Biological Technical Report
for the
East Valley Parkway and Midway Drive Drainage Improvement Project

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Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project, City of Escondido, California

EXECUTIVE SUMMARY

The proposed East Valley Parkway and Midway Drive Drainage Improvement Project would involve increasing the capacity of the storm drain systems in the central portion of the City of Escondido in northern San Diego County. The existing storm drainage systems in the Project area are undersized and unable to collect and convey anticipated flow quantities, resulting in more than 1,600 properties being completely or partially within a Federal Emergency Management Agency (FEMA) 100-year floodplain. Localized flooding occurs within the Project area, triggering deployment of sandbags and road closures an average of five times per year since 2019.

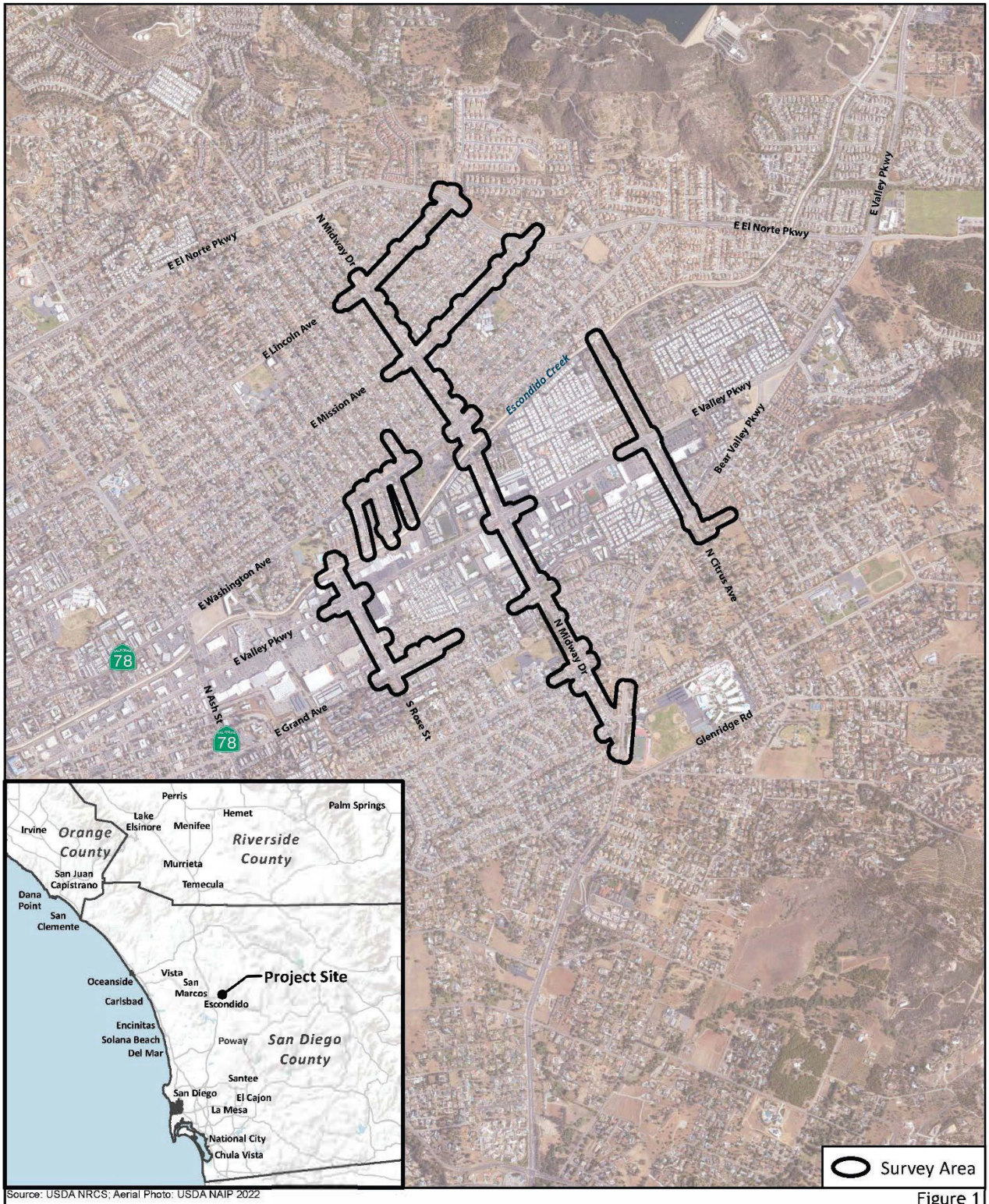
The approximately 203.3-acre study area, which includes 49.6 acres of actual Project impact area and 153.7 acres of 100-foot buffer area around the impact areas, is located in the central portion of the city of Escondido in northern San Diego County (Figure 1). The study area includes segments of North Midway Drive, South Midway Drive, Bear Valley Parkway, East Lincoln Avenue, East Mission Avenue, North Citrus Avenue, North Rose Street, East Grand Avenue, East Washington Avenue, and an unnamed access road immediately south of East Washington Avenue and north of Escondido Creek, between North Rose Street and Begonia Street (Figure 1).

In September 2024, biologists from Balk Biological, Inc. conducted biological reconnaissance surveys to map vegetation, conducted a jurisdictional wetland delineation, surveyed for general wildlife use and potential for sensitive wildlife species to use the site, and conducted a general plant survey and assessment for the potential of sensitive plants to occur onsite.

A total of six vegetation communities or land cover types were identified within the Project study area: coast live oak woodland, freshwater marsh, landscaping/ornamental, concrete-lined channel, bare ground, and developed land.

One special-status wildlife species, white-faced ibis, was detected foraging inside the Project study area during the reconnaissance level wildlife survey; however, no nesting habitat occurs onsite. No other sensitive wildlife species have moderate to high potential to occur onsite. No special-status plant species have more than a low potential to occur onsite. The results of the biological surveys concluded that there are areas within Project impact areas that meet the definition of waters of the United States and/or state, subject to review and regulation by the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW).

Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project, City of Escondido, California



Source: USDA NRCS; Aerial Photo: USDA NAIP 2022

Figure 1

Project Location

East Valley Parkway & Midway Drive Drainage Improvements

Balk Biological, Inc.

N

0 2,000 Feet

Implementation of the proposed Project would result in temporary and direct impacts to 48.4 acres of developed land, 0.7 acres of concrete-lined channel, and 0.5 acres of landscaping/ornamental land. Impacts to developed and landscaping/ornamental land are not significant and would not require mitigation. Impacts to the concrete-lined channel are considered an impact to non-wetland waters of the United States and/or state and are expected to be covered by a Nationwide permit issued by ACOE; it is anticipated that no mitigation would be required for these impacts.

Construction-related noise indirect impacts may occur to nesting birds if construction occurs from January 1 through August 31. Phasing of construction to avoid the bird nesting season, where feasible, and performing pre-construction nesting bird surveys to minimize potential impacts to other nesting birds if construction is to occur during the bird breeding season, would reduce impacts to nesting birds.

1 INTRODUCTION

This technical report provides an analysis of potential biological resource impacts associated with the proposed East Valley Parkway and Midway Drive Drainage Improvement Project (Project), which is located in the central portion of the city of Escondido in northern San Diego County (Figure 1). This report provides a brief Project description, summary of the pertinent biological resource regulations, the Project setting, survey methods, existing biological resources, special-status biological resources, Project impacts (direct and indirect), and proposed mitigation. The Project impacts, avoidance, and mitigation measures are discussed in accordance with federal, state, and local regulations, including the California Environmental Quality Act (CEQA), Clean Water Act (CWA), Migratory Bird Treaty Act (MBTA), California Fish and Game Code (CFGC), and the Porter-Cologne Water Quality Control Act, and with consideration to the Draft Multiple Habitat Conservation Program (MHCP) and Escondido's Subarea Plan (Subarea Plan).

1.1 Project Location

The approximately 203.3-acre study area, which includes 49.6 acres of actual Project impact area and 153.7 acres of 100-foot buffer area around the impact areas, is located in the City of Escondido along segments of North Midway Drive, South Midway Drive, Bear Valley Parkway, East Lincoln Avenue, East Mission Avenue, North Citrus Avenue, North Rose Street, East Grand Avenue, East Washington Avenue, and an unnamed access road immediately south of East Washington Avenue and north of Escondido Creek, between North Rose Street and Begonia Street (Figure 1).

1.2 Project Description

The proposed East Valley Parkway and Midway Drive Drainage Improvement Project (herein referred to as "Project") would involve increasing the capacity of the storm drain systems in the central portion of the city of Escondido in northern San Diego County. The existing storm drainage systems in the Project area are undersized and unable to collect and convey anticipated flow, resulting in more than 1,600 properties being completely or partially within a Federal Emergency Management Agency (FEMA) 100-year floodplain. Localized flooding occurs within the Project area, triggering deployment of sandbags and road closures, an average of five times per year since 2019.

The proposed Project would involve the construction of approximately 17,000 linear feet of reinforced concrete box culverts and approximately 1,550 linear feet of reinforced concrete pipelines beneath existing roadways and adjacent public rights-of-way (e.g., sidewalks) and five

new stormwater inlets into Escondido Creek. The culverts would range in size from a single 8-foot by 4-foot (32 square feet in area) to a triple 11-foot by 6-foot (198 square feet in area), and the pipelines would be 54 inches in diameter (about 16 square feet in area). The project would require relocation of some of the existing underground utility lines to accommodate the proposed storm drain culverts. After relocation of existing utilities and installation of the proposed storm drain culverts and pipes, the affected roadways/sidewalks would be resurfaced. Road resurfacing would include the provision of storm drain inlets along both sides of the roads to collect runoff. The project would also include bio-retention areas to provide filtration and treatment of runoff before discharging into Escondido Creek. Figure 1 shows the locations of the proposed culverts/pipelines and Escondido Creek inlets.

Construction of the proposed Project is anticipated to commence in February 2026 and be completed in approximately 24 months. Given the linear nature of the project, the active construction area would continuously move along the project site at a rate of approximately 50 to 80 liner feet per day. Culvert/pipe installation would be completed in trenches. After culvert/pipe installation, the trenches would be backfilled, and the road would be repaved. Excess fill soil would be hauled to Miramar Landfill for disposal.

Once construction of the Project is completed, the new culverts/pipelines and inlets would be maintained in a manner similar to the existing facilities.

1.3 Regulatory Framework

This section provides a summary of the federal and state environmental regulations that govern the biological resources applicable to the Project. This section also provides a summary of other state and local environmental guidelines or listings that evaluate the rarity of species or the habitats they depend on. The California Environmental Quality Act (CEQA) significance criteria are also included in this section. The descriptions below provide a brief overview of agency regulations that may be applicable to the resources that occur within the Project site, and their respective requirements.

1.3.1 Federal Regulations and Standards

1.3.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (16 United States Code [U.S.C.] §§ 1531 et seq.) directs the United States Fish and Wildlife Service (USFWS) to identify and protect

endangered and threatened species and their critical habitat, and to provide a means to conserve their ecosystems. Section 9 of the FESA makes it unlawful for a person to take a listed animal without a permit. "Take" is defined by the FESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct" (16 U.S.C. 1532(19)). Through regulations, the term "harm" is interpreted to include actions that modify or degrade habitats to a degree that significantly impairs essential behavioral patterns, including breeding, feeding, or sheltering.

Section 7 of the FESA directs USFWS to use its existing authority to conserve threatened and endangered species and, in consultation with federal agencies, ensure that any action authorized, funded, or carried out by such agency does not jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

Section 7(a)(2) requires federal agencies to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species. In consultation for those species with critical habitat, federal actions must also ensure that activities do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery.

1.3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703-712) makes it unlawful to take or possess migratory birds, except as permitted by the USFWS. The MBTA protects all migratory birds, their eggs, their body parts, or their nests. Essentially all avian species native to the U.S. are protected under the provisions of the MBTA; introduced species and non-migratory upland game birds are not protected by the MBTA. "Take" under the MBTA is defined "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect" protected birds (50 Code of Federal Regulations [C.F.R.] 10.12). The current list of species protected by the MBTA includes several hundred species. Nearly all native birds in the San Diego region are considered migratory. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, or protection of human health or safety and personal property.

1.3.1.3 Clean Water Act

Section 404 of the Clean Water Act (CWA) requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (ACOE) before performing any activity that involves any discharge of dredged or fill material into "waters of the United States," including wetlands. Waters of the U.S. include navigable waters of the U.S., interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries (33 CFR 328.3(a)). Many surface waters and wetlands in California meet the criteria for waters of the U.S. In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate Regional Water Quality Control Board (RWQCB), in this case the San Diego RWQCB, indicating that the project will not violate California water quality standards.

1.3.1.4 Rivers and Harbors Act – Sections 9 and 10

Section 9 of the Rivers and Harbors Act states that the construction of any bridge, dam, dike, or causeway over or in navigable waterways of the U.S. requires Congressional approval. The U.S. Coast Guard (USCG) administers Section 9 and consultation with the USCG may be necessary to determine if a Section 9 permit would be required under the Rivers and Harbors Act.

The USACE administers Section 10 of the Rivers and Harbors Act, and permits are required for all structures, such as rip-rap, and activities such as dredging and filling, in navigable waters of the U.S. Navigable waters are defined as "those subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce." The USACE grants or denies permits based on the effects of navigation. Most activities covered under the Rivers and Harbors Act are also covered under Section 404 of the Clean Water Act.

1.3.1.5 Executive Order 11988, Floodplain Management

Executive Order (EO) 11988 requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. EO 11988 provides an eight-step process that agencies carry out as part of their decision-making process for projects that have potential impacts to or within a floodplain.

1.3.1.6 Executive Order 11990, Protection of Wetlands

Pursuant to EO 11990, each federal agency is responsible for preparing implementing procedures for carrying out the provisions of the EO. The purpose of this EO is to "minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands." Each agency, to the extent permitted by law, must avoid undertaking or providing assistance for any activity located in wetlands, unless the head of the agency finds that there is no practical alternative to such activity, and the proposed action includes all practical measures to minimize harm to wetlands that may result from such actions. In making this finding, the head of the agency may take into account economic, environmental, and other pertinent factors. Each agency must also provide opportunity for early public review of any plans or proposals for new construction in wetlands.

1.3.2 State Laws and Regulations

1.3.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) (Public Resources Code Section 15000 et seq.) requires identification of significant environmental effects of proposed projects (including impacts on biological resources) and avoidance (where feasible) or mitigation of the significant effects. CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. "Projects" are activities that have the potential to have a physical impact on the environment.

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely on the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would typically be considered significant. Based on these guidelines, impacts to biological resources would be considered significant if the project would do any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Wildlife (CDFW) or the USFWS.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP); Natural Community Conservation Plan; or other approved local, regional, or state HCP.

An evaluation of whether an impact on biological resources would be substantial must consider the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. The evaluation of impacts considers direct impacts, indirect impacts, and cumulative impacts, and whether the impact is permanent or temporary.

1.3.2.2 California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et seq.) prohibits the "take" (defined as "to hunt, pursue, catch, capture, or kill") of State-listed species except as otherwise provided in State law. CESA, administered by CDFW, is similar to FESA, although unlike the Federal law, CESA applies incidental take prohibitions to species currently petitioned for State-listing status (i.e., candidate species). State lead agencies are required to consult with the CDFW to ensure that their authorized actions are not likely to jeopardize the continued existence of any State-listed species or result in the degradation of occupied habitat.

Under Section 2081, the CDFW authorizes "take" of State-listed endangered, threatened, or candidate species through incidental take permits or memoranda of understanding if 1) the take is incidental to otherwise lawful activities, 2) impacts of the take are minimized and fully mitigated, 3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in questions, and 4) the applicant ensures suitable funding to implement the measures required by CDFW.

1.3.2.3 Fully Protected Species

Prior to the development of FESA and CESA, species were listed as "fully protected" by California. Fully protected species, including fish, amphibians, reptiles, birds, and mammals, were identified to allow for the protection of those animals that were rare or that were threatened by potential extinction. The majority of fully protected species have since been listed as threatened or endangered under the CESA and/or FESA. Per § 4700 of the CFGC, the possession or taking of fully protected species is only allowed as provided in §2081.7 and §2835 of the CFGC.

1.3.2.4 California Fish and Game Code Section 1602 – Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Fish and Game Code Section 1602. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of, or 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 may pass into any river, stream, or lake.

CDFW defines "stream" as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. In practice, the CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, 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 wetland boundaries often include, but extend beyond, USACE wetland boundaries. Jurisdictional boundaries under CFGC Section 1600-1616 (CDFW's Lake and Streambed Alteration Program) may encompass an area that is greater than that under the jurisdiction of CWA Section 404. Therefore, jurisdictional waters of the state include jurisdictional waters of the U.S., federal and state jurisdictions do overlap, but would remain distinct for regulatory administration and permitting purposes. A CDFW Streambed Alteration Agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

1.3.2.5 California Fish and Game Code Section 3503 and 3503.5 – Protection of Birds, Nests, and Raptors

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

1.3.2.6 California Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Section 1900-1913) directed the CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave CDFW the power to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take.

1.3.2.7 Porter-Cologne Water Quality Control Act – California Water Code Section 13000 et seq.

Under the Porter-Cologne Water Quality Control Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters of the state may require waste discharge requirements from the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

1.3.2.8 Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality in California. The RWQCB regulates discharges to surface waters under the federal CWA and the Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all waters of the state and to all waters of the U.S., including wetlands (isolated and non-isolated conditions).

Through 401 Certification, Section 401 of the CWA allows the RWQCB to regulate any proposed federally permitted activity that may affect water quality. Such activities include the discharge of

dredged or fill material, as permitted by USACE, pursuant to Section 404 of the CWA. The RWQCB is required to provide "certification that there is reasonable assurance that an activity that may result in the discharge to waters of the United States will not violate water quality standards," pursuant to Section 401. Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards.

In addition, pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB is authorized to regulate any activity that would result in discharges of waste or fill material into waters of the state, including "isolated" waters and/or wetlands (e.g., vernal pools and seeps), saline waters, and groundwater within the boundaries of the state (California Water Code (CWC) Section 13050[e]). The Porter-Cologne Water Quality Control Act authorizes the State Water Resources Control Board to adopt, review, and revise policies for all waters of the state, and directs the RWQCB to develop and implement regional Basin Plans that recognize and are designed to maintain the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, maintaining water quality, and addressing the water quality problems of that region (CWC Section 13050[j]). As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if Section 404 does not apply. "Waste" is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

1.3.3 Local Plans and Policies

1.3.3.1 Multiple Habitat Conservation Program (MHCP) and Escondido's Subarea Plan (Subarea Plan)

The Multiple Habitat Conservation Program (MHCP) is a comprehensive, conservation planning program designed to address the needs of an ecosystem preserve in northwestern San Diego County. The MHCP is part of a large, multi-jurisdictional planning effort in San Diego County, and each MHCP represents a subregional plan under California's Natural Community Conservation Planning (NCCP) Act of 1991. The purpose of the MHCP is to protect viable populations of native plant and animal species and their habitat in perpetuity, while accommodating continued economic development and quality of life for residents of North County (SANDAG 2003).

The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. These jurisdictions will implement their portions of the MHCP through citywide "subarea" plans, which describe the specific policies each city will institute for the

MHCP. The *Public Review Draft Escondido Subarea Plan* (Subarea Plan) (Ogden and CBI 2001) is intended to be consistent with the region's MHCP and with the plans prepared by the entities participating in the MHCP.

The goal of Subarea Plan is to contribute to the maintenance of biodiversity and ecosystem health in the regions while maintaining quality of life and economic growth opportunities (Ogden and CBI 2001). The Subarea Plan is not adopted by the City or approved by CDFW or USFWS, though the City uses it as guidance when reviewing impacts to biological resources. The Subarea Plan represents the City's contribution to the MHCP and to regional NCCP conservation goals.

The Project is located within the central portion of the Subarea Plan (Figures 2a and 2b). It is not located within the Biological Core and Linkage Area (BCLA) and is outside of any Focused Planning Areas (FPAs), and no Constrained Lands occur within the Project. The Constrained Lands designation includes lands with steep slopes and wetlands regulated by ACOE federal wetland permitting requirements and the MHCP "no net loss of wetlands" policy (Ogden and CBI 2001).

2 SURVEY METHODS AND LIMITATIONS

The Project study area is comprised of the entire 203.3-acre site, including each Project impact/work areas and a 100-foot buffer (Figure 1). The 100-foot buffer is appropriate in this case to allow for detection of, or analysis of, potential habitat for any species which may be indirectly impacted by Project activities onsite. Data regarding biological resources present within the study area were obtained through a review of pertinent literature and field reconnaissance, both of which are described in detail as follows. Survey areas were determined based on suitable habitat for the resource for which the survey was conducted.

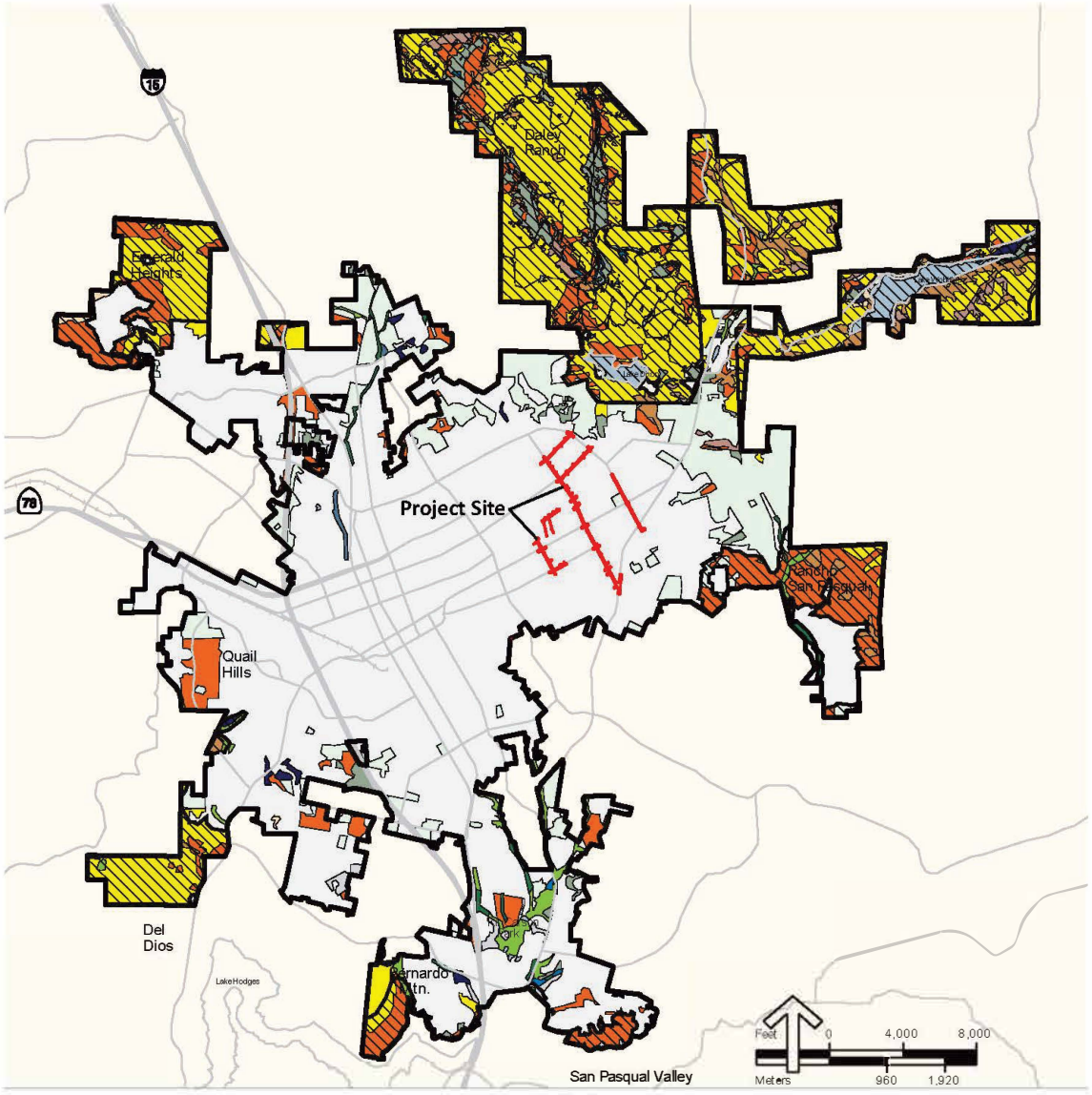


Figure 3-2
City of Escondido Subarea Plan
Vegetation Communities Inside the Biological Core & Linkage Area (BCLA)

Coastal Sage Scrub	Freshwater Marsh	Engelmann Oak Woodland	Disturbed Land
Chaparral	Riparian Forest	Eucalyptus Woodland	Agriculture
Coastal Sage/Chaparral Mix	Riparian Scrub	Open Water	Urban/Developed
Grassland	Coast Live Oak Woodland	Disturbed Wetland	Inside the BCLA

Source: SANDAG 2000

Figure 2a

Subarea Plan - Biological Core and Linkage Area

East Valley Parkway & Midway Drive
Drainage Improvements

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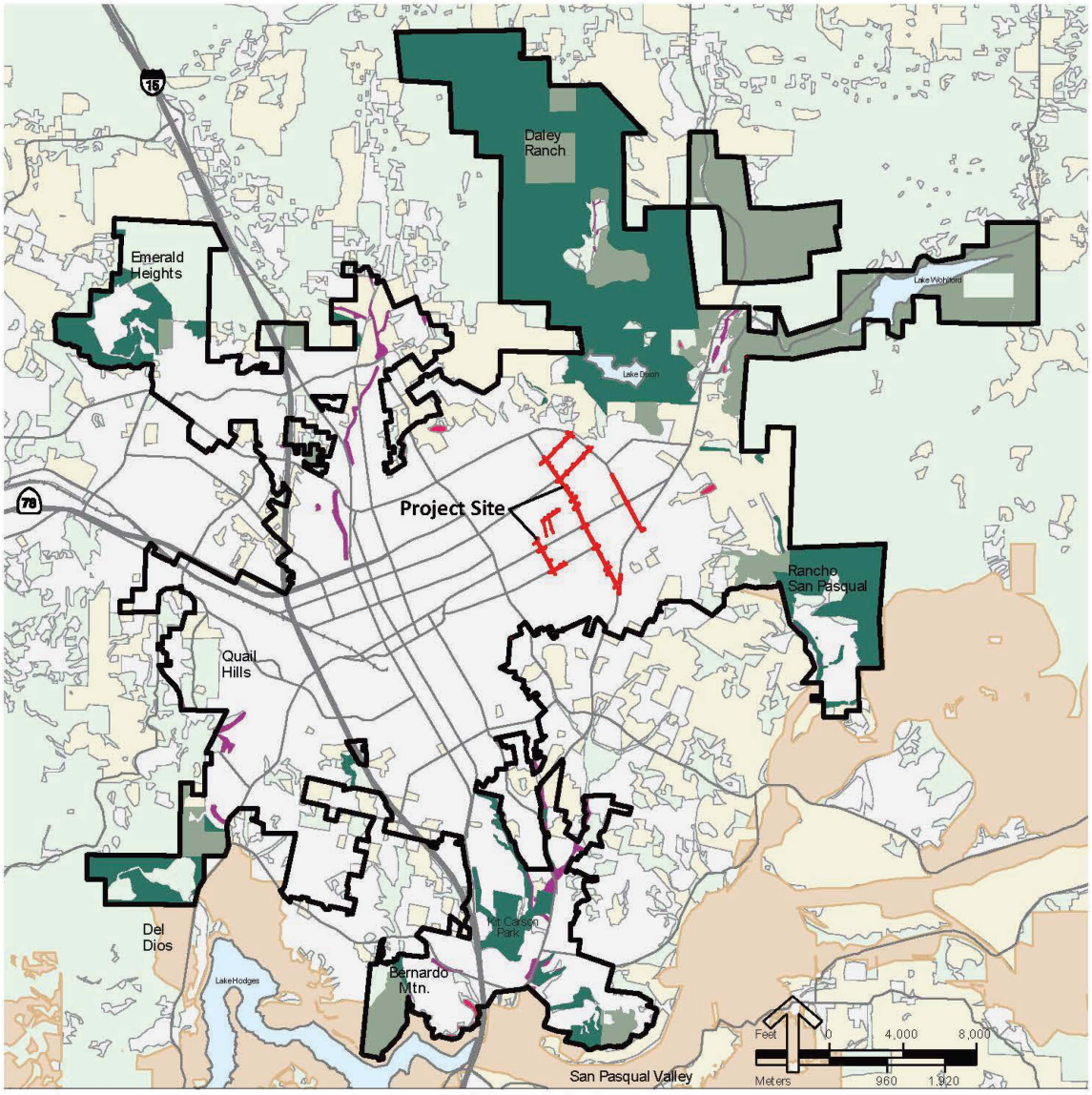


Figure 4-1
City of Escondido Subarea Plan
Focused Planning Area (FPA) and Constrained Lands Outside the FPA

- Natural Habitats
- Agricultural Land
- Developed and Disturbed Land
- Hardline Focused Planning Area (90% and greater Conservation)
- Softline Focused Planning Area (Less than 90% Conservation)
- Constrained Lands (Wetlands) Outside the FPA
- Constrained Land (Slopes > 35%) Outside the FPA
- MSCP Habitat Preserve Planning Area

Source: SANDAG 2000

Figure 2b

Subarea Plan - Focused Planning Area

East Valley Parkway & Midway Drive
Drainage Improvements

Balk Biological, Inc.

2.1 Literature Review

The following data sources were reviewed to assist with the biological resources analysis:

- U.S. Department of Agriculture Web Soil Survey (USDA 2024)
- CDFW California Natural Diversity Database – Special Animals List (CDFW 2024a)
- CDFW California Natural Diversity Database – RareFind, Version 5 (CDFW 2024b)
- The Calflora Database (Calflora 2024)
- California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2024)
- Final MHCP Plan (SANDAG 2003)
- City of Escondido Subarea Plan (Ogden and CBI 2001)
- USFWS Species Occurrence Data (USFWS 2024)
- San Diego Natural History Museum (SDNHM 2024)
- Aerial maps from the San Diego Association of Governments (SANDAG 2024), Bing (Microsoft 2024), and Google Earth (2002-2024)
- Topographic maps (Google Earth 2024)

Additional resources reviewed prior to field investigations include: Special Vascular Plants, Bryophytes, and Lichens (CDFW 2024c); Fully Protected Animals (CDFW 2024d); State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2024e); and State and Federally Listed Endangered and Threatened Animals of California (CDFW 2024f). A review of proposed or final USFWS Critical Habitat for federally threatened or endangered species (USFWS 2024) and MHCP Focused Planning Areas, Biological Core Linkage Areas, and Constrained Lands (Ogden and CBI 2001) were also completed prior to field investigations.

The results of the data query were then refined through site visits involving habitat assessments for these special-status species. For the purposes of this report, species are considered to have special-status if they meet at least one of the following criteria:

- Covered under the federal or state Endangered Species Act (CDFW 2024a; USFWS 1996, 2004)
- CDFW Species of Special Concern (CDFW 2024a; Remsen 1978; Williams 1986)
- CDFW Fully Protected Species (CDFW 2024a)
- Listed as having a California Rare Plant Rank (CRPR) (formerly CNPS List) as List 1A (presumed extinct in California), 1B (rare, threatened, and endangered in California and elsewhere), or 2 (rare, threatened, or endangered in California, but more common elsewhere). CRPR List 1A, 1B, and 2 species are considered special-status plant species if

they fall within any of these categories as defined in the NPPA, CFGC Section 1901 or the state ESA, CFGC Sections 2050 through 2098 CRPR List 3 (plants for which more information is needed [a review list]) or List 4 (plants of limited distribution [watch list]) (CNPS 2024)

- MHCP Species Occurring or Potentially Occurring in the City of Escondido Subarea Plan (Ogden and CBI 2001)

2.2 Field Reconnaissance

Biological surveys conducted within the Project study area were conducted on September 16 and September 18, 2024, and included vegetation mapping, general floral and wildlife surveys, and an aquatic resources delineation. Table 1 provides additional details regarding the conditions during the surveys. Photos of the area can be found in Appendix E, *Photo Document*.

TABLE 1
SCHEDULE OF SURVEYS

Date	Time	Personnel	Survey Type	Conditions
9/16/2024	1145-1530	Brynne Mulrooney	General biological reconnaissance, vegetation, wildlife, and plants	74 degrees F, wind 10-15 mph, 50% cloud cover
9/18/2024	0800-1330	Brian Lohstroh, Mark Wolford	Aquatic resources delineation	63-75 degrees F, wind 3-8 mph, 100-0% cloud cover

2.2.1 Resource Mapping

Vegetation communities and land uses within the study area were mapped in the field directly onto a 100-foot-scale (1 inch = 100 feet), aerial photograph–based field map with proposed disturbance areas for the Project. Following completion of the fieldwork, vegetation polygons were transferred to a digital map and digitized using ArcGIS, and a geographic information system (GIS) coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the study area was determined. The vegetation community/land cover mapping follows the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) as modified by the County and noted in Draft Vegetation Communities of San Diego County (Oberbauer *et al.* 2008).

2.2.2 Flora and Fauna

The plant species encountered during the field surveys were identified and recorded directly into a field notebook. Species that could not be identified in the field were brought into the laboratory for further investigation. A compiled list of plant species observed in the Project study area is presented in Appendix A, *Plant Species Observed within the Project Study Area*. Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2024), and common names follow the List of Vegetation Alliances and Associations (CDFG 2010) or the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2024b).

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly onto a field notebook. Binoculars (8x42) were used to aid in the identification of wildlife. The suitability of habitats for special-status wildlife species within the Project study area was evaluated during the vegetation mapping and general wildlife surveys.

Latin and common names of animals detected American Ornithologists' Union (AOU) (2024) for birds, and North American Butterfly Association (NABA) (2016) or SDNHM (2002) for butterflies. In addition to species detected during the surveys, potential wildlife use of the site was determined by known habitat preferences of species and knowledge of their relative distributions in the area. A list of wildlife species observed in the study area is presented in Appendix B, *Wildlife Species Observed within the Project Study Area*.

2.2.3 Aquatic Resources Delineation

An aquatic resources delineation was performed onsite to determine areas under the jurisdiction of the ACOE pursuant to Section 404 of the federal CWA, CDFW pursuant to Sections 1600–1603 of the CFGC, and RWQCB pursuant to CWA Section 401 and the Porter–Cologne Water Quality Control Act. For more specific details regarding the aquatic resources onsite, refer to the Aquatic Resources Delineation Report associated with the Project (Balk 2024).

2.3 Surveys for Sensitive Biological Resources

Sensitive biological resources are defined as follows: (1) species that have been given special recognition by federal, state, or local agencies and organizations due to limited, declining, or threatened population sizes; (2) habitat types recognized by local and regional agencies as sensitive; (3) habitat areas or plant communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; and (4) wildlife corridors and habitat linkages.

A summary of the dates and site conditions for the field efforts performed as part of this biological report is presented above in Section 2.2, Table 1. The following sections provide specific details regarding each survey.

2.4 Survey Limitations

Site visits to the Project study area were conducted during daylight hours. No focused wildlife surveys or special-status plant surveys were conducted. Wildlife species were recorded during site visits in the early fall season when many breeding species would not be present. Plant surveys were conducted during the early fall; timing and seasonal conditions were not adequate to determine presence/absence of all potentially occurring special-status plants. Complete inventories of biological resources present on a site often require numerous focused surveys at different times of day during different seasons. Some species such as annual plants are detectable only in spring or summer, and nocturnal animals are difficult to detect during the day. Other species may be present in such low numbers that they could be missed. Due to such timing and seasonal variations, survey results are not an absolute list of all species that the Project study area may support.

3 RESULTS

3.1 Physical Characteristics

3.1.1 Topography and Drainage

The Project study area occurs in central Escondido in the Midway District, approximately 16 miles inland from the Pacific Ocean, on generally flat ground, at approximately 662-756 feet above mean sea level (amsl). The Project study area occurs in a highly urbanized area, surrounded by single-family residences, multi-residential properties, businesses, shopping centers, schools, and a small city park (Oak Hill City Park). Escondido Creek, a concrete-lined channel in the Project area, runs from northeast to southwest through the Project study area.

The Project study area is immediately surrounded to the north, south, east, and west by development consistent with the Project setting. Interstate-15 occurs approximately three miles west, and California State Route 78 occurs approximately one mile east of the Project study area. The nearest open space preserve, Daley Ranch Park, occurs approximately three miles north of the Project study area and has no connectivity to the Project site.

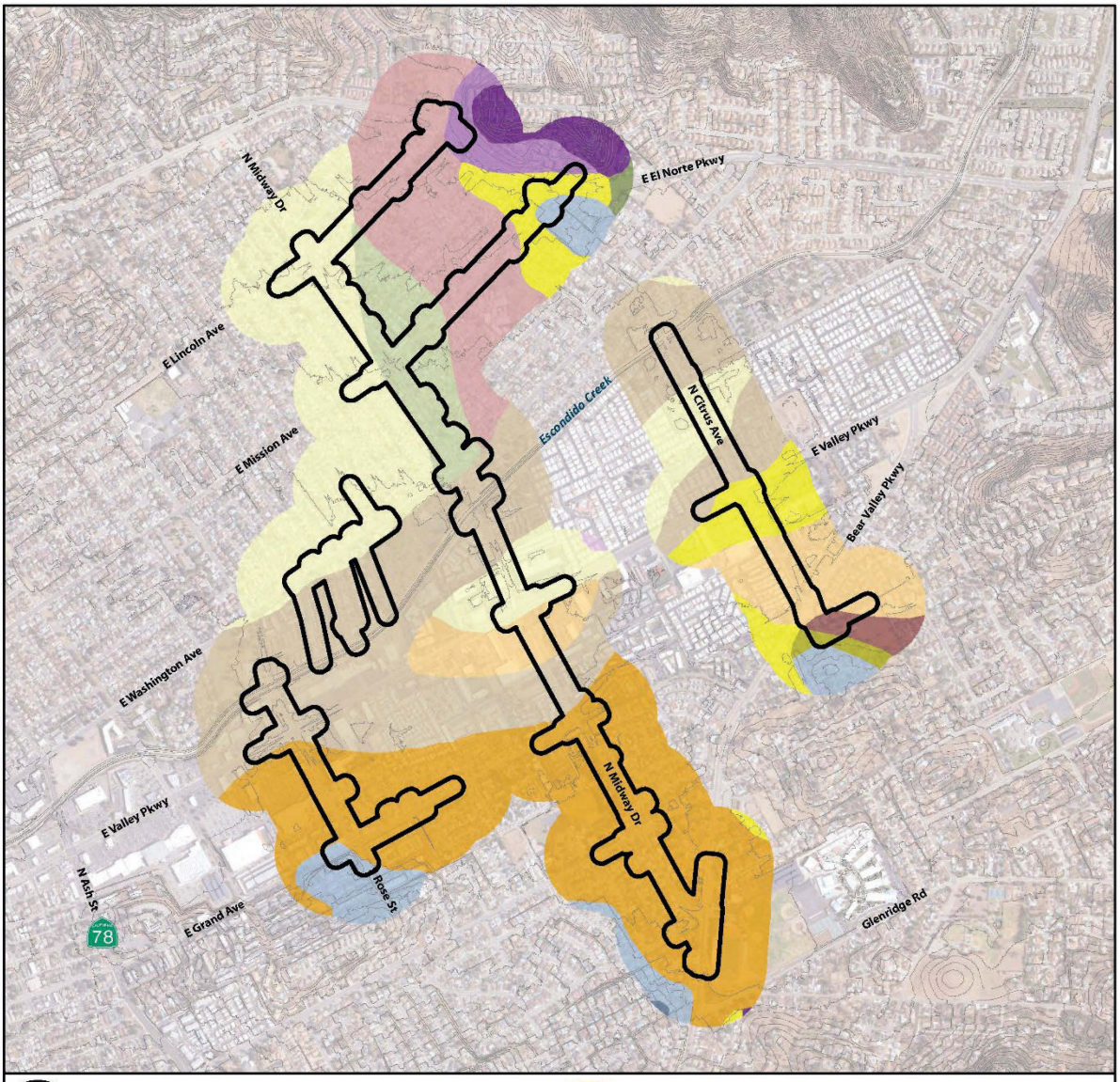
3.1.2 Soils

According to the San Diego County Soil Survey and digital soil maps from the NRCS 2.2 Database, 15 soil types are present in the Project study area as shown in Table 2 below and as depicted on the Soils and Topography map (Figure 3).

