



**Biological Resources Report for the
Alvarado Creek Apartments Project,
La Mesa, California**

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Acronyms and Abbreviations

ACOE	U.S. Army Corps of Engineers
CDFW	California Department of Fish and Wildlife
CFGF	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
HCP	Habitat Conservation Plan
I-8	Interstate 8
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Plan
project site	Alvarado Creek Apartments Project site
RWQCB	Regional Water Quality Control Board
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

1.0 Summary

The Alvarado Creek Apartments project site (project site) is located within in the city of La Mesa, California. The project proposes to construct a multi-family apartment development with associated infrastructure (i.e., road improvements, utilities, etc.). The entire project site and some adjacent off-site area (cumulatively called the survey area) were evaluated to determine the current condition of the biological resources present and to provide an impact analysis for the entire development area.

Two sensitive vegetation communities occur within the survey area; freshwater marsh and southern willow woodland. No sensitive plant or wildlife species were observed within the survey area.

The proposed project would have minor impacts to the two sensitive wetland vegetation communities present on-site. These wetland vegetation communities and other portions of the bed and bank of the creek are federal waters of the U.S. regulated by the U.S. Army Corps of Engineers (ACOE), and waters of the State regulated by the California Department of Fish and Wildlife (CDFW) and California Regional Water Quality Control Board (RWQCB). Impacts to federal and state waters require permits from ACOE, CDFW, and the RWQCB. On-site mitigation is being proposed to compensate for the permanent and temporary impacts and would involve the establishment and re-vegetation of wetlands within Alvarado Creek.

The proposed project may directly impact nesting birds on-site if construction occurs during the typical bird breeding season (i.e., February 1–September 15). To avoid direct impacts to nesting and migratory birds, a pre-construction survey would be conducted within the development footprint during the typical bird breeding season to determine the presence or absence of breeding birds and ensure that no impacts occur to any nesting birds or their eggs, chicks, or nests.

2.0 Introduction

The proposed Alvarado Creek Apartment project is located adjacent to Interstate 8 (I-8) in the city of La Mesa, California (Figure 1). The Alvarado Specific Plan is proposed as a master plan for a multi-family “transit-oriented development” on approximately 12 acres located along Alvarado Road generally between 70th Street on the west and Guava Avenue on the east, within the city of La Mesa. Construction is planned to occur in two phases. Phase 1 is planned for the properties west of the intersection of Alvarado Creek and Alvarado Road with two development parcels for Buildings 1 and 2, with a remainder parcel on the very west end of the site that will be used for parking, open space and storm water management. Phase 2, occurring on the parcel east of the intersection of Alvarado Creek and Alvarado Road, is planned for a later development schedule with a similar development concept in Building 3, and the San Diego RV Resort facilities remaining as an interim use. Each building within the Specific Plan will incorporate a variety of housing types ranging from the unique student housing options to the more traditional range of multi-family concepts including units with two- and one-bedrooms, studios, and loft units. Along the interior or southerly portions of the buildings, “liner” units are planned where lower-level units can have direct access to the interior creek-side area via a “front-stoop” concept. All buildings will include interior project amenity spaces and active outdoor spaces on the parking podium deck levels.

The project site is shown on the U.S. Geological Survey (USGS) La Mesa quadrangle in the Mission San Diego Land Grant (USGS 1994; Figure 2). Land uses adjacent to the project site include commercial and residential development with Alvarado Creek crossing through the center of the site (Figure 3). The project site is bound by I-8 and Alvarado Road to the north and the San Diego Metropolitan Transit System (MTS) Trolley Line to the south (see Figure 3). The project is not within a planned preserve area in the City of La Mesa Subarea Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) (City of La Mesa 1998).

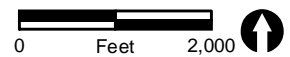
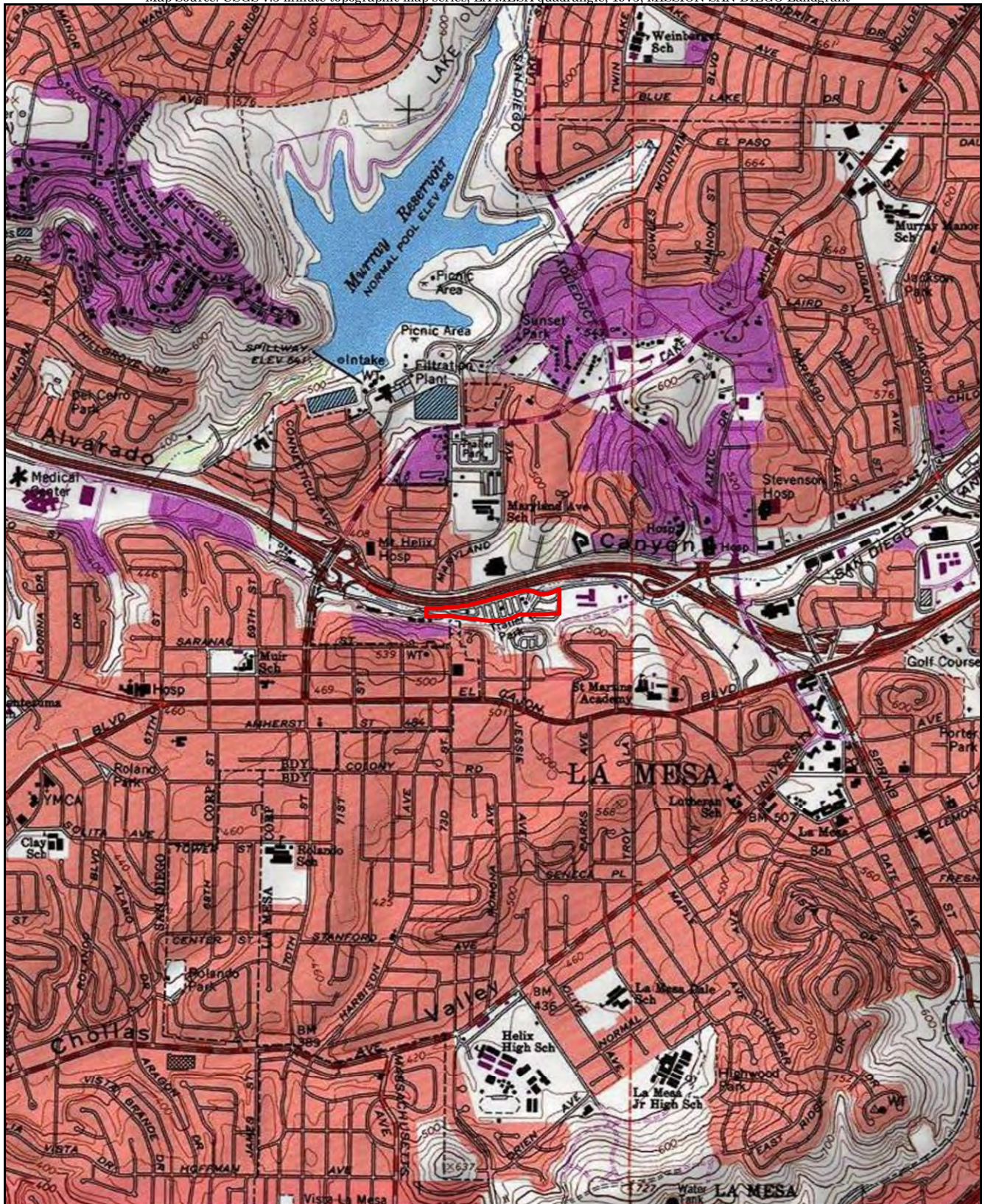
3.0 Methods and Survey Limitations

A biological survey was conducted by RECON Environmental, Inc. (RECON) biologists on January 23, 2018. The survey was conducted between 10:00 a.m. and 12:30 p.m., with the air temperature ranging from 63 to 75 degrees Fahrenheit, and wind speed ranging from zero to three miles per hour. Cloud cover during the survey was approximately zero percent. Vegetation communities and land cover types were mapped on a 1-inch-equals-150-feet aerial photograph of the survey area. Wildlife species were noted directly or detected from calls, tracks, scat, nests, or other signs. Plant species observed within the survey area were also noted.

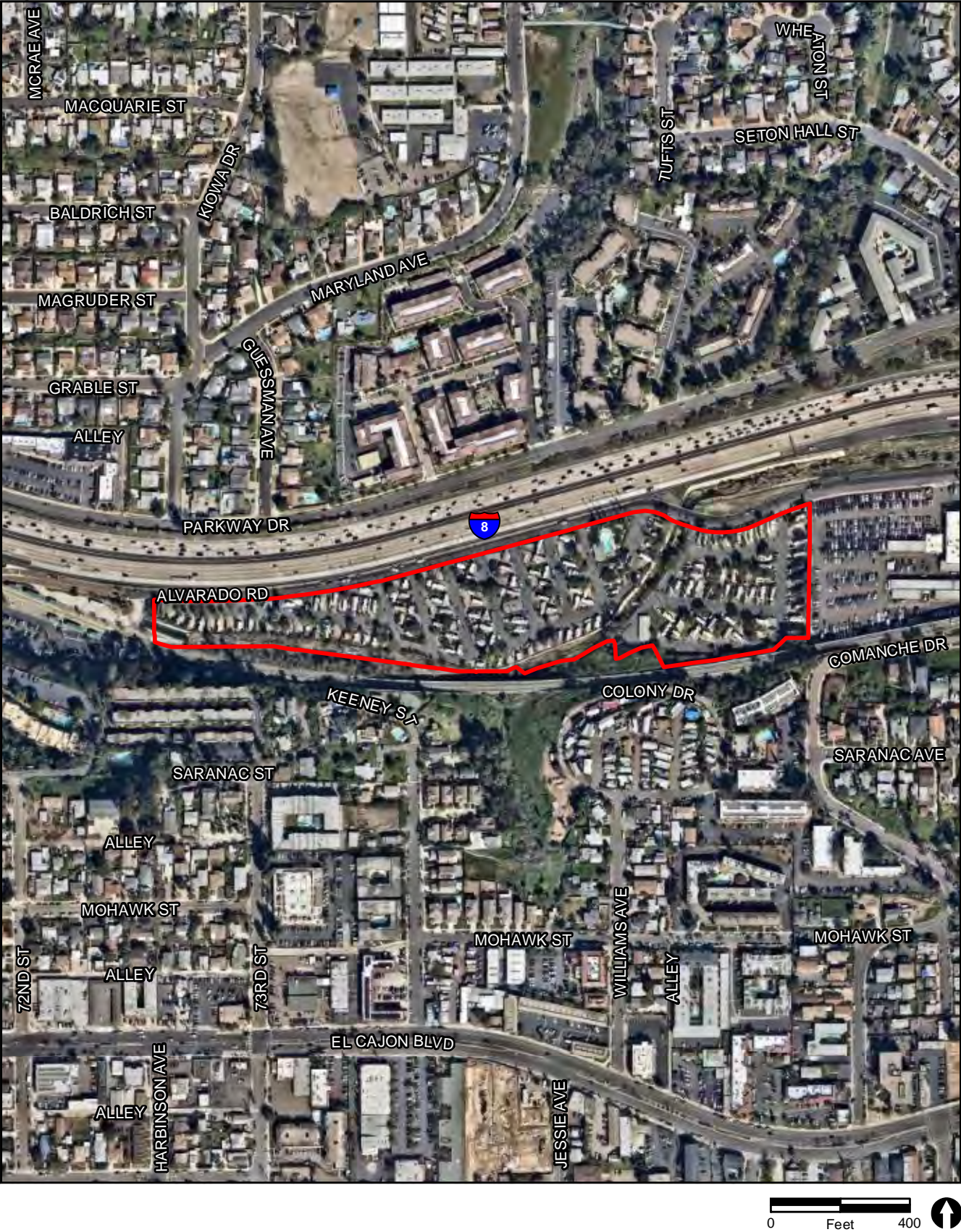


RECON

FIGURE 1
Regional Location



 Project Boundary




 Property Boundary

FIGURE 3
Project Location on Aerial Photograph

Floral nomenclature for common plants follows the Jepson Online Interchange (University of California 2018), for ornamental plants Brenzel (2001), and for sensitive plants California Native Plant Society (CNPS; 2018). Vegetation community classifications follow Oberbauer (2008), which is based on Holland's 1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (2016) and Unitt (2004); for mammals with Baker et al. (2003); and for reptiles with Crother (2008). Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon known ranges and habitat preferences for the species (Jennings and Hayes 1994; Unitt 2004; CNPS 2018; Reiser 2001), and species occurrence records from the California Natural Diversity Database (CNDDDB; State of California 2018a) and other sites in the vicinity of the survey area.

