filaree
Heliotropaceae	
Heliotropium curassavium	Salt heliotrope
Lamiaceae	
Marrubium vulgare	Horehound
Lythraceae	
Lythrum hyssopifolia	Grass poly
Myrtaceae	
Eucalyptus sp.	Eucalyptus
Polygonaceae	
Eriogonum fasciculatum var. *fasciculatum*	Coastal California buckwheat
Rumex crispus	Curly dock
Salicaceae	
Populus fremontii subsp. *fremontii*	Western cottonwood
Salix exigua	Narrow-leaf willow
Salix gooddingii	Goodding's back willow
Salix lasiolepis	Arroyo willow
Solanaceae	
Datura wrightii	Western Jimson weed
Nicotiana glauca	Tree tobacco

APPENDIX E.1. PLANT SPECIES DETECTED
13th Street Bridge Project

Scientific Name	Common Name
Tamaricaceae	
Tamarix sp.	Tamarisk
Urticaceae	
Urtica dioica subsp. *holosericea*	Hoary nettle
Zygophyllaceae	
Tibulus terrestris	Puncture vine
MONOCOTS	
Cyperaceae	
Cyperus sp.	Flat sedge
Eleocharis macrostachya	Pale spike rush
Schoenoplectus sp.	Bulrush
Juncaceae	
Juncus balticus subsp. *ater*	Baltic rush
Poaceae	
Arundo donax	Giant reed
Avena sp.	Wild oats
Bromus diandrus	Ripgut grass
Bromus hordeaceus	Soft chess
Bromus madritensis subsp. *rubens*	Red brome
Distichlis spicata	Saltgrass
Hordeum murinum	Barley
Lamarkia aurea	Golden-top

APPENDIX E.2. WILDLIFE SPECIES DETECTED*
13th Street Bridge Project

Scientific Name		Common Name
INVERTEBRATES		
Apidae		
	Apis mellifera	Honey bee
	Xylocopa californica	California carpenter bee
Coenagrionidae		
	Argia vivida	Vivid dancer
Formicidae		
	Linepithema humile	Argentine ant
	Pogonomyrmex californicus	California harvester ant
Hesperiidae		
	Hylephila phyleus	Fiery skipper
	Erynnis funeralis	Funereal duskywing
Libellulidae		
	Libellula saturata	Flame skimmer
	Erythemis collocata	Western pondhawk
Lycaenidae		
	Icaricia acmon acmon	Acmon blue
	Leptotes marina	Marine blue
Nymphalidae		
	Adelphia bredowii californica	California sister
	Junonia coenia grisea	Common buckeye
	Nymphalis antiopa	Mourning Cloak
	Vanessa cardui	Painted lady
Papilionidae		
	Papilio eurymedon	Pale swallowtail
Pieridae		
	Pieris rapae	Cabbage white
	Colias eurytheme	Orange sulphur
	Anthocharis sara sara	Sara orangetip
Pompilidae		
	Pepsis sp.	Tarantula hawk wasp
Tenebrionidae		
	Coelocnemis californicus	Darkling beetle
AMPHIBIANS		
Hylidae		
	Pseudacris hypochondriaca	Baja California Treefrog
REPTILES		
Colubridae		
	Pituophis catenifer	Gopher snake
Phrynosomatidae		
	Sceloporus orcuttii	Granite spiny lizard
	Sceloporus occidentalis	Western fence lizard
Teiidae		
	Aspisdoscelis hyperythra	Orange-throated whiptail

Scientific Name		Common Name
BIRDS		
Accipitridae		
	Accipiter cooperii	Cooper's hawk
	Buteo lagopus	Rough-legged Hawk
	Buteo jamaicensis	Red-tailed hawk
Aegithalidae		
	Psaltriparus minimus	Bushtit
Ardeidae		
	Ardea herodias	Great blue heron
	Casmerodius albus	Great egret
Cardinalidae		
	Pheucticus melanocephalus	Black-headed grosbeak
	Passerina caerulea	Blue grosbeak
Cathartidae		
	Cathartes aura	Turkey vulture
Charadriidae		
	Charadrius vociferous	Killdeer
Columbidae		
	Zenaida macroura	Mourning dove
Corvidae		
	Corvus brachyrhyncus	American crow
	Aphelocoma coerulescens	Western scrub jay
Emberizidae		
	Melospiza melodia	Song sparrow
Fringillidae		
	Carduelis tristis	American goldfinch
	Carpodacus mexicanus	House finch
	Careuelis psaltria	Lesser goldfinch
Hirundinidae		
	Petrochelidon pyrrhonota	Cliff swallow
	Stelgidopteryx serripennis	Northern rough-wing swallow
	Tachycineta bicolor	Tree swallow
Icteridae		
	Icterus bullocki	Bullock's oriole
Mimidae		
	Toxostoma redivivum	California thrasher
	Mimus polyglottos	Northern mockingbird
Muscicapidae		
	Sialia mexicana	Western bluebird
Parulidae		
	Setophaga auduboni auduboni	Audubon's warbler
	Geothlypis trichas	Common yellowthroat
	Oreothlypis celata	Orange-crowned warbler
	Setophaga townsendi	Townsend's warbler
	Cardellina pusilla	Wilson's warbler
	Setophaga petechia	Yellow warbler
Passerelidae		
	Melozone crissalis	California towhee
	Pipilo maculatus	Spotted towhee

Scientific Name		Common Name
Phasianidae		
	Callipepla californica	California quail
Picidae		
	Melanerpes formicivorus	Acorn woodpecker
	Colaptes auratus	Northern flicker
	Picoides nuttallii	Nuttall's woodpecker
Ptilogonatidae		
	Phainopepla nitens	Phainopepla
Sittidae		
	Sitta carolinensis	White-breasted nuthatch
Sturnidae		
	Sturnis vulgaris	European starling
Trochilidae		
	Calypte anna	Anna's hummingbird
	Archilochus alexandrii	Black-chinned hummingbird
Troglidytidae		
	Thryomanes bewickii	Bewick's wren
Tyrannidae		
	Myiarchus cinerascens	Ash-throated flycatcher
	Sayornis nigricans	Black phoebe
	Tyrannus vociferans	Cassin's kingbird
	Empidonax difficilis	Pacific slope flycatcher
	Sayornis saya	Say's phoebe
Vireonidae		
	Vireo bellii pusillus	Least Bell's vireo
	Vireo gilvus	Warbling vireo
MAMMALS		
Canidae		
	Canis latrans	Coyote
Cricetae		
	Neotoma sp.	Woodrat
Geomyidae		
	Thomomys bottae	Botta's pocket gopher
Leporidae		
	Sylvilagus auduboni	Desert cottontail
Procyonidae		
	Procyon lotor	Raccoon
Sciuridae		
	Spermophilus beecheyi	California ground squirrel

* = Species observed visually, by sound, tracks, nests, and/or scat.