Table 2
MAPPED SOILS IN STUDY AREA

Unit Name	Drainage Class	Runoff Class	Formation
Fallbrook sandy loam 9 to 15% slopes, eroded	Well-drained	Medium to rapid runoff	Weathered from granitic rocks
Fallbrook sandy loam 15 to 30% slopes, eroded	Well-drained	Medium to rapid runoff	Weathered from granitic rocks
Greenfield sandy loam, 0 to 2% slopes	Well-drained	Slow to medium runoff	Formed in textured alluvium derived from granitic and mixed rock sources

Unit Name	Drainage Class	Runoff Class	Formation
Greenfield sandy loam, 2 to 5% slopes	Well-drained	Slow to medium runoff	Formed in textured alluvium derived from granitic and mixed rock sources
Placentia sandy loam, thick surface, 0 to 2% slopes	Well- or moderately-drained	Slow to rapid runoff	Formed in alluvium from granite and other rocks of similar composition and texture
Placentia sandy loam, thick surface, 2 to 9% slopes	Well- or moderately-drained	Slow to rapid runoff	Formed in alluvium from granite and other rocks of similar composition and texture
Ramona sandy loam, 0 to 2% slopes, Major Land Resource Area (MLRA) 19	Well-drained	Slow to rapid runoff	Formed in alluvium derived mostly from granitic and related rock sources
Ramona sandy loam, 2 to 5% slopes	Well-drained	Slow to rapid runoff	Formed in alluvium derived mostly from granitic and related rock sources
Ramona sandy loam, 5 to 9% slopes	Well-drained	Slow to rapid runoff	Formed in alluvium derived mostly from granitic and related rock sources
Reiff fine sandy loam, 0 to 2% slopes	Well-drained	Slow runoff	Formed in alluvium derived from granitic rock
Visalia sandy loam, 0 to 2% slopes	Well-drained	Slow runoff	Developed from moderately coarse textured dominantly granitic alluvium
Visalia sandy loam, 2 to 5% slopes	Well-drained	Slow runoff	Developed from moderately coarse textured dominantly granitic alluvium
Vista coarse sandy loam, 5 to 9% slopes	Well-drained	Slow to rapid runoff	Formed in material weathered from decomposed granitic rocks
Vista coarse sandy loam, 9 to 15% slopes, MLRA 20	Well-drained	Slow to rapid runoff	Formed in material weathered from decomposed granitic rocks
Vista coarse sandy loam, 15 to 30% slopes, MLRA 20	Well-drained	Slow to rapid runoff	Formed in material weathered from decomposed granitic rocks



Survey Area

Soils

- Fallbrook sandy loam, 9 to 15 percent slopes, eroded
- Fallbrook sandy loam, 15 to 30 percent slopes, eroded
- Greenfield sandy loam, 0 to 2 percent slopes
- Greenfield sandy loam, 2 to 5 percent slopes
- Placentia sandy loam, thick surface, 0 to 2 percent slo pes
- Placentia sandy loam, thick surface, 2 to 9 percent slo pes
- Ramona sandy loam, 0 to 2 percent slopes, MLRA 19
- Ramona sandy loam, 2 to 5 percent slopes
- Ramona sandy loam, 5 to 9 percent slopes
- Reiff fine sandy loam, 0 to 2 percent slopes
- Visalia sandy loam, 0 to 2 percent slopes
- Visalia sandy loam, 2 to 5 percent slopes
- Vista coarse sandy loam, 5 to 9 percent slopes
- Vista coarse sandy loam, 9 to 15 percent slopes, MLRA 20
- Vista coarse sandy loam, 15 to 30 percent slopes, MLRA 20

Source: USDA NRCS; Aerial Photo: USDA NAIP 2022

Figure 3

Soils and Topography

East Valley Parkway & Midway Drive
Drainage Improvements

Balk Biological, Inc.

N

0 1,500 Feet

3.1.3 Watershed and Hydrologic Setting

The Project area is located within the Upper Escondido Creek subwatershed of the Carlsbad Hydrologic Unit (watershed). The Carlsbad Hydrologic Unit is approximately 210 square miles and extends from the headwaters of Escondido Creek above Lake Wohlford in the east to the Pacific Ocean in the west at the San Elijo Lagoon (SDRWQCB 2002). This hydrologic unit is bordered by San Luis Rey Hydrologic Unit to the north and San Dieguito Hydrologic Unit to the east and south. The Project area is located within the San Marcos Hydrologic Subarea.

The Carlsbad Hydrologic Unit includes one small coastal lagoon (Loma Alta Slough) and four major coastal lagoons, including Buena Vista, Agua Hedionda, Batiquitos, and San Elijo (SDRWQCB 2002). Water flow through the Project site occurs exclusively through Escondido Creek (Figure 4).

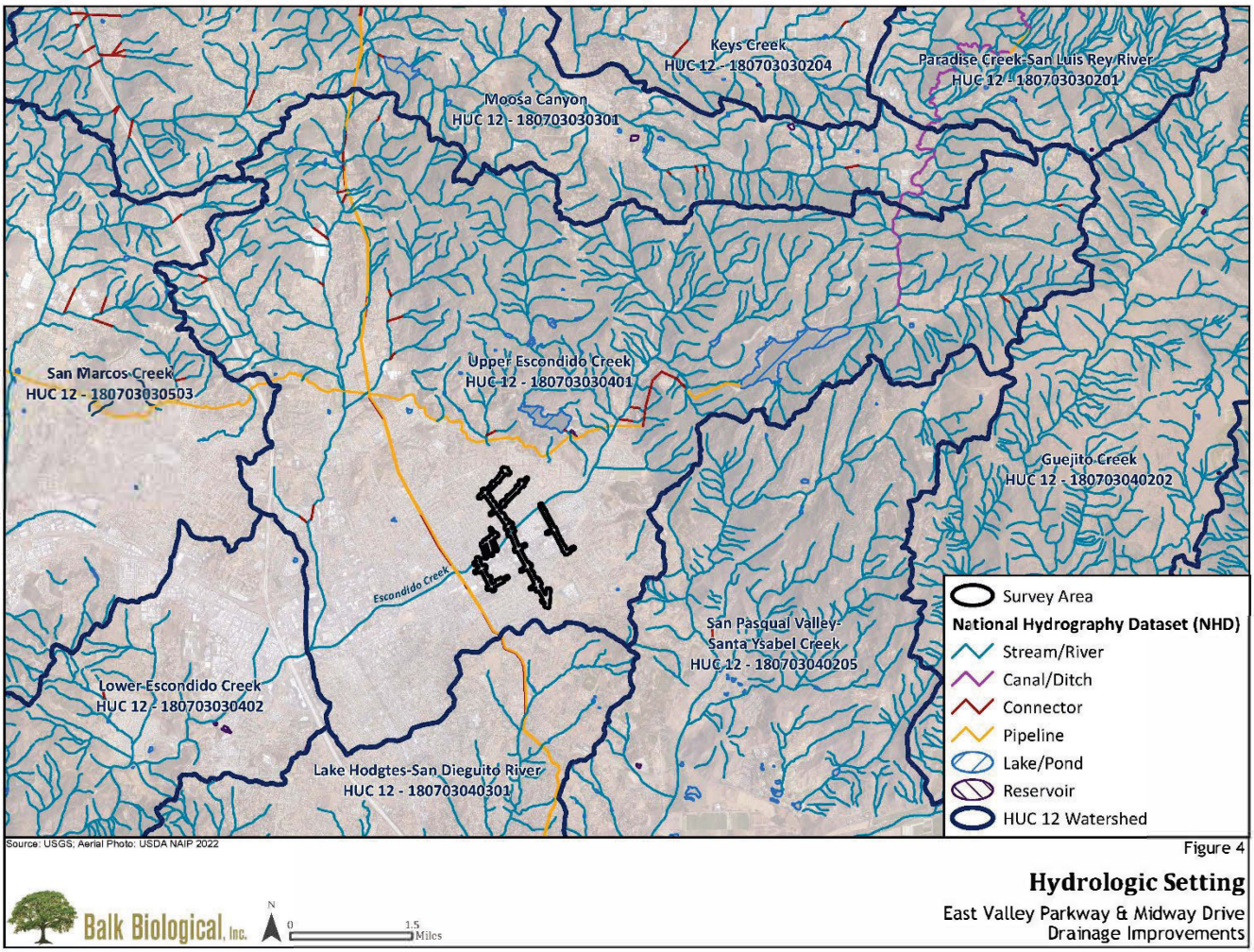


Figure 4

Hydrologic Setting

East Valley Parkway & Midway Drive
Drainage Improvements

3.2 Biological Resources

The following discussion describes the existing biological conditions within the Project study area, provided as biological resource descriptions.

3.2.1 Vegetation Communities and Land Cover Types

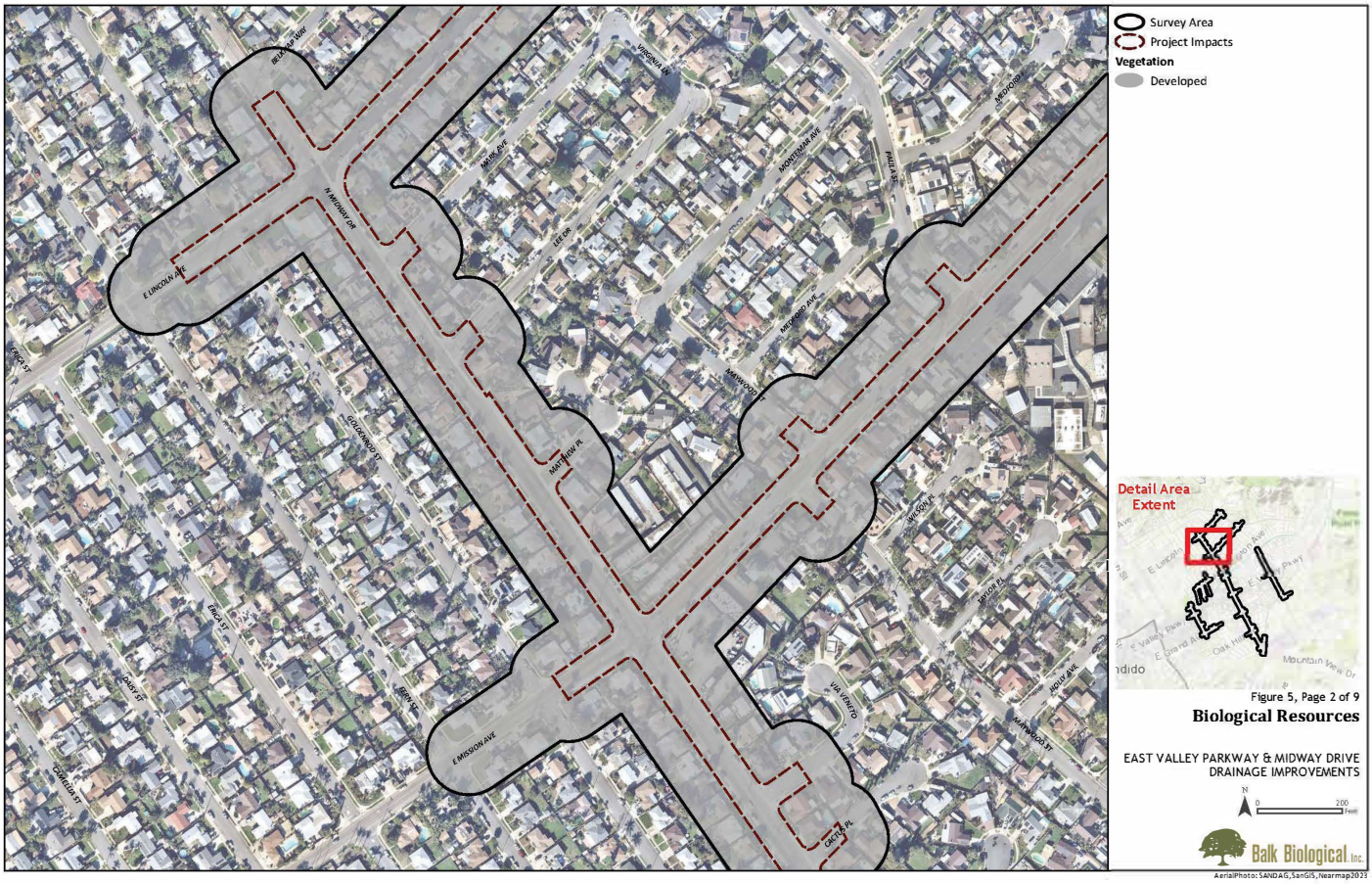
Vegetation communities and land covers were mapped according to Holland (1986) and Oberbauer *et al.* (2008), with a few exceptions. A total of six vegetation communities (or habitats) and land cover types were identified within the Project study area: freshwater marsh, coast live oak woodland, concrete-lined channel, landscaping/ornamental, developed land, and bare ground.

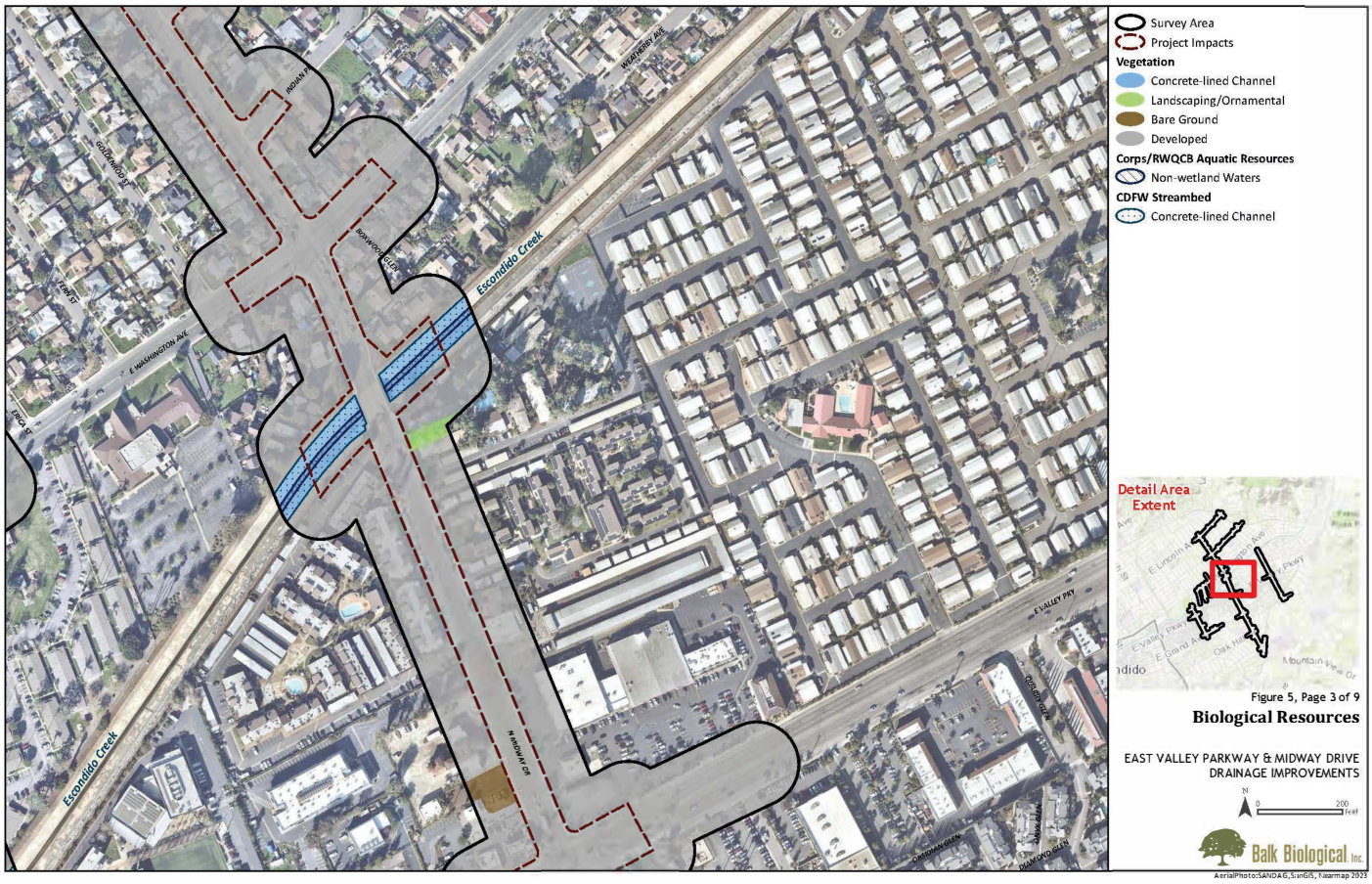
The vegetation communities and land cover types recorded in the study area are described in detail below, their acreages are presented in Table 3, and their spatial distributions are presented on the Biological Resources and Impacts map (Figure 5).

Table 3
Vegetation Communities and Land Cover Types in the Project Study Area

General Vegetation Community/Land Cover Category (Holland/Oberbauer Code)	Vegetation Community/Land Cover Type	Acres inside Project Impact Areas	Acres in Buffer Area (outside Project Impact Areas)	Total Acres Onsite
Disturbed or Developed Areas (10000)	Developed Land	48.4	146.5	194.9
	Bare Ground	0	0.2	0.2
	Landscaping/Ornamental	0.5	4.5	5.0
	Concrete-Lined Channel	0.7	2.3	3.0
Freshwater Marsh (52400)		0	0.02	0.02
Coast Live Oak Woodland (71160)		0	0.2	0.2
Total		**49.6**	**153.7**	**203.3**

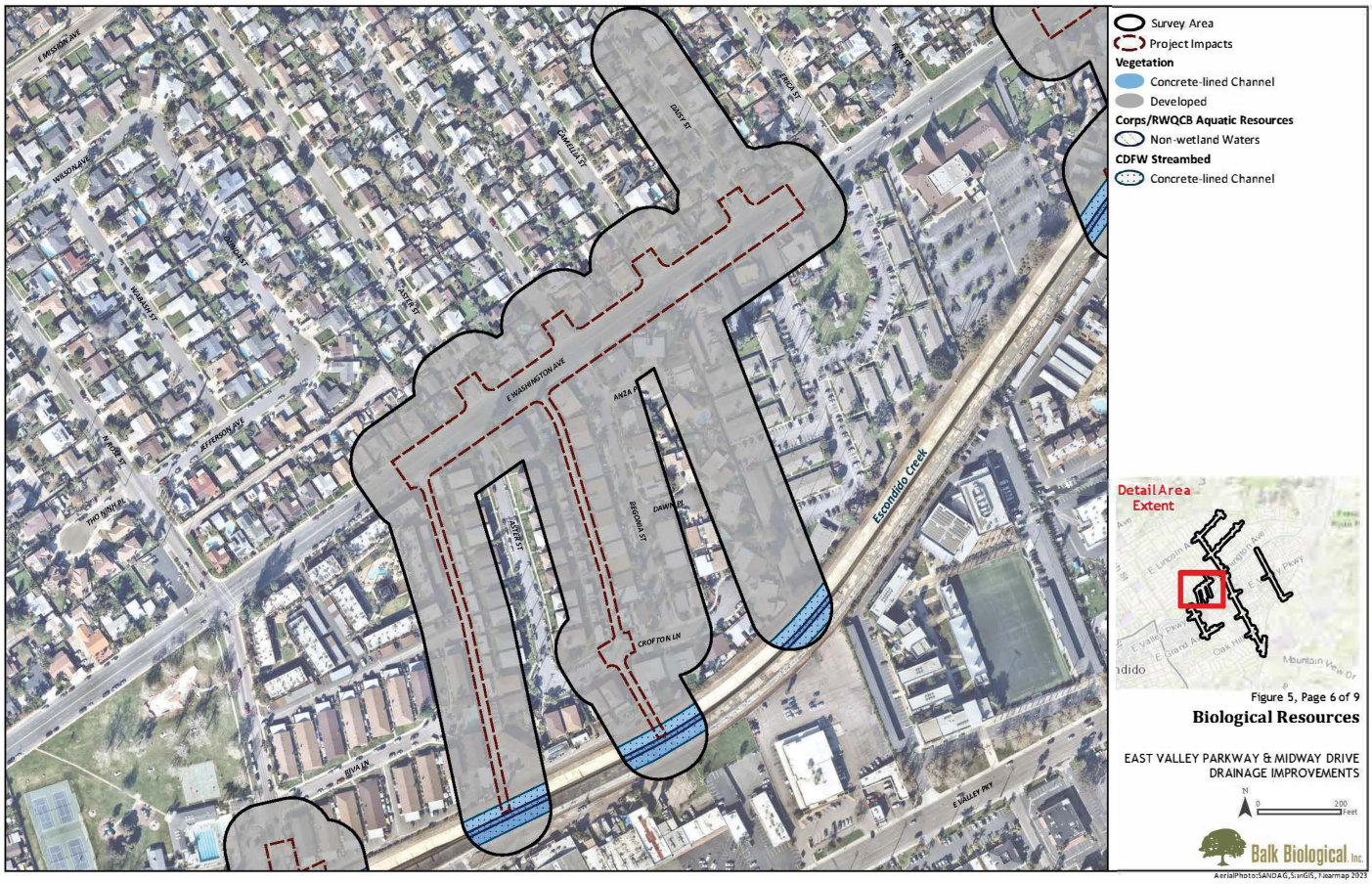

Survey Area
Project Impacts
Vegetation
Landscaping/Ornamental
Developed
Detail Area Extent
Figure 5, Page 1 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS
Balk Biological Inc.
Aerial Photo: SANDAG, SanGIS, Nearmap 2023
E EL NORTE PKY
HONEYBELL LN
NIGHTINGALE PL
E LINCOLN AVE
BELMONT WAY
MIMI PL
IVE AVE
STEWART PL
RED RUSH RD
E TANGELO
GALE
PITMAN AVE
VIRGINIA
MONTEMAR AVE
PHILEA ST
E MISSION AVE
N ETHAN AVE
MALLON WAY
HILLYARD ST

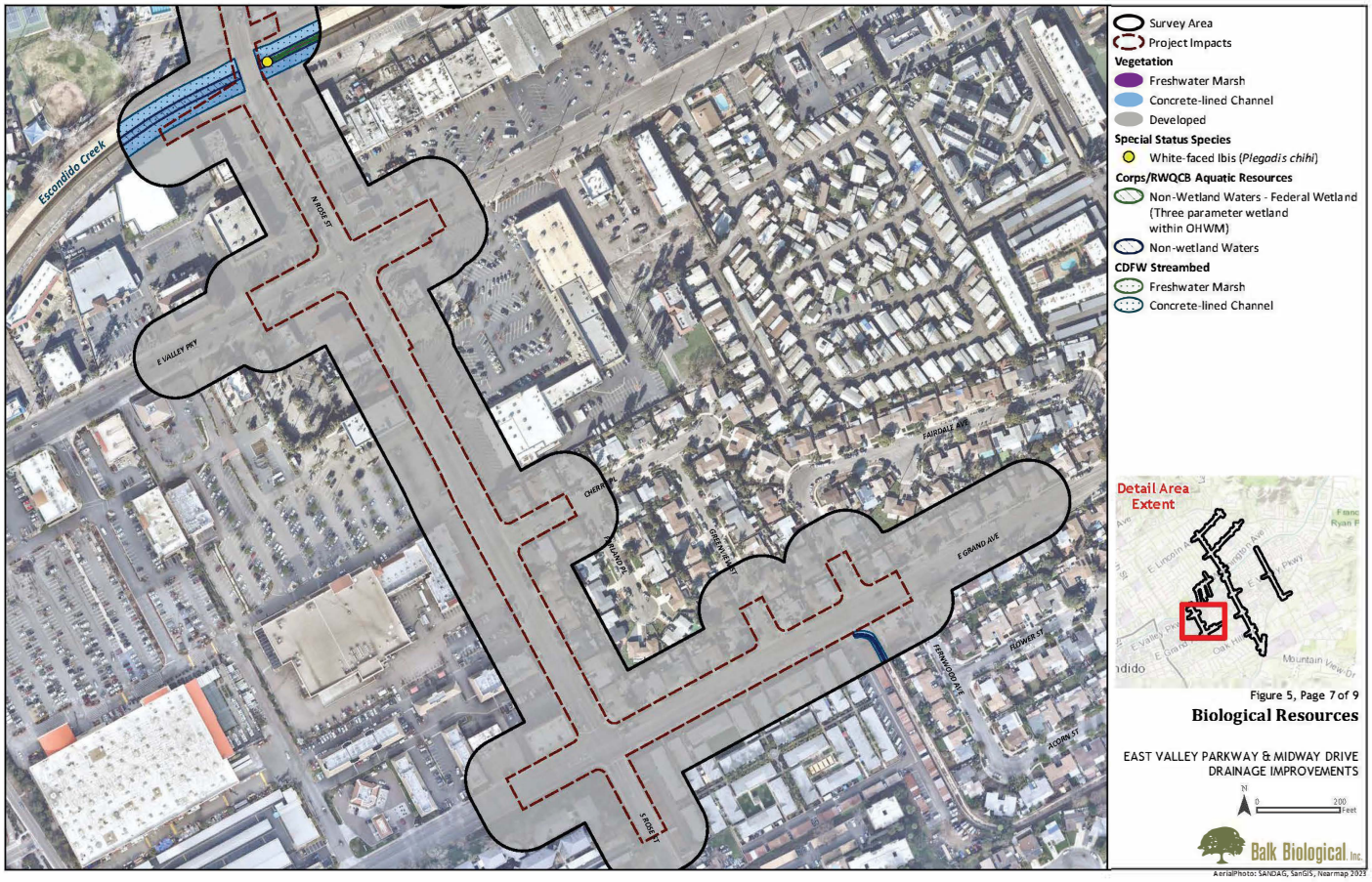

Survey Area
Project Impacts
Vegetation
Developed
Detail Area Extent
Figure 5, Page 2 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS
Balk Biological, Inc.
AerialPhoto: SANDAG,SanGIS,Nearmap2023

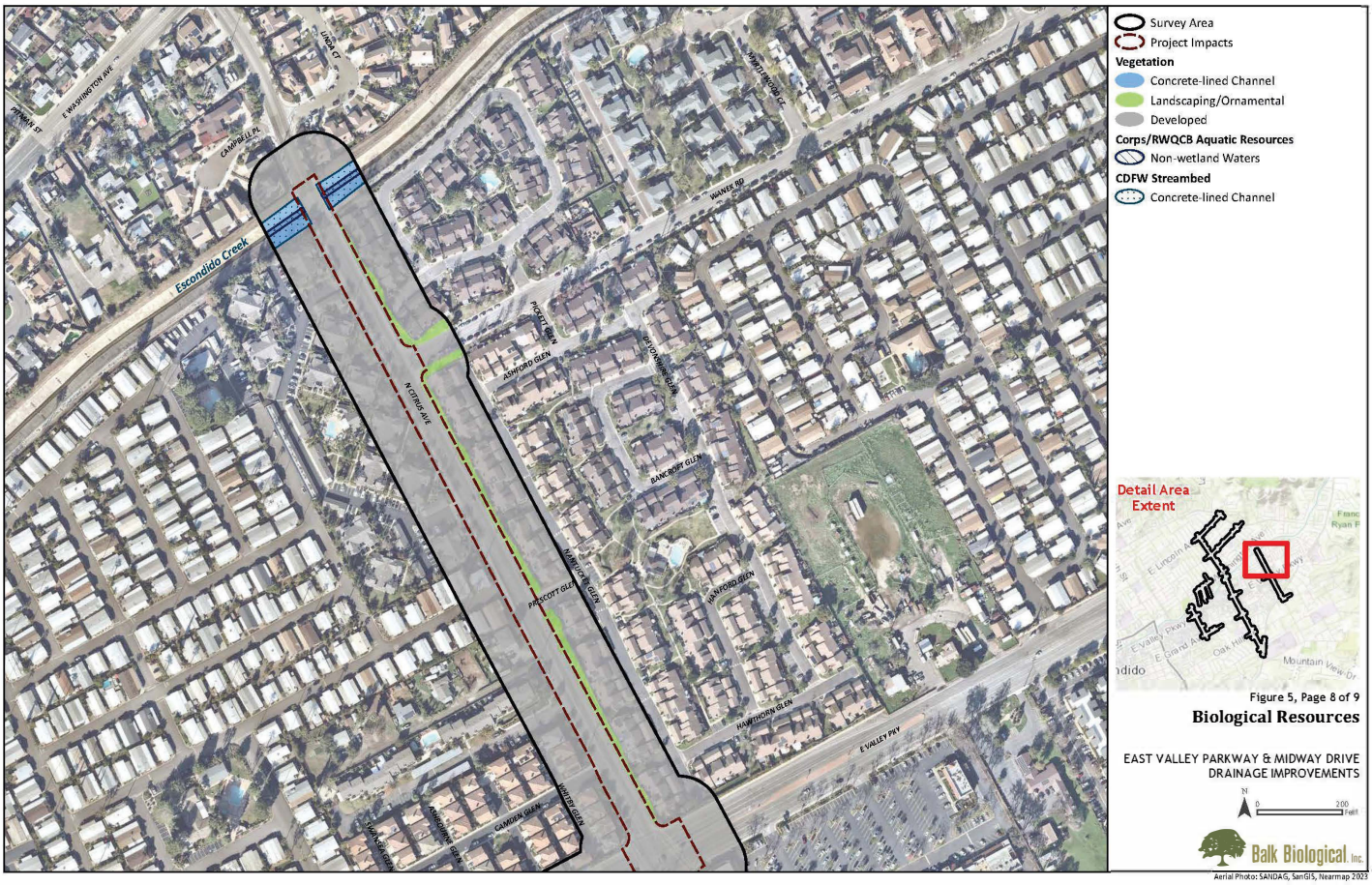

Survey Area
Project Impacts
Vegetation
Concrete-lined Channel
Landscaping/Ornamental
Bare Ground
Developed
Corps/RWQCB Aquatic Resources
Non-wetland Waters
CDFW Streambed
Concrete-lined Channel
Escondido Creek
Escondido Creek
E VALLEY PKY
MIDWAY DR
E WASHINGTON AVE
Detail Area Extent
Figure 5, Page 3 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS
Balk Biological Inc.
AerialPhoto:SANDAG,SanGIS, Nearmap 2023

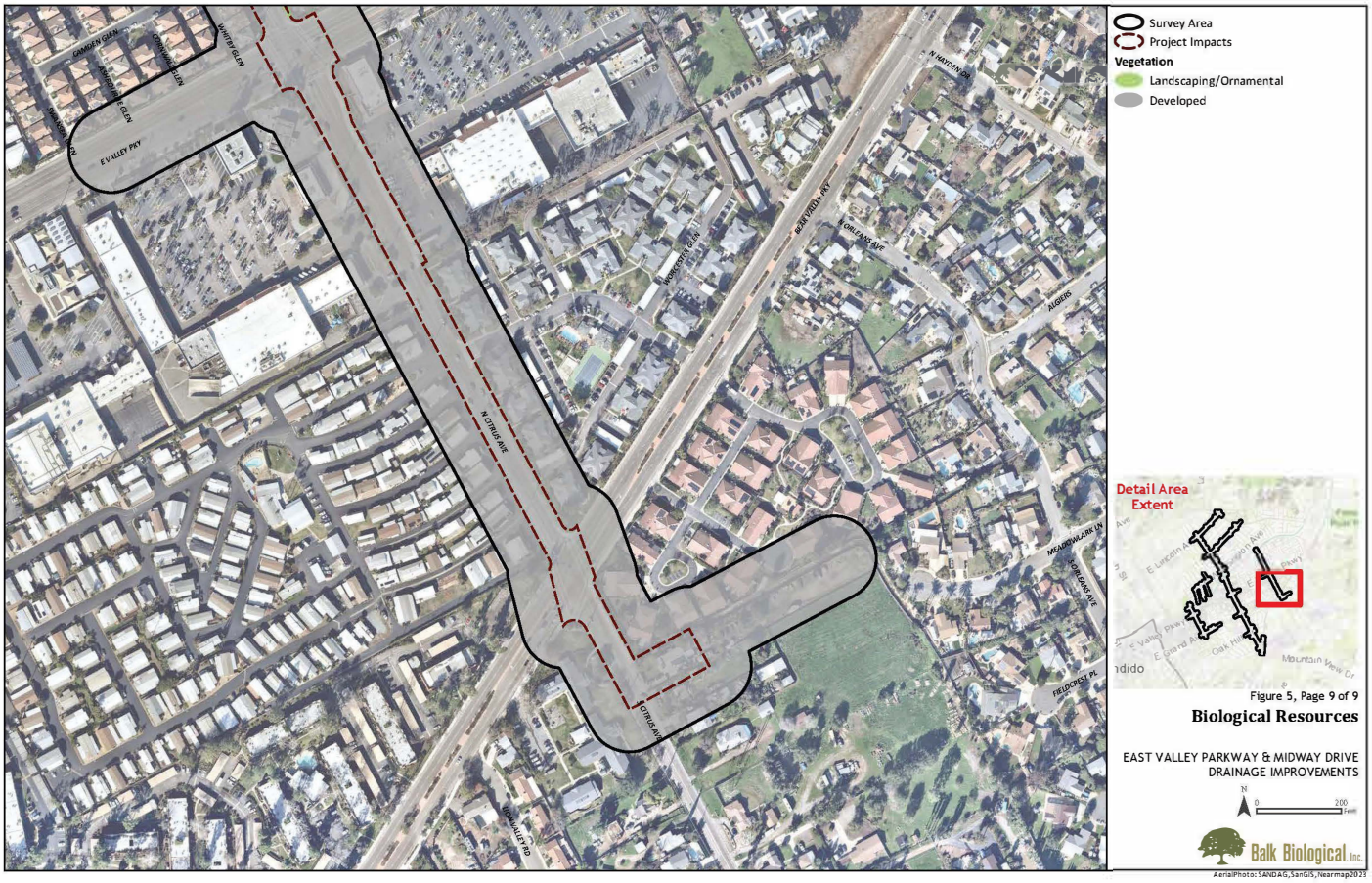

Survey Area
Project Impacts
Vegetation
Coast Live Oak Woodland
Landscaping/Ornamental
Developed
Detail Area Extent
Figure 5, Page 4 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS
N
0
200
Feet
Balk Biological Inc.
AerialPhoto:SANDAG, SanGIS, Nearmap 2023
N MIDWAY DR
S MIDWAY DR
E VALLEY PKWY
E GRAND AVE
PANORAMA AVE
ARGATH AVE
WESTHEVENE AVE
MANCHESTER AVE
OAK HILL DR
BEAR VALLEY PKWY


Survey Area
Project Impacts
Vegetation
Coast Live Oak Woodland
Landscaping/Ornamental
Developed
Detail Area Extent
Figure 5, Page 5 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS
N
0
200
Feet
Balk Biological Inc
AerialPhoto: SANDAG, SanGIS, Nearmap2023
OAK HILL DR
S MIDWAY DR
REAR VALLEY PKWY
FLINT AVE
BEARTRAP PL
KELLY CT
NANCY ST
KINGSTON DR
RANDALL CT
HURON ST
TOMAH ST
SENORA ST
HIGHLAND ST
KIMBALL ST
SENORA DR
CRAIGMORE AVE
JEFFREY AVE
PATRIOTS
GLENRIDGE RD
MOUNTAIN VIEW DR


Survey Area
Project Impacts
Vegetation
Concrete-lined Channel
Developed
Corps/RWQCB Aquatic Resources
Non-wetland Waters
CDFW Streambed
Concrete-lined Channel
Detail Area Extent
E MISSION AVE
WILSON AVE
JEFFERSON AVE
E WASHINGTON AVE
DAISY ST
CAMELLIA ST
ERICA ST
ROSE ST
ANZA ST
DAWN DR
BEGONIA ST
CROFTON LN
SILVA LN
E VALLEY PKY
Escondido Creek
Figure 5, Page 6 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS
N
0
200
Feet
Balk Biological Inc.
AerialPhoto:SANDAG,SanGIS, Nearmap 2023


Escondido Creek
N ROSE ST
E VALLEY PKY
FAIRDALE AVE
CHERRY PL
REDWOOD PL
GREENVIEW WAY
E GRAND AVE
FERNWOOD AVE
FLOWER ST
ACORN ST
S ROSE ST
Survey Area
Project Impacts
Vegetation
Freshwater Marsh
Concrete-lined Channel
Developed
Special Status Species
White-faced Ibis (Plegadis chihi)
Corps/RWQCB Aquatic Resources
Non-Wetland Waters - Federal Wetland (Three parameter wetland within OHWM)
Non-wetland Waters
CDFW Streambed
Freshwater Marsh
Concrete-lined Channel
Detail Area Extent
Figure 5, Page 7 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS
N
0
200
Feet
Balk Biological, Inc.
AerialPhoto: SANDAG, SanGIS, Nearmap 2023


Survey Area
Project Impacts
Vegetation
Concrete-lined Channel
Landscaping/Ornamental
Developed
Corps/RWQCB Aquatic Resources
Non-wetland Waters
CDFW Streambed
Concrete-lined Channel
Escondido Creek
N CITRUS AVE
E VALLEY PKY
E WASHINGTON AVE
CAMPBELL PL
WAINER RD
ASHFORD GLEN
PRESCOTT GLEN
RANCROFT GLEN
HAWTHORN GLEN
CAMDEN GLEN
Detail Area Extent
Figure 5, Page 8 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS
Balk Biological, Inc.
Aerial Photo: SANDAG, SanGIS, Nearmap 2023


Survey Area
Project Impacts
Vegetation
Landscaping/Ornamental
Developed
Detail Area Extent
Figure 5, Page 9 of 9
Biological Resources
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS
N
0
200
Feet
Balk Biological, Inc.
AerialPhoto: SANDAG, SanGIS, Nearmap2023
E VALLEY PKY
N CITRUS AVE
E GRAND AVE
N ORIANA AVE
MEADOWLARK LN
FIELDCREST PL
WHITE GLEN
GOLDEN GLEN
CORONA GLEN
N HAYDEN DR
BEAR VALLEY PKY
ALDENS
MOUNTAIN VIEW DR

3.2.1.1 Disturbed or Developed Areas (10000)

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

Developed Land

All of the streets, residential and business properties, sidewalks, and parking lots were mapped as developed land within the Project study area. The majority of the Project study area, including the footprint of the reinforced concrete storm drain pipeline and buffer area, was mapped as developed land. A total of 194.9 acres of developed land was mapped onsite (48.4 acres within Project impact areas and 146.5 acres within the Project buffer).

Bare Ground

A small, vacant dirt lot was mapped as bare ground within the Project study area. Bare ground has been differentiated from developed land due to the lack of any development (pavement, concrete, structures, or landscaping). A total of 0.2 acre of bare ground was mapped onsite, all outside of the Project impact areas.

Landscaping/Ornamental

This land cover type is described by Oberbauer *et al.* (2008) as an area where non-native ornamental species and landscaping have been installed and maintained. Landscaping/ornamental areas within the Project study area occur primarily on large residential plots, apartment complexes, and near parks and schools. This land cover supports a variety of ornamental species in the Project study area, including but not limited to Italian cypress (*Cupressus sempervirens*), ornamental pine (*Pinus* sp.), pepper trees (*Schinus* sp.), various palms and ornamental flowering trees, and Bermuda grass (*Cynadon dactylon*). A total of 5.0 acres of landscaping/ornamental land was mapped onsite (0.5 acre within Project impact areas 4.5 acres within the Project buffer).

Concrete-Lined Channel

Concrete-lined channels have been developed for the rapid conveyance of water from urban areas. In the Project study area, Escondido Creek, which originates in the upper headwaters in Bear Valley above Lake Wohlford, has been channelized to manage the large volume of runoff from storm events within the City. A total of 3.0 acres of concrete-lined channel was mapped onsite (0.7acre within Project impact areas and 2.3 acres within the Project buffer). The aquatic resources delineation determined that the Escondido Creek channel and an associated tributary channel near East Grand Avenue are non-wetland waters of the U.S. jurisdictional to the ACOE and RWQCB and streambeds jurisdictional to CDFW (see Section 3.2.2 for additional information).

3.2.1.2 Freshwater Marsh (52400)

Freshwater marsh is dominated by perennial, emergent monocots and is permanently flooded by fresh water (Oberbauer *et. al.* 2008). Within the Project study area, a small area of freshwater marsh associated with a temporary sediment deposit occurs within the concrete-lined channel of Escondido Creek and is primarily dominated by common spike rush (*Eleocharis palustris*), broadleaf cattail (*Typha latifolia*), rabbitsfoot grass (*Polypogon monspeliensis*), and watercress (*Nasturtium officinale*). A total of 0.023 acre of freshwater marsh was mapped onsite, all outside of the Project impact areas.

3.2.1.3 Coast Live Oak Woodland (71160)

Coast live oak woodland is typically dominated by a single tree species, coast live oak (*Quercus agrifolia*), and may have an understory of shrub species such as toyon (*Heteromeles arbutifolia*), currants (*Ribes* sp.), laurel sumac (*Malosma laurina*), or elderberry (*Sambucus* sp.) (Oberbauer *et. al* 2008), or grassland in open woodlands. The coast live oak woodland in the Project study area has been manicured for the purposes of contributing to City beautification and is associated with Oak Hill City Park, which is adjacent to Oak Hill Elementary School and a large single-family residence. A small building, Oak Hill Activity Center, is located in the park, and the adjacent residential property has various ornamental and native plantings contributing to the vegetation composition of this community, including Bermuda grass, ornamental agave (*Agave* sp.), century plant (*Agave americana*), spineless yucca (*Yucca elephantipesis*), jade plant (*Crassula ovata*), Barbary fig (*Opuntia ficus-indica*), California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), Cleveland sage (*Salvia clevelandii*), and toyon. A total of 0.2 acre of coast live oak woodland was mapped onsite, all outside of the Project impact areas.

3.2.2 Aquatic Resources

An aquatic resources delineation was conducted onsite to determine the type and extent of potential aquatic resources jurisdictional to the ACOE, RWQCB, and CDFW. Within the Project study area, potential aquatic resources were observed along the Escondido Creek channel and along a minor tributary to the Creek located in the southwestern portion of the Project study area near East Grand Avenue (see Figure 5). These potential aquatic resources are described below, according to agency jurisdiction.

Federal Aquatic Resources

Wetland Waters

No potential federal wetland waters occur within the Project study area. Aquatic resources exhibiting all three wetland parameters (*i.e.,* evidence of hydrophytic vegetation, hydric soils, and wetland hydrology) were largely absent throughout the Project study area since the only features present were concrete-lined channels. Only one location within the Escondido Creek channel representing the emergent freshwater marsh associated with a sediment deposit exhibited all three wetland parameters, but because the freshwater marsh occurs below the ordinary high water mark (OHWM) and is likely a temporary situation (as a storm event or routine maintenance will likely remove it), this aquatic resource is delineated as a potential non-wetland water of the U.S., as discussed below.