4.0 Existing Conditions

The Alvarado Creek Apartments project site is located along Alvarado Creek, a "blue line" drainage on the USGS topographical map that drains into the San Diego Aqueduct and eventually the San Diego River. Elevation ranges from approximately 395 feet above mean sea level to approximately 430 feet above mean sea level.

Three soil types, Riverwash; Redding-Urban land complex, 2 to 9 percent; and Redding-Urban land complex, 9 to 30 percent, are mapped by the U.S. Department of Agriculture (USDA; 1973) within the survey area. Riverwash soils occur in intermittent stream channels and typically consist of sand, gravel, or cobble. Riverwash soil may be devoid of vegetation in many places, or may contain sparse patches of shrubs and forbs. The soil is rapidly permeable and excessively drained (USDA 1973). Redding-Urban land complex, 2 to 9 percent and Redding-Urban land complex, 9 to 30 percent occur on marine terraces, at elevations of 200 to 500 feet. The soils in these areas has been altered through cut and fill operations and leveling for building sites. Prior to cut and fill operations and leveling, the slope was 2 to 9 percent or 9 to 30 percent, respectively (USDA 1973).

4.1 Botany

Two vegetation communities (freshwater marsh, willow woodland) and three land cover types (disturbed land, concrete channel, and urban/developed) occur on-site (Figure 4; Table 1). Plant species observed during the general survey are presented in Attachment 1.

Table 1 Vegetation Communities/Land Cover Types			
Vegetation Communities/ Land Cover Types	Existing On-site Acres	Existing Off-site Acres	Survey Area Total Acres
Freshwater Marsh	0.70	0.43	1.13
Willow Woodland	0.28	0.47	0.75
Disturbed Land	0.23	0.03	0.26
Urban/Developed Land	10.87	0.36	11.23
Concrete Channel	0.28	0.01	0.29
TOTAL	12.36	1.30	13.66

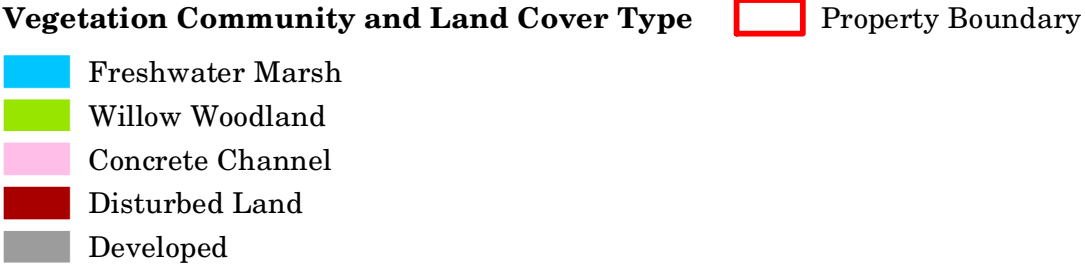


FIGURE 4
Biological Resources

4.1.1 Freshwater Marsh

Freshwater marsh occurs along Alvarado Creek on-site (Photograph 1). Freshwater marsh is a community that consists of perennial emergent monocots such as cattails (*Typha* sp.) and bulrush (*Scirpus* sp.) that typically form a closed canopy that is four to five meters tall (Oberbauer 2008). Freshwater marsh vegetation occurs in open bodies of fresh water with little current flow, such as ponds, and to a lesser extent around seeps and springs. Freshwater marsh communities, as with all wetland habitats, have been greatly reduced throughout their entire range and continue to decline as a result of urbanization.

The freshwater marsh on-site is dominated by broad-leaved cattail (*Typha latifolia*), southern bulrush (*Scirpus californica*), and Olney's three-square bulrush (*Schoenoplectus* [= *Scirpus*] *americanus*). Other plant species found in the freshwater marsh at this site include saplings of Mexican fan palm (*Washingtonia robusta*), Brazilian pepper tree (*Schinus terebinthifolius*), and scattered native trees of red willow (*Salix laevigata*) and Goodding's black willow (*Salix gooddingii*).

4.1.2 Willow Woodland

Willow woodland occurs along Alvarado Creek on the southwestern portion of the site (Photograph 2). Willow woodland is a riparian community dominated by broad-leaved, winter-deciduous willow trees (*Salix* spp.). This vegetation community is typically found along major drainages but also occurs in smaller drainages. The density of the willows typically prevents a dense understory of smaller plants from growing. The representative species typically grows in loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. This community requires repeated flooding to prevent succession to community dominated by sycamores and/or cottonwoods (Oberbauer 2008).

The willow woodland on-site is comprised of patches of trees and saplings of black willow red willow, and shrubs of mule fat (*Baccharis salicifolia*). The understory of the willow woodland is comprised of the same freshwater marsh species previously stated in the freshwater marsh section. Scattered non-native species found in this section of the creek include castor bean (*Ricinus communis*), Mexican fan palm, and Brazilian pepper tree.

4.1.3 Disturbed Land

Disturbed land on-site is present on-site south of the creek on the eastern parcel. The disturbed habitat occurs on a slope below a concrete wall associated with the MTS Trolley Line down to Alvarado Creek and along the eastern bank of the creek (Photograph 3). The slope supports a cover of ivy (*Hedera helix*), olive tree (*Olea Europa*), fennel (*Foeniculum vulgare*), and non-native grasses.



PHOTOGRAPH 1
Freshwater Marsh, Facing West. Photo Date: January 23, 2018



PHOTOGRAPH 2
Willow Woodland, Facing East. Photo Date: January 23, 2018

4.1.4 Urban/Developed

The majority of the site consists of a developed recreational vehicle park with ornamental vegetation consisting of maintained non-native landscaped areas (Photograph 4). These ornamental plants included Washington palm (*Washingtonia robusta*), Brazilian peppertree, Peruvian peppertree (*Schinus molle*), American century plant (*Agave americana*), and bird of paradise flower (*Strelitzia* sp.).

4.1.5 Concrete Channel

Portions of Alvarado Creek at the box culvert crossing at Alvarado Road and the box culvert inlet near the trolley station at the west end of the project have been covered in concrete to control erosion and stabilize the creek bed (Photograph 5). In addition, portions of the northern bank of the creek are also covered in concrete to stabilize the bank from erosive forces.

4.2 Zoology

The wildlife species observed within the survey area are typical for occurrence in urban in San Diego County. Even though a creek passes through the site, the number and variety of species present is limited probably due to the excess noise on-site from I-8 and the MTS Trolley Line, which border the project site. A complete list of the species detected is provided in Attachment 2.

5.0 Sensitive Biological Resources

The applicable federal, state, and local regulations for protecting sensitive biological resources are summarized below, followed by a detailed discussion of the specific sensitive resources with potential to occur on-site.

The assessments of potential species occurrence are based upon on-site conditions, known species ranges and habitat preferences, recorded species occurrences from the CNDDB, and species occurrence records from other sites in the vicinity of the survey area. These sensitive biological resources are discussed in further detail below.

5.1 Sensitivity Criteria/Regulatory Setting

For purposes of this report, species will be considered sensitive if they are: (1) covered species under the City of La Mesa NCCP; (2) listed by state or federal agencies as threatened or endangered or are proposed for listing (State of California 2018b, 2018c, 2017a, 2017b); or (3) on California Rare Plant Rank (CRPR) 1B (considered endangered throughout its range) or CRPR 2 (considered endangered in California but more common elsewhere) of the CNPS Inventory of Rare and Endangered Vascular Plants of California (2018). Noteworthy plant species are considered those on CRPR 3 (more information about the plant's distribution and rarity needed) and CRPR 4 (plants of limited distribution) of the CNPS Inventory (2018).



PHOTOGRAPH 3
Disturbed Land, Facing East. Photo Date: January 23, 2018



PHOTOGRAPH 4
Urban/Developed Land, Facing West. Photo Date: January 23, 2018



PHOTOGRAPH 5

The Box Culvert Inlet Near the Trolley Station, Facing West.

Photo Date: January 23, 2018

The Migratory Bird Treaty Act (MBTA) was established to provide protection to the breeding activities of migratory birds throughout the U.S. The MBTA protects migratory birds and their breeding activities from deliberate take. Incidental or accidental takes does not apply to MBTA.

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.3 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (raptors) or Strigiformes (owls), or of their nests and eggs (State of California 1991).

5.2 Sensitive Vegetation Communities

Two sensitive vegetation communities occur within the survey area; freshwater marsh and willow woodland. The locations of the two sensitive vegetation communities are shown on Figure 4.

5.3 Sensitive Plants

No species covered by the City of La Mesa Subarea HCP/NCCP (City of La Mesa 1998) were observed during the survey and are none expected to occur within the survey area. A comprehensive list of sensitive plant species with the potential for occurrence within the survey area is presented in Attachment 3, and includes those species with a potential for occurrence based on species range and habitat conditions.

5.4 Sensitive Wildlife Species

No sensitive wildlife species were detected within the survey area. Although riparian habitat is present within the survey area, there is low potential for the site to support least Bell's vireo (*Vireo bellii pusillus*), a federal and state listed endangered species, due to level of disturbance within the creek and lack of vegetation within the understory. All sensitive wildlife species known to occur in the project vicinity (within one mile of the survey area) that are federally listed threatened or endangered, or that have potential to occur based on species range are evaluated in Attachment 4.

5.5 Wildlife Movement Corridor

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors are important, because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife movement corridors are considered sensitive by resource and conservation agencies.

Alvarado Creek, within the survey area, does currently function as a local wildlife movement corridor. The creek flows east to west, into the site from and drains underground at the western end of the project site. The remainder of the site does not serve as a wildlife corridor. Although a portion of the site may function for local wildlife movement, the site is not a significant regional wildlife corridor as it does not connect large blocks of habitat or provide a throughway for wildlife species into major areas of off-site habitats.

5.6 Federal and State Jurisdictional Waters

A wetland delineation was conducted within the survey area to map the extent of federal and state jurisdictional waters (Attachment 5). ACOE federal waters of the U.S. and CDFW and RWQCB waters of the State occur within the survey area associated with Alvarado Creek (Table 2; Figures 5a and 5b, respectively). Federal and state wetlands include all areas of the creek vegetated with either freshwater marsh or willow woodland habitat. Federal non-wetland waters include the concrete lined portions of the creek bottom. State streambed and bank include the concrete lined portions of the creek bottom as well as the concrete lined and earthen banks.