Non-wetland Waters

Boundaries of potential non-wetland waters of the U.S. within the Project study area were determined by the presence of an OHWM and "relatively permanent flow". Linear aquatic resources delineated within the Project study area include the concrete-lined Escondido Creek channel supporting perennial flows and a smaller tributary to Escondido Creek near East Grand Avenue, which is also concrete-lined and supports intermittent flows. Evidence of an OHWM consisted of water stains and evidence of fallen debris being washed away. The water staining indicator was consistently observed throughout the channels within the Project study area. Due to the clear connection to downstream waters, and the strong evidence of surface flow below the OHWM, both channels would be considered potential Relatively Permanent Waters (RPWs) that are tributaries to Traditionally Navigable Waters (TNWs, *i.e.,* the San Elijo Lagoon and the Pacific Ocean).

An area of freshwater marsh present within the Escondido Creek channel near North Rose Steet is also considered to be a potential non-wetland waters because it is below the OHWM. As noted

above, the marsh is associated with a temporary sediment deposit within the concrete-lined channel and despite it qualifying as a 3-parameter wetland, it is established well below the OHWM.

State Aquatic Resources

All federal waters described above also fall within the CWA Section 401 authority of the RWQCB and Section 1602 authority of the CDFW. Additionally, the CDFW takes jurisdiction of aquatic resources extending beyond the OHWM to the top of bank and/or edge of riparian canopy.

Potential aquatic resources subject to CDFW jurisdiction but not USACE or RWQCB jurisdiction consist of the engineered channel banks above the OHWM. The top of bank associated with the non-wetland waters mapped throughout the Project study area was delineated at the crest of the channel slope. The CDFW-jurisdictional streambed includes areas of open water and the area of concrete-lined channel located below the top of bank.

Non-Jurisdictional Features

Four concrete-lined ditches and two bioretention basins were evaluated as part of the field delineation, and these were determined to be non-jurisdictional features constructed in uplands that were not associated with any historically mapped features (NWI 2024, NHD 2024). Three of the brow ditches are located near El Norte Parkway in the northern portion of the Project study area and the fourth brow ditch is present near East Grand Avenue. The ditches function to prevent erosion by capturing runoff and channeling it around a new housing development and an undeveloped lot. All of the brow ditches discharge into the City storm drain system, with one of the northern brow ditches entering a relatively small, vegetated bioretention basin, before discharging into the storm drain system.

Two bioretention basins are present in the northern portion of the Project study area. As noted above, a smaller basin is present east of Lincoln Avenue and north of El Norte Parkway and is fed by a brow ditch that captures some runoff from an adjacent housing development. A larger bioretention basin/bio-swale is present west of East Lincoln Avenue and appears to capture the bulk of the runoff from the adjacent housing development. Both basins are constructed in uplands, landscaped with ornamental vegetation and regularly maintained. They do not support hydrophytic vegetation within the Project study area and are not considered to be potential jurisdictional aquatic resources.

Table 4
Potential Waters of the U.S. and State Occurring within the Project Study Area

Type of Jurisdictional Waters	Type of Habitat[1]	Cowardin Classification[2]	Acres of Aquatic Resources		Linear Feet of Aquatic Resources	
			Study Area	Impact Area	Study Area	Impact Area
Jurisdictional Waters of the U.S. (USACE, RWQCB)						
Escondido Creek: Non-wetland Waters	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.57	0.11	1768	385
Escondido Creek: Non-wetland Waters (Federal 3-parameter Wetland Below OHWM)	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	0.02	–	135	--
Grand Ave Channel, Non-wetland Waters	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.01	--	112	–
Subtotal Jurisdictional Waters of the U.S.			*0.60*	*0.11*	*2014*	*385*
Jurisdictional Waters of the State (CDFW)						
Escondido Creek, Concrete-lined Channel	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	2.95	0.71	1768	385
Escondido Creek, Freshwater Marsh	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	0.02	–	135	--
Grand Ave Channel, Concrete-lined Channel	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.04	–	112	–
Subtotal Jurisdictional Waters of the State			*3.01*	*0.71*	*2014*	*385*
Grand Total Jurisdictional Waters			**3.01**	**0.71**	**2014**	**385**

1 Oberbauer *et al.* 2008.
2 Cowardin *et. al.* 1979.

3.2.3 Floral Diversity

A total of 62 species of vascular plants, including 8 native and 54 non-native, was recorded during the reconnaissance surveys for the project. A list of all plant species observed in the study area during surveys is provided in Appendix A, *Plant Species Observed within the Project Study Area*, of this report. No special-status plant species were observed in the Project study area.

3.2.4 Wildlife Diversity

Wildlife species that were observed or detected during field surveys by sight, calls, tracks, scat, or other signs were recorded directly onto a field notebook. Binoculars (8 x 42) were used to aid in

the identification of wildlife. A total of seven wildlife species were recorded during the biological surveys for the project study area. One wildlife species observed within the study area, white-faced ibis, is a special-status species (see Section 3.2.6).

A list of all wildlife species observed in the study area during the surveys is provided in Appendix B, *Wildlife Species Observed within the Project Study Area* of this report.

3.2.5 Special-Status Plants

Plant species are considered sensitive if they have been listed or are candidates for listing by the federal and/or state governments as rare, endangered, or threatened ("listed species"); have a CRPR of 1–4; and/or are included as a covered species under the MHCP as implemented by the Escondido Subarea Plan. An evaluation of known California Natural Diversity Database records within a five-mile radius of the site was conducted. Additionally, elevation, habitat, and soils present within the Project study area were evaluated to determine the potential for various special-status species to occur. The level of probability for occurrence of a given species within the Project study area is categorized as observed, high, moderate, low, or no potential to occur, based on the following criteria:

Present – Species was detected during Project surveys.

No Potential – The study area does not provide suitable habitat, the species is known to be restricted to habitats or specific areas outside of the study area, and/or the species is considered extirpated from the area.

Low Potential – Suitable habitat was found within the study area, but in very limited area and/or in a highly disturbed state.

Moderate Potential – Suitable habitat was found within the study area, but in a moderately limited area and/or in a moderately disturbed state.

High Potential –Suitable, high quality habitat is present, and the species is known to occur within the vicinity.

A general plant survey was conducted during vegetation/land cover mapping on September 16, 2024, to identify any species in the study area that was blooming or otherwise observable in that period. A rare plant survey was not conducted because the site supports limited suitable habitat and contains low diversity of plant species. No special-status plants were observed during the general plant survey.

There are no special-status plant species with a moderate to high potential to occur within the Project study area, which is consistent with the highly urbanized and developed landscape of the Project area. The potential for special-status plants is low or not expected due to the high level of developed and disturbed habitat that exists on site. The potential for sensitive plant species included in the California Natural Diversity Database records within five miles of the site to occur in the Project study area is described in Appendix C, *Special-Status Plant Species Potentially Occurring within the Project Study Area.*

3.2.6 Special-Status Wildlife

Sensitive wildlife species are those listed as federal/state endangered or threatened, candidate for listing, fully protected by CDFW, California Watch List (WL), California Species of Special Concern (SSC), or covered species in the MHPA as implemented by the Escondido Subarea Plan. An evaluation of known California Natural Diversity Database records in a five-mile radius of the site was conducted. Additionally, elevation, habitat, and soils present within the Project study area were evaluated to determine the potential for various special-status species to occur.

Special-status wildlife species observed, or with a low, moderate, or high potential to occur in the Project study area are summarized in Appendix D, *Special-Status Wildlife Species Observed or Potentially Occurring in the Project Study Area*. The level of probability for occurrence of a given species within the Project study area is determined based on the following criteria:

Present – Species was detected during Project surveys.

No Potential – The study area does not provide suitable habitat, the species is known to be restricted to habitats or specific areas outside of the study area, and/or the species is considered extirpated from the area.

Low Potential – Suitable habitat was found within the study area, but in very limited area and/or in a highly disturbed state.

Moderate Potential – Suitable habitat was found within the study area, but in a moderately limited area and/or in a moderately disturbed state.

High Potential –Suitable, high quality habitat is present, and the species is known to occur within the vicinity.

One general biological reconnaissance survey of the Project area was conducted according to the methods presented in Section 2 above, on September 16, 2024. One special-status wildlife species, white-faced ibis, was observed within the Project study area during the general biological survey and is further discussed below. No other special-status wildlife species were determined to have moderate or high potential to occur within the Project study area. In general, there is low potential for special-status wildlife to use the Project site and buffer due to the lack of available native habitat and connectivity to other undeveloped areas.

3.2.6.1 White-faced Ibis

White-faced ibis (*Plegadis chihi*) is a CDFW watch list species (nesting colony) and is covered by the MHCP. White-faced ibis nests in freshwater marshes and forages in shallow water and wet grass (Unitt 2004). Two nesting colonies for this species occur in northern San Diego County at Guajome Lake and in the San Luis River valley at the mouth of Keys Canyon, and white-faced ibis are frequently observed wintering throughout the county (Unitt 2004). This species' population is affected by loss of wetland habitat.

Suitable foraging habitat for white-faced ibis occurs within the shallow, freshwater marsh habitat in the concrete-lined channel of Escondido Creek adjacent to the Project work area, and three individuals of this species was observed foraging in this location at the Rose Creek Street crossing during the biological survey (Figure 5, page 7). This species nests in colonies and the small patch of freshwater marsh onsite is not suitable for a nesting colony; therefore, there is no suitable nesting habitat within the Project study area.

3.3 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Wildlife corridors contribute to population viability by (1) assuring the continual exchange of genes between populations, which helps maintain genetic diversity; (2) providing access to adjacent habitat areas, representing additional territory for foraging and mating; (3) allowing for a greater carrying capacity; and (4) providing

routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes (e.g., fires).

Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. Although individual animals may not move through a habitat linkage, the linkage does represent a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals such as reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat "islands" that function as "stepping stones" for dispersal.

The Escondido Subarea Plan identifies five large areas of natural habitats located in the northeastern, eastern, southern, southwestern, and northwestern portions of the City (Ogden and CBI 2001). The Project site is not located within a designated Biological Core Linkage Area (BCLA) (Ogden and CBI 2001). The Escondido Subarea plan describes the BCLA as being equivalent to a biologically preferred preserve alternative because it identifies all large, contiguous areas of habitat and important functional linkages and movement corridors between them (Ogden and CBI 2001). The Project is located within a highly urbanized area that is surrounded by high-density commercial and residential development. Human activity and considerable vehicle traffic in and surrounding the site inhibit wildlife movement through the Project site. Escondido Creek, as it flows through the Project site, may allow terrestrial animals to move through the City; however, the urban development that borders this drainage is a deterrent to wildlife mobility and it is expected that wildlife movement most likely occurs in the areas identified in the BCLA, and not within the Project study area.

4 IMPACTS ANALYSIS

The purpose of Section 4 is to describe the direct, indirect, and cumulative impacts of the proposed project on special-status biological resources. The significance determinations for proposed or potential impacts are described in Section 4.

4.1 Definition of Impacts and Significance

Impacts to vegetation communities, special-status plants, and special-status wildlife, must be quantified and analyzed to determine whether such impacts are significant under CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of "significant" effect is not possible, because the significance of an activity may vary with the setting; however, Appendix G of the CEQA Guidelines lists questions to be answered for evaluating potential environmental impacts of a project CEQA Guidelines Section 15065(a) is also helpful in defining whether a project may have a significant cumulative effect on the environment. Under that section, a proposed project may have a significant effect on the environment if the project has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, or (5) substantially reduce the number or restrict the range of a rare or endangered plant or animal.

The following are the significance thresholds for biological resources provided in the CEQA Guidelines Appendix G environmental checklist, which states that a project could potentially have a significant effect if it:

- Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Interferes substantially with the movement of an native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impedes the use of native wildlife nursery sites;
- Conflicts with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance; or
- Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Based upon the project description (Section 1.2), short-term and long-term direct impacts, indirect impacts , and cumulative impacts are defined as follows:

Direct Impacts are caused by the Project and occur at the same time and place as the Project. Any alteration, disturbance, or destruction of biological resources that would result from Project-related activities is considered a direct impact. Direct impacts would include direct losses to native habitats, potential jurisdictional waters, wetlands, and special-status species.

Indirect Impacts may occur later in time or at a place that is farther removed from the Project than direct impacts, but indirect impacts are still attributable to Project-related activities. Examples of indirect impacts include habitat fragmentation; elevated noise, dust, and lighting levels; changes in hydrology, runoff, and sedimentation; decreased water quality; soil compaction; increased human activity; and the introduction of invasive wildlife (domestic cats and dogs) and plants.

Cumulative impacts refer to the combined environmental effects of the proposed Project and other past, present, and reasonably foreseeable future projects. CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts refer to the incremental impacts from two or more projects when considered together. When analyzed separately, the impacts may be minor; however, when analyzed together, they could be considered significant over a period of time.

4.2 Direct Impacts

4.2.1 Vegetation Communities and Land Cover Types

Direct impacts were quantified by overlaying the proposed impact footprint onto the biological resources map and evaluating the impacts by vegetation community. Temporary and direct impacts associated with this Project would result from the construction of the reinforced concrete box culverts and storm drain pipeline and the construction of the new stormwater inlets within the concrete-lined channel. Implementation of the proposed Project would result in temporary, direct impacts totaling 49.6 acres to developed land, landscape/ornamental land, and the concrete-lined channel. While the Project components (reinforced concrete box culverts/pipe and stormwater inlets) are considered permanent, these components will be constructed in-kind and the work areas will be restored to pre-existing conditions. Table 5 provides a summary of these impacts.

Table 5
Direct Impacts to Vegetation Communities and Land Cover Types and Mitigation Required

General Vegetation Community/Land Cover Category (Holland/Oberbauer)	Vegetation Community/Land Cover Type	Impacts (acres)	Mitigation Ratio	Mitigation Required
Native Vegetation Communities				
N/A	N/A	N/A	N/A	N/A
Disturbed or Developed Areas (10000)	Developed Land	48.4	0:0	N/A
	Landscaping/Ornamental	0.5	0:0	N/A
	Concrete-Lined Channel	0.7	0:0	N/A
Total		**49.6**	**-**	**0**

Developed and landscaping/ornamental land provide little native habitat value and foraging opportunities for wildlife, and therefore, impacts to these land cover types would not be significant. Concrete-lined channels present onsite are considered a potential aquatic resource jurisdictional to the ACOE and CDFW and impacts to these potential aquatic resources are discussed in Section 4.2.2, *Aquatic Resources.*

4.2.2 Aquatic Resources

The construction of the new stormwater inlets into Escondido Creek may directly impact potential aquatic resources. Direct removal, fill, and hydrological interruption of potential aquatic resources would be considered a direct impact. However, these impacts would not be considered significant because the overall project is designed to make improvements to the drainage system. Project impacts to potential aquatic resources are temporary because there is no loss of jurisdictional waters as the concrete-lined channel would be restored to its original function.

Project impacts to the concrete-lined channel bank would not impact sensitive riparian vegetation communities; therefore, it is not anticipated that mitigation in the form of revegetation or replacement habitat will be required. Table 6 summarizes the Project impacts to potential aquatic resources.

Table 6
Direct Impacts to Aquatic Resources

Type of Jurisdictional Waters	Type of Habitat[1]	Cowardin Classification[2]	Impacts to Aquatic Resources (acres/linear feet)
Jurisdictional Waters of the U.S. (USACE, RWQCB)			
Escondido Creek: Non-wetland Waters	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.11/385
Escondido Creek: Non-wetland Waters (Federal 3-parameter Wetland Below OHWM)	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	-
Grand Ave Channel, Non-wetland Waters	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	-
Subtotal Jurisdictional Waters of the U.S.			*0.11/385*
Jurisdictional Waters of the State (CDFW)			
Escondido Creek, Concrete-lined Channel	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.71/385
Escondido Creek, Freshwater Marsh	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	-
Grand Ave Channel, Concrete-lined Channel	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	-
Subtotal Jurisdictional Waters of the State			*0.71/385*
Grand Total Jurisdictional Waters			***0.71/385***

1 Oberbauer *et al.* 2008.
2 Cowardin *et. al.* 1979.

4.2.3 Special-Status Plants

No special-status plant species were observed within the Project study area, and there are no sensitive plant species that were determined to have high or moderate potential to occur within the study area. Therefore, the implementation of the proposed Project would not directly impact special-status plant species.

4.2.4 Special-Status Wildlife

One special-status wildlife species, white-faced ibis, was detected during the biological reconnaissance survey. Three individuals of this species were observed only within the Project buffer area, outside of the Project impact area. Additionally, only foraging habitat occurs in the freshwater marsh in the Project study area outside of the impact area, and no nesting habitat occurs on or near the Project study area. The suitable foraging habitat adjacent to the Project work impact area occurs in a relatively small area compared to the entire length of Escondido Creek, and it is expected that foraging birds use the entire channel to forage. Therefore, implementation of the proposed Project would not directly impact this species.

4.2.5 Nesting Birds

Most native nesting birds are protected under the MBTA (16 U.S.C. 703–712), and nesting raptors are afforded additional protection under CFGC Section 3503.5. Direct impacts to active nests protected under the MBTA and/or CFGC Section 3503.5 would be considered significant. Pre-construction nesting bird surveys are adequate to ensure avoidance of impacts to active nests and reduce potential impacts to less than significant.

4.2.6 Wildlife Corridors and Habitat Linkages

The study area does not occur within a BCLA of the Escondido Subarea Plan. Project work areas and the surrounding study area buffer do not function as a wildlife corridor due to lack of any suitable habitat located in the work areas and the intense urban development within the Project footprint, restricting the movement of wildlife through the area. Therefore, implementation of the proposed Project would not directly impact wildlife corridors and habitat linkages.

4.3 Indirect Impacts

4.3.1 Vegetation Communities and Land Covers

The proposed Project footprint occurs in previously developed areas (roads and the concrete-lined channel); therefore, long-term indirect impacts to vegetation communities/land covers, such as an increase in human presence beyond the current extent, are not expected to occur.

Native vegetation communities occur adjacent to the Project impact areas. Potential short-term indirect impacts that could affect the native vegetation communities that occur adjacent to the Project impact area are described as follows:

Fugitive Dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light penetration, photosynthesis, respiration, and transpiration, as well as increased penetration of phytotoxic gaseous pollutants and increased incidence of pests and diseases.

Increased Human Activity. Construction of the proposed Project would temporarily increase human activity in the area, which may contribute to an increase in litter to areas outside of the Project impact area.

Restricting equipment and vehicles to Project impact areas and limiting vehicle speed to 15 miles per hour, minimizing impacts outside of the Project footprint by clearly delineating the work areas with construction fencing, providing biological monitoring to assist crews in minimizing indirect impacts, implementing best management practices, and designing construction activities to avoid or minimize new disturbance would reduce potential indirect impacts to less than significant.

4.3.2 Aquatic Resources

Potential indirect impacts on aquatic resources could include adverse effects of fugitive dust, changes in hydrology resulting from construction, and exposure to contaminants associated with construction activities. Potential indirect impacts that could affect the jurisdictional aquatic resources are described as follows:

Fugitive Dust. Excessive dust can settle on surface water, affecting aquatic communities and contributing to the nutrient loading of the surface water ecosystem. This contamination risks aquatic life and may impact downstream resources by making water unsafe for consumption or recreational use.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates and patterns, which may affect adjacent downstream aquatic, wetland, and riparian vegetation communities.

Chemical Pollutants. Chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction-related materials) may affect jurisdictional aquatic resources and downstream resources by contaminating the water, impacting aquatic life and water quality.

Increased Human Activity. Construction of the proposed Project would temporarily increase human activity in the area, which may contribute to an increase in litter to the concrete-lined channel.

Minimizing impacts outside of the Project footprint by clearly delineating the work areas with construction fencing, providing biological monitoring to assist crews in minimizing indirect impacts, implementing best management practices, and designing construction activities to avoid or minimize new disturbance would reduce potential indirect impacts to less than significant.

4.3.3 Special-Status Plant Species

No special-status plants were observed in the Project study area, and no special-status plant species were determined to have high or moderate potential to occur within the Project study area. Therefore, the implementation of the proposed Project would not directly impact special-status plant species.

4.3.4 Special-Status Wildlife Species and Nesting Birds

Indirect impacts to vegetation communities previously described, such as fugitive dust, may also affect special-status wildlife by decreasing the vigor and productivity of vegetation required for nesting. Wildlife may also be indirectly affected in the short-term by construction-related noise, which can disrupt normal wildlife activities and subject wildlife to higher predation risks. Breeding birds can be affected by short-term construction-related noise, which can result in the disruption of foraging, nesting, and reproductive activities.

Indirect impacts from construction-related noise or human presence may occur to nesting birds if construction occurs during the breeding season (*i.e.,* January 1 through August 31). Nesting birds that would be affected by noise, based on suitable habitat in the project vicinity, may occur up to 100 feet from the project work areas. This impact would be considered a significant impact, absent mitigation. Implementation of appropriate mitigation measures, as discussed in Section 5.4, would reduce these impacts to below significance.

Indirect noise impacts from Project construction would not be expected to affect breeding of the white-faced ibis, since there is no breeding habitat onsite or within 100 feet of the Project impact area, but increased noise may affect roosting and foraging for this species in the Project area. The suitable foraging habitat adjacent to the Project impact area occurs in a relatively small area compared to the entire length of Escondido Creek, and it is expected that foraging birds use the entire channel to forage, therefore indirect noise impacts to this species would not be considered significant.

4.4 Cumulative Impacts

The Project is located within an urban setting, and no sensitive plants, animals, or vegetation communities would be significantly impacted. Cumulative impacts would not be considered significant if construction guidelines described in Section 4, *Impacts Analysis* and proposed mitigation measures are implemented. Future projects within the Project study area could result in significant impacts to vegetation communities, jurisdictional waters and wetlands, and/or special-status plant wildlife species and nesting birds absent mitigation.

5 MITIGATION

5.1 Vegetation Communities and Land Covers

No mitigation is required for impacts to vegetation communities and land covers because significant impacts to sensitive vegetation communities are not expected to occur.

5.2 Aquatic Resources

BIO-1 Impacts to potential aquatic resources requires notification to the relevant federal and state agencies. Where it is confirmed through the aquatic resources delineation that potential aquatic resources would be impacted by the proposed Project, the Project proponent shall obtain the required federal and/or state permits from the USACE, RWQCB, and/or CDFW, pursuant to Sections 404 and 401 of the CWA, and Section 1600 et seq. of the CFGC, respectively. Permits are required to be obtained by the applicant before the impact to the resources. Permits may include additional mitigation requirements. No significant area-based mitigation is anticipated since the purpose of the Project is to make improvements to the drainage system and because the concrete-lined channel would be restored to its original function.

5.3 Special-Status Plants

No mitigation is required for impacts to special-status plants because direct and indirect impacts to special-status plants are not expected to occur.

5.4 Special-Status Wildlife and Nesting Birds

BIO-2 Potential impacts to nesting birds will be mitigated through pre-construction nesting bird surveys and appropriate buffers around active nests regulated by the MBTA and CFGC. If construction activity occurs during the breeding season (typically January 1 through August 31), a nesting bird survey must be conducted within the project boundary and a 100-foot buffer within 72 hours prior to construction and daily nesting bird surveys would be conducted during the breeding season. Nesting bird surveys would be required anytime construction begins in a new area outside of a previously surveyed area. If any active nests are detected, the area will be flagged and an appropriate buffer will be placed around the nest as determined by the project biologist, and monitored throughout the nesting cycle. If

the biologist determines that Project construction is causing a disturbance to the nest (*e.g.,* adult birds appear agitated and are not returning to nest to incubate or feed young), the biologist may halt construction until the nest has fledged. Construction may restart after the biologist has determined that the nest has fledged or is no longer active.

5.5 Wildlife Corridors and Habitat Linkages

Implementation of the proposed Project would not directly impact wildlife corridors and habitat linkages; therefore, no mitigation is required.

6 REFERENCES CITED

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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16 U.S.C. 703–712. 1918. Migratory Bird Treaty Act, as amended.

33 CFR 328.1–328.5. Definition of Waters of the United States.

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APPENDIX A

Plant Species Observed within the Project Study Area

Scientific Name	Common Name	Family Name	Status
	Gymnosperms and Gnetophytes		
**Cupressus sempervirens*	Italian cypress	Cupressaceae	–
**Pinus* sp.	ornamental pine	Pinacae	–
	Angiosperms - Monocots		
**Agave* sp.	ornamental agave	Agavaceae	–
**Agave americana*	century plant	Agavaceae	–
**Yucca elephantipesis*	spineless yucca	Agavaceae	–
**Phoenix canariensis*	Canary Island date palm	Arecaceae	–
**Syagrus romanzoffiana*	Queen palm	Arecaceae	–
**Washingtonia robusta*	Washington fan palm	Arecaceae	–
Eleocharis palustris	common spike-rush	Cyperaceae	–
**Cynodon dactylon*	Bermuda grass	Poaceae	–
**Polypogon monspeliensis*	rabbitsfoot grass	Poaceae	–
Typha latifolia	broadleaf cattail	Typhaceae	–
	Angiosperms -Eudicots		
**Aptenia cordifolia*	heartleaf iceplant	Aizoaceae	–
**Carpobrotus edulis*	hottentot fig	Aizoaceae	–
**Malephora crocea*	red-flowered iceplant	Aizoaceae	–
**Liquidambar styraciflua*	American sweetgum	Altingiaceae	–
**Schinus molle*	Peruvian peppertree	Anacardiaceae	–
**Schinus terebinthifolia*	Brazilian peppertree	Anacardiaceae	–
**Vinca major*	bigleaf periwinkle	Apocynaceae	–
**Hedera helix*	English ivy	Araliaceae	–
Artemisia californica	California sagebrush	Asteraceae	–
Encelia californica	California brittlebush	Asteraceae	–
**Catalpa bignonioides*	common catalpa	Bignoniaceae	–
**Jacaranda mimosifolia*	jacaranda	Bignoniaceae	–
**Echium candicans*	Pride of Madeira	Boraginaceae	–
**Nasturtium officinale*	watercress	Brassicaceae	–
Cylindropuntia sp.	cane cholla	Cactaceae	–
**Opuntia ficus-indica*	Barbary fig	Cactaceae	–

Scientific Name	Common Name	Family Name	Status
**Pachycereus* sp.	Pachycereus cactus	Cactaceae	–
**Carica papaya*	papaya	Caricaceae	–
**Ipomoea purpurea*	common morning glory	Convolvulaceae	–
**Crassula ovata*	jade plant	Crassulaceae	–
**Albizia julibrissin*	mimosa tree	Fabaceae	–
**Acacia cyclops*	coastal wattle	Fabaceae	–
**Acacia longifolia*	Sydney golden wattle	Fabaceae	–
**Acacia redolens*	bank catclaw	Fabaceae	–
**Parkinsonia aculeata*	Mexican palo verde	Fabaceae	–
Quercus agrifolia	California live oak	Fagaceae	–
**Pelargonium x hortorum*	common geranium	Geraniaceae	–
**Carya illinoinensis*	pecan	Juglandaceae	–
Salvia apiana	white sage	Lamiaceae	–
Salvia clevelandii	Cleveland sage	Lamiaceae	–
** Salvia rosmarinus*	rosemary	Lamiaceae	–
**Lagerstroemia indica*	crepe myrtle	Lythraceae	–
**Punica granatum*	pomegranate	Lythraceae	–
**Magnolia grandiflora*	southern magnolia	Magnoliaceae	–
**Pittosporum undulatum*	Victorian box	Myoporaceae	–
**Lysimachia arvensis*	scarlet pimpernel	Myrsinaceae	–
**Eucalyptus sideroxylon*	red ironbark	Myrtaceae	–
**Melaleuca viminalis*	weeping bottlebrush	Myrtaceae	–
**Mirabilis jalapa*	four o'clock	Nyctaginaceae	–
**Olea europaea*	olive	Oleaceae	–
**Fraxinus uhdei*	evergreen ash	Oleaceae	–
**Oenothera speciosa*	pinkladies	Onagraceae	–
**Plumbago auriculata*	cape leadwort	Plumbaginaceae	–
** Afrocarpus gracilior*	fern pine	Podocarpaceae	–
**Cotoneaster pannosus*	silverleaf cotoneaster	Rosaceae	–
Heteromeles arbutifolia	toyon	Rosaceae	–
**Cupaniopsis anacardioides*	carrot wood	Sapindaceae	–

Scientific Name	Common Name	Family Name	Status
**Koelreuteria paniculata*	golden rain tree	Sapindaceae	–
**Ailanthus altissima*	tree of heaven	Simaroubaceae	–
**Ulmus parvifolia*	Chinese elm	Ulmaceae	–

*Non-native species

APPENDIX B

Wildlife Species Observed within the Project Study Area

Common Name	Scientific Name	Order	Family	Status
		Invertebrates		
Cloudless sulfur butterfly	*Phoebis sennae*	Lepidoptera	Pieridae	-
		Avian		
White-faced ibis	*Plegadis chihi*	Pelicaniformes	Threskiornithidae	WL (nesting colony)
Mourning dove	*Zenaida macroura*	Columbiformes	Columbidae	-
Black phoebe	*Sayornis nigricans*	Passeriformes	Tyrannidae	-
American crow	*Corvus brachyrhynchos*	Passeriformes	Corvidae	-
Bushtit	*Psaltriparus minimus*	Passeriformes	Aegithalidae	-
House sparrow*	*Passer domesticus*	Passeriformes	Passeridae	-

WL – California Department of Fish and Wildlife (CDFW) WatchList species
*Naturalized or Vagrant Species

APPENDIX C

Special-Status Plant Species Potentially Occurring within the Study Area

SCIENTIFIC NAME & COMMON NAME	MHCP-COVERED	SENSITIVITY CODE AND STATUS (FEDERAL/ STATE/ CRPR LIST)*	PRIMARY HABITAT ASSOCIATIONS/LIFE FORM/ BLOOMING PERIOD	STATUS OR POTENTIAL TO OCCUR ONSITE
Acanthomintha ilicifolia San Diego thorn-mint	Yes	FT/CE/1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/clay soils/annual herb/Apr-Jun	Not observed. No potential to occur given lack of suitable habitat and soils.
Ambrosia pumila San Diego ambrosia	No	FE/None/1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools, often disturbed areas/perennial rhizomatous herb/Apr-Oct	Not observed. Low potential to occur due to very low quantity of suitable habitat.
Arctostaphylos glandulosa ssp. *crassifolia* Del Mar manzanita	Yes	FE/None/1B.1	Chaparral (maritime, sandy)/perennial evergreen shrub/Jun-Apr	Not observed. No potential to occur given lack of suitable habitat. If present within the survey area, this large perennial species likely would have been observed during surveys.
Arctostaphylos rainbowensis Rainbow manzanita	No	None/None/1B.2	Chaparral/perennial evergreen shrub/Dec-Mar	Not observed. No potential to occur given lack of suitable habitat. If present within the survey area, this large perennial species likely would have been observed during surveys.
Atriplex parishii Parish's saltbush	No	None/ None/1B.1	Chenopod scrub, playas, vernal pools/annual herb/ Jun-Oct	Not observed. No potential to occur given lack of suitable habitat.
Baccharis vanessae Encinitas baccharis	Yes	FT/SE/1B.1	Chaparral, cismontane woodland; sandstone/ perennial deciduous shrub/ Aug, Oct, Nov	Not observed. Low potential to occur; although woodland habitat is present onsite, habitat is of very low quality and quantity.
Berberis nevinii Nevin's barberry	No	None/SE/1B.1	Chaparral; sandy to gravelly soils, washes/shrub/Mar-Jun	Not observed. No potential to occur given lack of suitable habitat. If present within the survey area, this large perennial species likely would have been observed during surveys.
Brodiaea filifolia Thread-leaved brodiaea	No	FE/SE/1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; clay/perennial bulbiferous herb/Mar-Jun	Not observed. No potential to occur given lack of suitable soils (clay).
Brodiaea orcuttii Orcutt's brodiaea	No	None/None/1B.1	Chaparral, cismontane woodland, closed-cone coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools/perennial bulbiferous herb/May-Jul	Not observed. Low potential to occur; although woodland habitat is present onsite, habitat is of very low quality and quantity.
Ceanothus verrucosus wart-stemmed ceanothus	Yes	None/None/2B.2	Chaparral/perennial evergreen shrub/Dec-May	Not observed. No potential to occur given lack of suitable habitat. If present within the survey area, this large perennial species likely would have been observed during surveys.
Centromadia parryi ssp. *australis* Southern tarplant	No/ No	None/ None/1B.1	Marshes and swamps, valley and foothill grasslands, vernal pools/annual herb/ May-Nov	Not observed. No potential to occur given lack of suitable habitat.
Centromadia pungens ssp. *laevis* Smooth tarplant	No	None/None/1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland/annual herb/Apr-Sep	Not observed. No potential to occur given lack of suitable habitat. If present within the survey area, this large species likely would have been observed during surveys.

SCIENTIFIC NAME & COMMON NAME	MHCP-COVERED	SENSITIVITY CODE AND STATUS (FEDERAL/ STATE/ CRPR LIST)*	PRIMARY HABITAT ASSOCIATIONS/LIFE FORM/ BLOOMING PERIOD	STATUS OR POTENTIAL TO OCCUR ONSITE
Chloropyron maritimum ssp. *Maritimum* salt marsh bird's-beak	No	FE/CE/1B.2	Coastal dunes, marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May-Oct (Nov)	Not observed. No potential to occur due to lack of suitable habitat.
Chorizanthe orcuttiana Orcutt's spineflower	No	FE/CE/1B.1	Chaparral (maritime), closed-cone coniferous forest, coastal scrub/annual herb/Mar-May	Not observed. No potential to occur due to lack of suitable habitat.
Clarkia delicata delicate clarkia	No	None/None/1B.2	Chaparral, cismontane woodland/annual herb/Apr-Jun	Not observed. Low potential to occur. Although cismontane woodland habitat is present, the habitat is of low quality and unlikely to support this species.
Comarostaphylis diversifolia ssp. *diversifolia* summer holly	Yes	None/None/1B.2	Chaparral, cismontane woodland/perennial evergreen shrub/Apr-Jun	Not observed. Low potential to occur; although cismontane woodland habitat is present, the habitat is of low quality. If present within the survey area, this large perennial species would likely have been observed during surveys.
Ericameria palmeri var. *palmeri* Palmer's goldenbush	No	None/None/1B.1	Chaparral, coastal scrub/perennial evergreen shrub/(Jul) Sep-Nov	Not observed. Low potential to occur due to lack of suitable habitat. If present within the survey area, this large perennial species would likely have been observed during surveys.
Eryngium aristulatum var. *parishii* San Diego button-celery	No	FE/CE/1B.1	Coastal scrub, valley and foothill grassland, vernal pools/annual/perennial herb/Apr-Jun	Not observed. Low potential to occur; suitable habitat is not present.
Hazardia orcuttii Orcutt's hazardia	No	FSC/ST/1B.1	Chaparral, coastal scrub; often clay soils/perennial evergreen shrub/Aug-Oct	Not observed. Low potential to occur due to lack of suitable habitat. If present onsite this large perennial species would likely have been observed.
Horkelia truncata Ramona horkelia	No	None/None/1B.3	Chaparral, cismontane woodland/ perennial herb/ May-Jun	Not observed. Low potential to occur; although suitable cismontane woodland habitat is present, the habitat is of low quality and would not be expected to support this species.
Isocoma menziesii var. *decumbens* decumbent goldenbush	No	None/None/1B.2	Chaparral, coastal scrub (often disturbed areas, sandy)/perennial shrub/Apr-Nov	Not observed. No potential to occur due to lack of suitable habitat. If present onsite this large perennial species would likely have been observed.
Navarretia fossalis Spreading navarretia	Yes	FT/None/1B.1	Chenopod scrub, marshes and swamps (shallow freshwater), playas, vernal pools/annual herb/Apr-Jun	Not observed. No potential to occur due to lack of suitable habitat.
Quercus dumosa Nuttall's scrub oak	Yes	None/None/1B.1	Chaparral, closed-cone coniferous forest, coastal scrub/perennial evergreen shrub/Feb-Apr (May-Aug)	Not observed. No potential to occur due to lack of suitable habitat. In addition, if present within the survey area, this tree species would likely have been observed during surveys.
Tetracoccus dioicus Parry's tetracoccus	Yes	None/None/1B.2	Chaparral, coastal scrub/perennial deciduous shrub/Apr-May	Not observed. No potential to occur due to lack of suitable habitat. In addition, if present within the survey area, this large perennial species would likely have been observed during surveys.

Legend:

***Status:**
FEDERAL/STATE LISTED:
FE: Federally-listed as endangered
FT: Federally-listed as threatened
FSC: Federally-listed as species of concern
CE: California state-listed as endangered
CT: California state-listed as threatened

California Native Plant Society Rare Plant Ranking system:
1B – rare, threatened, or endangered in California and elsewhere
2 – rare, threatened, or endangered in California, but more common elsewhere
3 – plants about which more information is needed – a review list
4 – plants of limited distribution—a watch list

CRPR Threat Ranks:
Threat Ranks
0.1--Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2--Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3--Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX D

Special-Status Wildlife Species Observed or Potentially Occurring within the Project Study Area

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
INVERTEBRATES			
Branchinecta sandiegonensis San Diego fairy shrimp	FE	Small, shallow vernal pools, occasionally ditches and road ruts	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Bombus crotchii Crotch's bumblebee	SC	Scrub, chaparral, open grasslands, desert margins, developed areas	Not observed onsite. Low potential to occur due to lack of suitable native habitat in proximity to developed areas.
Euphydryas editha quino Quino checkerspot butterfly	FE, MHCP	Patchy coastal sage scrub, chaparral, juniper woodland, semi-desert scrub, grasslands.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Euphyes vestris harbisoni Harbison's dunn skipper	MHCP	Chaparral, oak woodland, and riparian areas that have narrow canyons or drainages. Requires host plant, San Diego sedge (*Carex spissa*).	Not observed onsite. No potential to occur due to lack of required host plant onsite.
Lycaena hermes Hermes copper butterfly	FT, USFS, MHCP	Cismontane coastal sage scrub and chaparral. Larval host plant is exclusively spiny redberry (*Rhamnus crocea*).	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Pyrgus ruralis lagunae Laguna Mountains skipper	FE	Montane meadows and openings from 4,000 to 6,000 feet elevation. Larval host plant is exclusively Cleveland's horkelia (*Horkelia clevelandii*).	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Streptocephalus woottoni Riverside fairy shrimp	FE	Small, shallow vernal pools, occasionally ditches and road ruts	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
REPTILES AND AMPHIBIANS			
Anniella stebbinsi Southern California legless lizard	SSC, USFS	Coastal sand dunes, sandy washes, and alluvial fans	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Aspidoscelis hyperythra Orange-throated whiptail	WL, USFS, MHCP	Coastal sage scrub, chaparral, grassland, juniper and oak woodland with loose soils.	Not observed onsite. Low potential to occur within small patch of coast live oak woodland onsite.

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
Aspidoscelis tigris stejnegeri Coastal whiptail	SSC	Mostly hot, dry cismontane chaparral, woodland, and riparian areas with sparse vegetation.	Not observed onsite. Low potential to occur within small patch of coast live oak woodland onsite.
Anaxyrus californicus Arroyo toad	FE, SSC	Riparian habitat with sandy streambeds. Occurring from sea level to 8,000 feet in elevation.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Coleonyx switaki Barefoot banded gecko	ST, BLM	Arid, sparsely vegetated desert areas with boulders and rock outcrops.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Actinemys pallida Southwestern pond turtle	FPT, SSC, BLM, MHCP	Lakes, streams, ponds where water persists year-round from near sea level to 5,500 feet in elevation.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Phrynosoma blainvillei Coast horned lizard	SSC, BLM, MHCP	Coastal sage scrub, annual grassland, chaparral, oak and riparian woodland, coniferous forest, with open areas for sunning and presence of harvester ants.	Not observed onsite. No potential to occur due to lack of open areas within the oak woodland for sunning, and absence of harvester ants.
Pleistodon skiltonianus interparietalis Coronado skink	WL, BLM	Grassland, woodlands, pine forests, chaparral, especially in open sunny areas such as clearings and the edges of creeks and rivers. Prefers rocky areas near streams with lots of vegetation.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Rana aurora draytonii California red-legged frog	FT, SSC, MHCP	Streamsides with plant cover, or near ponds; in grasslands, forests, woodlands, and scrub. Mostly found in foothills and lowlands. Breeding habitat may be ephemeral or permanent wetlands, but ephemerally wet areas must be located adjacent to moist refugia for use when wetlands are dry.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Spea hammondii Western spadefoot	FPT, SSC, BLM, MHCP	Temporary ponds, vernal pools, and backwaters of slow-flowing creeks for required for breeding and egg-laying. Also upland habitats such as grasslands and coastal sage scrub where burrows are constructed.	Not observed onsite. No potential to occur to due lack of suitable habitat onsite.

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
BIRDS			
Accipiter cooperii Cooper's hawk	WL, MHCP	Oak woodlands, willows, and commonly in eucalyptus trees in urban areas.	Not observed onsite. Low potential to occur within the small patch of coast live oak woodland and scattered eucalyptus trees surrounded by development.
Agelaius tricolor Tricolored blackbird	ST, SSC, BLM (nesting colony), MHCP	Nests in dense colonies in freshwater marshes and forages in nearby grasslands, pastures, or agricultural fields.	Not observed onsite. Low potential to occur, foraging, within the freshwater marsh onsite; however, the small patch of freshwater marsh onsite is unlikely to support a large nesting colony, and this area is not one of the 20-30 documented nesting colonies in San Diego County. The most recent record of this species within five miles of the Project is from 1906 (CNDDB).
Ammodramus savannarum Grasshopper sparrow	SSC (nesting), MHCP	Partial migrant restricted to native grassland habitat, typically dominated by bunchgrasses of the genus *Nassella*.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Aimophila ruficeps Southern California Rufous-crowned sparrow	WL, MHCP	Xeric, rocky slopes in coastal sage scrub, broken or burned chaparral, and grassland with scattered shrubs.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Amphispiza belli belli Bell's sage sparrow	WL, MHCP	Year-round resident in chaparral and sage scrub.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Aquila chrysaetos Golden eagle	CFP, WL, BLM, CDF (nesting and wintering), MHCP	Most pairs nest on cliff ledges, the rest in trees on steep slopes. Hunts in nearby grassland, sage scrub, or broken chaparral.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Athene cunicularia Burrowing owl	SC, SSC, BLM, BCC (burrow sites and some wintering areas), MHCP	Annual and perennial grasslands, deserts, agricultural areas, disturbed habitat, and scrublands, characterized by low-growing vegetation.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
Buteo swainsoni Swainson's hawk	ST, BLM (nesting)	Open plains and prairie.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Campylorhynchus brunneicapillus sandiegensis Coastal cactus wren	SSC, USFS, BCC, MHCP	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Charadrius nivosus nivosus Western snowy plover	FT, SSC (nesting)	Nests entirely on beaches, dunes, and salt flats.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Circus hudsonius Northern harrier	SSC, BCC (nesting), MHCP	Marshes, grasslands, fields, and prairies. Found in of open, unfragmented terrain, both wet and dry habitats, where there is sufficient ground cover for nest concealment.	Not observed onsite. Low potential to occur, foraging, in the freshwater marsh onsite. The small patch of freshwater marsh is unsuitable for nesting due to insufficient ground cover and habitat fragmentation. There are no records of this species within five miles of the Project.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT, SE, BLM USFS (nesting)	Always in or near significant stands of riparian woodland, dominated by willows and cottonwoods.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Empidonax traillii extimus Southwestern willow flycatcher	FE, SE, USFS (nesting), MHCP	Riparian woodlands and thickets associated with the presence of very moist soil conditions and/or surface water, and understory vegetation.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Icteria virens Yellow-breasted chat	SSC (nesting), MHCP	Dense riparian woodland.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Laterallus jamaicensis coturniculus California black rail	ST, CFP, BLM	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays.	Not observed onsite. No potential to occur due to extirpation of the species in the County (San Diego County Bird Atlas). The most recent record of this species within five miles of the Project is from 1907 (CNDDB).

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
Numenius americanus Long-billed curlew	WL (nesting), MHCP	Breed in shortgrass and mixed-grass prairies as well as agricultural fields. Migrate along the coast and interior Mexico through shortgrass prairies, alkali lakes, wet pastures, tidal mudflats, and agricultural fields. Winter in wetlands, tidal estuaries, mudflats, flooded fields less than 6 inches deep, and beaches.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Pandion haliaetus Osprey	WL (nesting), CDF, MHCP	Primarily along rivers, lakes, reservoirs, and seacoasts, occurring widely in migration, often crossing land between bodies of water. Nests in dead snags, live trees, cliffs, utility poles, wooden platforms, channel buoys, chimneys, windmills, etc. Usually near or above water.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Plegadis chihi White-faced ibis	WL (nesting colony), MHCP	Found in shallow areas of freshwater marshes and wet grass.	Observed onsite in concrete-lined Escondido Creek under Rose Street crossing. Suitable foraging habitat is present within Escondido Creek but no suitable nesting habitat occurs onsite. This species nests in colonies and the small patch of freshwater marsh onsite is not suitable for a nesting colony.
Polioptila californica californica Coastal California gnatcatcher	FT, SSC, MHCP	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland ecotone, riparian in late summer	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Rallus obsoletus levipes Light-footed Ridgway's rail	FE, SE, CFP	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Sialia mexicana Western bluebird	MHCP	Woodlands, farmlands, and orchards.	Not observed onsite. Low potential to occur within small patch of coast live oak woodland onsite or in residential landscaping where tree cavities or cavity nest boxes may be present. .
Sternula antillarum browni California least tern	FE, SE, CFP	Sea beaches, bays, large rivers, salt flats.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
Vireo bellii pusillus Least Bell's vireo	FE, SE (nesting), MHCP	Nests in southern willow scrub with dense cover within 1-2 meters above the ground; habitat includes willows, cottonwoods, baccharis, wild blackberry, or mesquite in desert areas	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
MAMMALS			
Antrozous pallidus Pallid bat	SSC, BLM, USFS, WBWG - H	Found in arid or semi-arid habitats, often in mountainous or rocky areas near water, and open, sparsely vegetated grasslands. Roost in cracks and crevices, which may include tile roofs, exfoliating bark of trees, or rocky outcrops.	Not observed onsite. Low potential to occur onsite under bridges that traverse Escondido Creek. Recent records (2014) of roosting colonies of this species have been recorded on Camp Pendleton and Chula Vista (San Diego County Mammal Atlas), and the most recent record of this species within five miles of the Project is from 1968 (CNDDB). No roosting bats or guano were observed during the survey.
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	State vulnerable, MHCP	Coastal sage scrub, grassland, sage scrub-grassland ecotones, sparse chaparral; rocky substrates, loams and sandy loams	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Corynorhinus townsendii Townsend's big-eared bat	SSC, BLM, USFS, WBWG – H, MHCP	Obligate cave-roosting species and will roost in rocky crevices, caves, tunnels, mineshafts, loose tree bark, hollow trees, and derelict buildings in forest and edge habitats.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite. No roosting bats or guano were observed during the survey, and the most recent record of this species within five miles of the Project is from 1931 (CNDDB).
Dipodomys stephensi *Stephens' kangaroo rat*	FT, ST, MHCP	Open grassland dominated by annual forbs or sparse coastal sage scrub and extensive bare ground with friable and loamy soils.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.
Eumops perotis californica Western mastiff bat	SSC, BLM, MHCP	Roosts in small colonies in crevices and cracks in the face of steep rocky cliffs, rocky outcrops, and abandoned quarries. It is strongly associated with its preferred roosting habitat: steep rocky cliffs, rock quarries, and areas with large granitic boulders. Requires a minimum of three meters of unobstructed space below its roost so it can fall before taking flight.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite. There are no records of this species within five miles of the Project. No roosting bats or guano were observed during the survey.

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
Lasiurus xanthinus Western yellow bat	SSC	Strongly associated with native groves of California fan palm. Roosts primarily in "skirts" of dead fronds, but also in cottonwoods and yuccas	Not observed onsite. No potential to occur due to lack of suitable habitat onsite. No roosting bats or guano were observed during the survey, and the most recent record of this species within five miles of the Project is from 1984 (CNDDB).
Lepus californicus bennettii San Diego black-tailed jackrabbit	State vulnerable, MHCP	Grasslands or open areas with patches of scrub; require cover for shade and escape.	Not observed onsite. No potential to occur due lack of suitable habitat onsite.
Neotoma lepida intermedia San Diego desert woodrat	SSC	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth	Not observed onsite. No potential to occur due lack of suitable habitat onsite.
Nyctinomops femorosaccus Pocketed free-tailed bat	SSC, WBWG – M	Pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.. No roosting bats or guano were observed during the survey, and the most recent record of this species within five miles of the Project is from 1988 (CNDDB).
Nyctinomops macrotis Big free-tailed bat	SSC	Rocky cliffs and outcrops in pinyon-juniper and Douglas fir forests, chaparral and oak forests in mountains and foothills where rocky cliffs and crevices are present. Rugged, rocky canyons.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite. No roosting colonies have been documented in San Diego County and records appear to be of rare migrants (San Diego County Mammal Atlas). No roosting bats or guano were observed during the survey, and the most recent record of this species within five miles of the Project is from 1988 (CNDDB).
Odocoileus hemionus fulginata Southern mule deer	MHCP	Coastal sage scrub, chaparral, oak woodland, riparian woodland, montane conifer-hardwood forest, and desert scrub. Distribution is determined by vegetation type, water availability, and quality and quantity of forage. The home range of this species is typically 5.9 km² to 14.8 5.9 km².	Not observed onsite. No potential to occur due to fragmented habitat and lack of spatial requirements onsite.
Puma concolor *Mountain lion*	MHCP	Rugged mountains, forests, and swamps.	Not observed onsite. No potential to occur due to lack of suitable habitat onsite.

SCIENTIFIC NAME/COMMON NAME	SPECIAL STATUS[a]	PRIMARY HABITAT ASSOCIATIONS	STATUS OR POTENTIAL TO OCCUR ONSITE
Taxidea taxus American badger	SSC	Open and sandy openings in coastal sage scrub, mixed chaparral, grassland, oak woodland, chamise chaparral, mixed conifer, pinyon-juniper, desert scrub, desert wash, and montane meadow. Prefers open, undeveloped areas and avoids urbanization. Requires friable soils. The home range of this species is typically 194 to 1123 hectares.	Not observed onsite. No potential to occur due to lack of suitable open habitat and spatial requirements onsite.

[a] Status:
FEDERAL/STATE LISTED:
FE = Federally listed endangered
FT = Federally listed threatened
FPT = Federally proposed for listing as threatened
SE = State listed endangered
ST = State listed threatened
SC = State candidate for listing as endangered or threatened

OTHER:
BCC = United States Fish and Wildlife Service Birds of Conservation Concern
BLM = Bureau of Land Management Sensitive
CDF = California Department of Forestry and Fire Protection Sensitive
CFP = California Department of Fish and Wildlife Fully Protected Species
G = Global Rank
IUCN = International Union for Conservation of Nature
MHCP = Final Multiple Habitat Conservation Plan for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista
S = State Rank
SSC = California Department of Fish and Wildlife Species of Special Concern
USFS = United States Forest Service Sensitive Animal
WL = California Department of Fish and Wildlife Watch List
WBWG – H = Western Bat Working Group - High Priority
WBWG - M = Western Bat Working Group - Medium Priority

APPENDIX E

Photo Document



Photo 1: Representative photo of developed land: Southwest-facing view of E. Lincoln Road, southwest of El Norte Parkway.



Photo 2: Representative photo of landscaping/ornamental: Northeast corner of E. Lincoln Road and Nightingale Place.



Photo 3: Representative photo of developed land: South-facing view of N. Midway Drive and E. Lincoln Avenue.



Photo 4: Representative photo of developed land: East-facing view of E. Mission Avenue and N. Midway Drive.



Photo 5: Representative photo of concrete-lined channel: East-facing view of Escondido Creek, south of Washington Avenue.



Photo 6: Representative photo of landscaping/ornamental: West-facing view on N. Midway Drive, south of E. Grand Avenue.

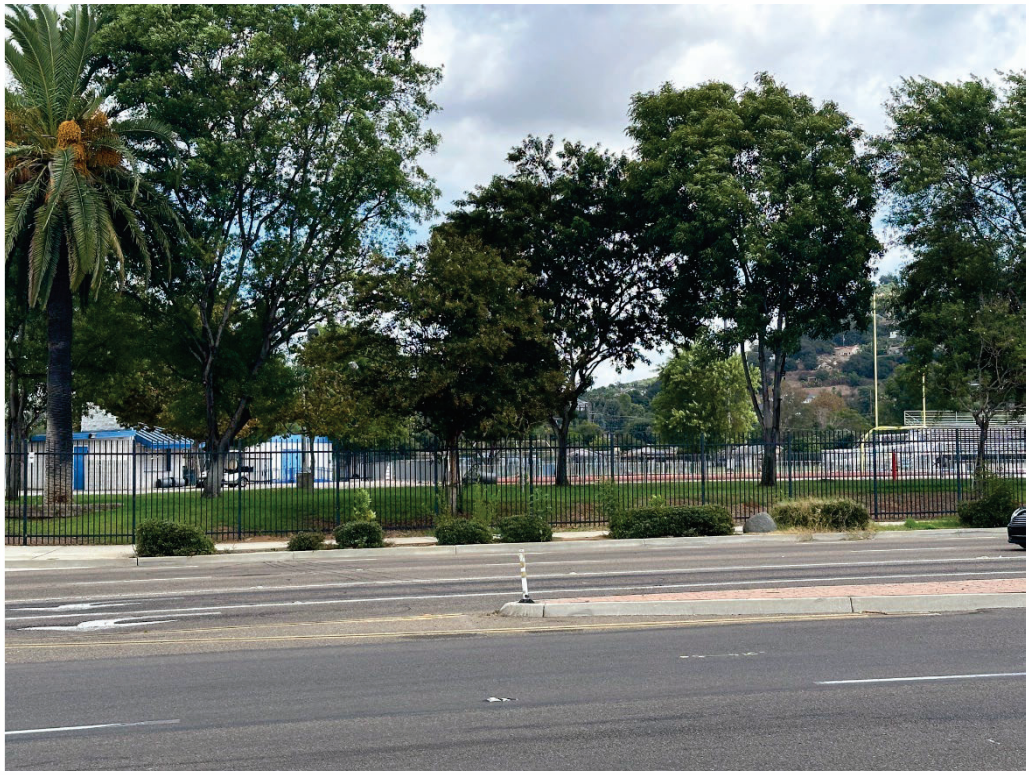


Photo 7: Representative photo of landscaping/ornamental: East-facing view on Bear Valley Parkway and S. Midway Drive.



Photo 8: Representative photo of coast live oak woodland: North-facing view on N. Midway Drive, north of Oak Hill Drive.



Photo 9: Representative photo of landscaping/ornamental: South-facing view on N. Midway Drive, north of mapped coast live oak woodland habitat, south of E. Grand Drive.



Photo 10: White-faced ibis wading in the concrete-lined channel of Escondido Creek at N. Rose Street.



Photo 11: Representative photo of freshwater marsh (circled in blue) in Escondido Creek at N. Rose Street. White-faced ibis are circled in yellow.



Photo 12: Representative photo of developed land and landscaping/ornamental: South-facing view of N. Citrus Avenue at Prescott Glen.



Photo 13: Representative photo of concrete-lined channel: East-facing view of Escondido Creek at N. Citrus Avenue.



Photo 14: Representative photo of bare ground: Northwest-facing view on N. Midway Drive, north of E. Valley Parkway.

December 13, 2024

Melissa J. Whittemore
Michael Baker International
9635 Granite Ridge Drive
San Diego, CA 92123

Subject: **Aquatic Resources Delineation for the East Valley Parkway and Midway Drive Drainage Improvements Project, City of Escondido, California**

Balk Biological, Inc. (Balk Biological) was retained by Michael Baker International on behalf of the City of Escondido (City) Development Services Department to perform a formal aquatic resources delineation for the Proposed East Valley Parkway and Midway Drive Drainage Improvement Project (Project).

The Project would involve increasing the capacity of the storm drain systems in the central portion of the City of Escondido in northern San Diego County (Figure 1, Project Vicinity and Figure 2, Survey Area). The existing storm drainage systems in the project area are undersized and unable to collect and convey anticipated flow rates, resulting in more than 1,600 properties being completely or partially within a Federal Emergency Management Agency (FEMA) 100-year floodplain. Localized flooding occurs within the Project area, triggering deployment of sandbags and road closures an average of five times per year since 2019.

The proposed Project would involve the construction of approximately 28,500 linear feet of reinforced concrete box culverts and approximately 1,500 linear feet of reinforced concrete pipelines beneath existing roadways and adjacent public rights-of-way (e.g., sidewalks) and five new stormwater inlets into Escondido Creek. Escondido Creek is a concrete-lined channel in the Project area that has been improved to convey runoff from a 100-year storm. The culverts would range in size from 8-foot by 4-foot (32 square feet in area) to 12-foot by 8-foot (96 square feet in area), and the pipelines would be 54 inches in diameter (about 16 square feet in area). The Project would require relocation of some of the existing underground utility lines to accommodate the proposed storm drain culverts. After relocation of existing utilities and installation of the proposed storm drain culverts and pipes, the affected roadways/sidewalks would be resurfaced. Road resurfacing would include the provision of storm drain inlets along both sides of the roads to collect runoff. The Project would also include bio-retention areas to provide filtration and treatment of runoff before discharging into Escondido Creek.

Construction of the proposed Project is anticipated to commence in February 2026 and be completed in approximately 24 months. Given the linear nature of the Project, the active construction area would continuously move along the Project site at a rate of approximately 50 to 80 liner feet per day. Culvert/pipe installation would be completed in trenches. After culvert/pipe installation, the trenches would be backfilled, and the road would be repaved. Excess fill soil would be hauled to Miramar Landfill for disposal.

Once construction of the Project is completed, the new culverts/pipelines and inlets would be maintained in a manner similar to the existing facilities.

Project Location and Survey Area

The proposed Project is located within the central portion of the City of Escondido, San Diego County, California (Figures 1 and 2). The Project includes the alignments of multiple stormwater drainage culverts that collectively connect to the concrete-lined Escondido Creek channel. Three primary Project alignments follow North Rose Street, Midway Drive and Citrus Avenue, all of which intersect with the Escondido Creek channel. The Midway Drive culvert is fed by culverts that follow East Lincoln Avenue and East Mission Avenue on the north side of Escondido Creek and by a culvert along Bear Valley Parkway on the south side of Escondido Creek. The North Rose Street alignment is fed by a culvert that follows East Grand Avenue on the south side of Escondido Creek. There are also minor culvert alignments that connect to the Escondido Channel along alleys/unnamed access roads near Aster Street, Begonia Street, and west of the Pacific Palms Apartment Complex.

The Aquatic Resources Delineation Report (ARDR) Survey Area (Survey Area) includes a 100-foot buffer from proposed Project impact areas along the above alignments and totals approximately 203.29 acres. The Survey Area is primarily within Section 00 of Township 12 South, Range 2 West of the United States Geological Survey (USGS) Valley Center, California 7.5-minute quadrangle map (Figure 1). The elevation within the Survey Area ranges from 660 feet above mean sea level (amsl) to 730 feet amsl.

Directions from Los Angeles: Take I-5 South for approximately 85 miles before taking Exit 51B for SR-78 East. Continue another 18 miles before taking a right at the intersection with Broadway Street. Take the first left after 0.2 miles onto East Mission Avenue. Continue another 1.7 miles to make a right onto North Rose Street. The Escondido Creek channel will be located 0.4 miles further south, next to Washington Park.

Directions from San Diego: Take SR-163 North and continue for 11 miles before merging with the I-15 North. Continue north for another 19 miles then take Exit 32 for east bound SR-78. Follow SR-78 E for roughly 1 mile then turn left at the intersection with Broadway Street. Take the first left after 0.2 miles onto East Mission Avenue. Continue another 1.7 miles to make a right onto Rose Street. The Escondido Creek channel will be located 0.4 miles further south, next to Washington Park.

The proposed Project applicant would accompany regulatory agencies to the proposed Project site upon request. Contact information for the Project applicant is:

City of Escondido
Development Services Department, Engineering Division
201 North Broadway
City Hall, First Floor
Escondido, CA 92025
Contact: Matt Souttere, Project Manager
760-214-4718; matt.souttere@escondido.gov

Survey Methods

Prior to performing field surveys, a preliminary desktop analysis was performed using the following sources to provide a baseline understanding of the Survey Area:

- USGS 7.5-minute topographic quadrangle maps,
- Aerial and satellite imagery of the Survey Area,
- The National Wetlands Inventory (NWI; USFWS 2024),
- The National Hydrography Dataset (NHD; USGS 2024), and
- The Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2024a).

The NWI, NHD and soils maps are provided in Figures 3, NWI and FEMA; 4, NHD; and 5, Soils and Topography, respectively.

The desktop analysis was followed up with a field survey conducted by Balk Biological aquatic resource specialists Brian Lohstroh and Mark Wolford on September 18, 2024. Mark Wolford conducted a follow-up visit on October 11, 2024. The field survey involved evaluation of potential aquatic resources identified within the Survey Area. Aquatic resources were mapped using the Environmental Systems Research Institute (ESRI) Field Maps application for ArcGIS running on a smartphone connected to a sub-meter-accuracy global positioning system (GPS) receiver. Spatial data collected was imported into ArcMap software for post-field processing.

Topographic data providing two-foot contours was referenced to supplement the GPS collected delineation data, where applicable. A desktop delineation was completed for areas not accessible due to security fences, other obstructions, and/or safety concerns by analyzing topographic contours and aerial imagery combined with field verification of portion(s) of a potential feature.

Mapped aquatic resources are presented in Figure 6, Aquatic Resources. Representative photos of aquatic resources are provided in Attachment B. Photo numbers were assigned post-field in the order that is presented in Figure 6 and Attachment B.

This ARDR provides the necessary data to support a jurisdictional determination from the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). Delineation methods and definitions of waters and wetlands for each federal, state, and regional agency are provided below.

Delineation of Federal Waters

Waters of the U.S. regulated by the USACE include those waters listed in 33 Code of Federal Regulations (CFR) Part 328 (Definitions of Waters of the United States). All potential waters of the U.S. were delineated to their jurisdictional limits as defined by 33 CFR § 328.4 (Limits of Jurisdiction). Pre-field analysis confirmed the potential presence of both non-wetland waters and wetland waters of the U.S. Therefore, field surveys evaluated the potential for wetland waters of the U.S. pursuant to the three-parameter methods according to the following:

(1) Corps of Engineers Wetland Delineation Manual (Manual; Environmental Laboratory 1987),

(2) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0; Environmental Laboratory 2008), and

(3) Applicable USACE Regulatory Guidance Letters (RGLs).

Unless paired with a wetland location, if one of the three wetland parameters (*i.e.,* dominance of hydrophytic vegetation, hydric soils, hydrology indicators) was not observed, no Wetland Determination Data Forms were completed and aquatic resources were therefore evaluated for presence of an ordinary high water mark (OHWM), as described below.

Aquatic resources were delineated as non-wetland waters of the U.S. in the absence of federal wetlands exhibiting all three wetland parameters, based on field indicators used to define and identify the lateral extent of the OHWM. The OHWM is defined by 33 CFR 328.3and was delineated according to the following:

- 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),
- National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams-Interim Version (David *et al.* 2022).
- 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),
- Distribution of Ordinary High Water Mark (OHWM) Indicators and their Reliability in Identifying the Limits of "Waters Of The United States" in Arid Southwestern Channels (Lichvar *et al.* 2006),
- Channel Classification across Arid West Landscapes in Support of OHW Delineation (Lefebvre *et al.* 2013), and
- Applicable USACE RGLs.

Changes in regulations have transpired somewhat recently relating to defining waters of the U.S. On August 30, 2021, in the case of Pascua Yaqui Tribe v. U.S. Environmental Protection Agency, No. CV-20-00266-TUC-RM, a U.S. District Judge for the District of Arizona vacated and remanded the Navigable Waters Protection Rule (NWPR), that went into effect on June 22, 2020. In light of this order, the U.S. Environmental Protection Agency (EPA) and USACE halted implementation of the NWPR and interpreted waters of the U.S. consistent with the pre-2015 regulatory regime until further notice. The pre-2015 regulations require following the guidance developed in 2007 and 2008 for implementing the definition of waters of the U.S. following the Rapanos v. United States, and Carabell v. United States Supreme Court decisions. On January 18, 2023, the final "Revised Definition of 'Waters of the United States'" rule was published in the Federal Register and was set to become effective on March 20, 2023. The revised definition of Waters of the U.S. codified both the Relatively Permanent test and Significant Nexus test from the Rapanos v. United States, and Carabell v. United States Supreme Court decisions. However, most recently on May 25, 2023, the U.S. Supreme Court ruled in Sackett v. Environmental Protection Agency that the definition of "waters" in §1362(7) of the Clean

Water Act (CWA) refers only to "geographic[al] features that are described in ordinary parlance as 'streams, oceans, rivers, and lakes'" and to adjacent wetlands that are "indistinguishable" from those bodies of water due to a continuous surface connection.

On August 29, 2023, the EPA and USACE issued a final rule to define waters of the U.S. in conformance with the Sackett decision (the Conforming Rule), specifically removing the significant nexus test from consideration when identifying tributaries and other waters, and also revising the adjacency test when identifying jurisdictional wetlands. The Conforming Rule became effective upon publication in the Federal Register. Under the Conforming Rule, the USACE regulates tributaries to Traditional Navigable Waters (TNWs) that exhibit "relatively permanent flow" and include streams, lakes, and ponds that support surface flow or ponding seasonally but does not include streams or other aquatic features that only support surface flow or ponding during precipitation and is not present once the precipitation event ends (*i.e.,* ephemeral features).

This ARDR was prepared in accordance with USACE Los Angeles District Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017) and Updated Map and Drawing Standards for the South Pacific Division Regulatory Program (USACE 2016).

Delineation of State Waters

Regional Water Quality Control Board (RWQCB)

Potential aquatic features under the jurisdiction of the RWQCB were delineated pursuant to the federal methodology for wetland and non-wetland waters of the U.S. (see Delineation of Federal Waters, above) and Section 13000 *et seq.* of the California Water Code (CWC; 1969 Porter-Cologne Water Quality Control Act). The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (CWC § 13050[e]). Waters of the state include those waters also under the jurisdiction of the federal government; however, the definition of waters of the state is broader than that for waters of the U.S. in that all waters are considered to be a water of the state regardless of circumstances or condition, including isolated waters pursuant to the California Porter-Cologne Act. However, waters of the state must still show wetland parameters (defined below) to be considered wetland waters, or OHWM-indicators to be considered non-wetland waters.

Additionally, the State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State (California Wetland Policy) adopted by the State Water Resources Control Board (SWRCB) on April 2, 2019 became effective May 28, 2020 and stipulates additional procedures and requirements for obtaining approval from water resource control boards for discharge of dredged or fill materials to state waters (SWRCB 2019). The California Wetland Policy largely models the USACE guidance for defining a wetland, but includes areas with wetland hydrology, wetland soils, and (if vegetated) wetland plants—an area may be a wetland even if it does not support vegetation. Therefore, an area may be considered a state wetland even if it is unvegetated at the time of delineation if it has wetland hydrology and hydric soils.

RWQCB jurisdiction was based on the definition of waters of the State and the California Wetland Policy, but also considered whether resources present a 'beneficial use' as outlined in the Water Quality Control Plan for the San Diego Basin Plan (RWQCB 1994,

as amended). Aquatic resources were considered under the jurisdiction of RWQCB if it was determined that any type of aquatic and/or aquatic-related features occurring within the Survey Area with wetland parameters or OHWM-indicators would also present a 'beneficial use,' and therefore, be considered a substantial aquatic feature that persists at least seasonally rather than a short duration event occurring infrequently over spans of decades. In this case, the delineation of RWQCB waters is concurrent with the lateral extent of the OHWM as described above for delineation of federal waters; no potential isolated waters were encountered during the field delineation.

California Department of Fish and Wildlife (CDFW)

Potential aquatic features under the jurisdiction of CDFW were delineated pursuant to Section 1600 *et seq.* of the California Fish and Game Code (CFGC). CDFW usually extends its jurisdictional limit to the top of a stream bank, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider. Therefore, jurisdictional boundaries subject to CFGC §§ 1600-1617 typically encompass an area that is greater than the lateral extent of the OHWM. Delineation of CDFW jurisdictional waters were mapped to include the streambed and, if applicable, the lateral extent of the top of bank above the streambed. Adjacent riparian habitat, if present, was also mapped as CDFW-exclusive jurisdiction where it extends beyond the top of bank to edge of canopy.

Agency Forms

The 2008 Supplement Wetland Determination Data Form-Arid West Region (Environmental Laboratory 2008) was used to document the presence/absence of potential wetlands at representative locations within the Survey Area. The December 2022 Interim Draft Rapid OHWM Field Identification Data Sheet (USACE 2022) was completed to document the OHWM at representative locations for non-wetland waters. The November 2023 Field form for the beta Arid Streamflow Duration Assessment Method was completed to determine streamflow duration in accordance with the user manual (Mazor *et. al.* 2023). All data forms are included in Attachment C. Due to the delineation of less than three types of federal aquatic resources within the Survey Area, an Operations and Maintenance Business Information Link (OMBIL) Regulatory Module (ORM) Bulk Upload Spreadsheet for USACE jurisdictional waters is not required.

Environmental Setting & Climate

General Land Use

The Survey Area is characterized as developed lands within the central portion of the City of Escondido. The Survey Area includes industrial, commercial, residential, and school zones, along with the associated infrastructure.

Hydrology

Surface Water

The Survey Area is within the Escondido Hydrologic Sub Area ([HSA] 904.62) of the Escondido Creek Hydrologic Area ([HA] 904.10) of the Carlsbad Hydrologic Unit ([HU] 904.00), and is within the Escondido Creek Watershed (HU Code [HUC] 180703030401). The USGS watershed boundary is identified on Figure 4. The Upper Escondido Creek

watershed (HUC 180703030401) includes an area of approximately 44.1 square miles (114.2 square kilometers) and is a part of the overall Escondido Creek Watershed.

Within the Survey Area, Escondido Creek takes the form of a concrete-lined flood control channel. Surface flows in the Creek are primarily fed by three sources: water releases from the Lake Wohlford Reservoir upstream, surface runoff from surrounding agricultural and residential land uses, and the City of Escondido's stormwater drainage system. Surface water approximately two inches in depth was present within the channel during the September 18, 2024 field visit and based on the beta Stream Duration Assessment Method (SDAM) for the Arid West Region, the flow duration of the Escondido Creek is determined to be perennial due to the presence of both hydrophytic plants and aquatic invertebrates (see SDAM Form in Attachment C).

Flows in the Escondido Creek channel generally follow a northeast-to-southwest route through Escondido before the channel ceases to be concrete-lined downstream near the community of Harmony Grove. Flow continues to the southwest where the creek feeds into the San Elijo Lagoon and eventually the Pacific Ocean, both TNWs.

A second tributary to Escondido Creek is present in the southwestern portion of the survey area near East Grand Avenue and also takes the form of a concrete lined channel. Surface flow was also apparent during the field visit in September and the SDAM determined flows to be intermittent (see SDAM Form in Attachment C).

NWI mapping (USFWS 2024, Figure 3) indicates the only aquatic resource that occurs with the Survey Area is Escondido Creek, with a Cowardin code of R4SBCx. This code indicates that this portion of Escondido Creek is a riverine, intermittent streambed that is seasonally flooded and excavated. NHD similarly indicates Escondido Creek as a stream/river within the Survey Area (USGS 2024, Figure 4).

Beneficial Uses

Beneficial uses pertaining to Escondido Creek include municipal and domestic supply, agricultural supply, potential industrial service supply, hydropower generation, contact and non-contact water recreation, warm and cold freshwater habitat, and wildlife habitat (RWQCB 1994, as amended).

Beneficial uses pertaining to other potential receiving waters (lower Escondido Creek, San Elijo Lagoon, and tributaries) include municipal and domestic supply; agricultural supply; potential industrial service supply; contact and non-contact water recreation; preservation of biological habitats of special significance; warm and cold freshwater habitat; estuarine habitat; marine habitat; wildlife habitat; rare, threatened, or endangered species; migration of aquatic organisms; and spawning, reproduction, and/or early development (RWQCB 1994, as amended).

FEMA Floodplain

According to the Federal Emergency Management Agency (FEMA) Flood Hazard maps, the Survey Area encompasses five FEMA designated flood zones. The Escondido Creek channel and some additional tributaries are designated as Zone A: areas of high-risk flood hazard. The Industrial areas immediately north and south of the Creek channel are designated as Zone AH: areas with a one percent annual chance flood hazard with base flood elevations ranging from 673 to 695 feet. Additional areas outside the AH zone are

designated as Zone AO and have a one percent annual chance flood hazard with a depth of one foot. Outside these areas, a significant portion of the Survey Area is designated as Zone X with a 0.2 percent chance of a flood hazard and very small outlying portions of the Survey Area are Zone X: areas of minimal flood hazard (FEMA 2024; Figure 3).

Soils

Soils within and near the Survey Area are displayed on Attachment A, Figure 5. Eleven (11) soil series types occur within the Survey Area, as noted in Table 1 (NRCS 2024a). Of these, four are listed as hydric by the NRCS (NRCS 2024b). Two of these hydric soil types are typically associated with depressions: Placentia sandy loam, thick surface, 0 to 2 percent slopes and Placentia sandy loam, thick surface, 2 to 9 percent slopes. Visalia sandy loam, 0 to 2 percent slopes and Visalia sandy loam, 2 to 5 percent slopes are hydric soils typically associated with floodplains. These hydric soils make up 41 percent (84.33 acres) of the Survey Area. It is important to note that the Survey Area exists within developed land and soils are either highly manipulated or covered over with concrete and asphalt.

Table 1. Soils Series Occurring Within the Survey Area

Soil Map Unit	Listed as Hydric by NRCS	Area (Acres)
Fallbrook sandy loam, 9 to 15 percent slopes, eroded	No	3.99
Greenfield sandy loam, 0 to 2 percent slopes	No	18.52
Placentia sandy loam, thick surface, 0 to 2 percent slopes	**Yes**	11.76
Placentia sandy loam, thick surface, 2 to 9 percent slopes	**Yes**	52.08
Ramona sandy loam, 0 to 2 percent slopes, MLRA 19[1]	No	36.91
Ramona sandy loam, 2 to 5 percent slopes	No	10.31
Ramona sandy loam, 5 to 9 percent slopes	No	0.84
Reiff fine sandy loam, 0 to 2 percent slopes	No	45.77
Visalia sandy loam, 0 to 2 percent slopes	**Yes**	18.21
Visalia sandy loam, 2 to 5 percent slopes	**Yes**	2.28
Vista coarse sandy loam, 9 to 15 percent slopes, MLRA 20[1]	No	2.62
	Total	**203.29**

1. MLRA: Major Land Resource Area (USDA 2022).

Hydrophytic Vegetation

The Survey Area occurs within developed and disturbed land associated with the City of Escondido and lacks native, undisturbed habitat. The portion of Escondido Creek that flows through the Survey Area is concrete-lined and maintained, so it generally lacks vegetation. However, occasional sediment deposits accumulate within the channel bottom and some emergent hydrophytic vegetation has colonized these areas. Only plant species with hydrophytic indicators of Obligate (OBL), Facultative Wetland (FACW), and Facultative (FAC) will be considered for the federal definition of wetlands to meet the hydrophytic plant community wetland parameter (Environmental Laboratory 1987). Dominant hydrophytic plant species (USACE 2020) documented within potential aquatic resources (*i.e.,* the concrete-lined channel associated with Escondido Creek and the East Grand Avenue tributary channel) included broad-leaved cattail (*Typha latifolia*; OBL), watercress (*Nasturtium officinale*, OBL), common spikerush (*Eleocharis palustris*, OBL), umbrella

sedge (*Cyperus eragrostis,* FACW), and rabbitsfoot grass (*Polypogon monspeliensis*; FACW).

Climate

In the three months prior to the initiation of the field delineation effort (performed on September 18, 2024), no significant rainfall was recorded (no precipitation in June, July, or August, and 0.03" of rain fell on September 16, 2024) according to the Natural Resource Conservation Service (NRCS) Climate Analysis for Wetlands Table (WETS Table) for the Escondido No. 2 weather station (National Oceanic and Atmospheric Administration [NOAA] 2024) that is provided in Attachment D. Total rainfall recorded as of September 18 in 2024 (13.10 inches) is above the 30-year average rainfall of 10.39 inches for the same portion of the year. The rainfall recorded the prior year (2023) totaled 27.36 inches and is a significant outlier, well above the 30-year average for the area (14.41 inches). Although the amount of rain in June through August 2024 is below the 30-year average precipitation for those months, the lack of rainfall in all three months is within the normal range for those summer months.

The Antecedent Precipitation Tool (APT; Version 2.0) is a desktop tool developed by the USACE to support decisions as to whether field data collection and other site-specific observations occurred under normal climatic conditions. The APT (Version 2.0) was used to evaluate climatic conditions of the Escondido Creek (HUC 180703030401) that encompasses the Survey Area. The APT Watershed Sampling Summary provided in Attachment D summarizes precipitation and climatic data for five random sampling points within HUC 180703030401 for the three months prior to the delineation fieldwork date of September 18, 2024. These data show that four of the sampling points exhibited precipitation and climate within the normal range of conditions recorded within HUC 180703030401, whereas the remaining sampling point exhibited precipitation and climate with drier than normal conditions. The Antecedent Precipitation Score (derived from the Antecedent Condition Calculation of the three prior months) of 11.4 indicates that climatic conditions recorded within the HUC 180703030401 and surrounding areas were normal, and all five sampling points exhibited a corresponding drought index (PDSI; based on data from NOAA) indication of mild wetness.

Results

The type and amount of potential aquatic resources occurring within the Survey Area are summarized in Table 1 and illustrated in Attachment A, Figure 6. Overall, 3.01 acres of potential aquatic resources were delineated within the Survey Area. Total aquatic resources potentially regulated by both the USACE and RWQCB included 0.60 acres of non-wetland waters of the U.S., consisting of 0.59 acres of open water/concrete-lined channel and 0.01 acres of three-parameter wetlands below the OHWM. Total aquatic resources potentially regulated by the CDFW included 3.01 acres of streambed below the top of bank.

Table 2. Summary of Potential Aquatic Resources within the Survey Area

Aquatic Resource Type	Cowardin Code	Vegetation Type	Coordinates	Amount	
				Acres[1]	Linear feet
Non-wetland Waters of the U.S./State (USACE, RWQCB)					
Escondido Creek Channel	R4SBCx	Developed/ concrete-lined channel	33.14048, -117.05339	0.57	1,768
Escondido Creek: Federal 3-Parameter Wetland Below OHWM	R4SB7Cx	Freshwater Marsh	33.13542, -117.05984	0.02	135
Grand Ave Channel	R4SBCx	Developed/ concrete-lined channel	33.13153, -117.05538	0.01	112
Subtotal Waters of the U.S./State (USACE/RWQCB)				*0.60*	*2,014*
Waters of the State (CDFW)					
Escondido Creek, Concrete-lined Channel	R4SBCx	Developed/ concrete-lined channel	33.14048, -117.05339	2.95	1,768
Escondido Creek, Freshwater Marsh	R4SB7Cx	Freshwater Marsh	33.13542, -117.05984	0.02	135
Grand Ave Channel, Concrete-lined Channel	R4SBCx	Developed/ concrete-lined channel	33.13153, -117.05538	0.04	112
Subtotal Waters of State (CDFW)				*3.01*	*2,014*
Total USACE/RWQCB Aquatic Resources				**0.60**	**2,014**
Total CDFW Aquatic Resources				**3.01**	**2,014**
Grand Total Aquatic Resources				**3.01**	**2,014**

1 All acreages are rounded to the nearest hundredth (0.01) and totals reflect this.

Federal Aquatic Resources

Wetland Waters

No potential federal wetland waters occur within the Survey Area. Aquatic resources exhibiting all three wetland parameters (*i.e.,* evidence of hydrophytic vegetation, hydric soils, and wetland hydrology) were largely absent throughout the Survey Area since the only features present were concrete-lined channels. Only one Wetland Sample Point (WDP-1; Attachment B, Photo 2) representing the emergent freshwater marsh within a sediment deposit in the Escondido Creek channel exhibited all three wetland parameters, but because the freshwater marsh occurs below the OHWM and is likely a temporary situation (as a storm event or routine maintenance will likely remove it), this aquatic resource is delineated as a potential non-wetland water of the U.S., as discussed below.

Non-wetland Waters

Boundaries of potential non-wetland waters of the U.S. within the Survey Area were determined by the presence of an OHWM and "relatively permanent flow" (Mazor *et al.* 2023). Linear aquatic resources delineated within the Survey Area include the concrete-lined Escondido Creek channel supporting perennial flows and a smaller tributary to Escondido Creek near East Grand Avenue, which supported intermittent flows. Two OHWM Datasheets were completed (Attachment C), representing the boundary of the federal non-wetland waters associated with the channels, including one along Escondido Creek at the N. Rose Street crossing (ODP-1; Photo 3), one along the tributary channel near East Grand Avenue (ODP-2; Photo 4). Indicators of the OHWM consisted of water stains and evidence of fallen debris being washed away (see Photo 3). The water staining indicator was consistently observed throughout channels within the Survey Area. Due to the clear connection to downstream waters and the strong evidence of surface flow below the OHWM, both channels would be considered potential RPWs that are tributaries to a TNW (see also Surface Water description, above).

An area of freshwater marsh present within the Escondido Creek channel is also considered to be potential non-wetland waters because it is below the OHWM. As noted above, the marsh is associated with a temporary sediment deposit within the concrete-lined channel and despite it qualifying as a three-parameter wetland (WDP-1), it is established well below the OHWM.

State Aquatic Resources

All federal waters described above also fall within the CWA Section 401 authority of the RWQCB and Section 1602 authority of the CDFW. Additionally, the CDFW takes jurisdiction of aquatic resources extending beyond the OHWM to the top of bank and/or edge of riparian canopy.

Potential aquatic resources subject to CDFW jurisdiction but not USACE or RWQCB jurisdiction consist of the engineered channel banks above the OHWM. The top of bank associated with the non-wetland waters mapped throughout the Survey Area was delineated at the crest of the channel slope. The CDFW-jurisdictional streambed mapped in this ARDR includes areas of open water, a small area of freshwater marsh within the concrete-lined channel, and the area of concrete-lined channel located below the top of bank.

Non-Jurisdictional Features

Four concrete-lined ditches were evaluated as part of the field delineation and these were determined to be non-jurisdictional brow ditches constructed in uplands that were not associated with any historically mapped features (NWI 2024, NHD 2024). Three of these brow ditches are located near El Norte Parkway in the northern portion of the Survey Area and are visible on Figure 6 page 1 and Photos 7-9. The fourth brow ditch is present near East Grand Avenue on Figure 6 page 6 and Photo 10. The ditches function to prevent erosion, capturing runoff and channeling it around a new housing development and an undeveloped lot. All the brow ditches discharge into the City storm drain system, with one of them entering a relatively small bioretention basin (Photo 5), before doing so.

A larger bioretention basin is present west of East Lincoln Avenue and appears to capture the bulk of the runoff from the adjacent housing development (Photo 6). The constructed

basins are landscaped and maintained, do not support hydrophytic vegetation within the Survey Area, and are therefore not considered to be potential jurisdictional aquatic resources.