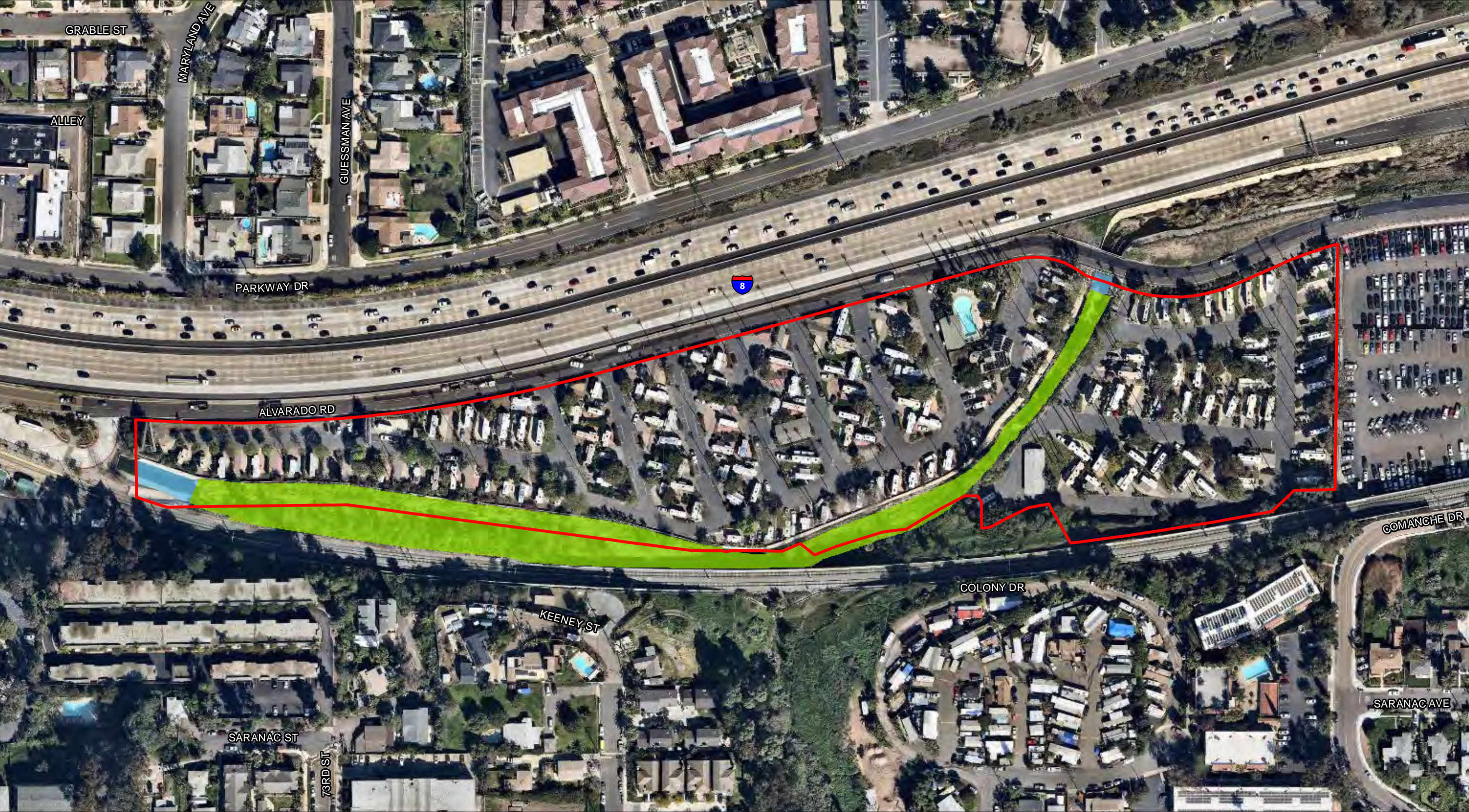
Table 2 Summary of Federal and State Jurisdictional Waters (acres)			
Jurisdiction	On-site	Off-site	Total
Federal Waters of the U.S. (ACOE)			
Wetland	0.98	0.90	1.88
Non-wetland Water	0.09	--	0.09
TOTAL Waters of the U.S.	1.07	0.90	1.97
Waters of the State (RWQCB, CDFW)			
Wetland	0.98	0.90	1.88
Streambed/Bank	0.37	0.02	0.39
TOTAL Waters of the State	1.35	0.92	2.27

6.0 Project Impacts

Impacts to biological resources due to the proposed project are discussed below. Mitigation would be required for impacts that are considered significant.

6.1 Vegetation Communities

Both permanent and temporary impacts to vegetation communities/land cover types would occur from the proposed project (Tables 3a and 3b; Figure 6). Permanent and temporary impacts to freshwater marsh and willow woodland are significant and require mitigation (City of La Mesa 1998). Impacts to disturbed land and urban/developed are not considered significant and do not require mitigation. Impacts to concrete channel are discussed in the jurisdictional waters section below.



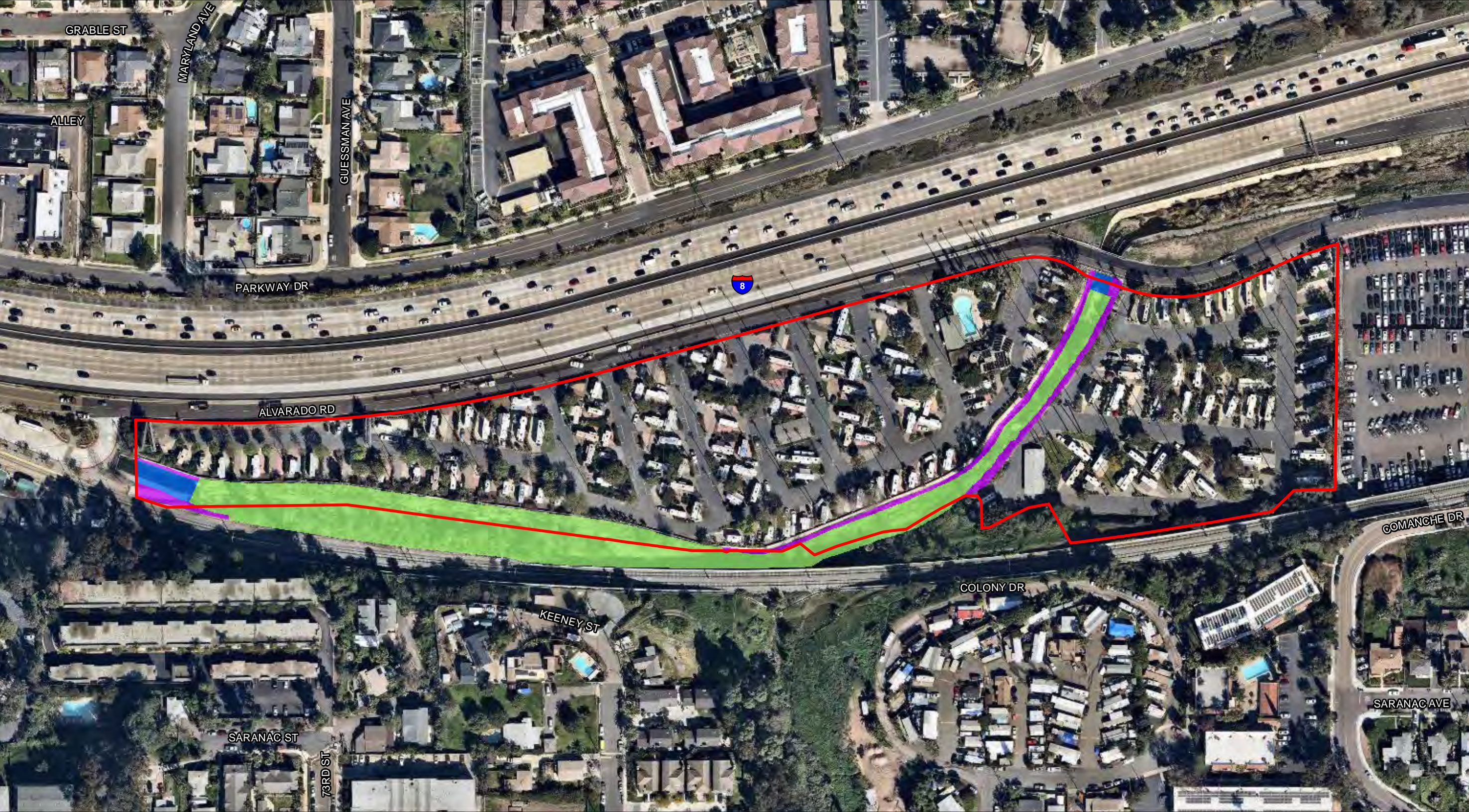
Waters of the US (ACOE) **Property Boundary**

Non-wetland Waters

Wetland Waters

0 Feet 150

FIGURE 5a
Location of Federal Waters of the U.S.



Waters of the State (RWQCB, CDFW) **Property Boundary**

Streambed
 Riparian
 Bank

0 Feet 150 

FIGURE 5b
Location of Waters of the State

Table 3a
Summary of Permanent Impacts to Vegetation Communities and Land Cover Types
(acres)

Vegetation Community/Land Cover Type	On-site	Off-site	TOTAL
Freshwater Marsh	0.01	0.0	0.01
Willow Woodland	0.02	0.0	0.02
Disturbed Land	0.05	0.0	0.05
Developed	10.74	0.35	11.09
Concrete Channel	0.03	0.0	0.03
TOTAL	10.85	0.35	11.2

Table 3b
Summary of Temporary Impacts to Vegetation Communities and Land Cover Types
(acres)

Vegetation Community/Land Cover Type	On-site	Off-site	TOTAL
Freshwater Marsh	0.03	0.01	0.04
Willow Woodland	0.01	0.0	0.01
Disturbed Land	0.06	0.02	0.08
Developed	0.12	0.01	0.13
Concrete Channel	0.10	0.02	0.12
TOTAL	0.32	0.06	0.38

6.2 Sensitive Plant Species

No impacts are anticipated to occur to sensitive plant species as none occur in the survey area.

6.3 Sensitive Wildlife Species

No impacts are anticipated to occur to sensitive wildlife species as none occur in the survey area. There is a potential for the project to have direct impacts on nesting and migratory bird or raptor species from the removal of trees within the project boundary. Direct impacts to nesting and migratory birds or raptors are significant, but can be avoided through by conducting pre-construction surveys.

6.4 Wildlife Movement Corridor

Although Alvarado Creek functions as a local wildlife movement corridor, any work conducted on the creek will be temporary and no permanent change in wildlife movement will result from this work. Therefore, the project would not interfere substantially with the movement of any wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.



Vegetation Community and Land Cover Type

- Freshwater Marsh
- Willow Woodland
- Concrete Channel
- Disturbed Land
- Developed

Impact

- Permanent
- Temporary
- Property Boundary
- Project Plan Lines

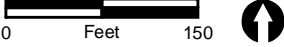


FIGURE 6
Location of Impacts to Biological Resources

6.5 Federal and State Jurisdictional Waters

Permanent and temporary impacts to federal and state jurisdictional waters would occur as a result of the project (Tables 4a and 4b; Figures 7a and 7b). These minor impacts would occur along the banks of Alvarado Creek due to the removal and replacement of the retaining walls and concrete banks, and in the creek bed from the removal of a gas line and to connect to existing sewer lines. All impacts to federal and state jurisdictional waters are considered significant and require resource agency permits as well as mitigation.

Table 4a Summary of Permanent Impacts to Federal and State Jurisdictional Waters (acres)			
Jurisdiction	On-site	Off-site	Total
Federal Waters of the U.S. (ACOE)			
Wetland	0.025	0	0.025
Non-wetland Water	0	0	0
TOTAL Waters of the U.S.	0.025	0	0.025
Waters of the State (RWQCB, CDFW)			
Wetland	0.025	0	0.025
Streambed/Bank	0.056	0	0.056
TOTAL Waters of the State	0.081	0	0.081

Table 4b Summary of Temporary Impacts to Federal and State Jurisdictional Waters (acres)			
Jurisdiction	On-site	Off-site	Total
Federal Waters of the U.S. (ACOE)			
Wetland	0.039	0.006	0.045
Non-wetland Water	0	0.008	0.008
TOTAL Waters of the US	0.039	0.014	0.053
Waters of the State (RWQCB, CDFW)			
Wetland	0.039	0.006	0.045
Streambed/Bank	0.164	0.018	0.182
TOTAL Waters of the State	0.203	0.024	0.227

7.0 Mitigation

Mitigation is required for all project impacts that are considered significant under the California Environmental Quality Act (City of La Mesa 1998). Impacts to sensitive biological resources should be avoided to the maximum extent feasible and minimized prior to proposing mitigation whenever possible. Mitigation is intended to reduce the impacts to below a level of significance.

7.1 Sensitive Vegetation Communities

Mitigation for impacts to freshwater marsh and willow woodland are covered under the jurisdictional waters section below.








Waters of the US (ACOE)		Impact		Property Boundary
	Non-wetland Waters		Permanent	
	Wetland Waters		Temporary	



FIGURE 7a
Location of Impacts to Federal Waters of the U.S.



Waters of the State (RWQCB, CDFW)

Streambed

Riparian

Bank

Impact

Permanent

Temporary

Property Boundary



FIGURE 7b
Location of Impacts to Waters of the State

7.2 Migratory Birds

Avoidance of significant impacts to nesting and migratory birds is required under the California Fish and Game Code 3503 (CFGF). To conform to the CFGF, no direct impacts should occur to any nesting birds or their eggs, chicks, or nests during the typical bird breeding season of February 1 to September 15. To avoid impacts to nesting bird species a qualified biologist shall conduct a pre-grading survey for active nests in the development footprint if project grading and/or brush management is proposed during the bird breeding season. If active bird nests are located, nest avoidance measures would be required in accordance with the CFGF.

7.3 Federal and State Jurisdictional Waters

Prior to impacts to any federal or state jurisdictional waters, the applicant shall procure a 404 permit from ACOE, a 401 State Water Quality Certification from RWQCB, and a 1602 Streambed Alteration Agreement from CDFW. These permits would require compensate for the impacts to wetlands and non-wetland waters/streambed.