Deviation from NWI

Most of the potential aquatic resources delineated within the Survey Area were mapped in similar locations by both the NWI (USFWS 2024) and NHD (USGS 2024), as shown in Figures 3 and 4. The Escondido Creek channel corresponds to the "Riverine intermittent streambed" mapped by the NWI and "streambed" mapped by the NHD. However, a minor drainage channel located near East Grand Avenue in the southwestern portion of the Survey Area is not included in either the NWI or NHD mapping.

Regulatory Discussion

Authorizations from the USACE, RWQCB, and CDFW may be required for implementation of the proposed Project if it will involve alteration of or impacts to potentially jurisdictional aquatic resources identified in the Survey Area. Aquatic resources within the Survey Area would be subject to USACE Los Angeles District jurisdiction, RWQCB Region 9 (San Diego) jurisdiction, and CDFW Region 5 (South Coast Region) jurisdiction.

Under Section 404 of the CWA, USACE regulates any activity that would result in the discharge of dredged or fill material into waters of the U.S., which include those waters listed in 33 CFR 328.3. Therefore, a permit from USACE will be required for discharge of dredge or fill material, which would include fill materials such engineered fill and concrete, etc., into waters of the U.S.

Because the proposed Project is being proposed by one entity, the City of Escondido Development Services Department, each of the Project features must be combined as one single and complete project. In other words, each facility improvement cannot be divided into separate projects for the purposes of lowering impacts to be within the limits of a particular Nationwide Permit (NWP). If the impacts for the proposed Project are less than 0.50-acre, then the Project would qualify for NWP No. 43 (Stormwater Management Facilities). However, it is possible that USACE would approve the use of multiple NWPs for the proposed Project based on different aspects of the Project. For example, if any dewatering, staging or construction access will be required within the aquatic resources, those activities could be authorized under NWP No. 33 Temporary Construction, Access, and Dewatering, which does not have an impact acreage limit. When multiple NWP are used for one single and complete project, the acreage loss of waters of the U.S. authorized by those NWPs cannot exceed their respective specified acreage limits. Each of the NWPs mentioned herein would require submittal of a Pre-Construction Notification (PCN) package to USACE. Balk Biological recommends scheduling a pre-application meeting with USACE and the other agencies to determine the best permitting strategy and whether multiple NWPs may be required. Please note that if impacts would be greater than 0.50-acre, it is likely that the proposed Project would require an Individual Permit; therefore, it is recommended to reduce impacts as much as possible to meet NWP limits.

Section 401 of the CWA (33 U.S.C. § 1341) requires any applicant for a federal license or permit that may result in a discharge into waters of the U.S. to provide the licensing or permitting federal agency with certification that the Project will comply with water quality

standards and implementation plans promulgated pursuant to section 303 of the CWA (33 U.S.C. § 1313). Therefore, because a USACE permit will be required, a Section 401 Certification will also be required. The SWRCB and its nine RWQCBs are collectively the State's Water Boards responsible for CWA section 401 Certification in California (Wat. Code, § 13160). If the proposed Project involves regulated activities that could result in a discharge of waste and fill materials to waters of the State, including wetlands, that are not covered by a 401 Certification, a Report of Waste Discharge Requirement (WDR) may be required pursuant to Section 13263 of the 1969 Porter-Cologne Water Quality Control Act. A WDR can be issued by the SWRCB/RWQCB concurrently with a Section 401 Certification.

If the proposed Project involves regulated activities that could result in any alteration to riparian habitat and/or streambed, a Lake or Streambed Alteration Agreement from CDFW may be required pursuant to CFGC Sections 1600-1617. Under CFGC Sections 1600 *et seq*., CDFW regulates activities that would result in (1) any potentially 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. The proposed Project will require submittal of a Notification of Lake or Streambed Alteration to CDFW.

Conclusion

The findings presented in this report, including the location and extent of aquatic resource areas subject to regulatory jurisdiction, represent the professional opinion of Balk Biological. These findings should be considered preliminary and at final discretion of the applicable resource agency. The USACE, RWQCB, and CDFW typically would need to review and verify to make a formal determination of the preliminary delineation results.

Sincerely,

Brian Lohstroh
Senior Biologist
Balk Biological, Inc.
blohstroh@balkbiological.com

Enclosures:

Attachment A, Figures

Figure 1	Project Vicinity
Figure 2	Survey Area
Figure 3	NWI and FEMA
Figure 4	NHD
Figure 5	Soils
Figure 6	Aquatic Resources

Attachment B, Representative Photos
Attachment C, Data Forms
Attachment D, Climatological Data

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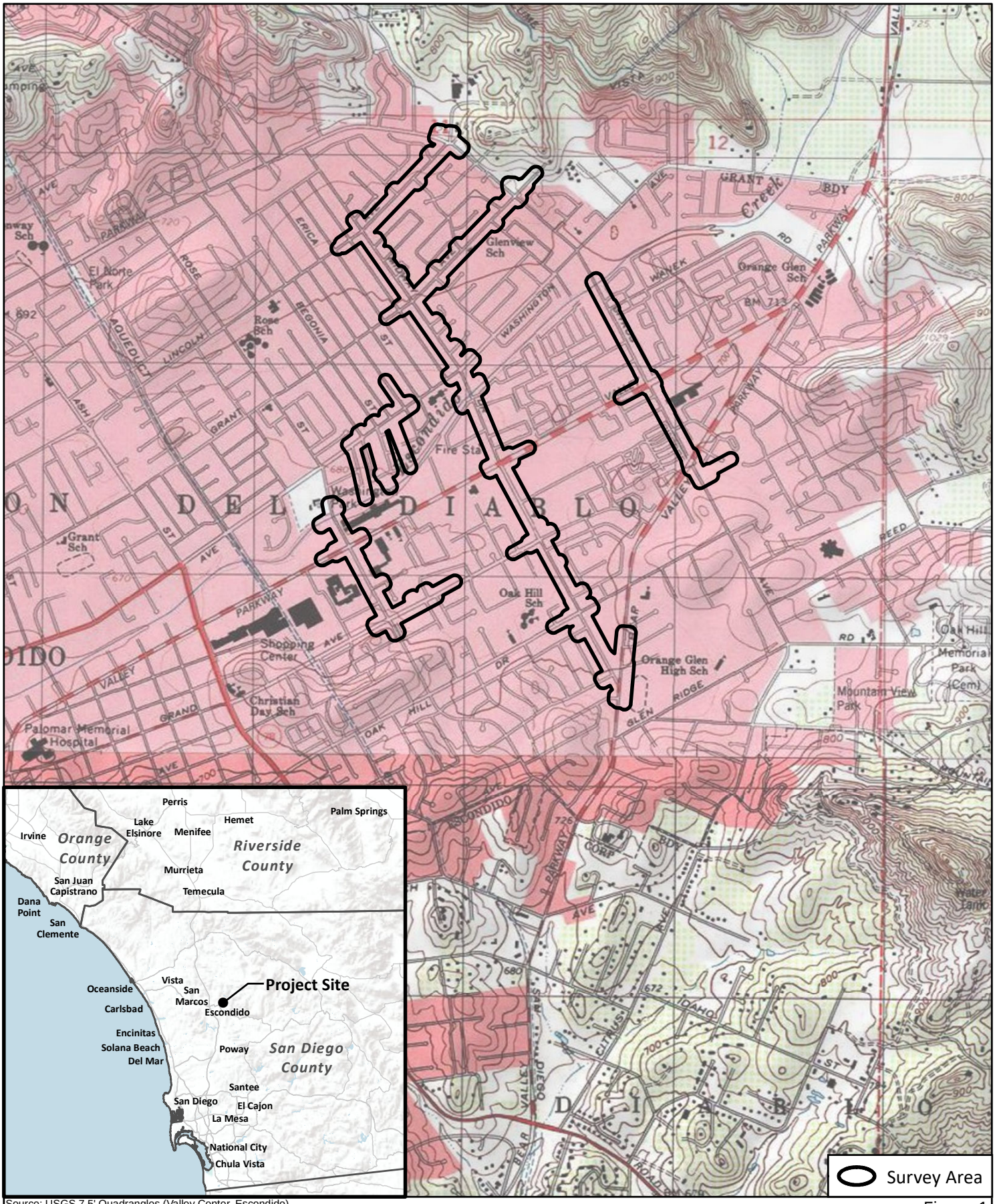
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Attachment A

Figures



Source: USGS 7.5' Quadrangles (Valley Center, Escondido)

Figure 1

Project Vicinity

East Valley Parkway & Midway Drive
Drainage Improvements

Balk Biological, Inc.

N

0 2,000 Feet



Aerial Photo: USDA NAIP 2022

Figure 2

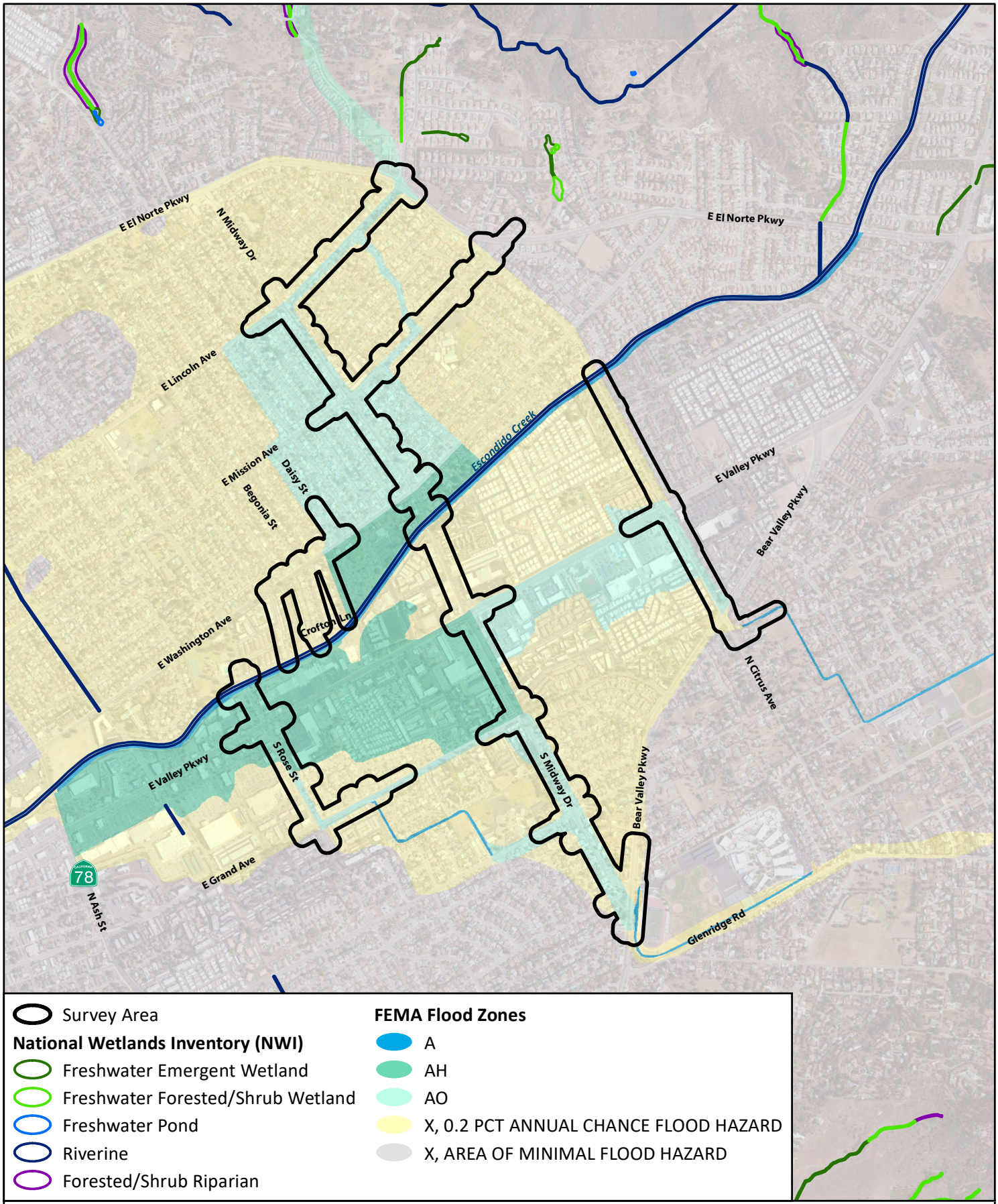
Survey Area

East Valley Parkway & Midway Drive
Drainage Improvements

Balk Biological, Inc.

N

0 1,200 Feet



Survey Area

National Wetlands Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Forested/Shrub Riparian

FEMA Flood Zones

- A
- AH
- AO
- X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- X, AREA OF MINIMAL FLOOD HAZARD

Source: USFWS, FEMA; Aerial Photo: USDA NAIP 2022

Figure 3

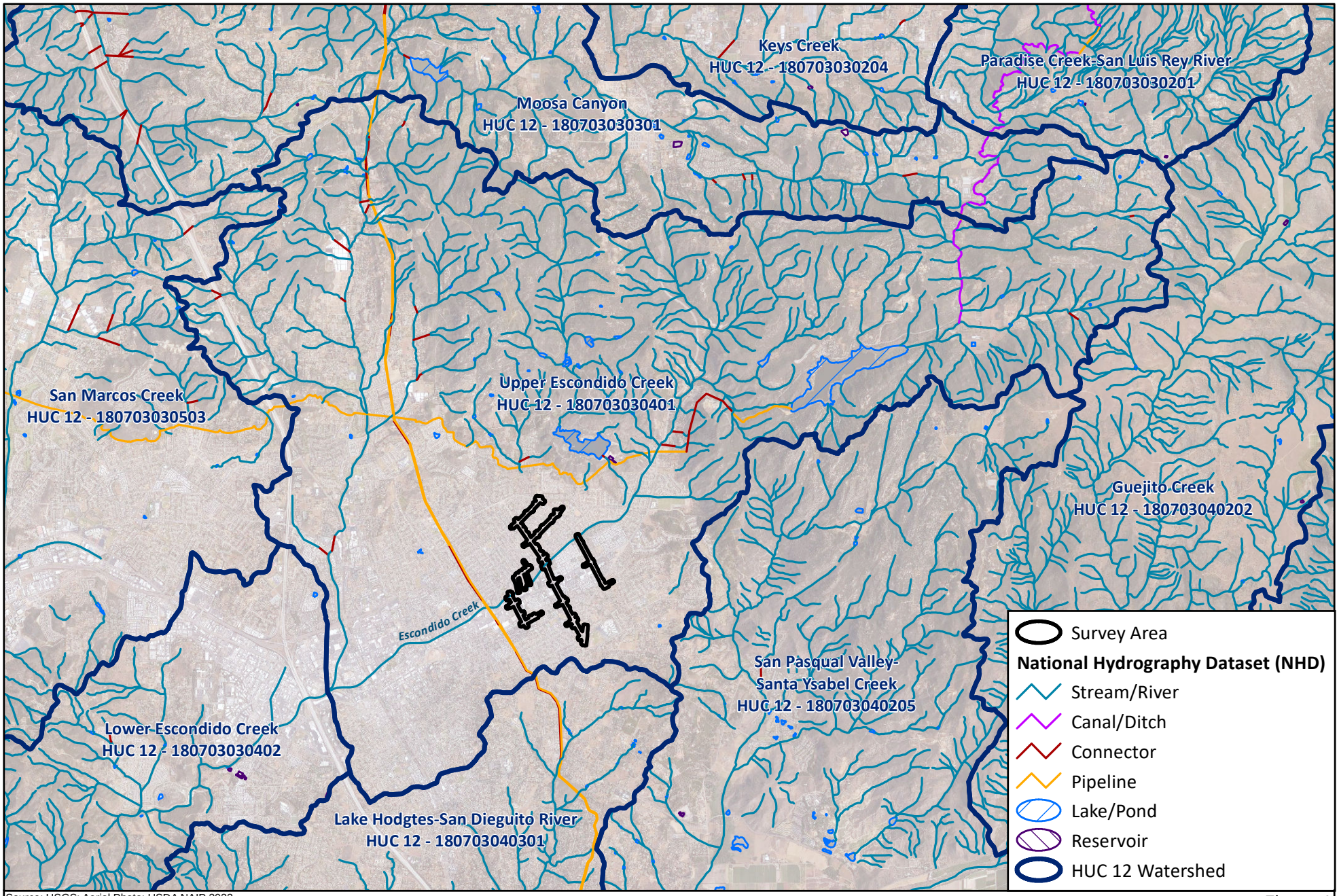
NWI and FEMA

East Valley Parkway & Midway Drive
Drainage Improvements

Balk Biological, Inc.

N

0 1,500 Feet



Source: USGS; Aerial Photo: USDA NAIP 2022

Figure 4

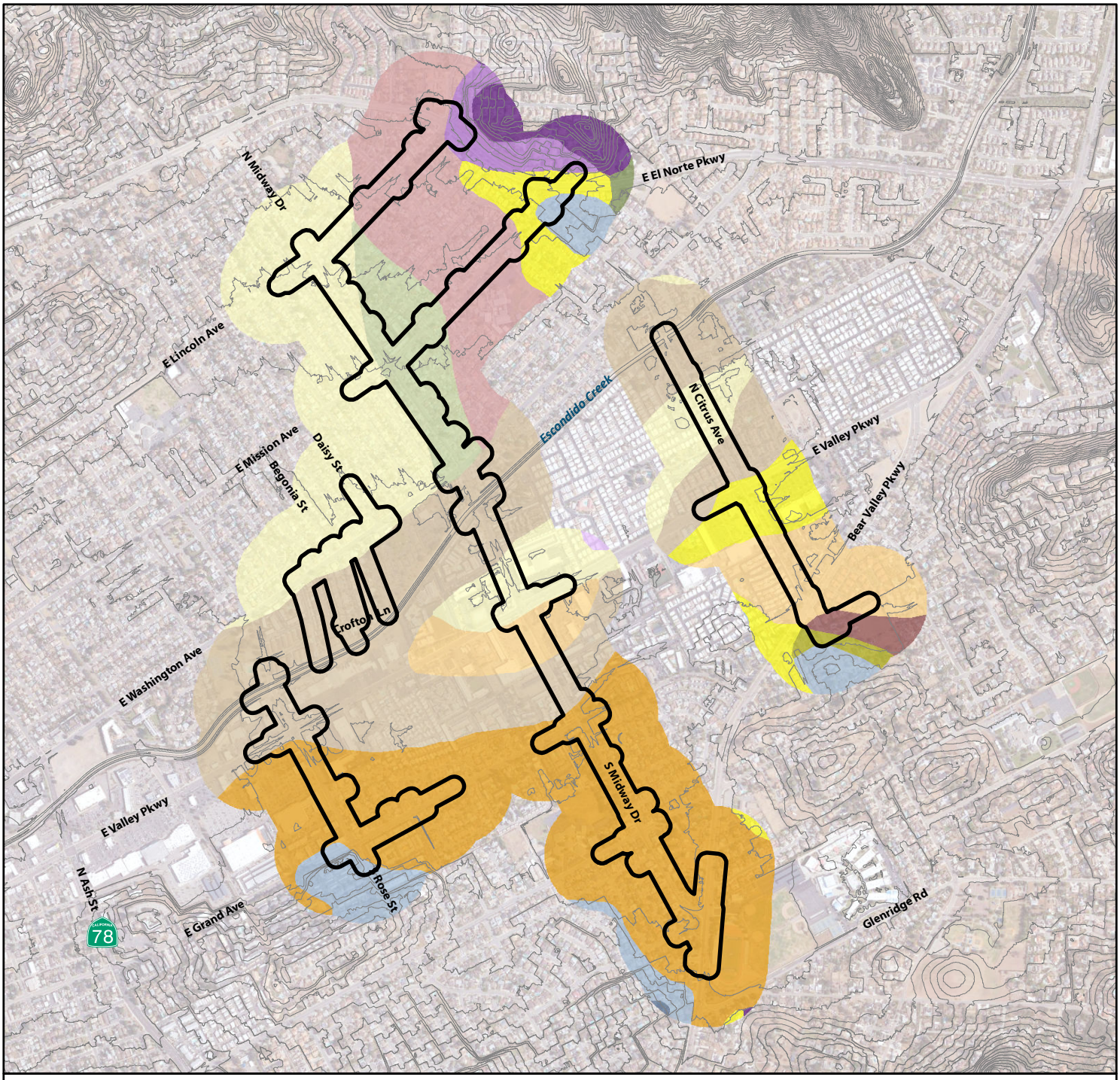
NHD

East Valley Parkway & Midway Drive
Drainage Improvements

Balk Biological, Inc.

N

0 1.5 Miles



Survey Area

Soils

- Fallbrook sandy loam, 9 to 15 percent slopes, eroded
- Fallbrook sandy loam, 15 to 30 percent slopes, eroded
- Greenfield sandy loam, 0 to 2 percent slopes
- Greenfield sandy loam, 2 to 5 percent slopes
- Placentia sandy loam, thick surface, 0 to 2 percent slo pes
- Placentia sandy loam, thick surface, 2 to 9 percent slo pes
- Ramona sandy loam, 0 to 2 percent slopes, MLRA 19
- Ramona sandy loam, 2 to 5 percent slopes
- Ramona sandy loam, 5 to 9 percent slopes
- Reiff fine sandy loam, 0 to 2 percent slopes
- Visalia sandy loam, 0 to 2 percent slopes
- Visalia sandy loam, 2 to 5 percent slopes
- Vista coarse sandy loam, 5 to 9 percent slopes
- Vista coarse sandy loam, 9 to 15 percent slopes, MLRA 20
- Vista coarse sandy loam, 15 to 30 percent slopes, MLRA 20

Source: USDA NRCS; Aerial Photo: USDA NAIP 2022

Figure 5

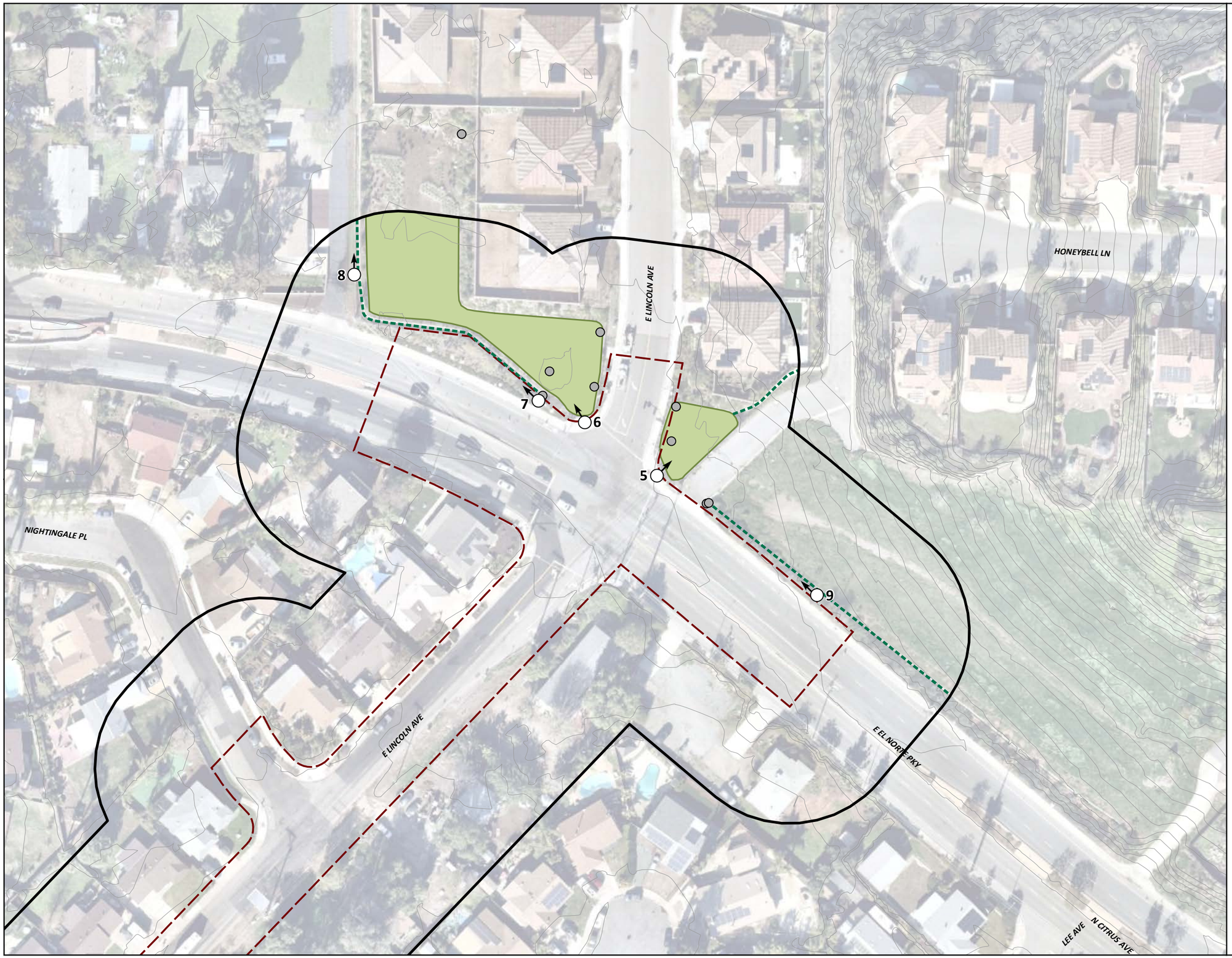
Soils and Topography

East Valley Parkway & Midway Drive
Drainage Improvements

Balk Biological, Inc.

N

0 1,500 Feet



Survey Area
Project Impacts
Photo Location
Culvert
Topographic Contour (2-foot Interval)

Non-Jurisdictional Features

Brow Ditch
Detention Basin/Bio swale

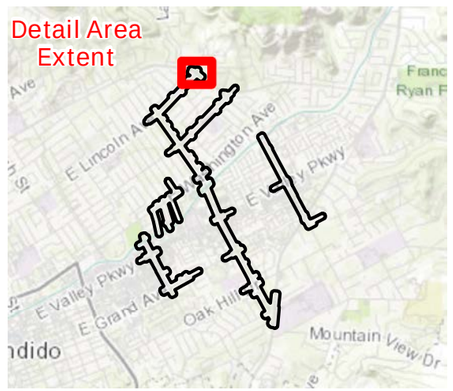


Figure 6 - Page 1 of 7

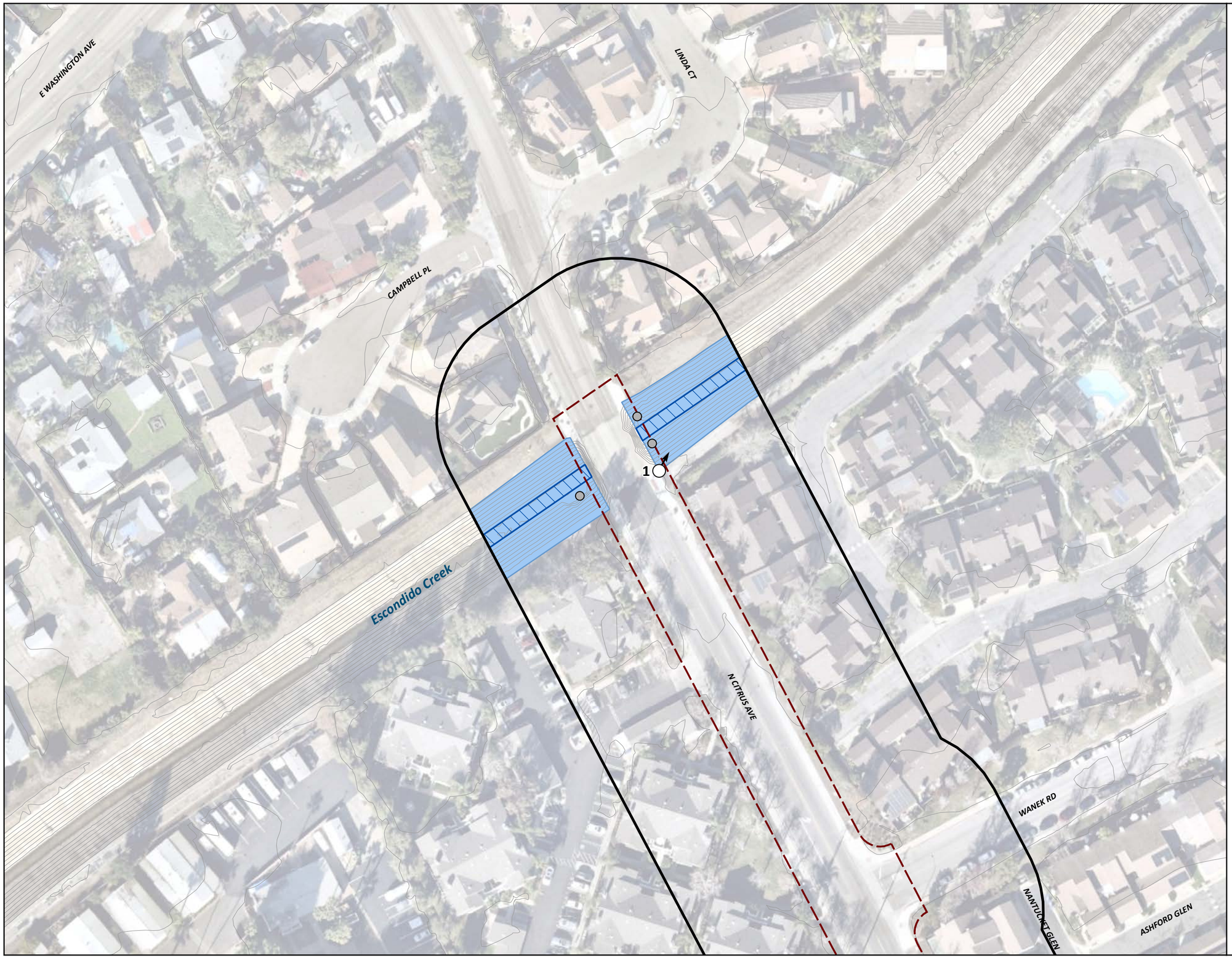
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 80 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Photo Location
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel



Figure 6 - Page 2 of 7

Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 80 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel

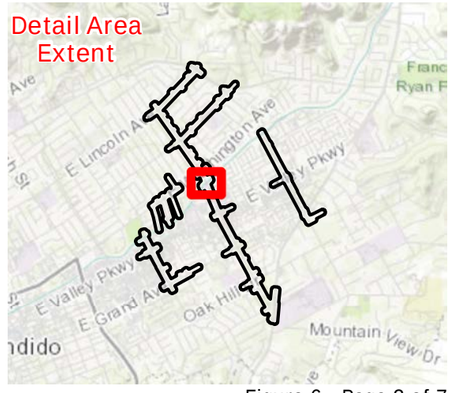


Figure 6 - Page 3 of 7

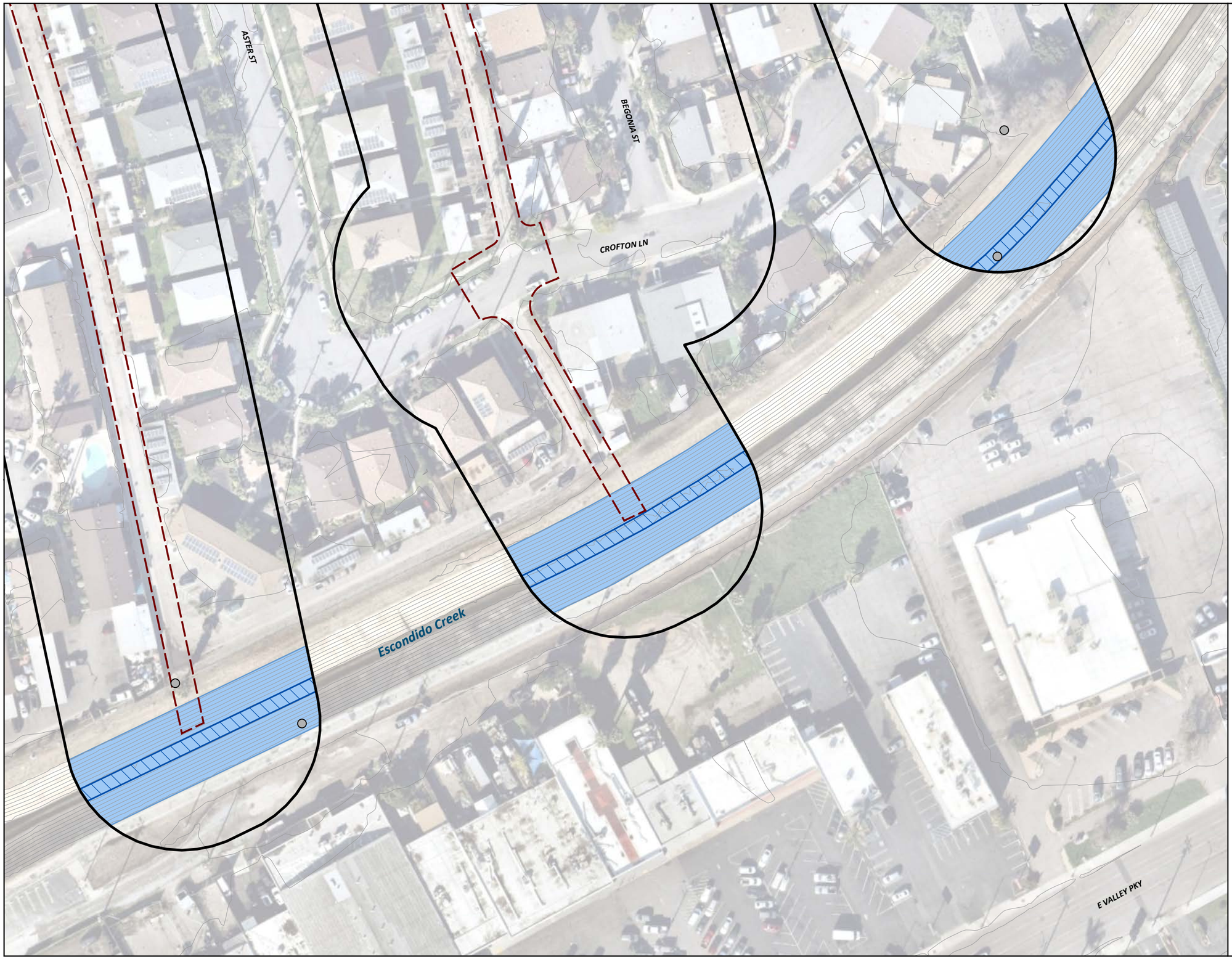
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



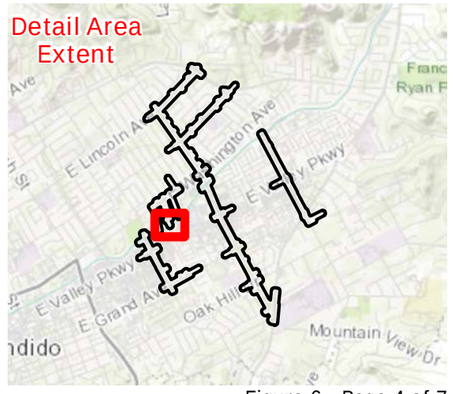
Survey Area
Project Impacts
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel



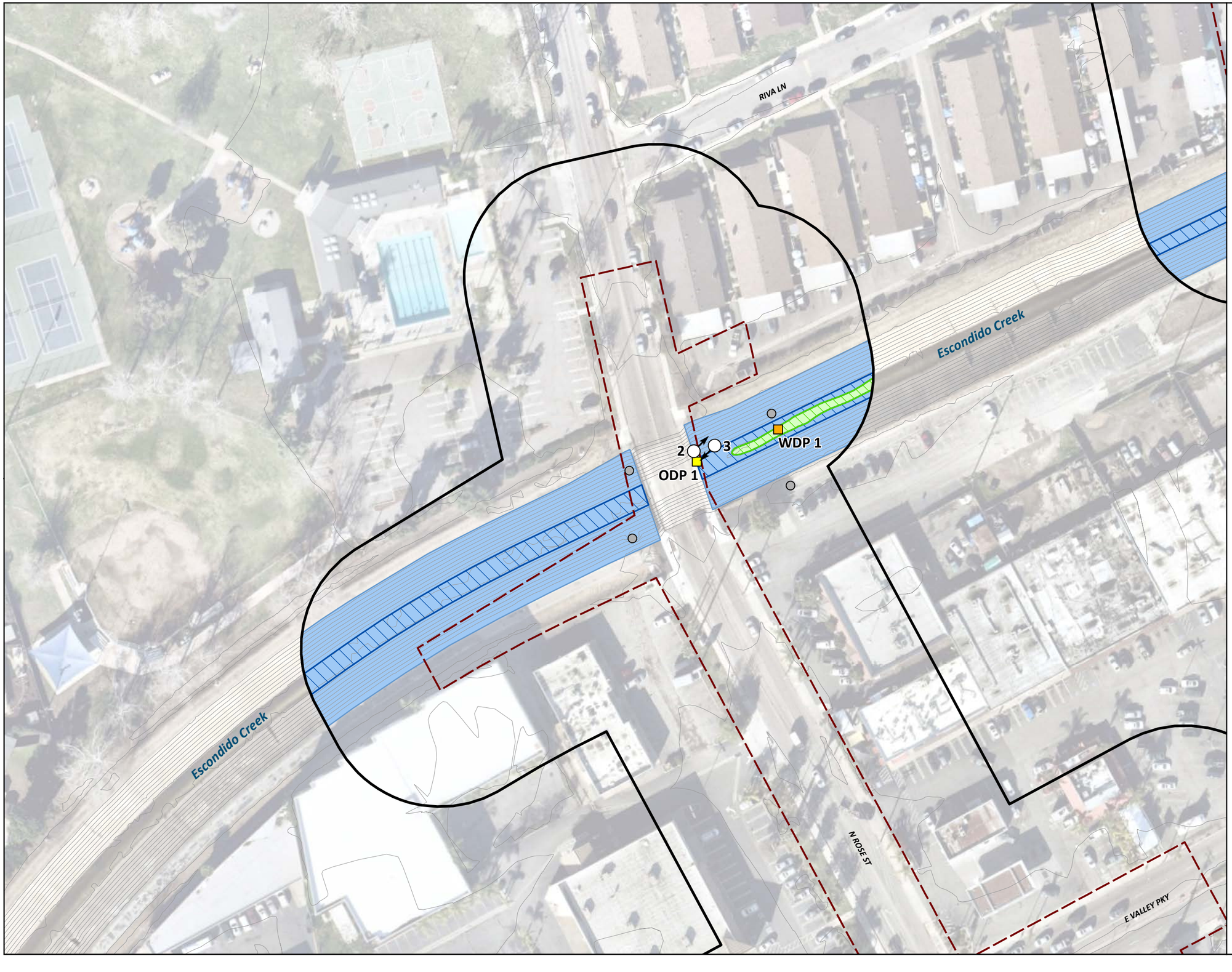
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 80 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Photo Location
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-Wetland Waters - Federal Wetland (Three parameter wetland within OHWM)
Non-wetland Waters

CDFW Streambed

Freshwater Marsh
Concrete-lined Channel

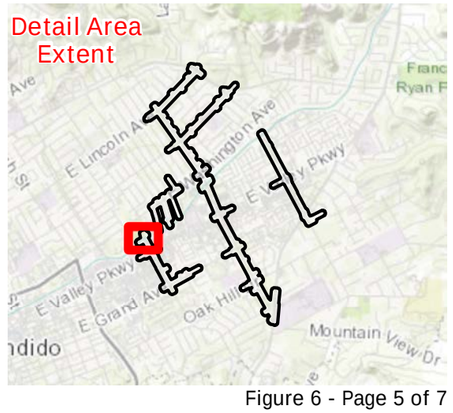


Figure 6 - Page 5 of 7

Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Photo Location
OHWM Datasheet Point (ODP)
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel



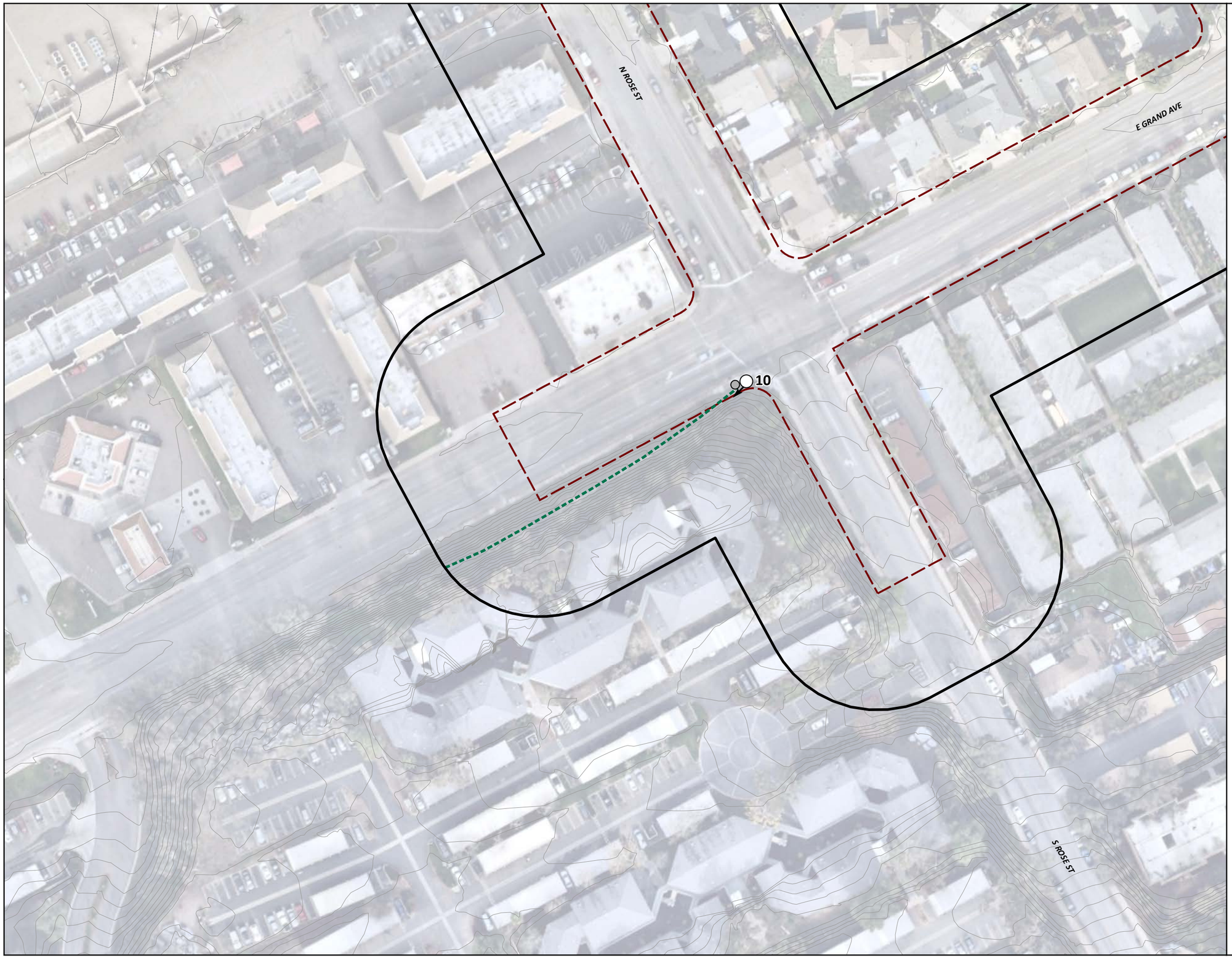
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 80 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Photo Location
Culvert
Topographic Contour (2-foot Interval)

Non-Jurisdictional Features

Brow Ditch



Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023

Attachment B

Representative Photographs



Photo 1: View facing northeast across the Escondido Creek channel at the North Citrus Avenue crossing. Escondido Creek is a concrete-lined channel at this location that conveys perennial surface flows. Culvert outlets are visible at center.