Compensation for the permanent and temporary impacts to federal and state jurisdictional waters (i.e., wetlands, non-wetland/streambed/bank and associated sensitive vegetation communities) will take place on-site within Alvarado Creek. The compensation would involve the revegetation of temporarily impacted areas of the creek and establishment of new wetlands in areas of the creek that were created where the creek bed was widened (Table 5; Figure 8).

Table 5 Summary of Proposed On-site Jurisdictional Waters Mitigation (acres)			
Vegetation Community/Land Cover Type	On-site	Off-site	TOTAL
Wetland Establishment	0.12	0.02	0.14
Wetland Re-vegetation	0.21	0.01	0.22
TOTAL	0.33	0.03	0.36

Native wetland plant species, including broad-leaved cattail, Olney's three-square bulrush, and southern bulrush would be planted as one-gallon container stock in the re-vegetation and establishment compensation areas of the creek to restore wetland habitat and functions impacted by the project. The compensation areas would be maintained and monitored initially for a period of five years as outlined in a Habitat Restoration Plan and per any resource agency permit requirements.

Alvarado Creek, within the limits of the property, will be preserved and enhanced as part of the long-term management of the creek environment. Non-native plants would continue to be removed from the creek and a long-term maintenance agreement would be established. Long-term maintenance and management of Alvarado Creek within the ownership would be addressed in a separate management plan. Over time, the amount of non-native species in this reach of the creek will diminish and the effort needed to control these species reduced.

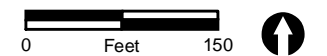
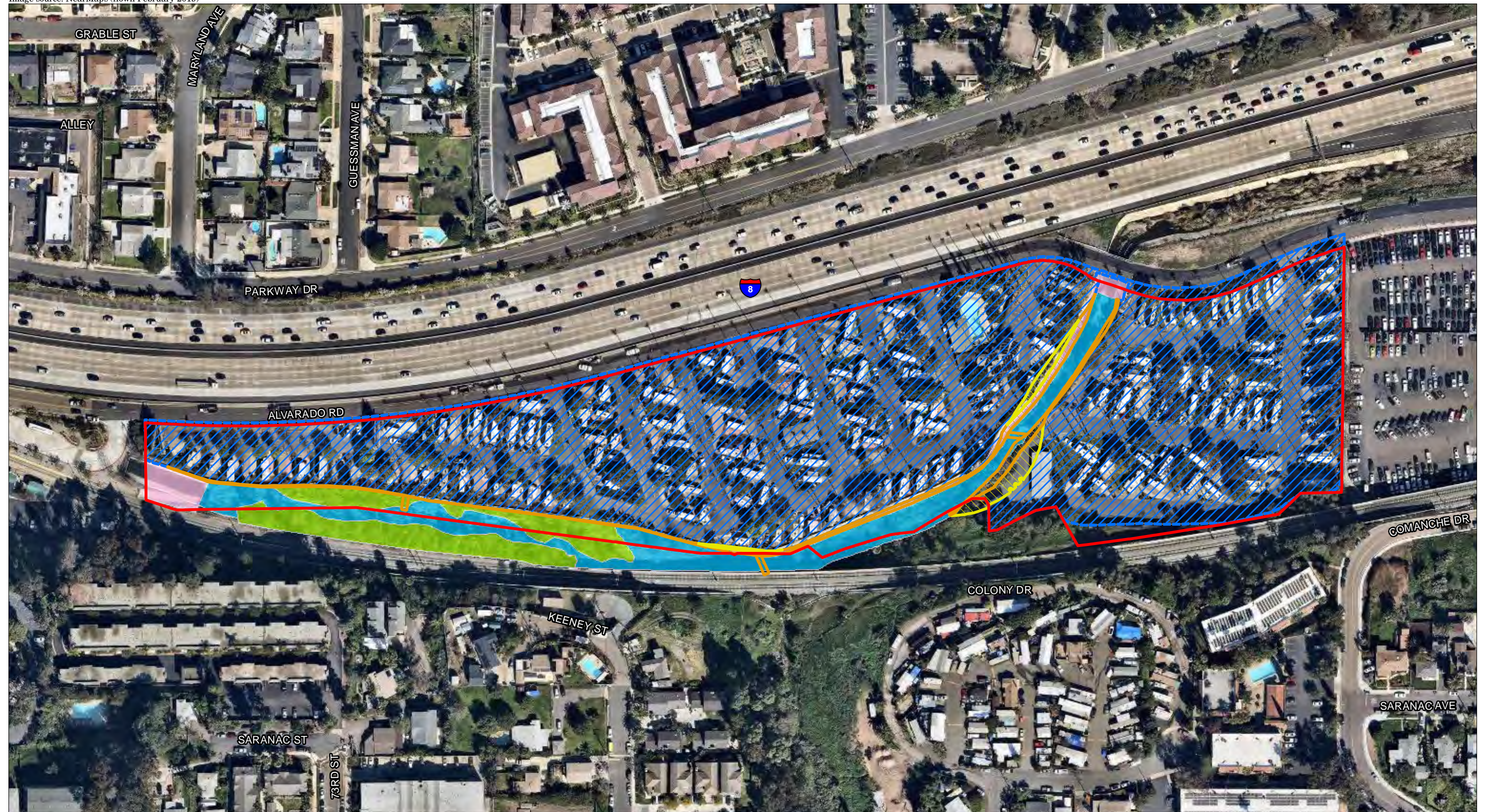


FIGURE 8
Location of Wetland Mitigation Areas

Other long-term maintenance tasks that may be required is when large woody vegetation becomes established in numbers that cause flooding to be exacerbated upstream of the property. Selective thinning of the woody vegetation may be required to limit impedance of flows and thus reduce upstream flooding issues.

7.4 Standard Construction Measures

Mitigation for general impacts to biological resources would be incorporated via standard measures including general mitigation measures and biological protections during construction, as described below.

Biological Resource Protection During Construction

I. Prior to Construction

- A. **Biologist Verification** – The owner/permittee shall designate a Project Biologist (Qualified Biologist) to be retained to implement the project's biological monitoring program.
- B. **Preconstruction Meeting** – The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program.
- C. **Avian Protection Requirements** – To avoid any direct impacts to any avian species identified as listed, candidate, sensitive, or special status, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a preconstruction survey to determine the presence or absence of nesting for these three sensitive bird species on the proposed area of disturbance. The preconstruction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the preconstruction survey to the City of La Mesa for review and approval prior to initiating any construction activities. If nesting activities for any sensitive bird species are detected, a letter report or mitigation plan in conformance with applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City of La Mesa for review and approval and implemented to the satisfaction of the City.
- D. **Resource Delineation** – Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats.
- E. **Education** – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive biological resources.

II. During Construction

- A. **Monitoring** – All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on the approved grading plans. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the preconstruction surveys.
- B. **Subsequent Resource Identification** – The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on-site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

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ATTACHMENTS

ATTACHMENT 1

Plant Species Observed

**Attachment 1
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
ANGIOSPERMS: MONOCOTS			
AGAVACEAE	AGAVE FAMILY		
<i>Agave americana</i> L.	American century plant	URB	I
ARECACEAE	PALM FAMILY		
<i>Washingtonia robusta</i> H. Wendl.	Mexican fan palm	FWM, WW, DIST, URB	I
CYPERACEAE	SEDGE FAMILY		
<i>Cyperus involucratus</i> [= <i>Cyperus alternifolius</i>] Rottb.	African umbrella plant	FWM	I
<i>Schoenoplectus</i> [= <i>Scirpus</i>] <i>americanus</i> (Pers.) Volkart ex Schinz & R. Keller	Olney's three-square bulrush	FWM	N
<i>Schoenoplectus</i> [= <i>Scirpus</i>] <i>californicus</i> (C.A. Mey.) Soják	southern bulrush	FWM	N
MUSACEAE	BANANA FAMILY		
<i>Musa</i> sp.	banana	URB	I
POACEAE (GRAMINEAE)	GRASS FAMILY		
<i>Arundo donax</i> L.	giant reed	WW	I
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	FWM	I
<i>Pennisetum setaceum</i> (Forssk.) Chiov.	crimson fountain grass	FWM	I
<i>Stipa miliacea</i> (L.) Hoover var. <i>miliacea</i> [= <i>Piptatherum miliaceum</i> ssp. <i>miliaceum</i> and <i>Oryzopsis miliacea</i>]	smilo grass	DIST	I
STRELITZIACEAE	BRODIAEA FAMILY		
<i>Strelitzia</i> sp.	bird of paradise flower	URB	I
TYPHACEAE	CATTAIL FAMILY		
<i>Typha latifolia</i> L.	broad-leaved cattail	FWM, WW	N
ADOXACEAE	ADOXA FAMILY		
<i>Sambucus nigra</i> L. ssp. <i>caerulea</i> (Raf.) Bolli [= <i>Sambucus mexicana</i>]	blue elderberry	DIST	N
AIZOACEAE	FIG-MARIGOLD FAMILY		
<i>Carpobrotus edulis</i> (L.) N.E. Br.	freeway iceplant	DIST	I
ANACARDIACEAE	SUMAC OR CASHEW FAMILY		
<i>Schinus molle</i> L.	Peruvian pepper tree	URB	I
<i>Schinus terebinthifolius</i> Raddi	Brazilian pepper tree	FWM, WW, URB	I
APIACEAE (UMBELLIFERAE)	CARROT FAMILY		
<i>Foeniculum vulgare</i> Mill.	fennel	FWM, DIST	I

Attachment 1
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
APOCYNACEAE	DOGBANE FAMILY		
<i>Nerium oleander</i> L.	common oleander	URB	I
<i>Hedera helix</i> L.	English ivy	DIST	I
ASTERACEAE	SUNFLOWER FAMILY		
<i>Baccharis pilularis</i> DC.	chaparral broom, coyote brush	DIST	N
<i>Baccharis salicifolia</i> (Ruiz & Pav.) Pers. ssp. <i>salicifolia</i>	mule fat, seep-willow	FWM	N
<i>Helminthotheca</i> [= <i>Picris</i>] <i>echioides</i> (L.) Holub	bristly ox-tongue	FWM	I
<i>Sonchus asper</i> (L.) Hill ssp. <i>asper</i>	prickly sow thistle	FWM	I
BRASSICACEAE (CRUCIFERAE)	MUSTARD FAMILY		
<i>Nasturtium officinale</i> [= <i>Rorippa nasturtium-aquaticum</i>] W.T. Aiton	water cress	FWM	N
CONVOLVULACEAE	MORNING-GLORY FAMILY		
<i>Ipomoea purpurea</i> (L.) Roth.	common morning-glory	WW	I
EUPHORBIACEAE	SPURGE FAMILY		
<i>Ricinus communis</i> L.	castor bean	FWM, WW	I
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY		
<i>Acacia redolens</i> Maslin	vanilla-scented wattle	DIST	I
GERANIACEAE	GERANIUM FAMILY		
<i>Erodium cicutarium</i> (L.) L'Hér. ex Aiton	redstem filaree	DIST	I
<i>Erodium texanum</i> A. Gray	Texas filaree	DIST	N
MALVACEAE	MALLOW FAMILY		
<i>Malva parviflora</i> L.	cheeseweed, little mallow	DIST	I
MYRTACEAE	MYRTLE FAMILY		
<i>Eucalyptus</i> sp.	gum tree	URB	I
<i>Melaleuca viminalis</i> (Sol. ex Gaertn.) Bymes	weeping bottlebrush	FWM	I
OLEACEAE	OLIVE FAMILY		
<i>Olea europaea</i> L.	olive	DIST	I
OXALIDACEAE	OXALIS FAMILY		
<i>Oxalis pes-caprae</i> L.	Bermuda buttercup	DIST	I
ROSACEAE	ROSE FAMILY		
<i>Heteromeles arbutifolia</i> (Lindl.) M. Roem.	toyon, Christmas berry	DIST	N

Attachment 1 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
SALICACEAE	WILLOW FAMILY		
<i>Salix gooddingii</i> C.R. Ball.	Goodding's black willow	FWM, WW	N
<i>Salix lasiolepis</i> Benth.	arroyo willow	FWM, WW	N
SCROPHULARIACEAE	FIGWORT FAMILY		
<i>Myoporum laetum</i> G. Forst.	ngaio tree	URB	I
SOLANACEAE	NIGHTSHADE FAMILY		
<i>Datura wrightii</i> Regel	western Jimson weed	DIST	N
<i>Nicotiana glauca</i> Graham	tree tobacco	FWM	I
TROPAEOLACEAE	NASTURTIUM FAMILY		
<i>Tropaeolum majus</i> L.	garden nasturtium	WW	I
HABITATS DIST = Disturbed Land FWM = Freshwater marsh WW = Willow Woodland URB = Urban/Developed		ORIGIN N = Native to locality I = Introduced species from outside locality (I) = Introduced species to the ecoregion in which the survey occurred; however, native to other ecoregions within San Diego County.	