Photo 2: View facing east/upstream along the Escondido Creek channel at the North Rose Street crossing. Sediment deposits have allowed emergent freshwater marsh vegetation to persist. This is also the location of WDP-1.



Photo 3: View facing southwest along the Escondido Creek channel showing debris (rodent scat) washed away and therefore indicating the location of the OHWM at location ODP-1. Water staining along the channel banks is also visible.



Photo 4: View facing south along the tributary channel at East Grand Avenue and location of ODP-2. This concrete-lined channel also supports intermittent flows and some hydrophytic vegetation (umbrella sedge) colonizing a sediment deposit.



Photo 5: View facing northeast at detention basin/bio-swale located on the northeast side of intersection of El Norte Parkway and East Lincoln Avenue. Basin is landscaped with ornamentals and planted natives. A concrete brow ditch is just visible entering the basin at right.



Photo 6: View facing west at second larger detention basin/bio-swale located on the northwest side of intersection of El Norte Parkway and East Lincoln Avenue. Basins is maintained and similarly landscaped as the other basin.



Photo 7: View facing northwest at concrete brow ditch entering a storm drain next to the large detention basin.



Photo 8: View facing north of concrete-lined brow ditch west of the large detention basin/bioswale.



Photo 9: View facing northwest of concrete brow ditch located along edge of undeveloped lot and El Norte Parkway.



Photo 10: View facing southwest of concrete brow ditch (at left) entering culvert along East Grand Avenue.

Attachment C

Data Forms

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: E. Valley PKWY & Midway Dr Drainage Imp. City/County: Escondido, San Diego Sampling Date: 9/18/24

Applicant/Owner: City of Escondido State: CA Sampling Point: WDP-1

Investigator(s): Brian Lohstroh, Mark Wolford Section, Township, Range: Sec 00, T12S, R2W

Landform (hillslope, terrace, etc.): Channel bottom Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): C - Mediterranean California Lat: 33.135352N Long: -117.0599816W Datum: WGS84

Soil Map Unit Name: Reiff fine sandy loam, 0-2% slopes NWI classification: R4SBCx

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

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

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

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

Remarks: Sediment deposits in artificial, concrete-lined channel have allowed riparian vegetation to persist

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. Nasturtium officinale	60	Yes	OBL
2. Eleocharis palustris	20	Yes	OBL
3. Polypogon monspeliensis	5	No	FACW
4.			
5.			
6.			
7.			
8.			
Total Cover:	85 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	5	x 2 =	10
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	85 (A)		90 (B)

Prevalence Index = B/A = 1.06

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.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks: Growing in sediment deposit within concrete-lined channel

SOIL

Sampling Point: WDP-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
3	GL1 2.5/5GY	100					loamy sand	sediment deposit

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

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

- [ ] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [x] 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)
- [x] 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: concrete

Depth (inches): 3

Hydric Soil Present? Yes (●) No ( )

Remarks: Sediment deposit within concrete-lined channel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- [ ] Surface Water (A1)
- [x] 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)
- [x] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Thin Muck Surface (C7)
- [ ] Recent Iron Reduction in Plowed Soils (C6)
- [ ] Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ( ) No (●)	Depth (inches):	
Water Table Present?	Yes (●) No ( )	Depth (inches):	1
Saturation Present? (includes capillary fringe)	Yes (●) No ( )	Depth (inches):	0

Wetland Hydrology Present? Yes (●) No ( )

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

Remarks:

Beta Arid West Streamflow Duration Assessment Method

General site information

Project name or number: East Valley Parkway and Midway Drive Drainage Improvments		
Site code or identifier: Rose St and Escondido Creek	Assessor(s): B. Lohstroh and M. Wolford	
Waterway name: Escondido Creek		Visit date: 9/18/24
Current weather conditions (check one) ☐ Storm/heavy rain ☐ Steady rain ☐ Intermittent rain ☐ Snowing ☑ Cloudy (95 % cover) ☐ Clear/Sunny	Notes on current or recent weather conditions (e.g., precipitation in previous week): No recent significant rain events	Coordinates at downstream end (decimal degrees): Lat (N): 33.135124 Long (W): -117.060516 Datum: WGS84
Surrounding land-use within 100 m (check one or two): ☑ Urban/industrial/residential ☐ Agricultural (farmland, crops, vineyards, pasture) ☐ Developed open-space (e.g., golf course) ☐ Forested ☐ Other natural ☐ Other: _____	Describe reach boundaries: Escondido Creek between N. Citrus Ave and N. Rose Street in Escondido, CA	
Mean channel width (m): 25	Reach length (m): 40x width; min 40 m; max 200 m. 1750 (uniform channel)	Enter photo ID, or check if completed Top down: _____ Mid down: _____ Mid up: _____ Bottom up: _____ See attached ARDR.
Disturbed or difficult conditions (check all that apply): ☐ Recent flood or debris flow ☑ Stream modifications (e.g., channelization) ☐ Diversions ☐ Discharges ☐ Drought ☐ Vegetation removal/limitations ☐ Other (explain in notes) ☐ None	Notes on disturbances or difficult site conditions: Constructed concrete-lined channel	
Observed hydrology: 100 % of reach with surface flow N/A % of reach with sub-surface or surface flow N/A # of isolated pools	Comments on observed hydrology: Dry season surface flow present, approximately 5 cm depth.	

Site sketch:

1. Hydrophytic plant species

Record up to 5 hydrophytic plant species (FACW or OBL in the **Arid West** regional wetland plant list) within the assessment area: **within the channel or up to one half-channel width**. Explain in notes if species has an odd distribution (e.g., covers less than 2% of assessment area, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID, or check if photo is taken.

Check if applicable: ☐ No vegetation in assessment area ☐ No hydrophytes in assessment area

Species	Odd distribution?	Notes	Photo ID
Nasturtium officiale	Yes	Colonized sediment deposit	
Typha latifolia	Yes	Colonized sediment deposit	
Eleocharis palustris	Yes	Colonized sediment deposit	

Notes on hydrophytic vegetation:

Growing within sediment deposits that

2 and 3. Aquatic invertebrates

2. How many aquatic invertebrates are quantified in a 15-minute search?

Number of individuals quantified:
☐ None
☐ 1 to 19
☑ 20 +

(Do not count mosquitos)

Photo ID:_____

3. Is there evidence of aquatic stages of EPT (Ephemeroptera, Plecoptera and Trichoptera)?

Yes / No



Ephemeroptera larva
Image credit: Dieter Tracey



Plecoptera larva
Tracey Saxby



Trichoptera larva
Tracey Saxby

Notes on aquatic invertebrates:

4. Algal Cover

Are algae found on the streambed?		Notes on algae cover:	Photo ID:
☐ Check if *all* observed algae appear to be deposited from an upstream source.	☐ Not detected ☐ Yes, < 10% cover ☑ Yes, ≥ 10% (check Yes in single indicator below)	Algae present throughout channel	

5. Are single indicators observed?

Indicator	Present	Notes	Photo ID
Fish	☐ Yes ☑ No, no fish ☐ No, only non-native mosquitofish		
Algae cover ≥ 10%	☑ Yes ☐ No		

Supplemental information E.g., aquatic or semi-aquatic amphibians, snakes, or turtles; iron-oxidizing bacteria and fungi; etc.

Photo log

Indicate if any other photos taken during the assessment

Photo ID	Description
	See ARDR

Additional notes about the assessment:

Classification: Perennial

1. Hydrophytic plant species	2. Aquatic invertebrates	3. EPT taxa	4. Algae	5. Single indicators • fish present • algae cover ≥ 10%	Classification
None	None	Absent	Absent	Absent	**Ephemeral**
				Present	**At least intermittent**
			Present		**Intermittent**
	Few (1-19)	Absent	Absent	Absent	**Less than Perennial**
				Present	**At least intermittent**
			Present		**At least intermittent**
		Present	Absent		**Intermittent**
			Present		**Perennial**
	Many (20+)	Absent	Absent	Absent	**Ephemeral**
				Present	**At least intermittent**
			Present	Absent	**Ephemeral**
				Present	**At least intermittent**
		Present			**Intermittent**
Few (1-2)	None				**Intermittent**
	Few (1-19)	Absent			**Intermittent**
		Present	Absent		**Intermittent**
			Present		**Perennial**
	Many (20+)	Absent			**Intermittent**
		Present	Absent		**Perennial**
			Present		**Intermittent**
Many (3+)	None				**Intermittent**
	Few (1-19)	Absent	Absent		**Intermittent**
			Present		**Perennial**
		Present			**Perennial**
	Many (20+)				**Perennial**

Shading provided to enhance readability by increasing the contrast between neighboring cells; empty cells indicate the classification will not change with additional information however it is recommended that all five indicators be measured and recorded during every assessment.

Beta Arid West Streamflow Duration Assessment Method

General site information

Project name or number: East Valley Parkway and Midway Drive Drainage Improvments		
Site code or identifier: East Grand Avenue Tributary	Assessor(s): B. Lohstroh and M. Wolford	
Waterway name: Minor tributary to Escondido Creek		Visit date: 9/18/24
Current weather conditions (check one) ☐ Storm/heavy rain ☐ Steady rain ☐ Intermittent rain ☐ Snowing ☐ Cloudy (___ % cover) ☑ Clear/Sunny	Notes on current or recent weather conditions (e.g., precipitation in previous week): No recent significant rain events	Coordinates at downstream end (decimal degrees): Lat (N): 33.1315188 Long (W): -117.0554272 Datum: WGS84
Surrounding land-use within 100 m (check one or two): ☑ Urban/industrial/residential ☐ Agricultural (farmland, crops, vineyards, pasture) ☐ Developed open-space (e.g., golf course) ☐ Forested ☐ Other natural ☐ Other: _____	Describe reach boundaries: Minor tributary to Escondido Creek at E. Grand avenue in Escondido, CA	
Mean channel width (m) 12	Reach length (m): 40x width; min 40 m; max 200 m. 10 (uniform channel)	Enter photo ID, or check if completed Top down: _____ Mid down: _____ Mid up: _____ Bottom up: _____ See attached ARDR.
Disturbed or difficult conditions (check all that apply): ☐ Recent flood or debris flow ☑ Stream modifications (e.g., channelization) ☐ Diversions ☐ Discharges ☐ Drought ☐ Vegetation removal/limitations ☐ Other (explain in notes) ☐ None	Notes on disturbances or difficult site conditions: Constructed concrete-lined channel	
Observed hydrology: 100 % of reach with surface flow N/A % of reach with sub-surface or surface flow N/A # of isolated pools	Comments on observed hydrology: Dry season surface flow present, approximately 5 cm depth.	

Site sketch:

1. Hydrophytic plant species

Record up to 5 hydrophytic plant species (FACW or OBL in the **Arid West** regional wetland plant list) within the assessment area: **within the channel or up to one half-channel width**. Explain in notes if species has an odd distribution (e.g., covers less than 2% of assessment area, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID, or check if photo is taken.

Check if applicable: ☐ No vegetation in assessment area ☐ No hydrophytes in assessment area

Species	Odd distribution?	Notes	Photo ID
Cyperus eragrostis	Yes	Colonized sediment deposit	

Notes on hydrophytic vegetation:

Growing within sediment deposits that

2 and 3. Aquatic invertebrates

2. How many aquatic invertebrates are quantified in a 15-minute search?

Number of individuals quantified: ☐ None ☑ 1 to 19 ☐ 20 +

(Do not count mosquitos)

Photo ID:_____

3. Is there evidence of aquatic stages of EPT (Ephemeroptera, Plecoptera and Trichoptera)?

Yes / No



Ephemeroptera larva
Image credit: Dieter Tracey



Plecoptera larva
Tracey Saxby



Trichoptera larva
Tracey Saxby

Notes on aquatic invertebrates:

4. Algal Cover

Are algae found on the streambed?		Notes on algae cover:	Photo ID:
☐ Check if *all* observed algae appear to be deposited from an upstream source.	☐ Not detected ☐ Yes, < 10% cover ☑ Yes, ≥ 10% (check Yes in single indicator below)	Algae present throughout channel	

5. Are single indicators observed?

Indicator	Present	Notes	Photo ID
Fish	☐ Yes ☑ No, no fish ☐ No, only non-native mosquitofish		
Algae cover ≥ 10%	☑ Yes ☐ No		

Supplemental information E.g., aquatic or semi-aquatic amphibians, snakes, or turtles; iron-oxidizing bacteria and fungi; etc.

Photo log

Indicate if any other photos taken during the assessment

Photo ID	Description
	See ARDR

Additional notes about the assessment:

Classification: Intermittent

1. Hydrophytic plant species	2. Aquatic invertebrates	3. EPT taxa	4. Algae	5. Single indicators • fish present • algae cover ≥ 10%	Classification
None	None	Absent	Absent	Absent	**Ephemeral**
				Present	**At least intermittent**
			Present		**Intermittent**
	Few (1-19)	Absent	Absent	Absent	**Less than Perennial**
				Present	**At least intermittent**
			Present		**At least intermittent**
		Present	Absent		**Intermittent**
			Present		**Perennial**
	Many (20+)	Absent	Absent	Absent	**Ephemeral**
				Present	**At least intermittent**
			Present	Absent	**Ephemeral**
				Present	**At least intermittent**
		Present			**Intermittent**
Few (1-2)	None				**Intermittent**
	Few (1-19)	Absent			**Intermittent**
		Present	Absent		**Intermittent**
			Present		**Perennial**
	Many (20+)	Absent			**Intermittent**
		Present	Absent		**Perennial**
			Present		**Intermittent**
Many (3+)	None				**Intermittent**
	Few (1-19)	Absent	Absent		**Intermittent**
			Present		**Perennial**
		Present			**Perennial**
	Many (20+)				**Perennial**

Shading provided to enhance readability by increasing the contrast between neighboring cells; empty cells indicate the classification will not change with additional information however it is recommended that all five indicators be measured and recorded during every assessment.

U.S. Army Corps of Engineers (USACE)

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

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

Form Approved -
OMB No. 0710-0025
Expires: 01-31-2025

AGENCY DISCLOSURE NOTICE

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

Project ID #: ODP-1	Site Name: E. Valley Pkwy & Midway Dr. Drainage	Date and Time: 9/18/2024, 0940
Location (lat/long): 33.135275N, -117.060211W	Investigator(s): B. Lohstroh, M. Wolford	

Step 1 Site overview from remote and online resources

Check boxes for online resources used to evaluate site:

gage data	LiDAR	geologic maps
X climatic data	X satellite imagery	X land use maps
X aerial photos	X topographic maps	X Other: NWI, NRCS soils

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

Concrete-lined channel, within an urban environment. No recent flood events.

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

Channel supports approximately 2 inches surface flow depth. Some sediment deposits present, which have been colonized by obligate hydrophytes.

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

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

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

Geomorphic indicators

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

Sediment indicators

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

Vegetation Indicators

- **Change in vegetation type and/or density:**

Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***

- *vegetation absent to:*
- *moss to:*
- *forbs to:*
- *graminoids to:*
- *woody shrubs to:*
- *deciduous trees to:*
- *coniferous trees to:*
- **Vegetation matted down and/or bent:**
- **Exposed roots below intact soil layer:**

Ancillary indicators

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

Other observed indicators? Describe:

Mouse scat deposited under bridge (leaf litter surrogate) washed away at OHWM, see photo.

Project ID #: ODP-1

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

Step 5 Describe rationale for location of OHWM

Water stains obvious along smooth concrete lining of channel, with dry season surface flows present.

Additional observations or notes

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

Photo log attached? [X] Yes No If no, explain why not: _____

List photographs and include descriptions in the table below.

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

Photo Number	Photograph description
	Photo log provided in ARDR.

U.S. Army Corps of Engineers (USACE)

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

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

Form Approved -
OMB No. 0710-0025
Expires: 01-31-2025

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

Project ID #: ODP-2	Site Name: E. Valley Pkwy & Midway Dr. Drainage	Date and Time: 9/18/2024, 1240
Location (lat/long): 33.1315188N, -117.0554272W	Investigator(s): B. Lohstroh, M. Wolford	

Step 1 Site overview from remote and online resources

Check boxes for online resources used to evaluate site:

gage data	LiDAR	geologic maps
X climatic data	X satellite imagery	X land use maps
X aerial photos	X topographic maps	X Other: NWI, NRCS soils

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

Concrete-lined channel, within an urban environment. No recent flood events.

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

Channel supports approximately 0.5-1 inch surface flow depth. Some sediment deposits present, which have been colonized by hydrophytes.

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

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

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

Geomorphic indicators

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

Sediment indicators

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

Vegetation Indicators

- **Change in vegetation type and/or density:**

Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***

- *vegetation absent to:*
- *moss to:*
- *forbs to:*
- *graminoids to:*
- *woody shrubs to:*
- *deciduous trees to:*
- *coniferous trees to:*
- **Vegetation matted down and/or bent:**
- **Exposed roots below intact soil layer:**

Ancillary indicators

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

Other observed indicators? Describe:

Mouse scat deposited under bridge (leaf litter surrogate) washed away at OHWM, see photo.

Project ID #: ODP-2

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

Step 5 Describe rationale for location of OHWM

Water stains obvious along smooth concrete lining of channel, with dry season surface flows present.

Additional observations or notes

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

Photo log attached? [X] Yes No If no, explain why not: _____

List photographs and include descriptions in the table below.

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

Photo Number	Photograph description
	Photo log provided in ARDR.

Attachment D

Climatological Data

Monthly Total Precipitation for ESCONDIDO NO. 2, CA

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1994	1.22	4.91	3.72	2.29	0.11	0.00	0.74	T	0.00	T	0.61	1.05	14.65
1995	9.47	1.84	8.81	1.84	0.67	0.97	0.00	0.00	0.00	0.00	0.13	1.17	24.90
1996	2.30	4.08	1.53	0.60	0.03	0.00	0.09	0.00	0.00	0.60	0.71	2.53	12.47
1997	6.07	0.80	0.00	T	0.04	T	0.06	0.00	2.00	0.01	2.88	1.86	13.72
1998	3.89	11.34	3.89	2.41	1.46	0.06	0.00	T	0.10	0.12	1.56	0.88	25.71
1999	2.27	0.56	0.68	2.09	0.00	0.31	0.10	0.13	0.00	0.00	0.01	0.47	6.62
2000	0.67	M	1.41	1.11	0.08	0.03	0.00	0.00	0.14	M	0.40	0.07	M
2001	1.85	3.63	1.51	1.57	0.23	0.00	0.00	0.00	0.02	0.00	1.73	1.14	M
2002	0.49	0.13	1.28	0.90	0.20	0.00	0.00	0.00	0.00	0.03	0.75	2.05	M
2003	M	M	1.94	2.99	0.61	0.22	0.05	0.00	0.00	M	0.73	1.42	M
2004	0.33	5.18	0.56	M	0.00	M	0.00	0.00	0.00	4.73	0.50	3.19	M
2005	7.64	7.06	1.67	0.98	0.05	0.02	M	M	M	M	M	M	M
2006	1.50	2.04	M	M	M	T	0.52	M	M	0.01	0.00	M	M
2007	M	M	M	0.00	0.00	0.00	0.00	1.45	0.00	0.00	M	0.00	M
2008	M	M	M	M	M	M	M	M	0.00	M	M	M	M
2009	M	M	M	M	M	M	M	M	M	M	M	M	M
2010	M	M	M	M	M	M	0.00	0.00	0.08	4.14	1.33	8.85	M
2011	1.16	2.91	2.22	0.42	0.65	0.03	0.09	0.00	0.12	0.54	3.10	1.08	12.32
2012	0.69	1.82	2.34	1.74	0.11	0.00	0.00	0.02	0.06	0.71	0.69	2.82	11.00
2013	1.56	0.89	1.74	0.09	0.61	0.00	0.06	0.00	0.00	1.14	0.39	0.38	6.86
2014	0.19	2.13	0.44	1.02	0.00	0.00	0.06	0.11	0.02	0.00	0.79	3.63	8.39
2015	0.47	0.92	1.47	0.32	1.30	0.29	1.22	0.00	0.91	0.55	1.00	1.50	9.95
2016	4.42	0.22	1.27	1.07	0.39	0.00	0.00	0.00	0.66	0.05	2.24	4.79	15.11
2017	7.80	7.06	0.44	0.00	1.27	0.01	0.13	0.01	0.01	0.00	0.00	0.00	16.73
2018	2.78	0.94	2.15	0.03	0.14	0.00	0.00	0.00	0.00	0.77	2.29	2.26	11.36
2019	3.57	6.67	1.67	0.16	1.40	0.07	0.02	0.00	0.22	0.00	4.75	4.47	23.00
2020	0.47	0.79	5.61	5.27	0.02	0.14	0.00	0.00	0.00	0.07	0.73	0.92	14.02
2021	3.05	0.23	1.89	0.10	0.03	0.00	0.17	0.16	0.04	1.19	0.00	4.92	11.78
2022	0.32	0.99	1.86	0.15	0.00	0.07	0.00	0.00	0.29	0.23	2.01	1.88	7.80
2023	10.26	3.73	8.13	0.15	0.57	0.04	0.00	2.75	0.05	0.09	1.00	0.59	27.36
2024	3.39	5.70	3.48	0.38	0.12	0.00	0.00	0.00	0.03	M	M	M	M
Mean	2.99	3.06	2.37	1.06	0.37	0.08	0.12	0.17	0.17	0.60	1.17	2.07	14.41

Climatological Data for ESCONDIDO NO. 2, CA - September 2024

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2024-09-01	92	64	78.0	38	28	0.00	M	M
2024-09-02	94	66	80.0	40	30	0.00	M	M
2024-09-03	98	67	82.5	43	33	0.00	M	M
2024-09-04	96	68	82.0	42	32	0.00	M	M
2024-09-05	104	71	87.5	48	38	0.00	M	M
2024-09-06	112	75	93.5	54	44	0.00	M	M
2024-09-07	106	76	91.0	51	41	0.00	M	M
2024-09-08	109	79	94.0	54	44	0.00	M	M
2024-09-09	104	77	90.5	51	41	0.00	M	M
2024-09-10	98	68	83.0	43	33	0.00	M	M
2024-09-11	86	63	74.5	35	25	0.00	M	M
2024-09-12	85	61	73.0	33	23	0.00	M	M
2024-09-13	85	65	75.0	35	25	0.00	M	M
2024-09-14	83	65	74.0	34	24	0.00	M	M
2024-09-15	75	65	70.0	30	20	0.00	M	M
2024-09-16	74	59	66.5	27	17	0.03	M	M
2024-09-17	77	57	67.0	27	17	0.00	M	M
2024-09-18	81	57	69.0	29	19	0.00	M	M
2024-09-19	79	64	71.5	32	22	0.00	M	M
2024-09-20	75	61	68.0	28	18	0.00	M	M
2024-09-21	80	59	69.5	30	20	0.00	M	M
2024-09-22	85	61	73.0	33	23	0.00	M	M
2024-09-23	88	63	75.5	36	26	0.00	M	M
2024-09-24	87	64	75.5	36	26	0.00	M	M
2024-09-25	79	61	70.0	30	20	0.00	M	M
2024-09-26	83	61	72.0	32	22	0.00	M	M
2024-09-27	81	59	70.0	30	20	0.00	M	M
2024-09-28	86	58	72.0	32	22	0.00	M	M
2024-09-29	87	57	72.0	32	22	0.00	M	M
2024-09-30	91	54	72.5	33	23	0.00	M	M
Average|Sum	88.7	64.2	76.4	1098	798	0.03	M	M

Antecedent Precipitation Tool v2.0 - Watershed Sampling Summary

Generated on 2024-10-23

User Inputs

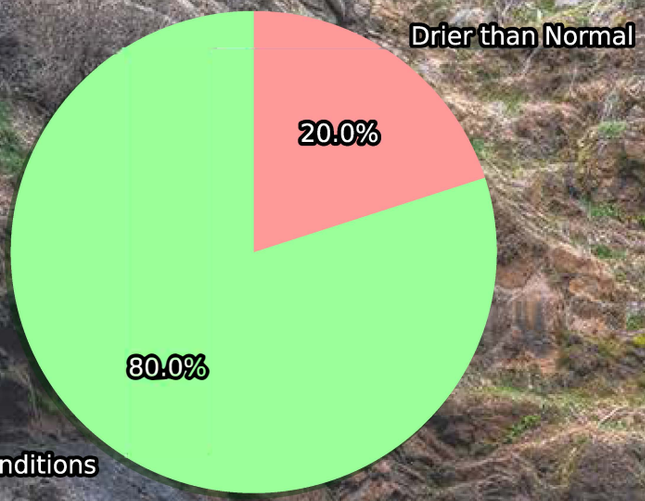
Coordinates	33.14048, -117.053393
Date	2024-09-18
Geographic Scope	HUC12
Used Gridded Precipitaton	False

Intermediate Data

Hydrologic Unit Code	180703030401
Watershed Size	43.54 mi^2
# Random Sampling Points	5

Preliminary Result

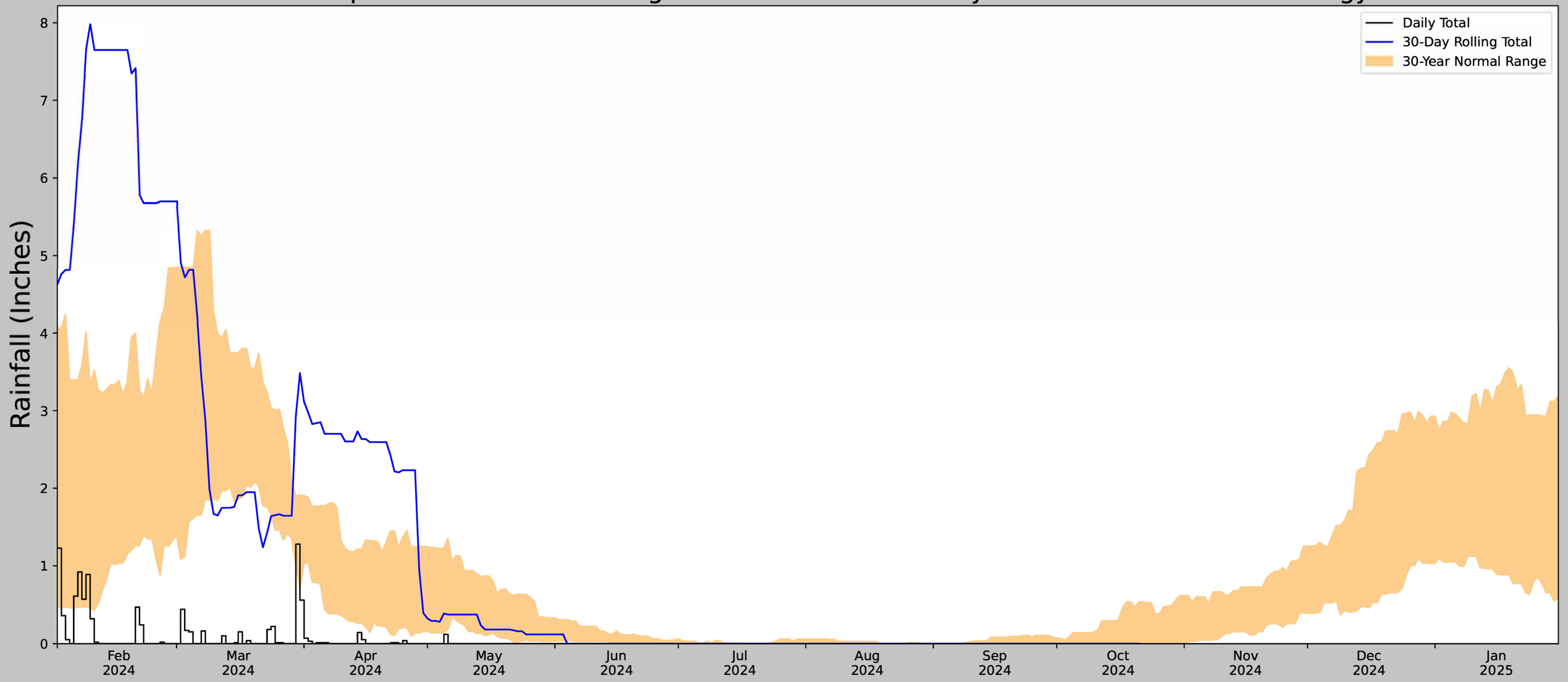
Average Antecedent Precipitation Score	11.4
Preliminary Determination	Normal Conditions



Sampling Point Breakdown

Antecedent Precipitation Score	Antecedent Precipitation Condition	WebWIMP H_2O Balance	Drought Index (PDSI)	# of Points
12	Normal Conditions	Dry Season	Mild wetness (2024-08)	4
9	Drier than Normal	Dry Season	Mild wetness (2024-08)	1

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



Coordinates	33.14048, -117.053393
Observation Date	2024-09-18
Elevation (ft)	673.869
Drought Index (PDSI)	Mild wetness (2024-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-18	0.0	0.079921	0.0	Normal	2	3	6
2024-08-19	0.0	0.005906	0.0	Normal	2	2	4
2024-07-20	0.0	0.003543	0.0	Normal	2	1	2
Result							Normal Conditions - 12

US Army Corps of Engineers

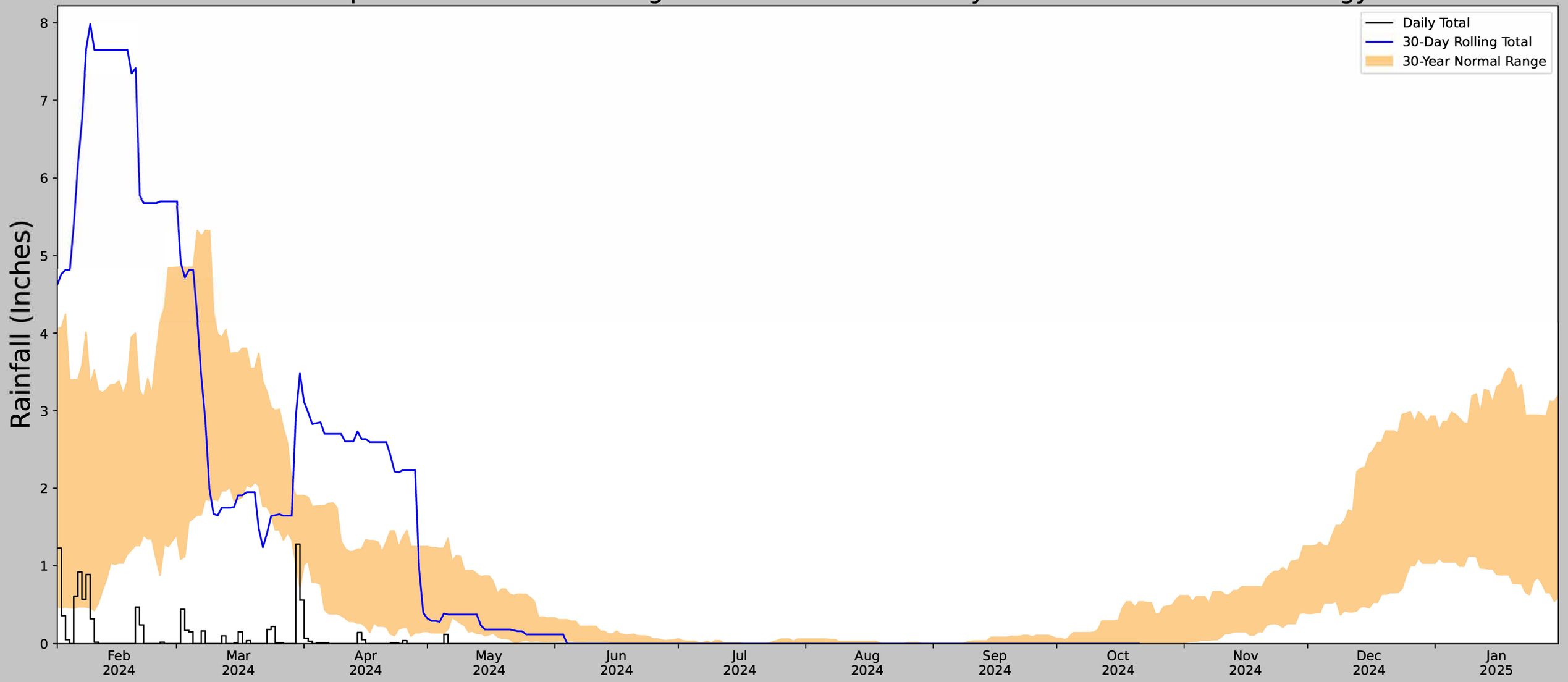
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ESCONDIDO #2	33.1211, -117.09	600.066	2.506	73.803	1.313	10094	72
ESCONDIDO 0.8 NNE	33.1474, -117.0656	733.924	2.301	133.858	1.343	0	18
ESCONDIDO 2.5 SSE	33.1055, -117.0482	689.961	2.648	89.895	1.43	650	0
SAN MARCOS 2.5 ENE	33.1472, -117.1316	666.011	3.008	65.945	1.552	50	0
SAN PASQUAL ANIMAL PK	33.0956, -116.9975	419.948	5.636	180.118	3.551	432	0
POWAY VALLEY	33.0194, -117.0308	647.966	7.818	47.9	3.893	95	0
CARLSBAD MCCLELLAN PALOMAR AP	33.13, -117.2764	312.992	10.803	287.074	7.963	31	0

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



Coordinates	33.14155, -117.02338
Observation Date	2024-09-18
Elevation (ft)	673.869
Drought Index (PDSI)	Mild wetness (2024-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-18	0.0	0.079921	0.0	Normal	2	3	6
2024-08-19	0.0	0.005906	0.0	Normal	2	2	4
2024-07-20	0.0	0.003543	0.0	Normal	2	1	2
Result							Normal Conditions - 12

US Army Corps of Engineers

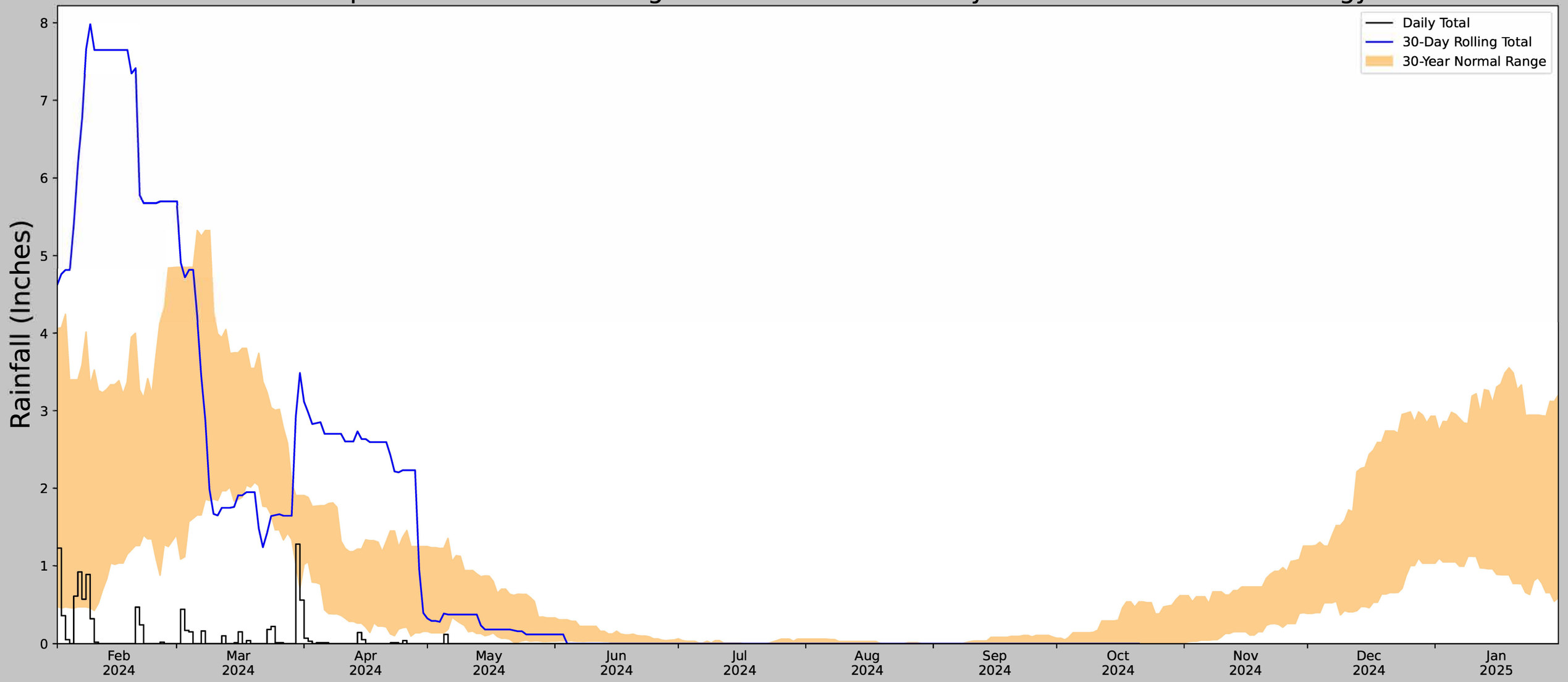
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ESCONDIDO #2	33.1211, -117.09	600.066	4.105	73.803	2.15	10094	72
ESCONDIDO 0.8 NNE	33.1474, -117.0656	733.924	2.301	133.858	1.343	0	18
ESCONDIDO 2.5 SSE	33.1055, -117.0482	689.961	2.648	89.895	1.43	650	0
SAN MARCOS 2.5 ENE	33.1472, -117.1316	666.011	3.008	65.945	1.552	50	0
SAN PASQUAL ANIMAL PK	33.0956, -116.9975	419.948	5.636	180.118	3.551	432	0
POWAY VALLEY	33.0194, -117.0308	647.966	7.818	47.9	3.893	95	0
CARLSBAD MCCLELLAN PALOMAR AP	33.13, -117.2764	312.992	10.803	287.074	7.963	31	0

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



Coordinates	33.210632, -117.091881
Observation Date	2024-09-18
Elevation (ft)	1088.542723
Drought Index (PDSI)	Mild wetness (2024-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-18	0.0	0.079921	0.0	Normal	2	3	6
2024-08-19	0.0	0.005906	0.0	Normal	2	2	4
2024-07-20	0.0	0.003543	0.0	Normal	2	1	2
Result							Normal Conditions - 12

US Army Corps of Engineers

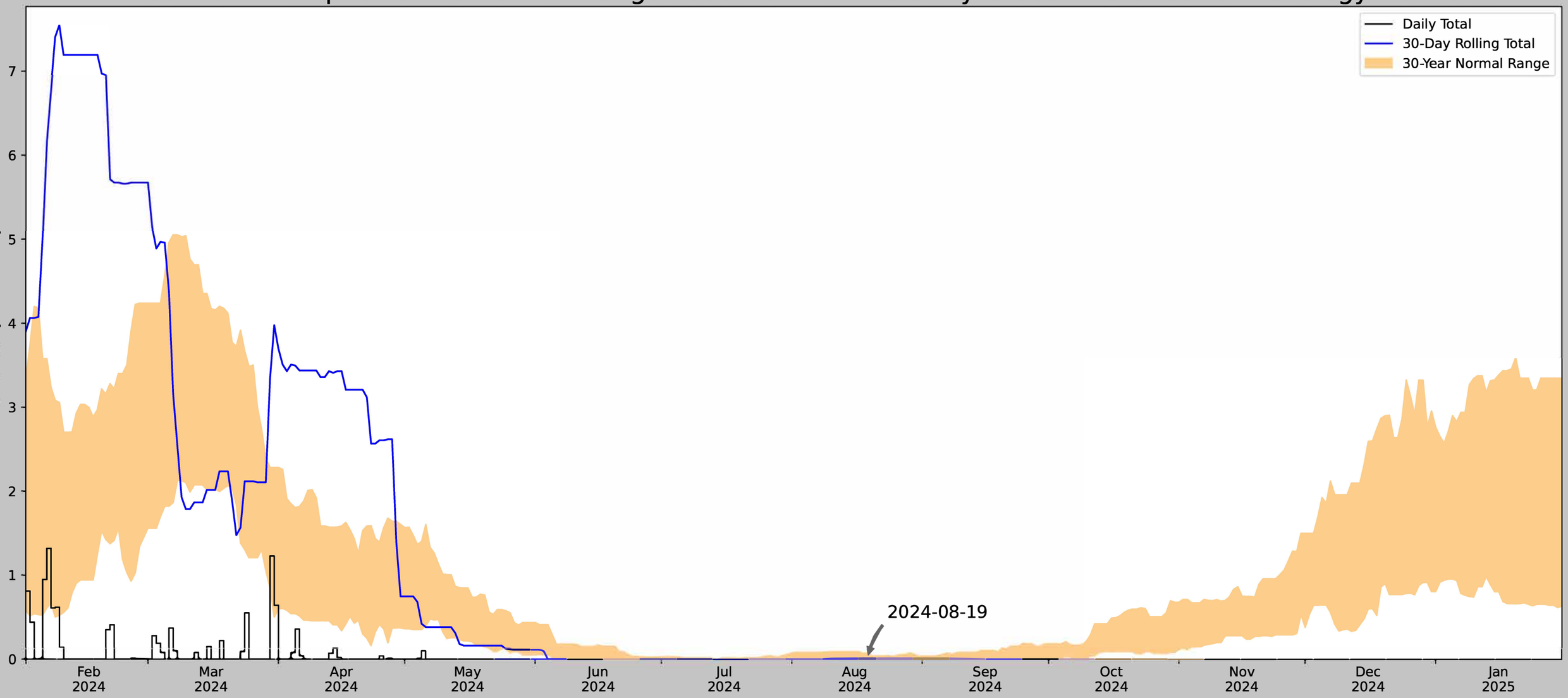
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ESCONDIDO #2	33.1211, -117.09	600.066	6.187	488.477	5.806	10094	72
ESCONDIDO 0.8 NNE	33.1474, -117.0656	733.924	2.301	133.858	1.343	0	18
ESCONDIDO 2.5 SSE	33.1055, -117.0482	689.961	2.648	89.895	1.43	650	0
SAN MARCOS 2.5 ENE	33.1472, -117.1316	666.011	3.008	65.945	1.552	50	0
SAN PASQUAL ANIMAL PK	33.0956, -116.9975	419.948	5.636	180.118	3.551	432	0
POWAY VALLEY	33.0194, -117.0308	647.966	7.818	47.9	3.893	95	0
CARLSBAD MCCLELLAN PALOMAR AP	33.13, -117.2764	312.992	10.803	287.074	7.963	31	0

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



Coordinates	33.187149, -116.98962
Observation Date	2024-09-18
Elevation (ft)	1773.856713
Drought Index (PDSI)	Mild wetness (2024-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-18	0.011811	0.101969	0.0	Dry	1	3	3
2024-08-19	0.0	0.073228	0.011811	Normal	2	2	4
2024-07-20	0.0	0.011811	0.0	Normal	2	1	2
Result							Drier than Normal - 9

US Army Corps of Engineers

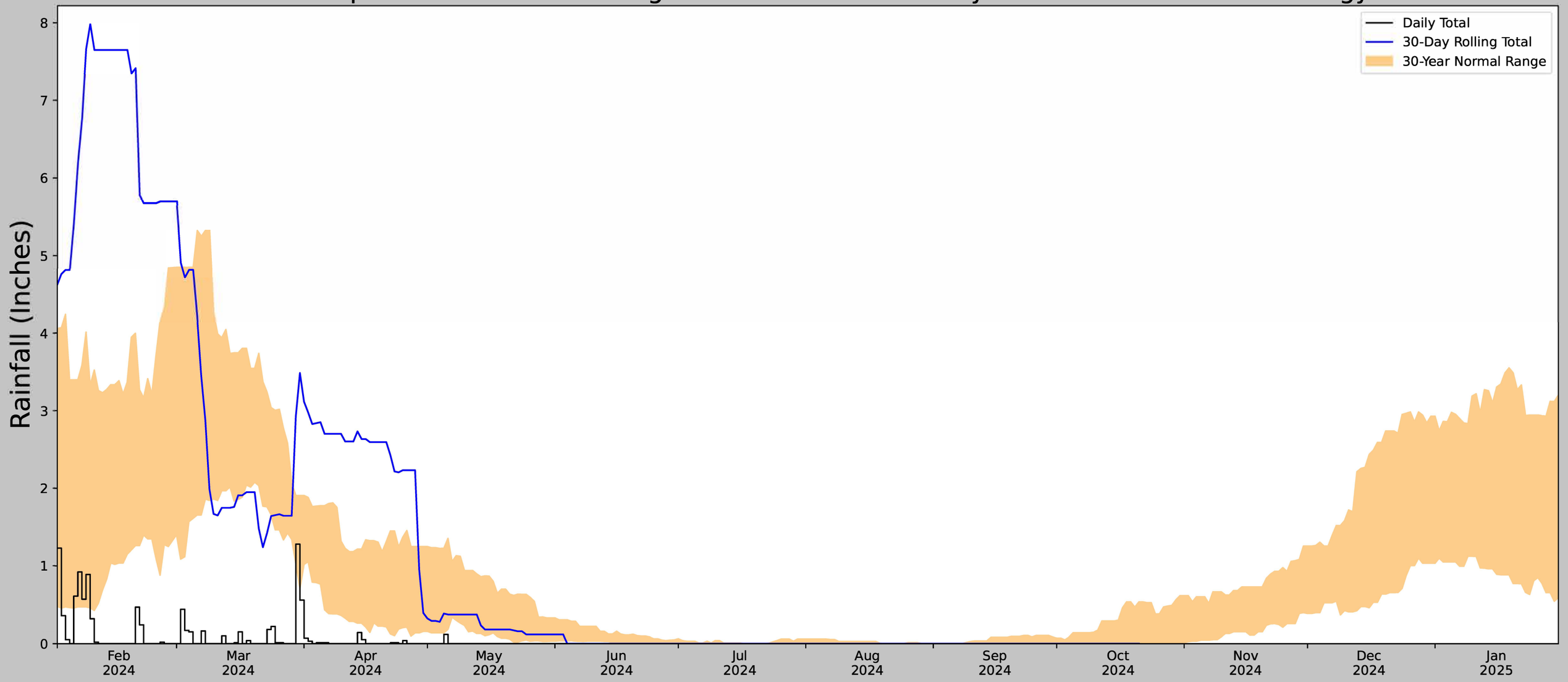
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
RAMONA AP	33.0381, -116.9161	1384.843	11.143	389.014	9.349	9241	90
RAMONA 1.8 WSW	33.0256, -116.8976	1395.013	1.376	10.17	0.633	1	0
RAMONA FIRE DEPT	33.0114, -116.9081	1470.144	1.902	85.301	1.018	1940	0
ESCONDIDO 7.2 SE	33.0563, -116.9925	1584.974	4.6	200.131	2.991	1	0
SAN DIEGO COUNTRY ESTATES 1.5	33.0158, -116.8068	1474.081	6.516	89.238	3.514	9	0
POWAY 3.2NE	32.9956, -117.0044	1206.037	5.899	178.806	3.709	3	0
POWAY VALLEY	33.0194, -117.0308	647.966	6.769	736.877	8.034	157	0

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



Coordinates	33.146548, -117.10266
Observation Date	2024-09-18
Elevation (ft)	706.066595
Drought Index (PDSI)	Mild wetness (2024-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-18	0.0	0.079921	0.0	Normal	2	3	6
2024-08-19	0.0	0.005906	0.0	Normal	2	2	4
2024-07-20	0.0	0.003543	0.0	Normal	2	1	2
Result							Normal Conditions - 12

US Army Corps of Engineers

ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ESCONDIDO #2	33.1211, -117.09	600.066	1.905	106.001	1.059	10094	72
ESCONDIDO 0.8 NNE	33.1474, -117.0656	733.924	2.301	133.858	1.343	0	18
ESCONDIDO 2.5 SSE	33.1055, -117.0482	689.961	2.648	89.895	1.43	650	0
SAN MARCOS 2.5 ENE	33.1472, -117.1316	666.011	3.008	65.945	1.552	50	0
SAN PASQUAL ANIMAL PK	33.0956, -116.9975	419.948	5.636	180.118	3.551	432	0
POWAY VALLEY	33.0194, -117.0308	647.966	7.818	47.9	3.893	95	0
CARLSBAD MCCLELLAN PALOMAR AP	33.13, -117.2764	312.992	10.803	287.074	7.963	31	0

March 7, 2025

Melissa J. Whittemore
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9635 Granite Ridge Drive
San Diego, CA 92123

Subject: **Supplemental Memo to the Draft Biological Technical Report and Aquatic Resources Delineation Report for the East Valley Parkway and Midway Drive Drainage Improvement Project, City of Escondido, California**

This supplemental memo to the Draft Technical Biological Technical Report (BTR) and Aquatic Resources Delineation Report (ARDR) provides an analysis of potential biological and aquatic resource impacts associated with the 30% design additions to the footprint of the proposed East Valley Parkway and Midway Drive Drainage Improvement Project (Project), which is located in the central portion of the city of Escondido in northern San Diego County. This memo provides a brief Project description, the Project setting, survey methods, existing biological and aquatic resources, special-status biological resources, Project impacts (direct and indirect), and proposed mitigation.

The Project study area identified in the BTR (dated December 2024) and ARDR (dated December 2024) was used to assess potential biological and aquatic resources impacts associated with the proposed Project and was based on the preliminary design of the project. The 30% Project design plans were recently completed and include an increase to the construction footprint within Escondido Creek to ensure adequate area to construct the proposed new stormwater inlets. A total of approximately 7.9 acres of additional impact area is now included as of the 30% design additions and Project impacts now total approximately 57.5 acres. This supplemental memorandum provides a discussion of potential biological and aquatic resources impacts associated with these additional footprint areas.

Project Location and Description

The Project site is an approximately five-mile-long corridor within public rights-of-way along existing roadways and Escondido Creek in the central portion of the City of Escondido in northern San Diego County. The roadways within the project site include segments of North Midway Drive, South Midway Drive, Bear Valley Parkway, East Lincoln Avenue, East Mission Avenue, North Citrus Avenue, North Rose Street, East Grand Avenue, East Washington Avenue, Daisy Street, and an unnamed access road immediately south of East Washington Avenue and north of Escondido Creek, between North Rose Street and Begonia Street.

The proposed project would involve the construction of approximately 16,850 linear feet of reinforced concrete box culverts and approximately 4,450 linear feet of reinforced concrete pipelines beneath existing roadways and adjacent public rights of way (e.g., sidewalks) and four new stormwater inlets into Escondido Creek. The culverts would range in size from a single 6-foot by 4-foot culvert (24 square feet in area) to a dual 12-foot by 10-foot culvert (240 square feet in area). The pipelines would be 36 inches in diameter (approximately 7 square feet in area) and 54 inches in diameter (approximately 16 square feet in area). The Project would require relocation of some of the existing underground utility lines to accommodate the proposed storm drain culverts. After relocation of existing utilities and installation of the proposed storm drain culverts and pipes, the affected roadways/sidewalks would be resurfaced. Road

resurfacing would include the provision of storm drain inlets along both sides of the roads to collect runoff. The Project would also include bio-retention areas to provide filtration and treatment of runoff before discharging into Escondido Creek.

Construction of the Project is anticipated to take approximately two years to complete. Given the linear nature of the Project, the active construction area would continuously move along the Project site at a rate of approximately 50 to 80 liner feet per day.

Once construction of the Project is completed, the new culverts, pipelines, and inlets would be maintained in a manner similar to existing City drainage infrastructure. Upon completion of this Project, more than 1,600 parcels that are currently completely or partially located within the FEMA 100-year floodplain can be redesignated as outside the 100-year floodplain (the City will submit a Conditional Letter of Map Revisions to FEMA). Implementation of the Project would eliminate the localized flooding within the project area, which occurs an average of five times per year since 2019 and triggers deployment of sandbags and road closures.

Regulatory Framework

A summary of the federal, state, and local environmental regulations that govern the biological resources applicable to the Project, including the 30% design additions, are presented in the *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project*.

Survey Methods and Limitations

The Project study area is comprised of the entire 213.8-acre site, including the original Project impact/work areas, a 100-foot buffer, and the 30% design additions (Attachment 2). Data regarding biological resources present within the study area were obtained through a review of pertinent literature, field reconnaissance, and desktop analysis of the additional areas added to the construction footprint from the 30% design.

Biological surveys conducted within the Project study area were conducted on September 16 and September 18, 2024, and included vegetation mapping, general floral and wildlife surveys, and an aquatic resources delineation. A complete description of the survey methods and limitations for this Project, as well as a description of topography, drainage, soils, and watershed and hydrologic setting, are included in the *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project*.

Biological Resources within 30% Design Additions

Vegetation Communities and Land Cover Types

Three land cover types were identified within the 30% design additions: concrete-lined channel, landscaping/ornamental, and developed land. Land covers are described according to Holland (1986) and Oberbauer *et al.* (2008). The land cover types identified in the 30% design additions of the Project footprint are described in detail below, their acreages are presented in Table 1, and their spatial distributions are presented on the Biological Resources and Impacts Figure (Attachment 2).

Table 1
Vegetation Communities and Land Cover Types in the Project Study Area

General Vegetation Community/Land Cover Category (Holland/Oberbauer Code)	Vegetation Community/ Land Cover Type	Total Acres in 30% Design Study Area	Additional 30% Design Project Impact Areas
Disturbed or Developed Areas (10000)	Developed Land	10.5	4.3
	Landscaping/Ornamental	5.0	0.3
	Concrete-Lined Channel	3.0	0.3
Total		**18.5**	**4.9**

3.2.1.1 Disturbed or Developed Areas (10000)

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

Developed Land

All of the streets, residential and business properties, sidewalks, and parking lots were mapped as developed land within the Project study area. The majority of the Project study area, including the footprint of the reinforced concrete storm drain pipeline and buffer area, was mapped as developed land. An additional 14.8 acres of developed land was mapped onsite from the 30% design additions which includes 4.3 acres within Project impact areas and 10.5 acres within the Project buffer.

Landscaping/Ornamental

This land cover type is described by Oberbauer *et al.* (2008) as an area where non-native ornamental species and landscaping have been installed and maintained. Landscaping/ornamental areas within the Project study area occur primarily on large residential plots, apartment complexes, and near parks and schools. This land cover supports a variety of ornamental species in the Project study area, including but not limited to Italian cypress (*Cupressus sempervirens*), ornamental pine (*Pinus* sp.), pepper trees (*Schinus* sp.), various palms and ornamental flowering trees, and Bermuda grass (*Cynadon dactylon*). An additional 0.3 acres of Project impacts to landscaping/ornamental land was mapped onsite from the 30% design additions within the total survey area of 5.0 acres.

Concrete-Lined Channel

Concrete-lined channels have been developed for the rapid conveyance of water from urban areas. In the Project study area, Escondido Creek, which originates in the upper headwaters in Bear Valley above Lake Wohlford, has been channelized to manage the large volume of runoff from storm events within the City. An additional 0.3 acres of Project impacts to concrete-lined channel was mapped onsite from the 30% design additions within the total survey area of 3.0 acres. The aquatic resources delineation determined that the Escondido Creek channel and an associated tributary channel near East Grand Avenue are non-wetland waters of the U.S. jurisdictional to the ACOE and RWQCB and streambeds jurisdictional to CDFW.

Aquatic Resources

An aquatic resources delineation was conducted onsite to determine the type and extent of potential aquatic resources jurisdictional to the ACOE, RWQCB, and CDFW. The 30% design additions were previously included in the surveys of the Project study area, which identified potential aquatic resources along the Escondido Creek channel and along a minor tributary to the Creek located in the southwestern portion of the Project study area near East Grand Avenue (see Attachment 3). These potential aquatic resources are described below, according to agency jurisdiction, and their acreages are represented in Table 2.

Federal Aquatic Resources

Wetland Waters

No potential federal wetland waters occur within the Project study area. Aquatic resources exhibiting all three wetland parameters (*i.e.,* evidence of hydrophytic vegetation, hydric soils, and wetland hydrology) were largely absent throughout the Project study area since the only features present were concrete-lined channels. Only one location within the Escondido Creek channel representing the emergent freshwater marsh associated with a sediment deposit exhibited all three wetland parameters, but because the freshwater marsh occurs below the ordinary high water mark (OHWM) and is likely a temporary situation (as a storm event or routine maintenance will likely remove it), this aquatic resource is delineated as a potential non-wetland water of the U.S., as discussed below.

Non-wetland Waters

Boundaries of potential non-wetland waters of the U.S. within the Project study area were determined by the presence of an OHWM and "relatively permanent flow". Linear aquatic resources delineated within the Project study area include the concrete-lined Escondido Creek channel supporting perennial flows and a smaller tributary to Escondido Creek near East Grand Avenue, which is also concrete-lined and supports intermittent flows. Evidence of an OHWM consisted of water stains and evidence of fallen debris being washed away. The water staining indicator was consistently observed throughout the channels within the Project study area. Due to the clear connection to downstream waters, and the strong evidence of surface flow below the OHWM, both channels would be considered potential Relatively Permanent Waters (RPWs) that are tributaries to Traditionally Navigable Waters (TNWs, *i.e.,* the San Elijo Lagoon and the Pacific Ocean).

An area of freshwater marsh present within the Escondido Creek channel near North Rose Steet is also considered to be a potential non-wetland waters because it is below the OHWM. As noted above, the marsh is associated with a temporary sediment deposit within the concrete-lined channel and despite it qualifying as a 3-parameter wetland, it is established well below the OHWM.

State Aquatic Resources

All federal waters described above also fall within the CWA Section 401 authority of the RWQCB and Section 1602 authority of the CDFW. Additionally, the CDFW takes jurisdiction of aquatic resources extending beyond the OHWM to the top of bank and/or edge of riparian canopy.

Potential aquatic resources subject to CDFW jurisdiction but not USACE or RWQCB jurisdiction consist of the engineered channel banks above the OHWM. The top of bank associated with the non-wetland waters mapped throughout the Project study area was delineated at the crest of the channel slope. The CDFW-jurisdictional streambed includes areas of open water and the area of concrete-lined channel located below the top of bank.

Non-Jurisdictional Features

Four concrete-lined ditches and two bioretention basins were evaluated as part of the field delineation, and these were determined to be non-jurisdictional features constructed in uplands that were not associated with any historically mapped features (USFWS 2024, USGS 2024). Three of the brow ditches are located near El Norte Parkway in the northern portion of the Project study area and the fourth brow ditch is present near East Grand Avenue. The ditches function to prevent erosion by capturing runoff and channeling it around a new housing development and an undeveloped lot. All of the brow ditches discharge into the City storm drain system, with one of the northern brow ditches entering a relatively small, vegetated bioretention basin, before discharging into the storm drain system.

Two bioretention basins are present in the northern portion of the Project study area. As noted above, a smaller basin is present east of Lincoln Avenue and north of El Norte Parkway and is fed by a brow ditch that captures some runoff from an adjacent housing development. A larger bioretention basin/bio-swale is present west of East Lincoln Avenue and appears to capture the bulk of the runoff from the adjacent housing development. Both basins are constructed in uplands, landscaped with ornamental vegetation and regularly maintained. They do not support hydrophytic vegetation within the Project study area and are not considered to be potential jurisdictional aquatic resources.

Table 2
Potential Waters of the U.S. and State Occurring within the Project Study Area

Type of Jurisdictional Waters	Type of Habitat[1]	Cowardin Classification[2]	Acres of Aquatic Resources		Linear Feet of Aquatic Resources	
			Study Area	Original Impact Area / 30% Design Impact Area	Study Area	Original Impact Area / 30% Design Impact Area
Jurisdictional Waters of the U.S. (USACE, RWQCB)						
Escondido Creek: Non-wetland Waters	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.57	0.11 / 0.07	1768	385 / 200
Escondido Creek: Non-wetland Waters (Federal 3-parameter Wetland Below OHWM)	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	0.02	--	135	--
Grand Ave Channel, Non-wetland Waters	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.01	-- / 0.002	112	-- / 17
Subtotal Jurisdictional Waters of the U.S. ***(includes 30% Design)***			*0.60*	***0.18***	*2015*	***602***
Jurisdictional Waters of the State (CDFW)						
Escondido Creek, Concrete-lined Channel	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	2.95	0.71 / 0.26	1768	385 / 200
Escondido Creek, Freshwater Marsh	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	0.02	--	135	--
Grand Ave Channel, Concrete-lined Channel	Developed/ concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.04	-- / 0.006	112	-- / 17
Subtotal Jurisdictional Waters of the State ***(includes 30% Design)***			*3.01*	***0.97***	*2015*	***602***
Grand Total Jurisdictional Waters ***(includes 30% Design)***			**3.01**	**0.97**	**2015**	**602**

1 Oberbauer *et al.* 2008.
2 Cowardin

Floral and Wildlife Diversity

Reconnaissance surveys for plants and wildlife within the Project study area were conducted prior to the inclusion of the 30% design areas, and with the exception of an additional 10.5 acres of developed land, the entire Project study area was surveyed. A total of 62 species of vascular plants, including 8 native and 54 non-native, were recorded during the reconnaissance surveys for the project, and a total of seven wildlife species were recorded during the biological surveys for the project study area. The recorded plant and wildlife species documented in the reconnaissance surveys are representative of the entire Project study area, including the additional 10.5 acres of developed land included in the 30% design.

A list of all plant and wildlife species observed in the study area during the surveys is provided in Appendices A and B, respectively, in the *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project*.

Special-Status Plants and Wildlife

Potentially suitable habitat for special-status plants and wildlife does not occur within the additional areas included in the 30% design. A complete discussion of special-status plants and wildlife is included in the *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project*.

Wildlife Corridors and Habitat Linkages

The additional areas included in the 30% design do not occur within a designated Biological Core Linkage Area (BCLA) (Ogden and CBI 2001). A complete discussion of wildlife corridors and habitat linkages is included in the *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project*.

Impact Analysis of 30% Design Additions

Direct, indirect, and cumulative impacts and their significance are defined in the *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project.* Analysis of impacts within the 30% design areas are described below.

Direct Impacts

Vegetation Communities and Land Cover Types

Direct impacts for the 30% design additions were quantified by overlaying the proposed 30% design footprint onto the biological resources map and evaluating the impacts by vegetation community. Temporary and direct impacts associated with this Project would result from the construction of the reinforced concrete box culverts and storm drain pipeline and the construction of the new stormwater inlets within the concrete-lined channel. Implementation of the proposed Project would result in temporary, direct impacts totaling an additional 4.9 acres to developed land, landscape/ornamental land, and the concrete-lined channel. While the Project components (reinforced concrete box culverts/pipe and stormwater inlets) are considered permanent, these components will be constructed in-kind and the work areas will be restored to pre-existing conditions. Table 3 provides a summary of these impacts.

Table 3
Direct Impacts to Vegetation Communities and Land Cover Types and Mitigation Required

General Vegetation Community/Land Cover Category (Holland/Oberbauer)	Vegetation Community/Land Cover Type	Impacts (acres)		Mitigation Ratio	Mitigation Required
		Original	30% Design Additions		
Native Vegetation Communities					
N/A	N/A	N/A		N/A	N/A
Disturbed or Developed Areas (10000)	Developed Land	48.4	7.3	0:0	N/A
	Landscaping/Ornamental	0.5	0.3	0:0	N/A
	Concrete-Lined Channel	0.7	0.3	0:0	N/A

Total	**49.6**	**7.9**	**-**	**0**
Grand Total (Original and 30% Design Areas)	**57.5**		**-**	**0**

Developed and landscaping/ornamental land provide little native habitat value and foraging opportunities for wildlife, and therefore, impacts to these land cover types would not be significant. Concrete-lined channels present onsite are considered a potential aquatic resource jurisdictional to the ACOE and CDFW and impacts to these potential aquatic resources are discussed below in *Aquatic Resources*.

Aquatic Resources

The construction of the new stormwater inlets into Escondido Creek may directly impact potential aquatic resources. Direct removal, fill, and hydrological interruption of potential aquatic resources would be considered a direct impact. However, these impacts would not be considered significant because the overall Project is designed to make improvements to the drainage system. Project impacts to potential aquatic resources are temporary because there is no loss of jurisdictional waters as the concrete-lined channel would be restored to its original function.

Project impacts to the concrete-lined channel bank would not impact sensitive riparian vegetation communities; therefore, it is not anticipated that mitigation in the form of revegetation or replacement habitat will be required. Table 4 summarizes the Project impacts to potential aquatic resources.

Table 4
Direct Impacts to Aquatic Resources

Type of Jurisdictional Waters	Type of Habitat[1]	Cowardin Classification[2]	Impacts to Aquatic Resources (acres/linear feet)	
			Original	30% Design Additions
Jurisdictional Waters of the U.S. (USACE, RWQCB)				
Escondido Creek: Non-wetland Waters	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.11/385	0.07/200
Escondido Creek: Non-wetland Waters (Federal 3-parameter Wetland Below OHWM)	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	-	-
Grand Ave Channel, Non-wetland Waters	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	-	0.002/17
Subtotal Jurisdictional Waters of the U.S. ***(includes 30% Design)***			***0.18/602***	
Jurisdictional Waters of the State (CDFW)				
Escondido Creek, Concrete-lined Channel	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	0.71/385	0.26/200
Escondido Creek, Freshwater Marsh	Freshwater Marsh	Riverine intermittent streambed, vegetated, seasonally flooded, excavated	-	-
Grand Ave Channel, Concrete-lined Channel	Developed/concrete-lined channel	Riverine intermittent streambed, seasonally flooded, excavated	-	0.006/17
Subtotal Jurisdictional Waters of the State ***(includes 30% Design)***			***0.97/602***	
Grand Total Jurisdictional Waters			***0.97/602***	

1 Oberbauer *et al.* 2008.
2 Cowardin *et. al.* 1979.

Special-Status Plants and Wildlife

No special-status plants or wildlife have the potential to occur within the additional areas included in the 30% design. Therefore, the implementation of the proposed areas from the 30% design would not directly impact special-status plant species.

Nesting Birds

Most native nesting birds are protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703–712), and nesting raptors are afforded additional protection under California Fish and Game Code (CFGC) Section 3503.5. Direct impacts to active nests protected under the MBTA and/or CFGC Section 3503.5 would be considered significant. Pre-construction nesting bird surveys are adequate to ensure avoidance of impacts to active nests and reduce potential impacts to less than significant.

Wildlife Corridors and Linkages

The 30% design additions do not occur within a BCLA of the Escondido Subarea Plan. Project work areas and the surrounding study area buffer do not function as a wildlife corridor due to lack of any suitable habitat located in the work areas and the intense urban development within the Project footprint, restricting the movement of wildlife through the area. Therefore, implementation of the proposed areas from the 30% design would not directly impact wildlife corridors and habitat linkages.

Indirect Impacts

Vegetation Communities and Land Cover Types

The proposed 30% design additions occur in previously developed areas (roads and the concrete-lined channel); therefore, long-term indirect impacts to vegetation communities/land covers, such as an increase in human presence beyond the current extent, are not expected to occur.

Potential short-term indirect impacts that could affect the native vegetation communities that occur adjacent to the 30% design additions are the same as those described in the *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project* and are summarized again as follows:

Fugitive Dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light penetration, photosynthesis, respiration, and transpiration, as well as increased penetration of phytotoxic gaseous pollutants and increased incidence of pests and diseases.

Increased Human Activity. Construction of the proposed Project would temporarily increase human activity in the area, which may contribute to an increase in litter to areas outside of the Project impact area.

Restricting equipment and vehicles to Project impact areas and limiting vehicle speed to 15 miles per hour, minimizing impacts outside of the Project footprint by clearly delineating the work areas with construction fencing, providing biological monitoring to assist crews in minimizing indirect impacts, implementing best management practices, and designing construction activities to avoid or minimize new disturbance would reduce potential indirect impacts to less than significant.

Aquatic Resources

Potential indirect impacts on aquatic resources from the 30% design additions could include adverse effects of fugitive dust, changes in hydrology resulting from construction, and exposure to contaminants associated with construction activities. Potential indirect impacts that could affect the jurisdictional aquatic resources are described as follows:

Fugitive Dust. Excessive dust can settle on surface water, affecting aquatic communities and contributing to the nutrient loading of the surface water ecosystem. This contamination risks aquatic life and may impact downstream resources by making water unsafe for consumption or recreational use.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates and patterns, which may affect adjacent downstream aquatic, wetland, and riparian vegetation communities.

Chemical Pollutants. Chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction-related materials) may affect jurisdictional aquatic resources and downstream resources by contaminating the water, impacting aquatic life and water quality.

Increased Human Activity. Construction of the proposed Project would temporarily increase human activity in the area, which may contribute to an increase in litter to the concrete-lined channel.

Special-Status Plants and Wildlife

No special-status plants or wildlife have the potential to occur within the additional areas included in the 30% design. Therefore, the implementation of the proposed areas from the 30% design would not indirectly impact special-status plant species.

Nesting Birds

Indirect impacts from construction-related noise or human presence from the 30% design additions may occur to nesting birds if construction occurs during the breeding season (i.e., January 1 through August 31). Nesting birds that would be affected by noise, based on suitable habitat in the project vicinity, may occur up to 100 feet from the project work areas. This impact would be considered a significant impact, absent mitigation. Implementation of appropriate mitigation measures, as discussed below in *Mitigation*, would reduce these impacts to below significance.

Wildlife Corridors and Linkages

The 30% design additions do not occur within a BCLA of the Escondido Subarea Plan. Project work areas and the surrounding study area buffer do not function as a wildlife corridor due to lack of any suitable habitat located in the work areas and the intense urban development within the Project footprint, restricting the movement of wildlife through the area. Therefore, implementation of the proposed areas from the 30% design would not indirectly impact wildlife corridors and habitat linkages.

Cumulative Impacts

The 30% design additions are located within an urban setting, and no sensitive plants, animals, or vegetation communities would be significantly impacted. Cumulative impacts would not be considered significant if construction guidelines described in the *Impacts Analysis* section and proposed mitigation measures are implemented. Future projects within the Project study area could result in significant impacts to vegetation communities, jurisdictional waters and wetlands, and/or special-status plant wildlife species and nesting birds absent mitigation.

Mitigation

Vegetation Communities and Land Cover Types

No mitigation is required for impacts to vegetation communities and land covers within the 30% design additions because significant impacts to sensitive vegetation communities are not expected to occur.

Aquatic Resources

BIO-1 Impacts to potential aquatic resources within the 30% design additions requires notification to the relevant federal and state agencies. Where it is confirmed through the aquatic resources delineation that potential aquatic resources would be impacted by the proposed Project, the Project proponent shall obtain the required federal and/or state permits from

the USACE, RWQCB, and/or CDFW, pursuant to Sections 404 and 401 of the CWA, and Section 1600 et seq. of the CFGC, respectively. Permits are required to be obtained by the applicant before the impact to the resources. Permits may include additional mitigation requirements. No significant area-based mitigation is anticipated since the purpose of the Project is to make improvements to the drainage system and because the concrete-lined channel would be restored to its original function.

Special-Status Plants and Wildlife

No mitigation is required for impacts to special-status plants and wildlife with the 30% design additions because direct and indirect impacts to special-status plants and wildlife are not expected to occur.

Nesting Birds

BIO-2 Potential impacts to nesting birds will be mitigated through pre-construction nesting bird surveys and appropriate buffers around active nests regulated by the MBTA and CFGC. If construction activity occurs during the breeding season (typically January 1 through August 31), a nesting bird survey must be conducted within the project boundary and a 100-foot buffer within 72 hours prior to construction and daily nesting bird surveys would be conducted during the breeding season. Nesting bird surveys would be required anytime construction begins in a new area outside of a previously surveyed area. If any active nests are detected, the area will be flagged and an appropriate buffer will be placed around the nest as determined by the project biologist and monitored throughout the nesting cycle. If the biologist determines that Project construction is causing a disturbance to the nest (*e.g.,* adult birds appear agitated and are not returning to nest to incubate or feed young), the biologist may halt construction until the nest has fledged. Construction may restart after the biologist has determined that the nest has fledged or is no longer active.

Wildlife Corridors and Linkages

Implementation of the proposed Project within the 30% design additions would not directly impact wildlife corridors and habitat linkages; therefore, no mitigation is required.

Conclusion

The information presented in this supplemental memo represents the analysis of potential biological resource impacts associated with the 30% design additions to the footprint of the proposed East Valley Parkway and Midway Drive Drainage Improvement Project. All impacts resulting from the 30% design additions occurred in areas that were previously surveyed from the original project footprint, and no new vegetation communities or sensitive biological or aquatic resources outside of what was reported from the original project footprint occur within the 30% design areas. The *Draft Biological Technical Report for the East Valley Parkway and Midway Drive Drainage Improvement Project* provides complete background information for this supplemental memo.

Sincerely,



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Enclosures:

Attachment 1 – Biological Resources and Impacts Figure
Attachment 2 – Aquatic Resources and Impacts Figure

References

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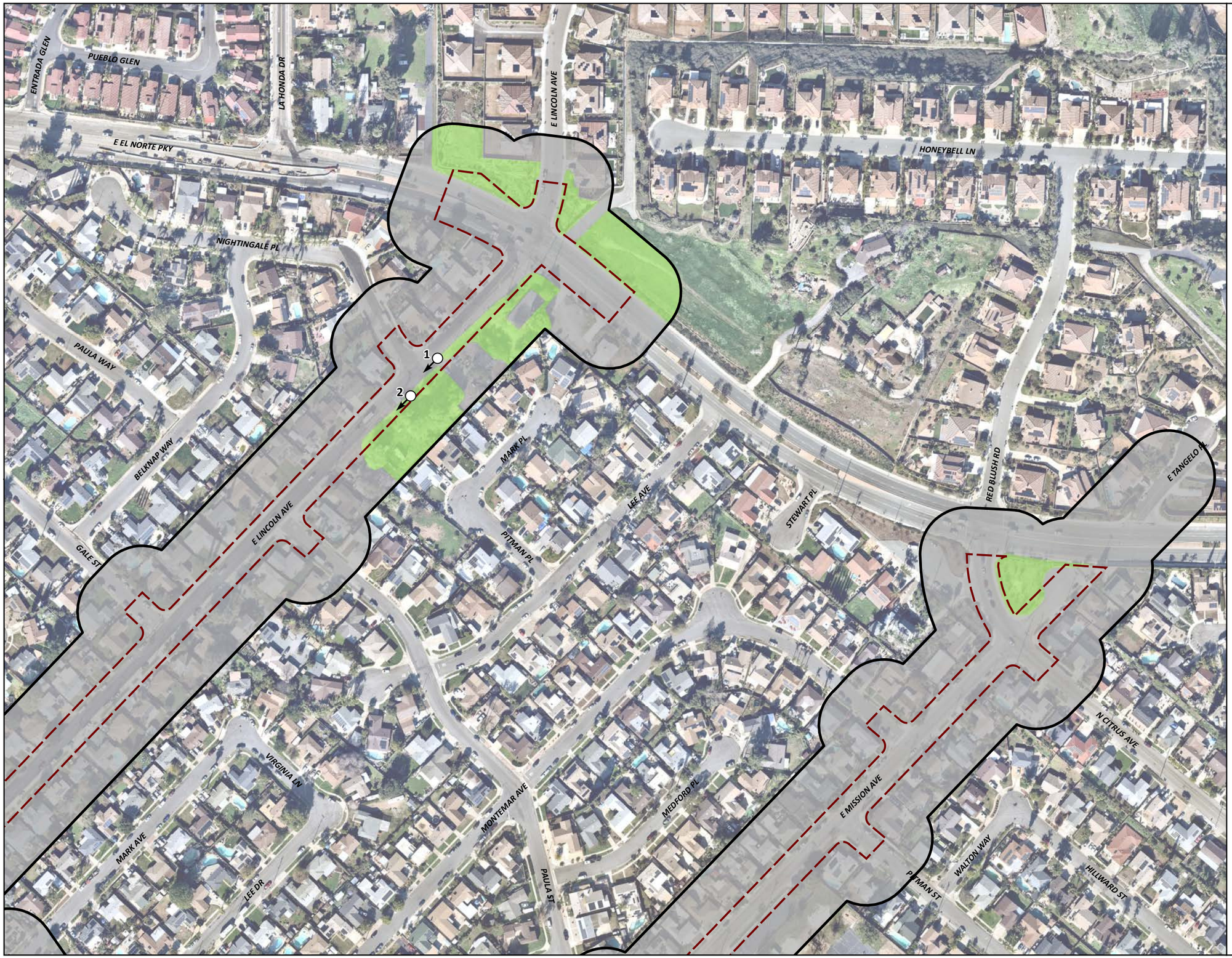
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Attachment A

Biological Resources and Impacts Figure



Survey Area

Project Impacts

Photo Location

Vegetation

Landscaping/Ornamental

Developed



Figure 5, Page 1 of 9

Biological Resources

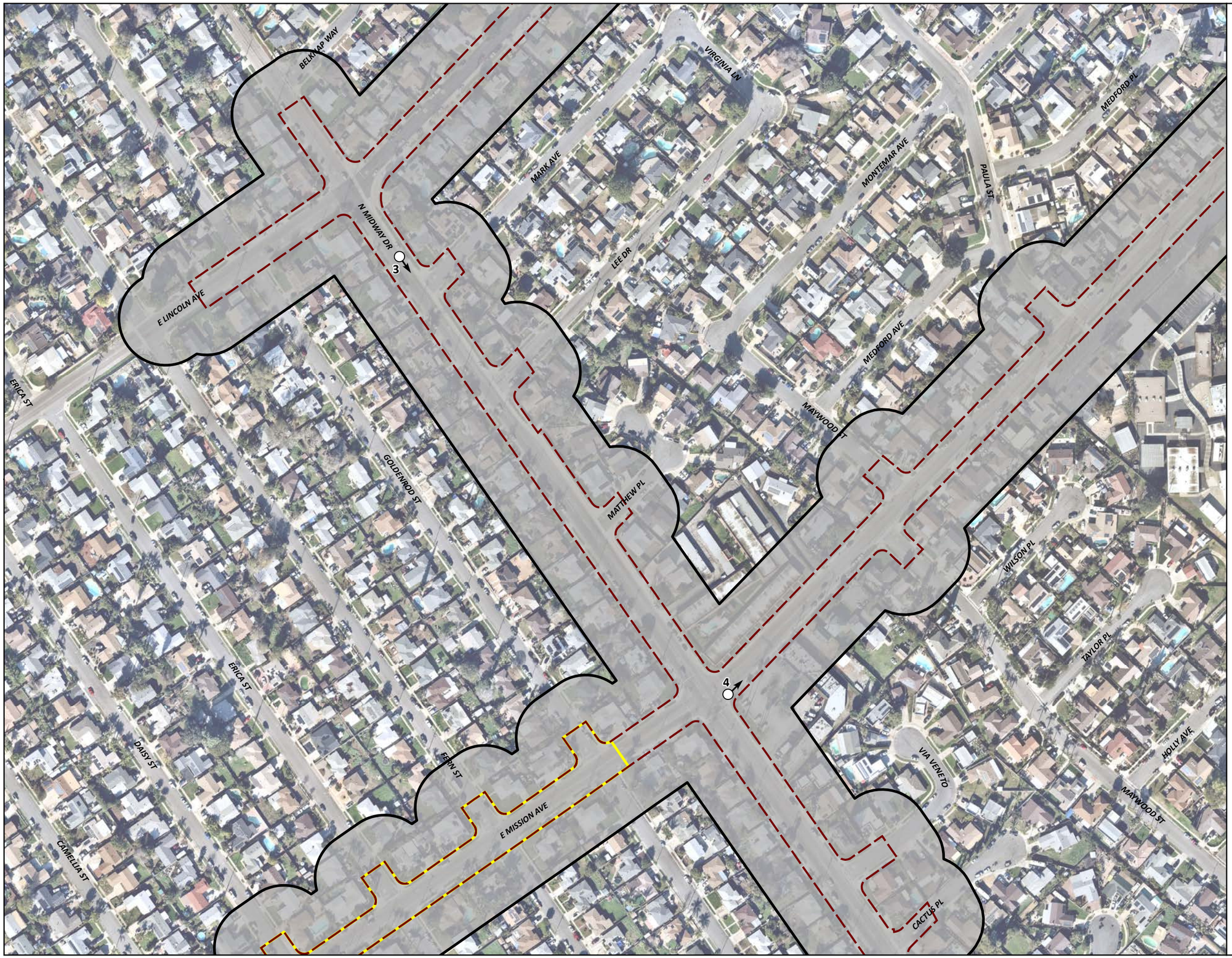
EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N

0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Additional Project Impacts
Photo Location

Vegetation

Developed

Detail Area Extent



Figure 5, Page 2 of 9

Biological Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023

E MISSION AVE
CACTUS PL
INDIAN PL
MAYWOOD ST
WEATHERBY AVE
GOLDENROD ST
FERN ST
ERICA ST
DAISY ST
CAMELLIA ST
BOXWOOD GLEN
Escondido Creek
E WASHINGTON AVE
ASTER ST
ANZA PL
BEGONIA ST
DAWN PL
N MIDWAY DR
5
14