ATTACHMENT 2

Sensitive Plant Species Observed or with the Potential for Occurrence

**Attachment 2
Wildlife Species Observed**

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
INVERTEBRATES (Nomenclature for fairy shrimp from Eriksen and Belk 1999; for spiders and insects from Evans 2008; for butterflies from San Diego Natural History Museum 2002)				
APIDAE	HONEY BEES			
<i>Apis mellifera</i>	honey bee (I)	DIST		O
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES			
<i>Nymphalis antiopa</i>	mourning cloak	URB, FWM		O
AMPHIBIANS (Nomenclature from Crother et al. 2008)				
BUFONIDAE	TRUE TOADS			
<i>Anaxyrus boreas halophilus</i>	southern California toad	FWM		V
BIRDS (Nomenclature from American Ornithologists' Union 2016 and Unitt 2004)				
ACCIPITRIDAE	HAWKS, KITES, & EAGLES			
<i>Buteo lineatus elegans</i>	red-shouldered hawk	FO	F / Y	V
COLUMBIDAE	PIGEONS & DOVES			
<i>Zenaida macroura marginella</i>	mourning dove	FO	C / Y	O, V
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte anna</i>	Anna's hummingbird	FWM, WW	C / Y	V
<i>Selasphorus sasin</i>	Allen's hummingbird	FWM, WW	C / M	O, V
PICIDAE	WOODPECKERS & SAPSUCKERS			
<i>Picoides nuttallii</i>	Nuttall's woodpecker	URB, WW	C / Y	V
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Sayornis nigricans semiatra</i>	black phoebe	FWM	C / Y	O, V
CORVIDAE	CROWS, JAYS, & MAGPIES			
<i>Corvus brachyrhynchos hesperis</i>	American crow	FO	C / Y	V
AEGITHALIDAE	BUSHTIT			
<i>Psaltiriparus minimus melanurus</i>	bushtit	URB, FWM	C / Y	V

**Attachment 2
Wildlife Species Observed**

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	DIST	F / Y	O, V
PARULIDAE	WOOD WARBLERS			
<i>Setophaga [=Dendroica] coronata</i>	yellow-rumped warbler	FWM, WW, URB	C / W	O, V
<i>Geothlypis trichas</i>	common yellowthroat	FWM	C / Y	O, V
EMBERIZIDAE	EMBERIZIDS			
<i>Melospiza melodia</i>	song sparrow	FWM	C / Y	O, V
<i>Melospiza [=Pipilo] crissalis</i>	California towhee	FWM, WW	C / Y	O
FRINGILLIDAE	FINCHES			
<i>Spinus [=Carduelis] psaltria hesperophilus</i>	lesser goldfinch	URB, WW	C / Y	O, V
<i>Haemorhous [=Carpodacus] mexicanus frontalis</i>	house finch	URB	C / Y	V

(I) = Introduced species

HABITATS

DIST = Disturbed Land
FWM = Freshwater marsh
WW = Willow Woodland
URB = Urban/Developed

EVIDENCE OF OCCURRENCE

O = Observed
V = Vocalization

ABUNDANCE (birds only; based on Garrett and Dunn 1981)

C = Common to abundant; almost always encountered in proper habitat, usually in moderate to large numbers
F = Fairly common; usually encountered in proper habitat, generally not in large numbers
U = Uncommon; occurs in small numbers or only locally

SEASONALITY (birds only)

A = Accidental; species not known to occur under normal conditions; may be an off-course migrant
M = Migrant; uses site for brief periods of time, primarily during spring and fall months
S = Spring/summer resident; probable breeder on-site or in vicinity
T = Transient; uses site regularly but unlikely to breed on-site
V = Rare vagrant
W = Winter visitor; does not breed locally
Y = Year-round resident; probable breeder on-site or in vicinity

ATTACHMENT 3

Sensitive Plant Species Observed or with the Potential for Occurrence

Attachment 3 Sensitive Plant Species Observed or with the Potential for Occurrence						
Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	City of La Mesa	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
ANGIOSPERMS: DICOTS						
ASTERACEAE SUNFLOWER FAMILY						
<i>Bahiopsis</i> [=Viguiera] <i>laciniata</i> San Diego viguiera [=San Diego County viguiera]	—/—	4.3	—	Perennial shrub; chaparral, coastal sage scrub; blooms February–June; elevation less than 2,500 feet.	No	This species was not observed on-site and would have been apparent during survey, if present. This species is known to occur within two miles of the site (State of California 2018c).
<i>Iva hayesiana</i> San Diego marsh-elder	—/—	2B.2	—	Perennial herb; marshes and swamps, playas, riparian areas; blooms April– September; elevation below 1,700 feet.	No	This species was not observed during survey and would have been apparent, if present. This species is known to occur within two miles of the site (State of California 2018c).
CACTACEAE CACTUS FAMILY						
<i>Ferocactus viridescens</i> San Diego barrel cactus	—/—	2B.1	—	Perennial stem succulent; chaparral, coastal sage scrub, valley and foothill grasslands, vernal pools; blooms May– June; elevation less than 1,500 feet.	No	This species was not observed during survey and would have been apparent, if present. This species is known to occur within two miles of the site (State of California 2018c).
FAGACEAE OAK FAMILY						
<i>Quercus dumosa</i> Nuttall's scrub oak	—/—	1B.1	—	Perennial evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub; sandy and clay loam soils; blooms February–March; elevation less than 1,300 feet.	No	This species was not observed during survey and would have been apparent, if present. This species is known to occur within two miles of the site (State of California 2018c).
LAMIACEAE MINT FAMILY						
<i>Acanthomintha ilicifolia</i> San Diego thornmint	CE/FT	1B.1	NE, MSCP	Annual herb; chaparral, coastal sage scrub, and grasslands; friable or broken clay soils; blooms April–June; elevation less than 3,200 feet.	No	This species is not expected to occur on-site due to the lack of presence of clay soils. This species is known to occur within two miles of the site (State of California 2018b).

Attachment 3 Sensitive Plant Species Observed or with the Potential for Occurrence						
Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	City of La Mesa	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Monardella viminea</i> [= <i>Monardella linoides</i> <i>ssp. viminea</i>] willow monardella	CE/FE	1B.1	MSCP	Perennial herb; closed-cone coniferous forest, chaparral, coastal sage scrub, riparian scrub, riparian woodlands, sandy seasonal dry washes; blooms June–August; elevation 160–740 feet. San Diego County endemic.	No	This species was not observed and not expected to occur. This species prefers sandy embankments of major canyon riparian systems (State of California 2018b).
RHAMNACEAE BUCKTHORN FAMILY						
<i>Adolphia californica</i> California adolphia	–/–	2B.1	–	Perennial deciduous shrub; Diegan coastal sage scrub and chaparral; clay soils; blooms December–May; elevation 100–2,500 feet.	No	This species was not observed during survey and would have been apparent, if present. This species is known to occur within two miles of the site (State of California 2018c).
JUNCACEAE RUSH FAMILY						
<i>Juncus acutus</i> ssp. <i>leopoldii</i> southwestern spiny rush	–/–	4.2	–	Perennial herb (rhizomatous); coastal dunes, meadows and seeps, coastal salt marsh, riparian; blooms May–June; elevation less than 3,000 feet.	No	This species was not observed during survey and would have been apparent, if present. This species is known to occur within two miles of the site (State of California 2018c).
THEMIDACEAE BRODIAEA FAMILY						
<i>Bloomeria</i> [= <i>Muilla</i>] <i>clevelandii</i> San Diego goldenstar	–/–	1B.1	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; clay soils; blooms May; elevation 170–1,500 feet.	No	This species is not expected to occur on-site due to the lack of vernal pool habitat and clay soils on-site. This species is known to occur within two miles of the site (State of California 2018c).

Attachment 3
Sensitive Plant Species Observed or with the Potential for Occurrence

FEDERAL CANDIDATES AND LISTED PLANTS

FE = Federally listed endangered
FT = Federally listed threatened

STATE LISTED PLANTS

CE = State listed endangered

CALIFORNIA NATIVE PLANT SOCIETY (CNPS): CALIFORNIA RARE PLANT RANKS (CRPR)

1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
2B = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.
.1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat).
.2 = Species fairly threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat).
.3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known).

CITY OF SAN DIEGO

NE = Narrow endemic
MSCP = Multiple Species Conservation Program covered species

ATTACHMENT 4

Sensitive Wildlife Species Occurring or with the Potential to Occur

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
AMPHIBIANS (Nomenclature from Crother et al. 2008)					
PELOBATIDAE SPADEFOOT TOADS					
Western spadefoot <i>Spea hammondi</i>	CSC	Vernal pools, floodplains, and alkali flats within areas of open vegetation.	No	None	This species was not observed and not expected to occur on-site due to lack of suitable habitat.
BUFONIDAE TRUE TOADS					
Arroyo toad <i>Anaxyrus californicus</i>	FE, CSC, MSCP	Open streamside sand/gravel flats. Quiet, shallow pools along stream edges are breeding habitat. Nocturnal except during breeding season (March–July).	No	None	This species was not observed and not expected to occur on-site. Alvarado Creek is channelized leaving no suitable upland habitat.
REPTILES (Nomenclature from Crother et al. 2008)					
IGUANIDAE IGUANID LIZARDS					
Coast horned lizard <i>Phrynosoma blainvillii</i> [= <i>P. coronatum</i> coastal population]	CSC, MSCP, *	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	No	None	This species was not observed and not expected to occur on-site due to the lack of suitable habitat and habitat fragmentation. This species is known to occur within two miles of the site (State of California 2017b).

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
TEIIDAE WHIPTAIL LIZARDS					
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	No	None	This species was not observed and not expected to occur on- site due to the lack of suitable habitat and habitat fragmentation. This species is known to occur within two miles of the site (State of California 2017b).
COLUBRIDAE COLUBRID SNAKES					
Two-striped gartersnake <i>Thamnophis hammondi</i>	CSC, *	Permanent freshwater streams with rocky bottoms. Mesic areas.	No	None	This species was not observed and not expected to occur on- site due to the fact that Alvarado Creek does not have a rocky bottom.
CROTALIDAE RATTLESNAKES					
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	No	None	This species was not observed and not expected to occur on- site due to the lack of suitable habitat and habitat fragmentation.
BIRDS (Nomenclature from American Ornithologists' Union 2016 and Unitt 2004)					
ACCIPITRIDAE HAWKS, KITES, & EAGLES					
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	WL, MSCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	No	Moderate	This species was not observed but has a moderate potential to nest on-site due to the presence of tall trees within Alvarado Creek and the RV park.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
White-tailed kite (nesting) <i>Elanus leucurus</i>	CFP, *	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year-round resident.	No	None	This species was not observed and not expected to nest or forage on-site due to the narrow riparian habitat and proximity to urban development.
TYRANNIDAE TYRANT FLYCATCHERS					
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE, CE, MSCP	Nesting restricted to willow thickets. Also occupies other woodlands. Rare spring and fall migrant, rare summer resident. Extremely localized breeding.	No	None	This species was not detected and not expected to occur due to the minimal amount of willow riparian habitat on-site.
VIREONIDAE VIREOS					
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, CE, MSCP	Willow riparian woodlands. Summer resident.	No	Low	This species was not observed and has a low potential to nest within the survey area due to the minimal amount of willow woodland habitat available.
SYLVIIDAE GNATCATCHERS					
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	No	None	This species is not expected to occur on-site due to the lack of suitable coastal sage scrub habitat on-site. This species is known to occur within two miles of the site (State of California 2017a).

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
PARULIDAE WOOD WARBLERS					
Yellow-breasted chat (nesting) <i>Icteria virens auricollis</i>	CSC	Dense riparian woodland. Localized summer resident.	No	Low	Low potential to nest on-site since the willow woodland habitat on-site may not be dense enough for breeding. Known to occur within the area (State of California 2017b).
MAMMALS (Nomenclature from Baker et al. 2003)					
MOLOSSIDAE FREE-TAILED BATS					
Western mastiff bat <i>Eumops perotis californicus</i>	CSC	Woodlands, rocky habitat, arid and semiarid lowlands, cliffs, crevices, buildings, tree hollows. Audible echolocation signal.	No	Moderate	This species was not observed but has a moderate potential to forage on-site. This species is known to occur within two miles of the site (State of California 2017b).
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	CSC	Normally roost in crevice in rocks, slopes, cliffs. Lower elevations in San Diego and Imperial counties. Colonial. Leave roosts well after dark.	No	Moderate	This species was not observed but has a moderate potential to forage on-site. This species is known to occur within two miles of the site (State of California 2017b).
Big free-tailed bat <i>Nyctinomops macrotis</i>	CSC	Rugged, rocky terrain. Roost in crevices, buildings, caves, tree holes. Very rare in San Diego County. Colonial. Migratory.	No	Moderate	This species was not observed but has a moderate potential to forage on-site. This species is known to occur within two miles of the site (State of California 2017b).

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
HETEROMYIDAE POCKET MICE & KANGAROO RATS					
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	CSC	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	No	Low	This species was not observed but has a low potential to forage on-site. This species is known to occur within two miles of the site (State of California 2017b).
MURIDAE OLD WORLD MICE & RATS (I)					
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	CSC	Coastal sage scrub and chaparral.	No	None	This species was not observed or expected to occur on-site as no woodrat nests were observed.
<p>(I) = Introduced species</p> <p>STATUS CODES</p> <p><u>Listed/Proposed</u></p> <p>FE = Listed as endangered by the federal government</p> <p>FPT = Federally proposed threatened</p> <p>FT = Listed as threatened by the federal government</p> <p>CE = Listed as endangered by the state of California</p> <p><u>Other</u></p> <p>CFP = California fully protected species</p> <p>CSC = California Department of Fish and Wildlife species of special concern</p> <p>WL = California Department of Fish and Wildlife watch list species</p> <p>MSCP = City and County of San Diego Multiple Species Conservation Program covered species</p> <p>* = Taxa listed with an asterisk fall into one or more of the following categories:</p> <ul style="list-style-type: none"> • Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines • Taxa that are biologically rare, very restricted in distribution, or declining throughout their range • Population(s) in California that may be peripheral to the major portion of a taxon's range but which are threatened with extirpation within California • Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands) 					

ATTACHMENT 5

Jurisdictional Waters Delineation for the Alvarado Creek Apartments Project



**Jurisdictional Waters Delineation for the
Alvarado Creek Apartments Project
La Mesa, California**

Prepared for
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Prepared by
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RECON Number 4167.2
February 5, 2018

A handwritten signature in cursive script, reading "Gerry Scheid".

Gerry Scheid, Senior Biologist

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Acronyms

ACOE	U.S. Army Corps of Engineers
City	City of San Diego
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
FAC	facultative
FACU	facultative upland
FACW	facultative wet
NI	not indicated
OBL	obligate
RECON	RECON Environmental, Inc.
RWQCB	Regional Water Quality Control Board
UPL	upland

1.0 Summary of Findings

RECON Environmental, Inc. (RECON) biologists performed a routine wetland delineation on the approximately 12-acre Alvarado Creek Apartments project site (project site) located within in the city of La Mesa, California. The delineation also included some adjacent off-site areas of Alvarado Creek. Methods for delineating wetlands followed guidelines set forth by the U.S. Army Corps of Engineers (ACOE; 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008).

ACOE federal waters of the U.S., and California Department of Fish and Wildlife (CDFW) and California Regional Water Quality Control Board (RWQCB) waters of the state were all delineated within the project area. ACOE jurisdictional waters of the U.S. total 0.98 acre of wetland and 0.09 acre of non-wetland waters on-site and 0.90 acre of adjacent wetland off-site. CDFW and RWQCB jurisdictional waters of the state total 0.98 acre of wetland and 0.37 acre of streambed and bank on-site and 0.90 acre of adjacent wetland and 0.02 acre of streambed bank off-site.

Each of the agencies will verify this delineation during the discretionary review and permitting processes. Under a no-net-loss to wetlands policy, the agencies will require that impacts be avoided and minimized to the greatest extent practicable, and that any unavoidable impacts be mitigated.

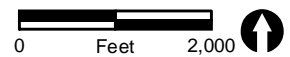
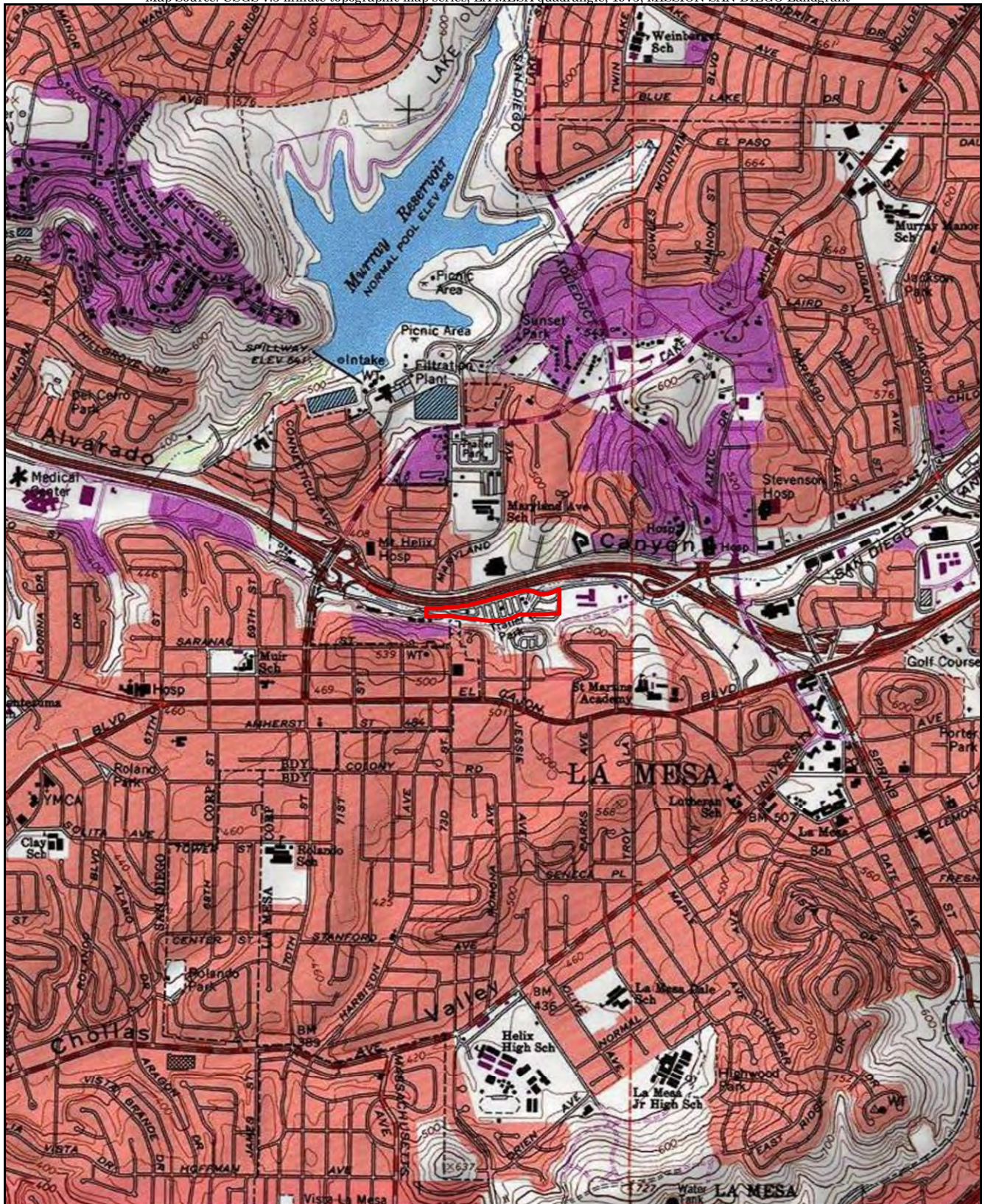
2.0 Introduction

The project site consists of two parcels that total 12.35 acres of mostly developed land located in the city of La Mesa, just south of Interstate 8 (Figure 1). The project site occurs in an unsectioned portion of Township 16 South and Range 2 West, of the U.S. Geological Survey (USGS) 1996 7.5-minute topographic map, La Mesa quadrangle (Figure 2; USGS 1996). The project site occurs to the east of 70th Street, just south of and adjacent to Alvarado Road. Land uses surrounding the project site include a mixture of residential and commercial development (Figure 3).

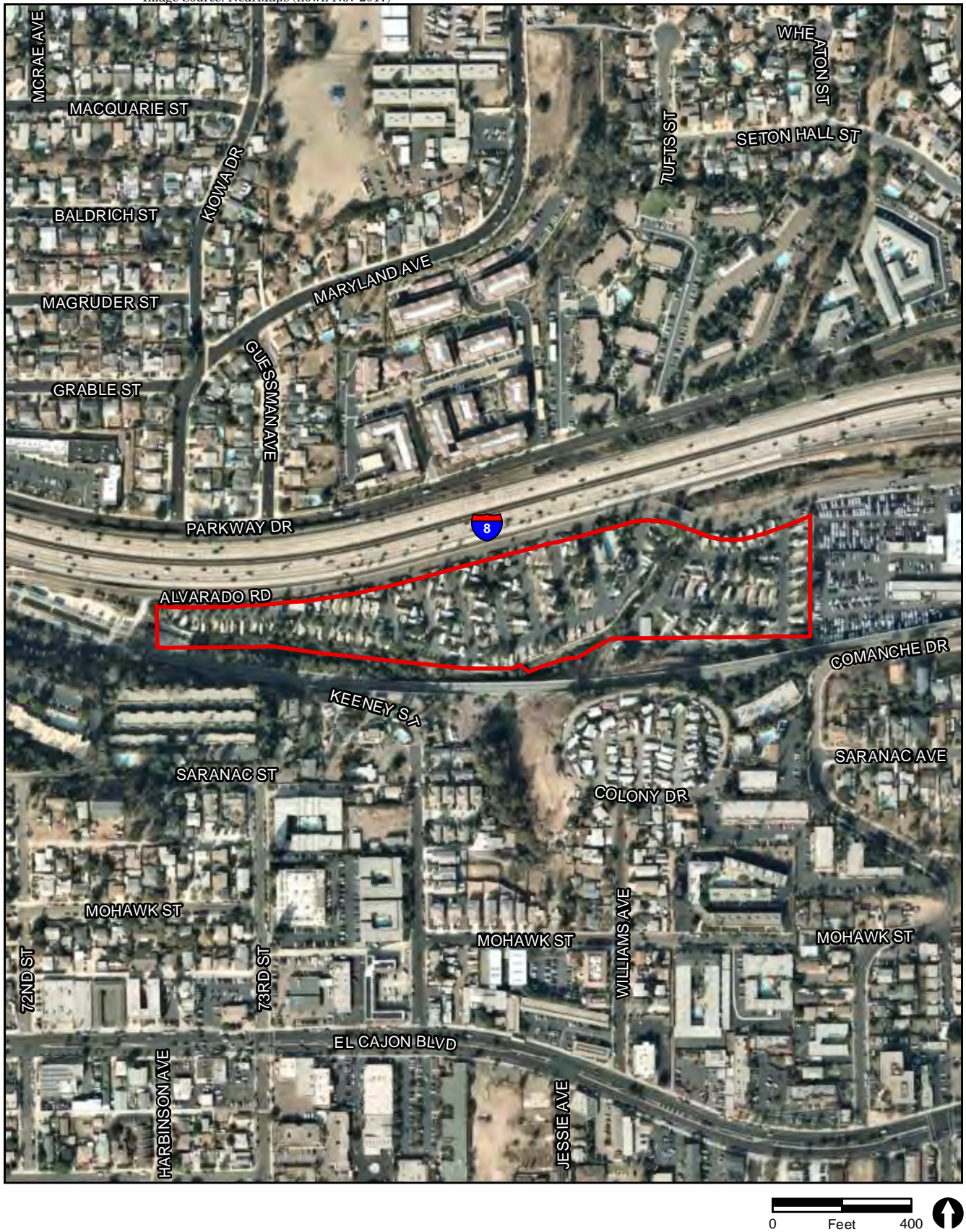
This report describes the results of a jurisdictional waters delineation conducted on the project site, including some adjacent off-site areas of Alvarado Creek, and includes the jurisdictional waters delineation data necessary for a jurisdictional determination by the ACOE, CDFW, and RWQCB. Review and approval of the jurisdictional waters delineation would occur during the discretionary review and permit processes for each agency.