Survey Area
Project Impacts
Additional Project Impacts
Photo Location

Vegetation
Concrete-lined Channel
Landscaping/Ornamental
Bare Ground
Developed

Corps/RWQCB Aquatic Resources
Non-wetland Waters

CDFW Streambed
Concrete-lined Channel

Detail Area Extent



Figure 5, Page 3 of 9

Biological Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Photo Location

Vegetation

Coast Live Oak Woodland
Landscaping/Ornamental
Bare Ground
Developed

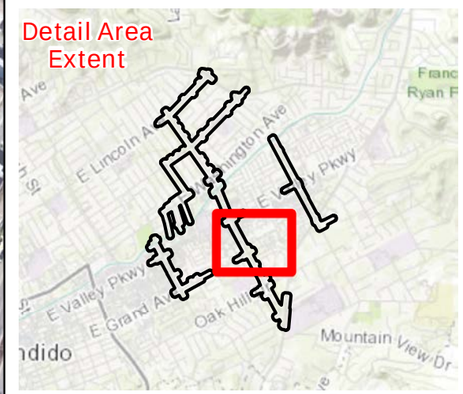


Figure 5, Page 4 of 9

Biological Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023





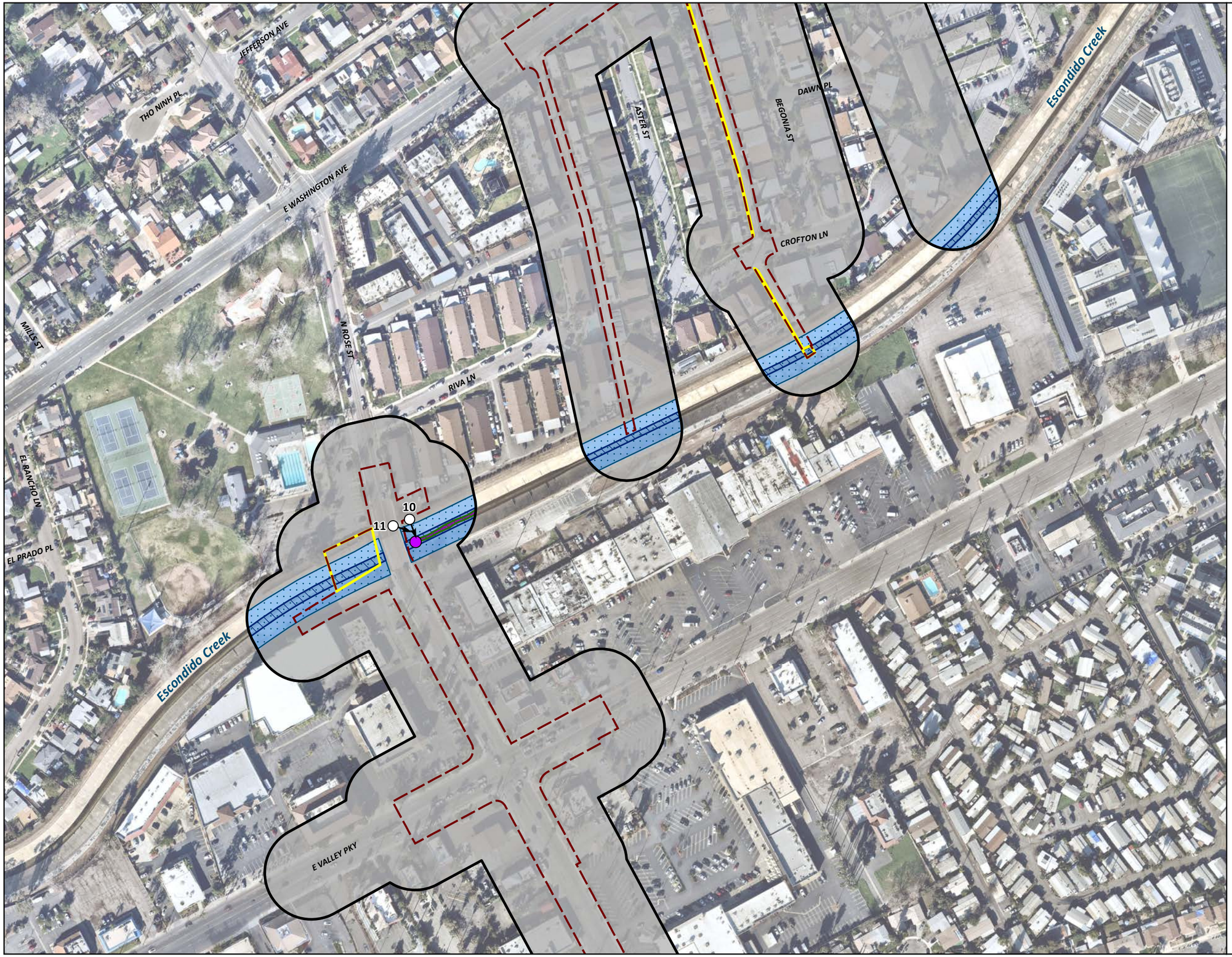
Biological Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



- Survey Area
- Project Impacts
- Additional Project Impacts
- Photo Location

Vegetation

- Freshwater Marsh
- Concrete-lined Channel
- Developed

Special Status Species

- White-faced Ibis (*Plegadis chihi*)

Corps/RWQCB Aquatic Resources

- Non-Wetland Waters - Federal Wetland (Three parameter wetland within OHWM)
- Non-wetland Waters

CDFW Streambed

- Freshwater Marsh
- Concrete-lined Channel



Figure 5, Page 6 of 9

Biological Resources

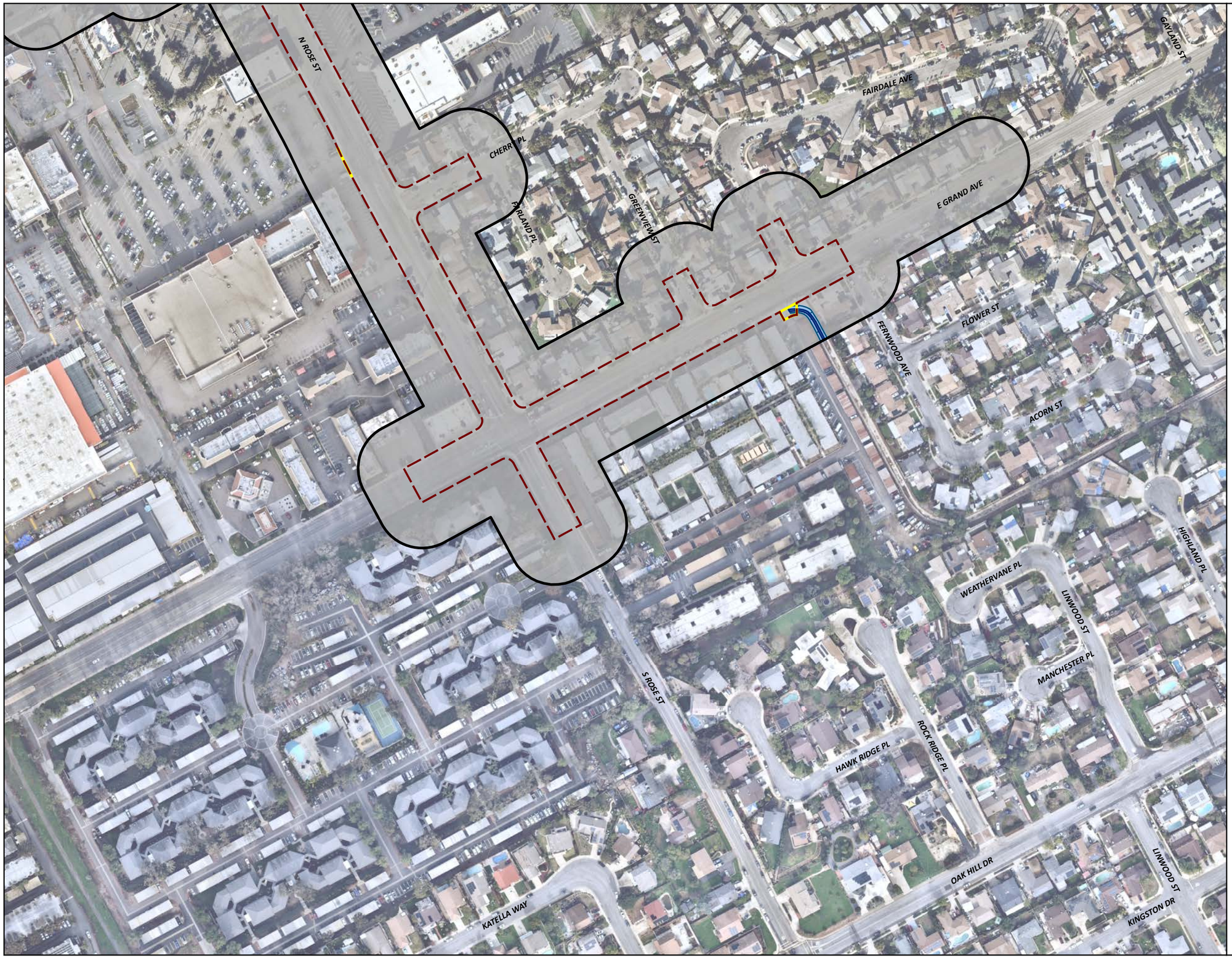
EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS

N

0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



- Survey Area
- Project Impacts
- Additional Project Impacts

Vegetation

- Concrete-lined Channel
- Developed

Corps/RWQCB Aquatic Resources

- Non-wetland Waters

CDFW Streambed

- Concrete-lined Channel



Figure 5, Page 7 of 9

Biological Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE DRAINAGE IMPROVEMENTS

N

0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Additional Project Impacts
Photo Location

Vegetation
Concrete-lined Channel
Landscaping/Ornamental
Developed

Corps/RWQCB Aquatic Resources
Non-wetland Waters

CDFW Streambed
Concrete-lined Channel



Figure 5, Page 8 of 9

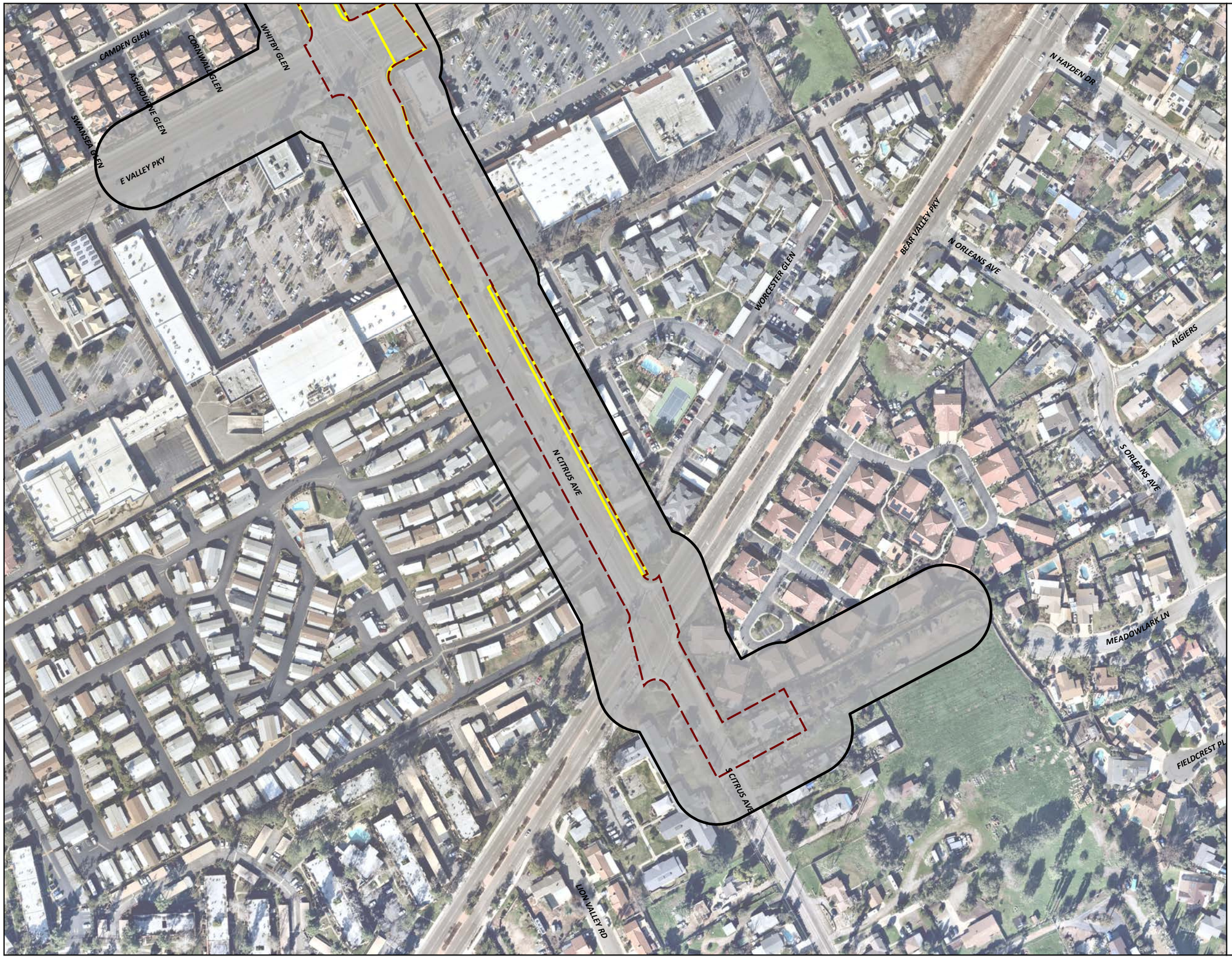
Biological Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Additional Project Impacts

Vegetation

Landscaping/Ornamental
Developed

Detail Area Extent



Figure 5, Page 9 of 9

Biological Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

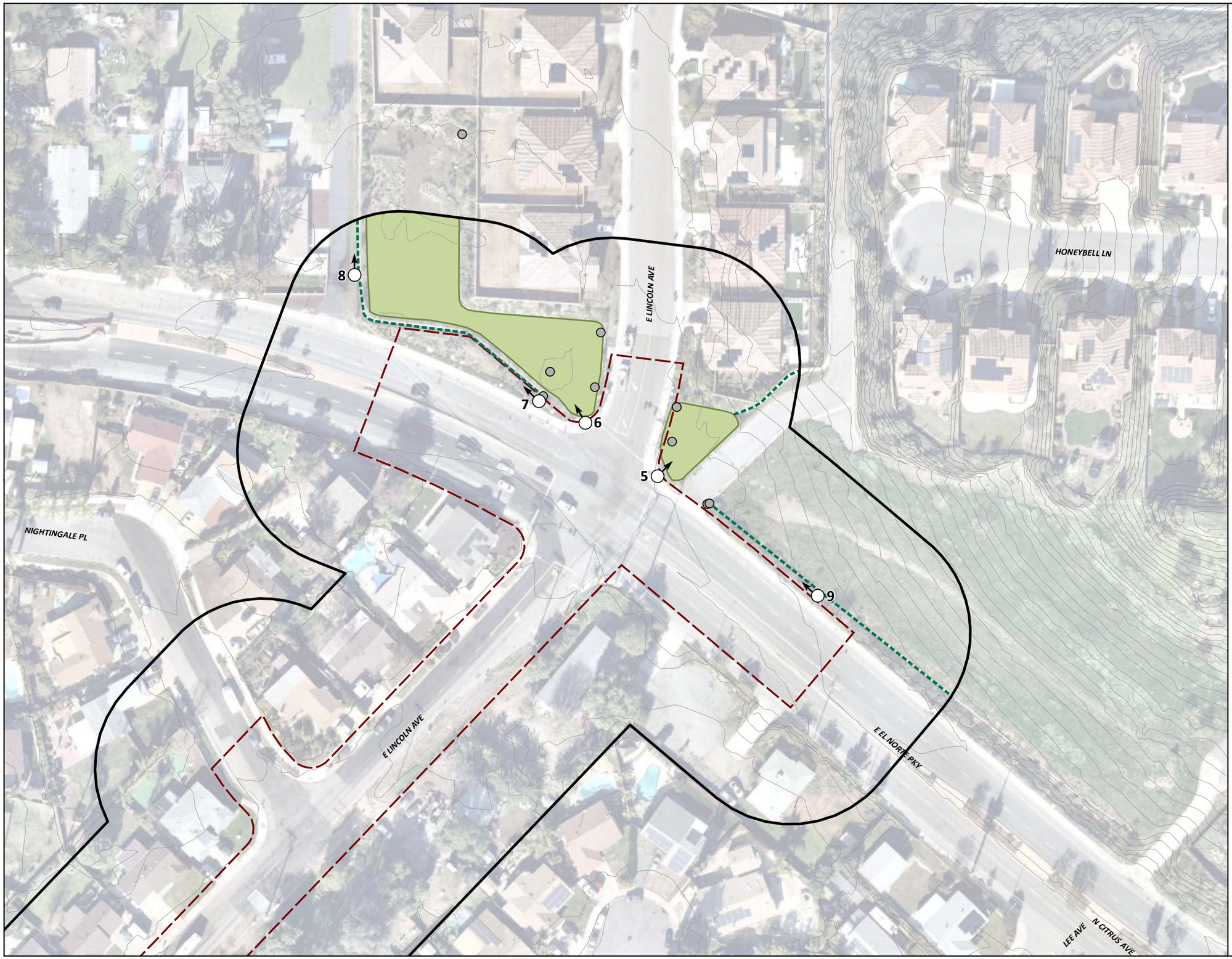
N
0 200 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023

Attachment B

Aquatic Resources and Impacts Figure



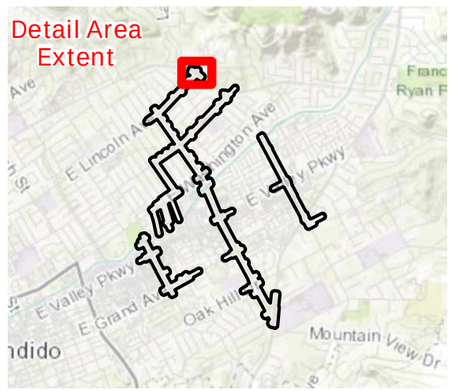


Figure 6 - Page 1 of 7

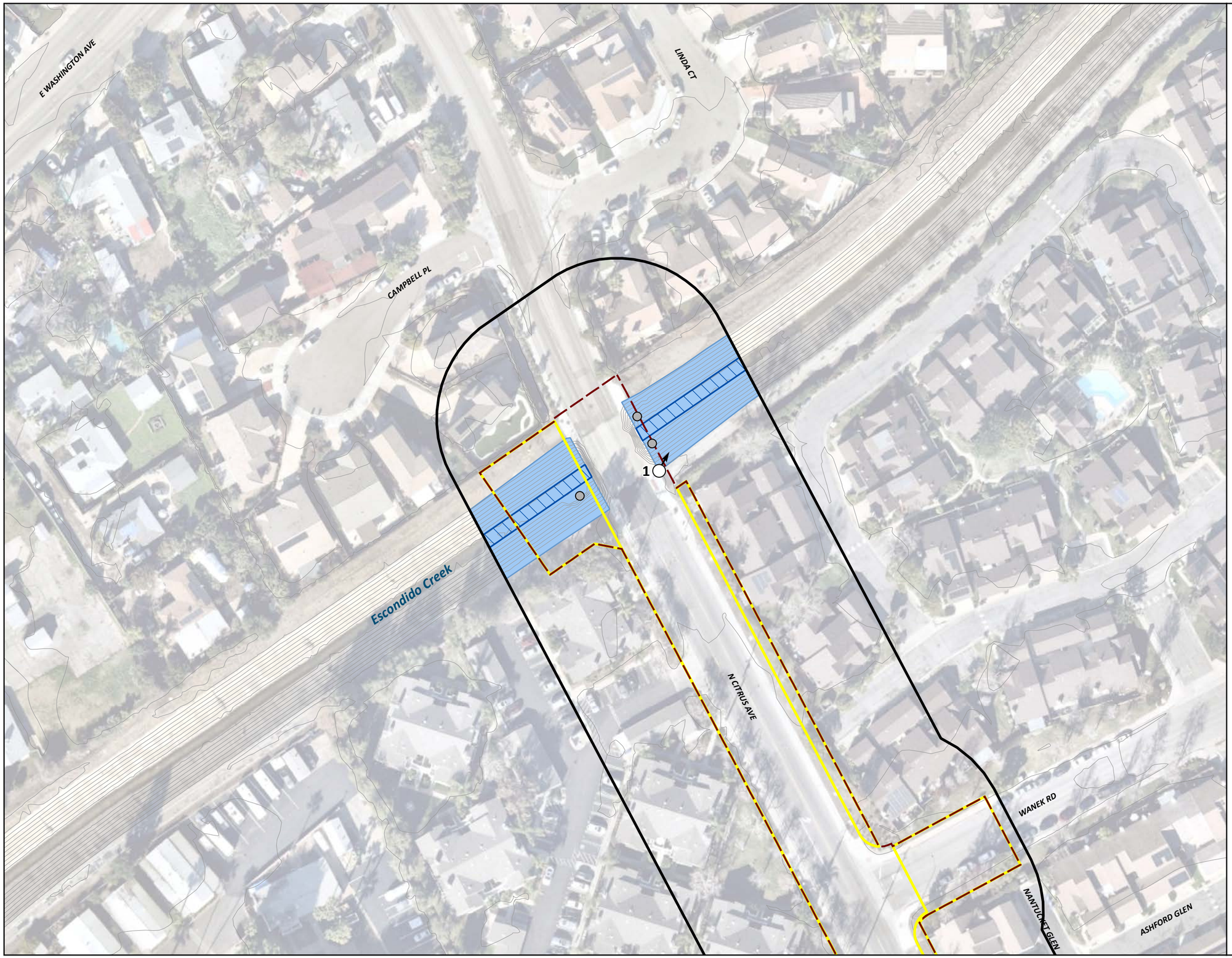
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Additional Project Impacts
Photo Location
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel



Figure 6 - Page 2 of 7

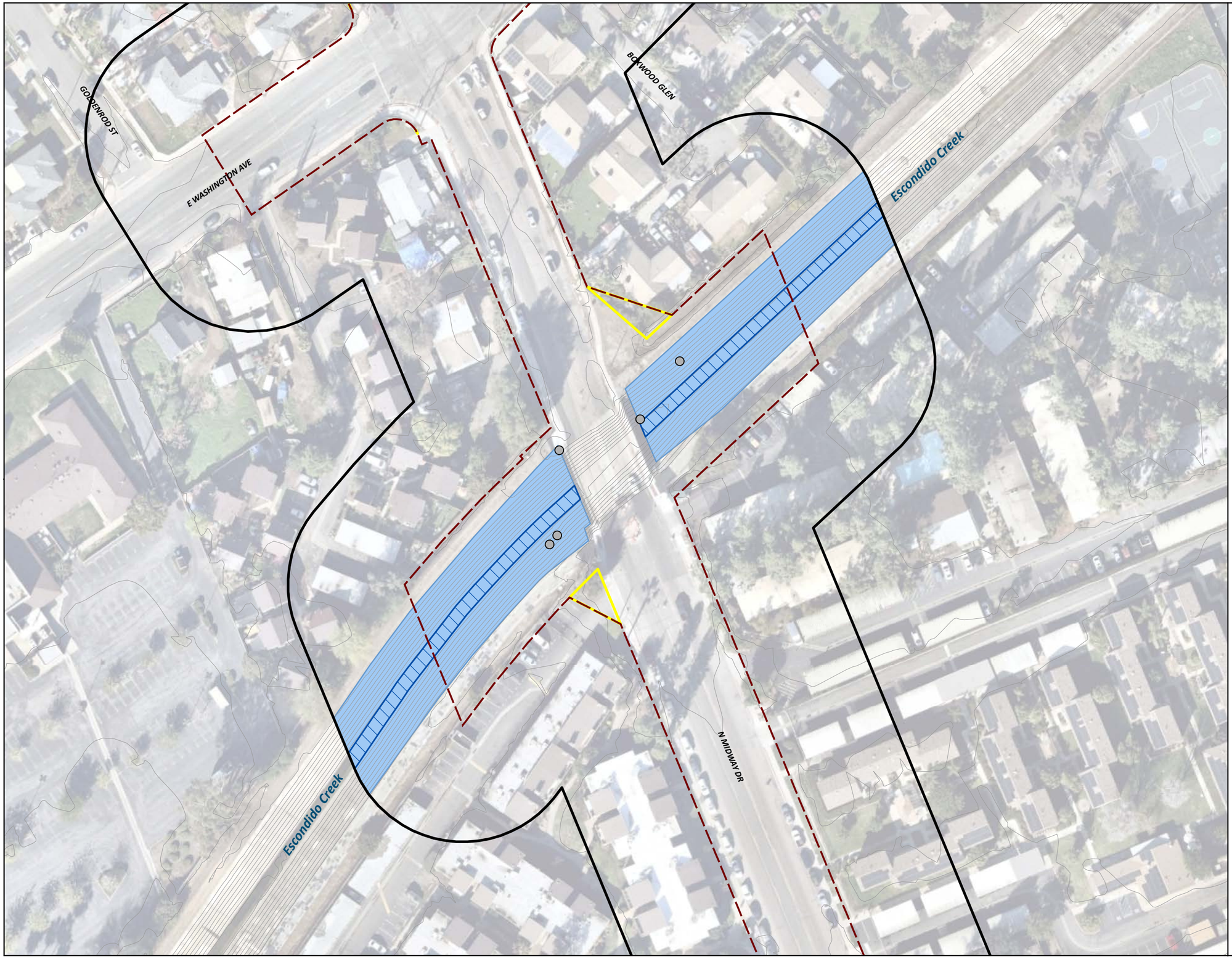
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Additional Project Impacts
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel



Figure 6 - Page 3 of 7

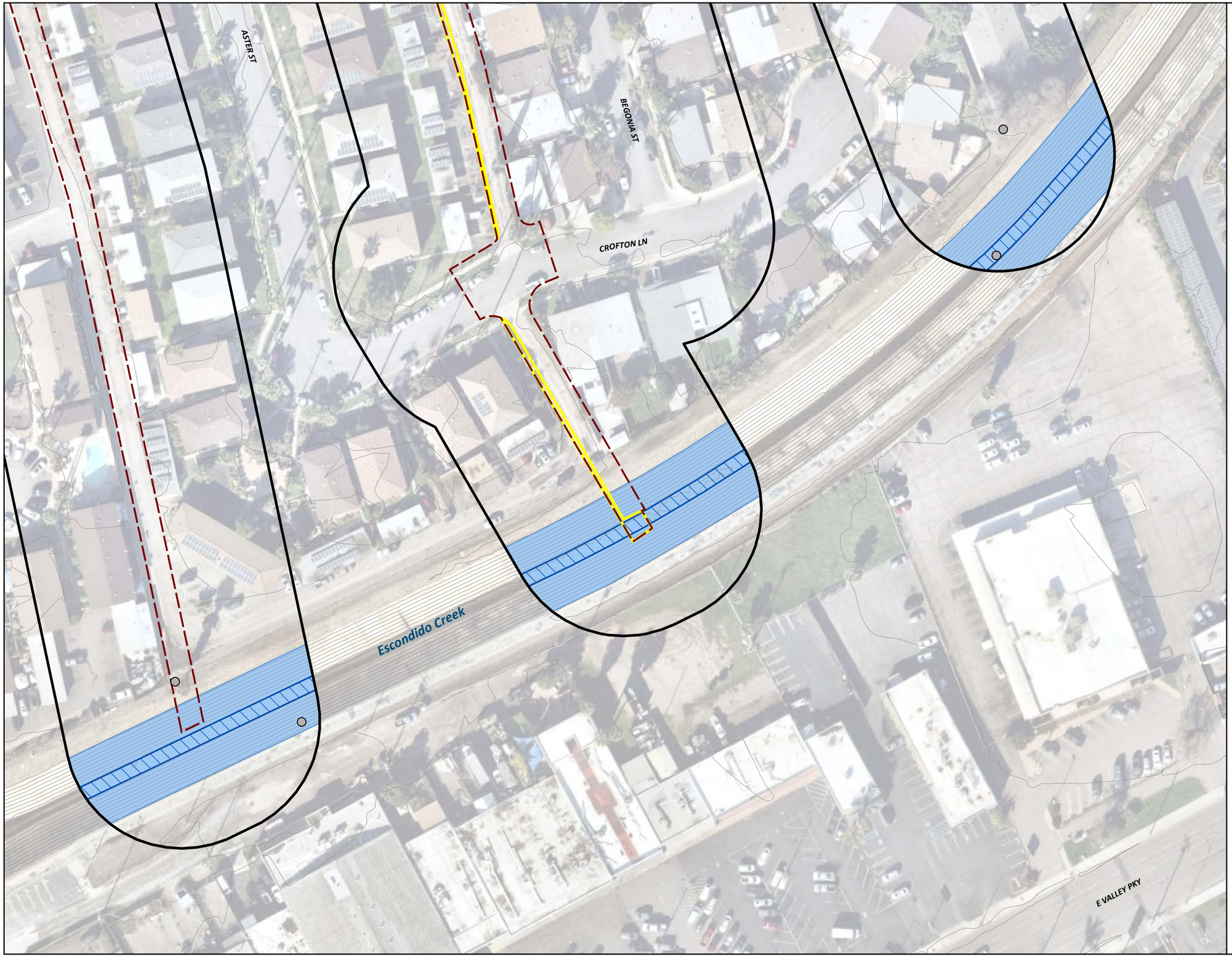
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 80 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



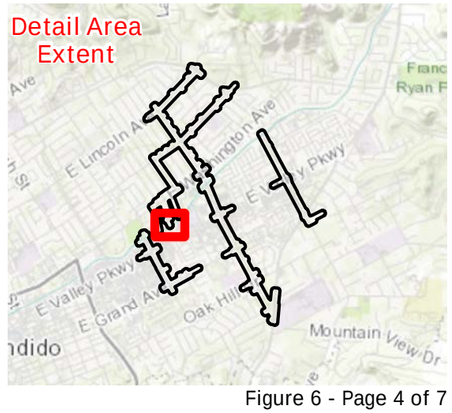
Survey Area
Project Impacts
Additional Project Impacts
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel



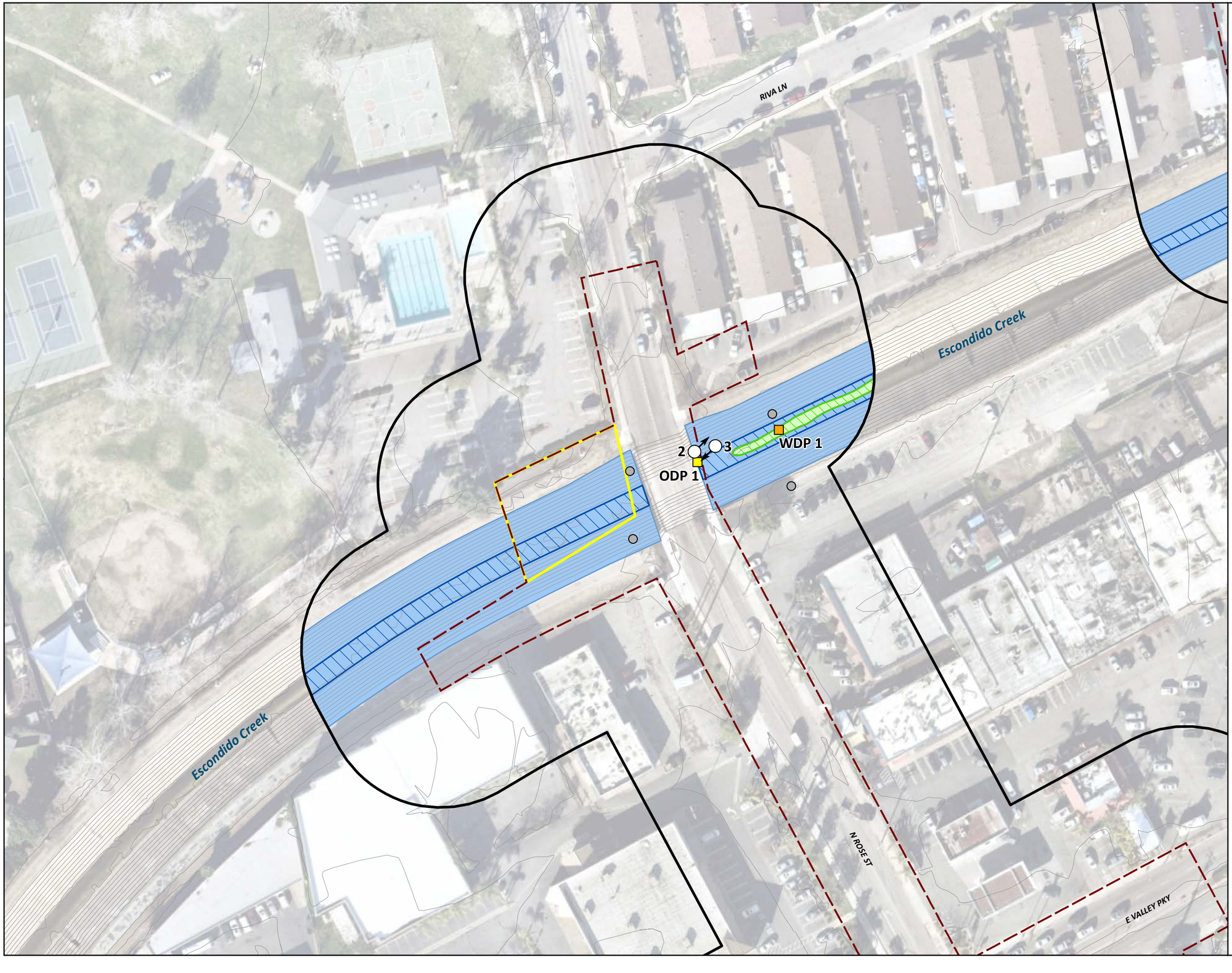
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Additional Project Impacts
Photo Location
OHWM Datasheet Point (ODP)
Wetland Data Form Point (WDP)
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-Wetland Waters - Federal Wetland (Three parameter wetland within OHWM)
Non-wetland Waters

CDFW Streambed

Freshwater Marsh
Concrete-lined Channel



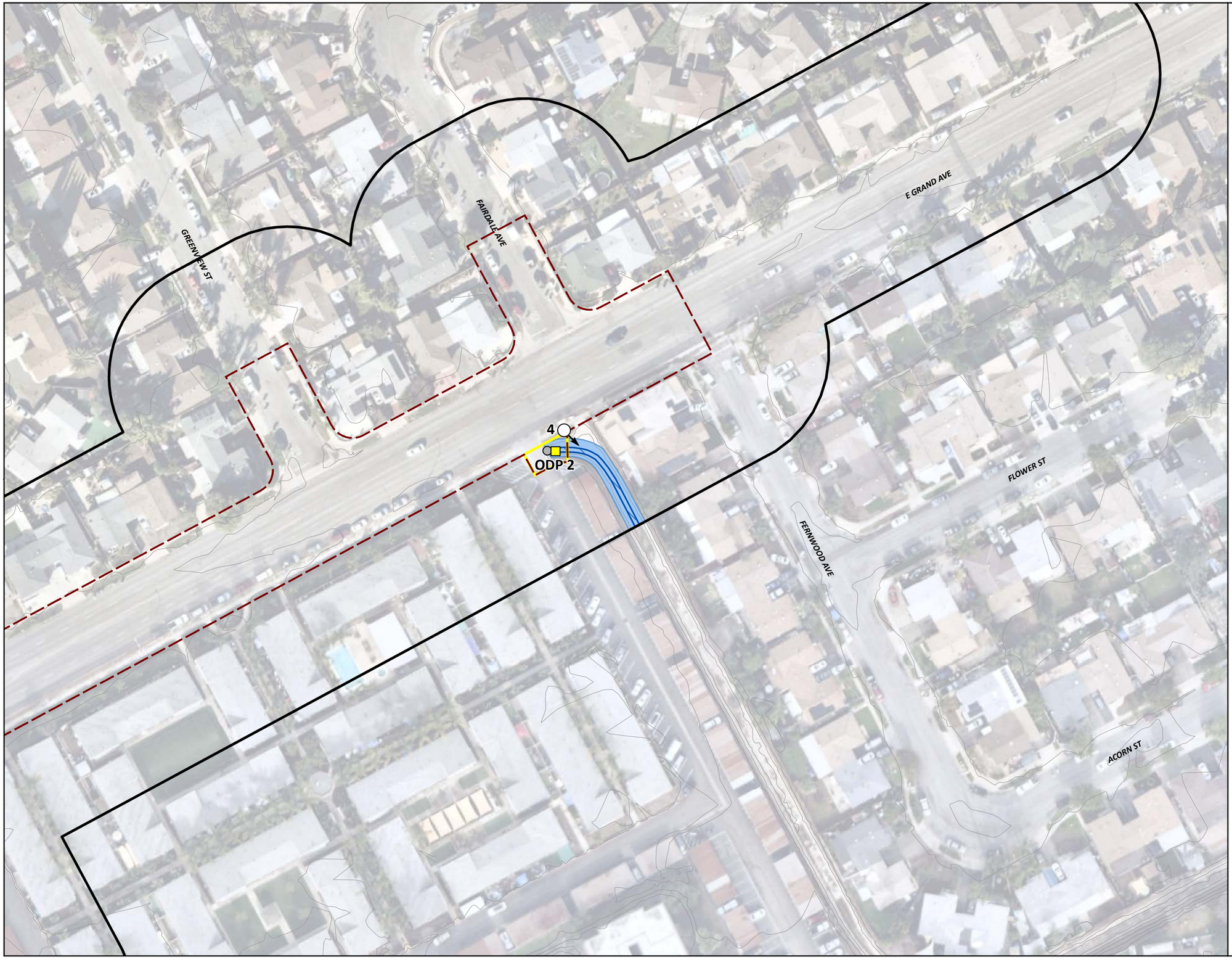
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Additional Project Impacts
Photo Location
OHWM Datasheet Point (ODP)
Culvert
Topographic Contour (2-foot Interval)

Corps/RWQCB Aquatic Resources

Non-wetland Waters

CDFW Streambed

Concrete-lined Channel



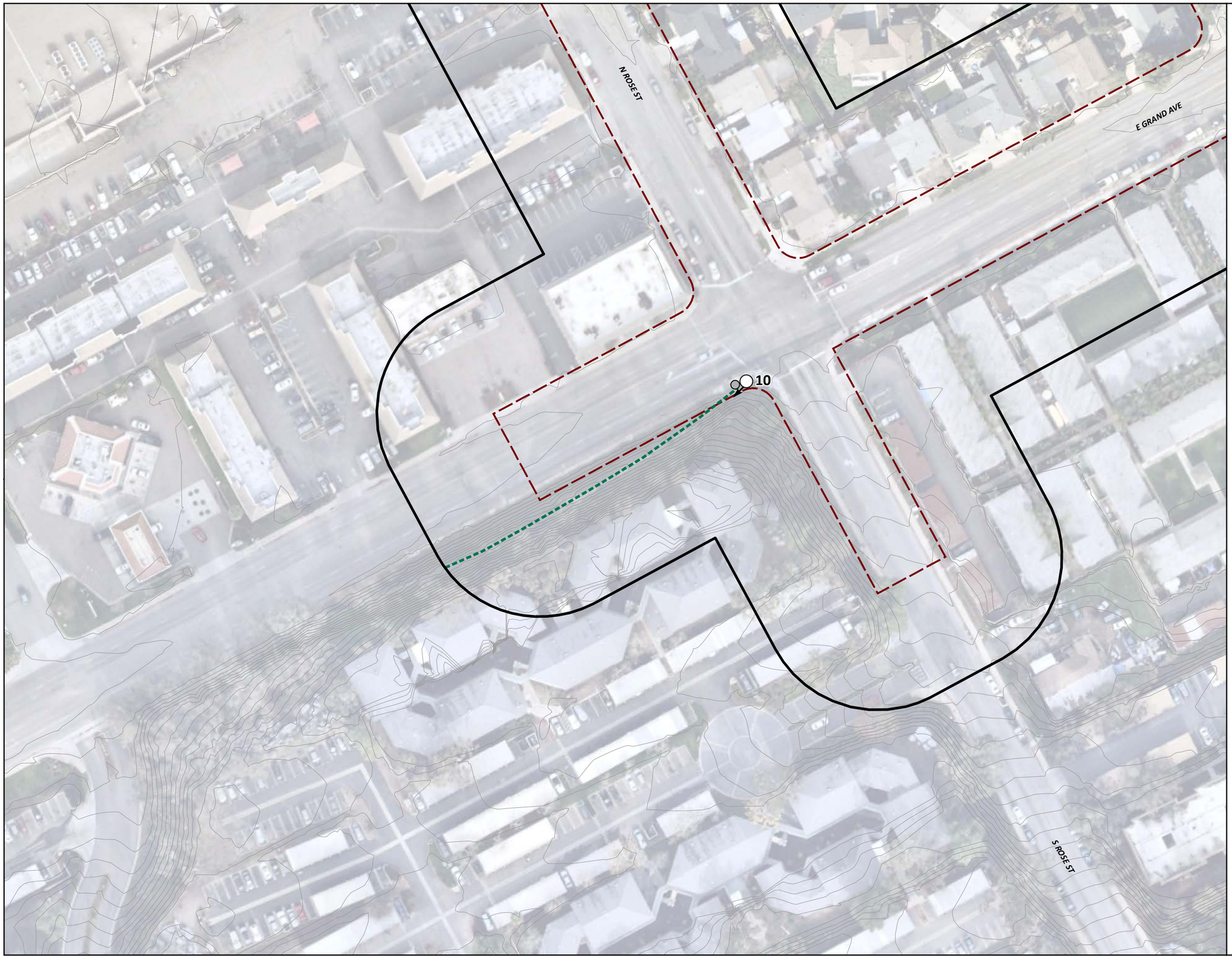
Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0 80 Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023



Survey Area
Project Impacts
Photo Location
Culvert
Topographic Contour (2-foot Interval)

Non-Jurisdictional Features

Brow Ditch



Aquatic Resources

EAST VALLEY PARKWAY & MIDWAY DRIVE
DRAINAGE IMPROVEMENTS

N
0
80
Feet

Balk Biological, Inc.

Aerial Photo: SANDAG, SanGIS, Nearmap 2023