3.0 Methods

RECON biologists performed a routine jurisdictional waters delineation within the project site on January 23, 2018, according to the guidelines set forth by ACOE (1987, 2008).



 Project Boundary



 Project Boundary

A jurisdictional waters delineation is used to identify and map the extent of the wetlands and waters of the U.S. and waters of the state. Prior to conducting the delineation, an aerial photograph was examined to aid in the determination of potential federal and state jurisdictional areas in the survey area. Once on-site, the survey area was examined to determine the presence of any indicators of jurisdictional waters, including wetland vegetation, hydric soils, and hydrology.

Soil test pits were located (1) within potential wetland areas and (2) in or adjacent to the spot where the boundary between wetland and upland was inferred (based on changes in the topography, hydrology, and composition of the vegetation).

3.1 ACOE Waters of the U.S.

According to the ACOE manual, wetland waters of the U.S. are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions” (ACOE 1987).

The definition of a wetland includes the phrase “under normal circumstances” because there are situations in which the vegetation of a wetland has been removed or altered as a result of a recent natural event or human activities (ACOE 1987).

Atypical situations and problem areas may lack one or more of the three criteria and still be considered wetlands. Background information on the previous condition of the area and/or field observations may indicate that the site met the wetland criteria prior to disturbance. Additional delineation procedures would be employed if normal circumstances did not occur on a site. For the survey area, atypical situations or problem areas do not occur; normal circumstances are present.

3.1.1 Regulatory Definition

In accordance with Section 404 of the Clean Water Act (CWA), ACOE regulates the discharge of dredged or fill material into waters of the U.S. The term “waters of the U.S.” is defined as:

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

fish or shellfish are, or could be, taken and sold in interstate or foreign commerce; or (3) which are used or could be used for industries in interstate commerce.

- All other impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified above;
- The territorial seas; and
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in the paragraphs above [33 Code of Federal Regulations Part 328.3(a)].

3.1.2 Wetland Parameters

Wetlands are delineated using three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. According to ACOE, indicators for all three parameters must be present to qualify as a wetland.

3.1.2.1 Hydrophytic Vegetation

Hydrophytic vegetation is defined as “the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content” (ACOE 1987). The potential wetland areas within the survey area were surveyed by walking through the project site and making observations of those areas exhibiting characteristics of jurisdictional waters or wetlands. Vegetation units with potential wetland areas were examined, and data for each vegetation stratum (i.e., tree, shrub, herb, and vine) were recorded on the datasheet provided in the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (hereafter referred to as *Arid Supplement*; ACOE 2008). The percent absolute cover of each species present was visually estimated and recorded.

The wetland indicator status of each species recorded was determined by using the list of wetland plants for the arid southwest provided by the ACOE (2013). An obligate (OBL) indicator status refers to plants that have a 99 percent probability of occurring in wetlands under natural conditions. A facultative wet (FACW) indicator status refers to plants that occur in wetlands (67 to 99 percent probability) but are occasionally found in non-wetlands. A facultative (FAC) indicator status refers to plants that are equally likely to occur in wetlands or non-wetlands (estimated probability 34 to 66 percent). Facultative upland (FACU) species are more often found in upland sites. Upland (UPL) species have a high probability to occur in upland sites. A not indicated (NI) status refers to species that have insufficient data available to determine an indicator status at this time for the local region.

Plant species nomenclature follows that contained in the online *Jepson Flora* (Jepson Flora Project 2015). Dominant species with an indicator status of NI or not listed in the 1997 list were evaluated as either wetland or upland indicator species based on local professional

knowledge of where the species are most often observed in habitats characteristic of southern California.

There are three indicators or tests to determine hydrophytic vegetation on a site: the dominance test, prevalence index, and morphological adaptations. The 50/20 rule is a repeatable and objective procedure for selecting a dominant plant species and is recommended when data are available for all species in the community (ACOE 2008). Dominant species are those plants that individually or collectively contribute more than 50 percent of the total vegetative cover plus those species that, by themselves, comprise 20 percent or more of the total cover.

If the vegetation at a particular site passes the dominance test (using the 50/20 rule), the hydrophytic vegetation criterion is considered fulfilled. If it fails the dominance test and positive indicators of hydric soils and/or wetland hydrology are present, it is necessary to apply the prevalence index. The prevalence index is a weighted-average wetland indicator status of all plant species at a test site, where each indicator status category is given a numeric code and weighted by percent cover (ACOE 2008). If a prevalence index is 3.0 or less, the hydrophytic vegetation criterion is considered fulfilled.

If a site fails the prevalence index and positive indicators of hydric soils and/or wetland hydrology are present, it is necessary to assess the presence or absence of morphological adaptations. To apply this indicator, morphological features must be observed on more than 50 percent of the individuals of a FACU species living in an area where indicators of hydric soil and wetland hydrology are present (ACOE 2008). Once this indicator is applied, the dominance test and/or the prevalence index are/is recalculated using a FAC indicator status of this species (ACOE 2008).

3.1.2.2 Hydric Soils

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (ACOE 1987). Hydric soil indicators are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds (ACOE 2008). The hydric soil criterion is considered fulfilled at a location if soils in the area can be inferred to have a high groundwater table, evidence of prolonged soil saturation exists, or any indicators suggesting a long-term reducing environment in the upper 18 inches of the soil profile are present.

A sample point was selected within a potential wetland area where the apparent boundary between wetland and upland was inferred based on changes in the composition of the vegetation and topography. The soil pit was dug to a depth of at least 18 inches or to a depth necessary to determine soil color, evidence of soil saturation, depth to groundwater, and indicators of a reducing soil environment (e.g., mottling, gleying, and sulfidic odor).

Hydric soil indicators are presented in three groups in the *Arid Supplement* (ACOE 2008): “all soils, sandy soils, and loamy and clayey soils.” Indicators applicable to all soil textures are indicated as A1 through A10 on the datasheet and include histosols, histic epipedon,

stratified layers, and muck, among others. Indicators of sandy soils are noted as S1 through S6 and include sandy gleyed matrix, sandy redox, and stripped matrix. F1 (loamy mucky mineral) through F9 (vernal pools) are indicators of hydric conditions within loamy and clayey soils. A complete description of each of the hydric soil indicators is provided in the 2008 *Arid Supplement* and should be referenced during each delineation.

3.1.2.3 Wetland Hydrology

The presence of wetland hydrology indicators confirm that inundation or saturation has occurred on a site, but may not provide information about the timing, duration, or frequency of the event. Hydrology features are generally the most ephemeral of the three wetland parameters (ACOE 2008).

In the 2008 *Arid Supplement*, wetland hydrology indicators are divided into four groups. Those that are determined based on direct observation are in Group A. These include the presence of surface water, a high-water table, and saturation. Water marks, drift deposits, surface soil cracks, and other indicators of flooding or ponding fall within Group B. Group C consists of indicators that provide indirect evidence that a site was saturated recently, such as the presence of sulfidic odors or oxidized rhizospheres along living roots. Group D consists of vegetation and soil features that indicate recent wet conditions, such as the FAC-neutral test or a shallow aquitard (ACOE 2008). These indicators are further classified as primary or secondary indicators.

Hydrologic information for the site was obtained by reviewing USGS topographic maps and by directly observing hydrology indicators in the field. The wetland hydrology criterion is considered fulfilled at a location if, based upon the conclusions inferred from the field observations, an area has a high probability of being periodically inundated or has soils saturated to the surface at some time during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (ACOE 1987). If at least one primary indicator or at least two secondary indicators are found at a sample point, the wetland hydrology criterion is considered fulfilled.

3.2 CDFW and RWQCB Waters of the State

Under Sections 1600–1607 of the Fish and Game Code, CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats (e.g., southern willow scrub) associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider.

RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes waters of the state as mandated by both the federal CWA Section 401 and the California Porter–Cologne Water Quality Control Act.

4.0 Results of Field Data

A description of the major vegetation units observed and soil types encountered, and a discussion of the local hydrology in the project area are presented below. Copies of the field data forms summarizing information on vegetation, soils, and hydrology observed at each sample site are provided in Attachment 1.

4.1 Vegetation

Two native vegetation communities and three land cover types occur on the project site. Developed land comprises the majority of the site with lesser acreages of freshwater marsh, willow woodland, disturbed land, and areas of concrete channel. Areas with and without hydrophytic vegetation occur on-site. Areas with hydrophytic vegetation, in general, were considered potential jurisdictional waters. Locations on-site without hydrophytic vegetation were considered upland, unless evidence suggested that a wetland or other jurisdictional water might occur at the particular location. Vegetation dominated by OBL, FACW, and/or FAC hydrophytic indicator plant species usually satisfies the hydrophytic vegetation criteria, one of the three criteria necessary to be identified as an ACOE wetland.

4.1.1 Areas with Hydrophytic Vegetation

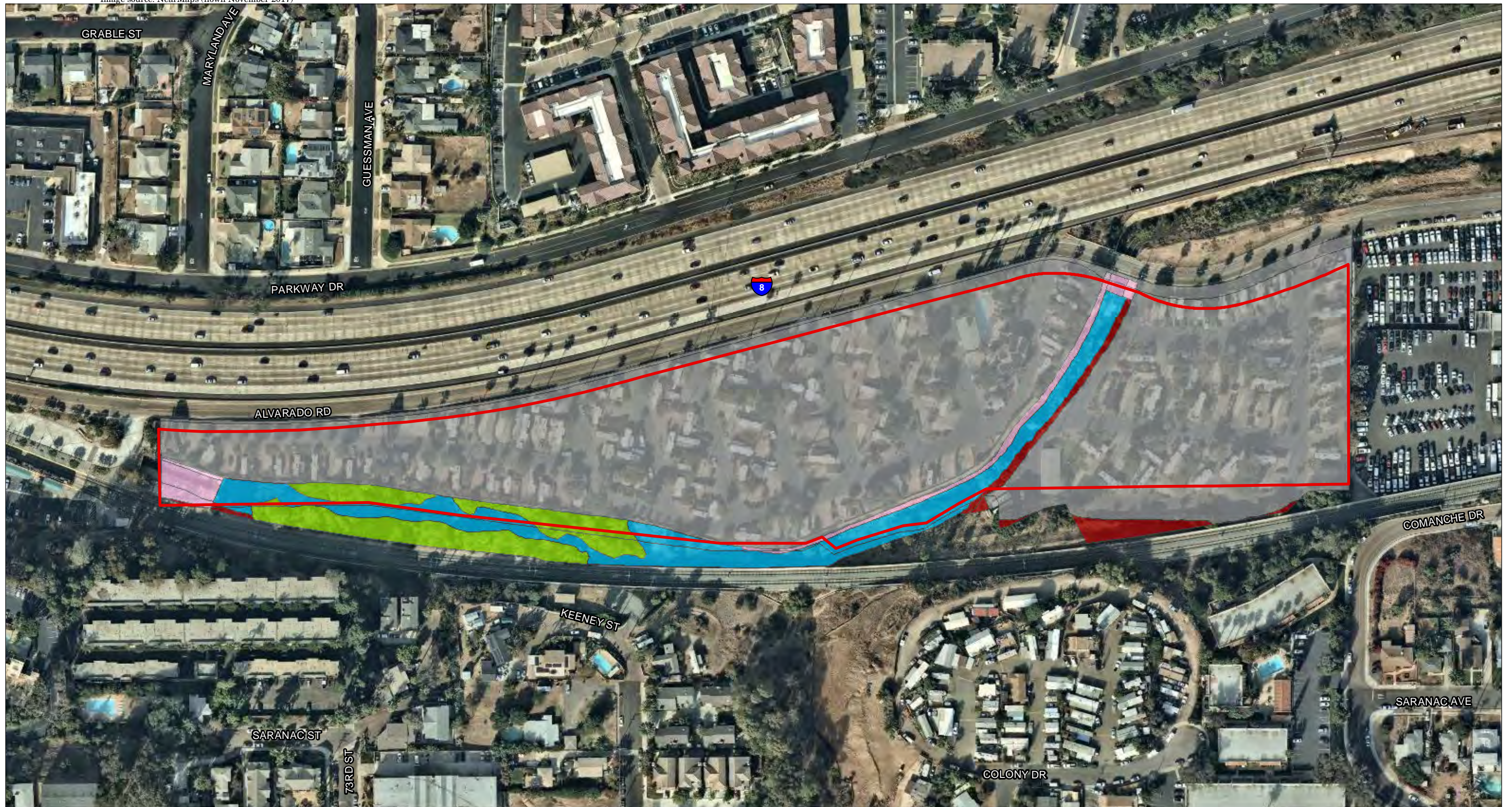
Hydrophytic vegetation within the survey area occurs within the areas considered wetland. Vegetation communities that occur in Alvarado Creek include freshwater marsh and willow woodland (Figure 4). The freshwater marsh community is dominated by broad-leaved cattail (*Typha latifolia*) and bulrushes (*Schoenoplectus* [= *Scirpus*] *americanus*, *Schoenoplectus* [= *Scirpus*] *californicus*). The willow woodland areas have most of the same freshwater marsh species in the understory of the woodland, and have patches of young trees and saplings of black willow (*Salix gooddingii*), red willow (*Salix laevigata*), and mule fat (*Baccharis salicifolia*) growing amongst the cattails. Cattails and bulrushes have a hydrophytic vegetation status of OBL, while the black and red willows have a hydrophytic vegetation status of FACW.

4.1.2 Areas Lacking Hydrophytic Vegetation

The developed and disturbed land areas are dominated by upland plant species and do not satisfy the hydrophytic vegetation criteria. These vegetation types primarily occur adjacent to the outside of the bed and bank of Alvarado Creek.

4.2 Soils

One soil series was encountered in the creek: River Wash (U.S. Department of Agriculture 1973). This soil type is comprised of sandy, gravelly, or cobbly soils that are excessively drained and rapidly permeable. Soil horizons in river wash soils are not well developed.



Project Boundary

Vegetation Community and Land Cover Type

- Freshwater Marsh
- Willow Woodland
- Concrete Channel
- Disturbed Land
- Developed

0 Feet 150

Sample points were selected within potential wetland areas and where the apparent boundary between wetland and upland was inferred, based on changes in the topography, hydrology, and composition of the vegetation. Soil test pits were dug to search for indicators of hydric soil conditions. Hydric soil indicators observed in the test pits included a low chroma matrix color and the presence of mottles.

4.3 Hydrology

A segment of Alvarado Creek occurs within the project site. This creek has an intermittent hydrologic regime. The majority of the water that enters this segment of the creek comes as storm water runoff during the wet season and dry season flows likely from urban landscape irrigation runoff. Water that drains from the landscape to the east from storms and urban runoff are collected in storm drain inlets and discharged into Alvarado Creek at various locations upstream and downstream of the site.

The creek enters the project site under a box culvert bridge on Alvarado Road. The north bank of the creek is made of concrete and retaining walls and the south bank of the creek is mostly earthen except where it meets the retaining wall beneath the trolley tracks off-site to the south. Alvarado Creek goes underground at the west end of the project site where the creek is placed in a storm drain system beneath the transit center's trolley station.

The bottom of this segment of Alvarado Creek is earthen except for about 20 feet downstream of the Alvarado Road bridge, at a utility line crossing the creek, at sewer manholes, and at the west end near the trolley station where the bottom is covered by concrete. Hydrology indicators observed included surface water, high water table, saturated soils, sediment deposits, and drift deposits.

5.0 Jurisdictional Waters Delineation

ACOE, CDFW, and RWQCB will verify this jurisdictional waters delineation during the discretionary and permit review processes to make a final jurisdictional determination with respect to Section 404 of the CWA, Section 1600 of the Fish and Game Code, and the California Porter–Cologne Water Quality Control Act. The location of federal waters of the U.S. and waters of the state are shown on Figures 5a and 5b, respectively. A summary of the federal and state jurisdictional waters is provided in Table 1.

Table 1 Summary of Federal and State Jurisdictional Waters (acres)			
Jurisdiction	On-site	Off-site	Total
Federal Waters of the US (ACOE)			
Wetland	0.98	0.90	1.88
Non-wetland Water	0.09	--	0.09
TOTAL Waters of the US	1.07	0.90	1.97
Waters of the State (RWQCB, CDFW)			
Wetland	0.98	0.90	1.88
Streambed/Bank	0.37	0.02	0.39
TOTAL Waters of the State	1.35	0.92	2.27



- Project Boundary
- Sample Points
- Waters of the US (ACOE)**
- Non-wetland Waters
- Wetland Waters



FIGURE 5a
Location of Federal Waters of the US

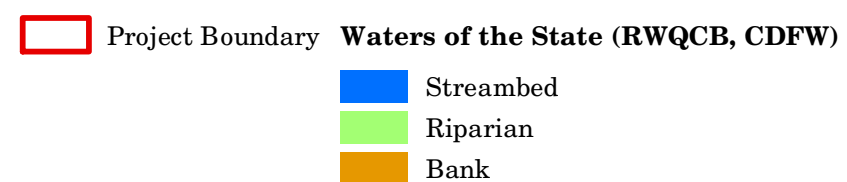


FIGURE 5b
Location of Waters of the State

5.1 Waters of the U.S. (ACOE Jurisdiction)

Federal waters of the U.S. on-site include 0.98 acre of wetland waters and 0.09 acre of non-wetland waters and off-site includes 0.90 acre of adjacent wetland. The limit of the federal jurisdictional waters was determined by the lateral extent of the hydrophytic vegetation and Ordinary High Water Mark.

5.2 Waters of the State (CDFW and RWQCB Jurisdiction)

Waters of the state on-site include 0.98 acre and 0.37 of streambed/bank and off-site includes 0.90 acre of adjacent wetland and 0.02 acre of streambed/bank. The limit of the CDFW jurisdiction was estimated to be at the outer drip line of the canopy for the riparian vegetation, including the limits of the bed and bank. The RWQCB takes jurisdiction over all waters of the state and all waters of the U.S. as mandated by both the federal CWA and the California Porter–Cologne Water Quality Control Act. The extent of RWQCB jurisdiction in this case is the same as the limits of the waters of the state as all federal waters of the U.S. are within this limit and total onsite 0.98 acre of wetland and 0.37 of streambed/bank and offsite 0.90 acre of adjacent wetland and 0.02 acre of streambed/bank.

6.0 Regulatory Issues

ACOE, CDFW, and RWQCB jurisdictional waters are regulated by federal and state governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Unavoidable and authorized impacts would require mitigation through habitat creation, enhancement, or preservation as determined by a qualified restoration biologist in consultation with the regulatory agencies during the permitting process. Any impacts to ACOE, CDFW, and RWQCB jurisdictional waters would require a Section 404 permit authorization from ACOE, a 1600 Streambed Alteration Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB, along with compensatory mitigation.

7.0 References Cited

Jepson Flora Project

2014 Jepson eflora. <http://ucjeps.berkeley.edu/IJM.html>.

U.S. Army Corps of Engineers (ACOE)

1987 Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, Department of the Army. January.

2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.

2013 National Wetland Plant List. http://wetland_plants.usace.army.mil.

U.S. Department of Agriculture

1973 Soil Survey, San Diego Area, California. Soil Conservation Service and Forest Service. Roy H. Bowman, ed. San Diego. December.

ATTACHMENT 1

Field Data Sheets

SOIL

Sampling Point: 1**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Sandy loam	
2-18	10YR 3/2	100					Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☒ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 12

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

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

(includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Alvarado Creek Apartments City/County: La Mesa / San Diego Sampling Date: 01/23/18
 Applicant/Owner: RV Communities LLC State: CA Sampling Point: 2
 Investigator(s): G.Scheid; B. Procsal Section, Township, Range: Unsectioned T16S R2W La Mesa Quad.
 Landform (hillslope, terrace, etc.): Creek bottom Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR): LRR-C Lat: 32.772 Long: -117.039 Datum: NAD83
 Soil Map Unit Name: Riverwash NWI classification: Riverine
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>) 1. <u>Salix gooddingii</u> Absolute % Cover <u>70</u> Dominant Species? <u>Yes</u> Indicator Status <u>FACW</u> 2. <u>Salix laevigata</u> Absolute % Cover <u>25</u> Dominant Species? <u>Yes</u> Indicator Status <u>FACW</u> 3. <u>Washingtonia robusta</u> Absolute % Cover <u>5</u> Dominant Species? <u>No</u> Indicator Status <u>FACW</u> 4. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> <u>100</u> = Total Cover Sapling/Shrub Stratum (Plot size: <u> </u>) 1. <u>Schinus terebinthifolius (saplings)</u> Absolute % Cover <u>5</u> Dominant Species? <u>Yes</u> Indicator Status <u>FAC</u> 2. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 3. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 4. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 5. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> <u> </u> = Total Cover Herb Stratum (Plot size: <u> </u>) 1. <u>Typha latifolia</u> Absolute % Cover <u>50</u> Dominant Species? <u>Yes</u> Indicator Status <u>OBL</u> 2. <u>Schoenoplectus americanus</u> Absolute % Cover <u>40</u> Dominant Species? <u>Yes</u> Indicator Status <u>OBL</u> 3. <u>Ricinus communis</u> Absolute % Cover <u>10</u> Dominant Species? <u>No</u> Indicator Status <u>FACU</u> 4. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 5. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 6. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 7. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 8. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> <u> </u> = Total Cover Woody Vine Stratum (Plot size: <u> </u>) 1. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> 2. <u> </u> Absolute % Cover <u> </u> Dominant Species? <u> </u> Indicator Status <u> </u> <u> </u> = Total Cover % Bare Ground in Herb Stratum <u> </u> % Cover of Biotic Crust <u> </u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u> Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
Remarks:	

SOIL

Sampling Point: 2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	95	10YR 3/1	5			Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☒ Sediment Deposits (B2) (**Riverine**)
- ☒ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 6

Saturation Present? Yes ☒ No ☐ Depth (inches): 3

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Alvarado Creek Apartments City/County: La Mesa / San Diego Sampling Date: 01/23/18
 Applicant/Owner: RV Communities LLC State: CA Sampling Point: 3
 Investigator(s): G.Scheid; B. Procsal Section, Township, Range: Unsectioned T16S R2W La Mesa Quad.
 Landform (hillslope, terrace, etc.): Creek bottom Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR): LRR-C Lat: 32.773 Long: -117.037 Datum: NAD83
 Soil Map Unit Name: Riverwash NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Salix gooddingii</u>	60	Yes	FACW	
2. <u>Schinus terebinthifolius</u>	30	Yes	FAC	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
	90	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u>Schinus terebinthifolius (saplings)</u>	80	Yes	FAC	
2. <u>Washingtonia robusta (saplings)</u>	10	No	FACW	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
	90	= Total Cover		
Herb Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Schoenoplectus americanus</u>	25	Yes	OBL	
2. <u>Schoenoplectus californicus</u>	25	Yes	OBL	
3. <u>Cyperus involucratus</u>	5	No	FACW	
4. <u>Typha latifolia</u>	25	Yes	OBL	
5. <u>Stipa miliaceae</u>	15	Yes	FAC	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
	95	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100					Sandy loam	
								Unable to dig deeper due to rockiness of soil

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		<input type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>12</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Alvarado Creek Apartments City/County: La Mesa / San Diego Sampling Date: 01/23/18
 Applicant/Owner: RV Communities LLC State: CA Sampling Point: 4
 Investigator(s): G.Scheid; B. Procsal Section, Township, Range: Unsectioned T16S R2W La Mesa Quad.
 Landform (hillslope, terrace, etc.): Creek bottom Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR): LRR-C Lat: 32.772 Long: -117.037 Datum: NAD83
 Soil Map Unit Name: Riverwash NWI classification: Riverine
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>None</u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
= Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Washingtonia robusta (saplings)</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u> </u>				
= Total Cover				
Herb Stratum (Plot size: <u> </u>)				
1. <u>Schoenoplectus californicus</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Typha latifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
3. <u>Ricinus communis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
4. <u>Cynodon dactylon</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
8. <u> </u>				
= Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>				
2. <u> </u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
= Total Cover				
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			
Remarks:				

SOIL

Sampling Point: 4**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/2	80	10YR 3/1	20	RM	M	Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
☒ Sediment Deposits (B2) (**Riverine**)
☒ Drift Deposits (B3) (**Riverine**)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☒ No ☐ Depth (inches): 6
 Saturation Present? Yes ☒ No ☐ Depth (inches): 2
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: