



MAIN OFFICE 605 THIRD STREET ENCINITAS, CALIFORNIA 92024 T 760.942.5147 T 800.450.1818 F 760.632.0164

August 17, 2017 9420-03

U.S. Fish and Wildlife Service Attn: Recovery Permit Coordinator 2177 Salk Avenue, Suite 250 Carlsbad, California 92008

> Subject: 2017 Dry Season Survey for Vernal Pool Branchiopods, City of San Diego Pure Water Project, San Diego County, California

Dear Recovery Permit Coordinator:

The 2017 dry season survey for the presence or absence of two federally listed endangered vernal pool branchiopod species, Riverside fairy shrimp (*Streptocephalus woottoni*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*), was conducted on June 9, 2017. Dudek biologist Paul Lemons (TE-051248-5) conducted the soil collection according to the Survey Guidelines for the Listed Large Branchiopods (USFWS 2015). This report summarizes the results of the 2017 dry season survey in order to fulfill the report requirements in accordance with the Section 10(a)(1)(A) Recovery Permit for the Pure Water San Diego Program North City Project, located in San Diego County, California.

Soil samples from a total of 30 basins were collected during the 2017 dry season survey. Focused surveys were conducted during the 2016/17 wet season for 19 of the 30 basins. 11 basins were not previously surveyed.

The 2017 dry season soil collection was performed by Dudek biologist Paul Lemons (Permit # TE051248-5) with assistance from Dudek biologist Jeff Priest. Soil samples were collected on June 9, 2017. The samples were then submitted to, and later evaluated and cysts cultured by, biologist Greg Mason (Alden Environmental, Inc.). The survey focused on the determination of the presence/absence of two federally listed endangered vernal pool branchiopod species, Riverside fairy shrimp (*Streptocephalus woottoni*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*), and was conducted according to the *Survey Guidelines for the Listed Large Branchiopods* (USFWS, 2015).

PROJECT LOCATION AND EXISTING CONDITIONS

Proposed North City Project pipelines extend through the cities of San Diego, Santee, and the community of Lakeside in unincorporated San Diego County, in addition to federal lands within MCAS Miramar (Figure 1, Regional Map). The Project site occupies portions of Township 14

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South, Range 1 East, projected Sections 30 and 31; Township 14 South, Range 1 West, projected Sections 25 and 36; Township 14 South, Range 2 West, projected Sections 32, and 33; Township 15 South, Range 1 East, projected Sections 6 and 18; Township 15 South, Range 1 West, projected Sections 1, 23, and 30; Township 15 South, Range 2 West, projected Sections 6, 25, 29, 30, 31, 32, 33, 35, and 36; Township 15 South, Range 3 West, projected Sections 9, 10, 11, 16, 17, 20, 25, 26, and 28; Township 16 South, Range 2 West, projected Sections 1, 2, 3, and 4; and Township 16 South, Range 3 West, projected Section 9 on the San Vicente Reservoir, El Cajon, La Mesa, Poway, La Jolla, and Del Mar U.S. Geological Survey 7.5 minute quadrangle maps (Figure 2, Vicinity Map).

Elevations range from about 94 feet amsl in the southwestern portion of the Project site to approximately 688 feet amsl.

Soils within the Project site consist of acid igneous rock land; Altamont clay; Carlsbad-Urban Land complex, Chesterton fine sandy loam; Chesterton-Urban Land complex; Cieneba rocky and very rocky coarse sandy loam, Cieneba-Fallbrook rocky sandy loam; Diablo clay; Diablo-Olivenhain complex; Diablo-Urban land complex; Fallbrook sandy loam; Fallbrook-Vista sandy loam; Friant rocky fine sandy loam; Gaviota fine sandy loam; gravel pits; Huerhuero loam; metamorphic rock land; Olivenhain cobbly loam; Ramona sandy loam; Redding cobbly and gravelly loam; Redding-Urban land complex; riverwash; Salinas clay loam; stony land; terrace escarpments; Tujunga sand; and Visalia sandy loam (SanGIS 2016).

VEGETATION COMMUNITIES, DEPRESSIONS, AND LAND COVER TYPES

A total of 28 vegetation communities and/or land cover types were identified within a 500-foot buffer of the Miramar Reservoir Alternative study area, and 26 vegetation communities and/or land cover types were observed within a 500-foot buffer of the San Vicente Pipeline Alternative study area. Dominate vegetation community/land cover categories within the study areas include disturbed and developed areas, scrub and chaparral, riparian and bottomlands, woodlands, and grasslands.

Suitable and potentially suitable habitat (i.e., ephemerally wet/ponded basins) for vernal pool branchiopods was identified on site and consists primarily of road rut (man-made) depressions, lacking vegetation, located immediately adjacent to roads and driveway access areas along the proposed project alignments; however, one basin (PWP 8) appears to be a naturally occurring pool adjacent to the Metro Biosolids Center (located north of State Route 52 (SR-52), adjacent to the Miramar Landfill). All of the basins surveyed are considered potentially suitable habitat for vernal pool branchiopods. All 19 basins surveyed were found in areas mapped as disturbed habitat.

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Project, San Diego County, California

Disturbed habitats are areas that have been physically disturbed and are no longer recognizable as native or naturalized vegetation associations (Oberbauer et al. 2008). These areas may continue to retail soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Examples of these areas may include graded landscapes or areas, graded firebreaks, graded construction pads, construction staging areas, off-highway vehicle (OHV) trails, areas repeatedly cleared for fuel management, or repeatedly used areas that prevent revegetation (e.g., parking lots, trails that have persisted for years). On site, the dirt roads, dirt trails, and OHV areas are mapped as disturbed habitat.

PREVIOUS BRANCHIOPOD STUDIES

Dudek conducted presence/absence surveys for vernal pool branchiopods within 19 of the 30 basins discussed in this report during the 2016/17 wet season. The 19 basins surveyed during the 2016/17 wet season include PWP1 through PWP19. To Dudek's knowledge, no previous protocol-level surveys have been conducted within the additional 11 basins (VP5, VP8, VP10, VP11, VP12, VP15, VP17, VP18, VP19, VP26, and VP27) surveyed during the 2017 dry season and discussed in this report.

A general habitat assessment to evaluate the potential for vernal pool branchiopods within the survey area was conducted by Dudek biologist Brock Ortega in November 2016 prior to conducting protocol-level surveys.

SURVEY METHODS

Thirteen of the 30 basins were between 25 and 235 square meters, therefore 25 samples were collected from the lowest topographic areas of each of these basins. The remaining seventeen depressions were under 25 square meters, therefore 10 samples were collected from the lowest topographic areas of each of these basins. Small (6 inch) hand spades were used to excavate each sample (approximately 100ml each) of soil from the top 1-3 centimeters of soil. Data sheets were completed for each basin that was surveyed (Appendix A). Selected photographs of basins sampled are attached to this report as Appendix B.

Immediately after sample collection, each soil sample was carefully placed into plastic bags and labeled according to basin ID. Soil samples collected on June 9, 2017 from each basin were immediately submitted to Mr. Greg Mason of Alden Environmental, Inc. that same day. Soil samples were then processed by Mr. Mason for examination in the laboratory using the methods described in the dry season report by Alden Environmental, Inc. (Appendix C).

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Project, San Diego County, California

SURVEY RESULTS

Basin Descriptions

A total of 30 basins were surveyed during the 2017 dry survey season. The basins within the study area are distributed in topographically flat areas primarily along Eastgate Mall Road in the City of San Diego and Moreno Avenue in Lakeside, CA (Figures 3A-3G). Seventeen (17) of the basins are considered road ruts. Road ruts are depressions that are typically formed by vehicular traffic within or immediately adjacent to roadways, generally lack aquatic vegetation, and are heavily disturbed by vehicular traffic moderately to highly disturbed, showing evidence of current roadside disturbance (i.e., parked vehicles, trailers, tire tracks, trash). Thirteen basins (PWP 1, PWP 8, VP5, VP8, VP10, VP11, VP12, VP15, VP17, VP18, VP19, VP26, and VP27) are considered vernal pools. Vernal pools are depressions that retain sufficient water level, support vernal pool indicator plant species, and likely support vernal pool branchiopods.

Fairy Shrimp Presence/Absence

Results of the dry sample analysis yielded the presence of cysts from the fairy shrimp genus *Branchinecta* in 14 basins, including PWP 3, PWP 4, PWP 5, PWP 8, PWP 9, PWP 11, PWP 12, PWP 13, PWP 14, PWP 15, PWP 16, PWP 17, VP8, and VP11. All cysts collected from these basins were attempted to be cultured and raised to maturity to make a species-level identification. This attempt was successful in 12 of the 14 basins where cysts were collected. Only basins PWP 13 and PWP 16 failed to produce hatched shrimp, therefore, the cysts from these two basins could only be positively identified to genus level (i.e., *Branchinecta*). All shrimp that were successfully raised to maturity were identified as versatile fairy shrimp (*Branchinecta lindahli*). No listed San Diego fairy shrimp or Riverside fairy shrimp were identified during this dry season survey effort. Detailed results of soil analysis and cyst culturing are included in the Alden Environmental Report (Appendix C).

All required data collection information per the survey guidelines (USFWS, 2015) was recorded and is included as Appendices A through C of this report.

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I certify that the information presented in this survey report and attached exhibits fully and accurately represents my work. Please feel free to contact me at 760.942.5147 if you have any questions regarding the contents of this report.

Sincerely,

Paul Lemons TE051248

Att: Figures 1–3G

Appendix A, Survey Data Form Appendix B, Photo Exhibits

Appendix C, Dry Season Fairy Shrimp Sampling Results (Alden Environmental, Inc.)

cc: Brock Ortega, Dudek

Greg Mason, Alden Environmental, Inc.

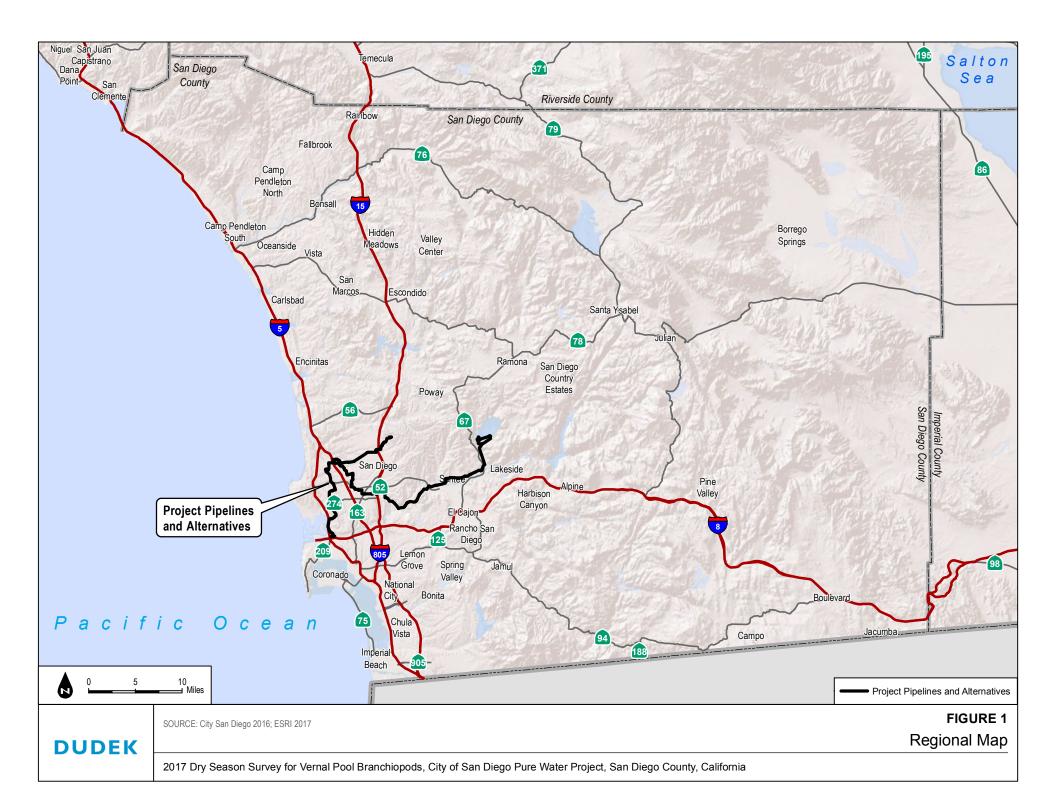
REFERENCES CITED

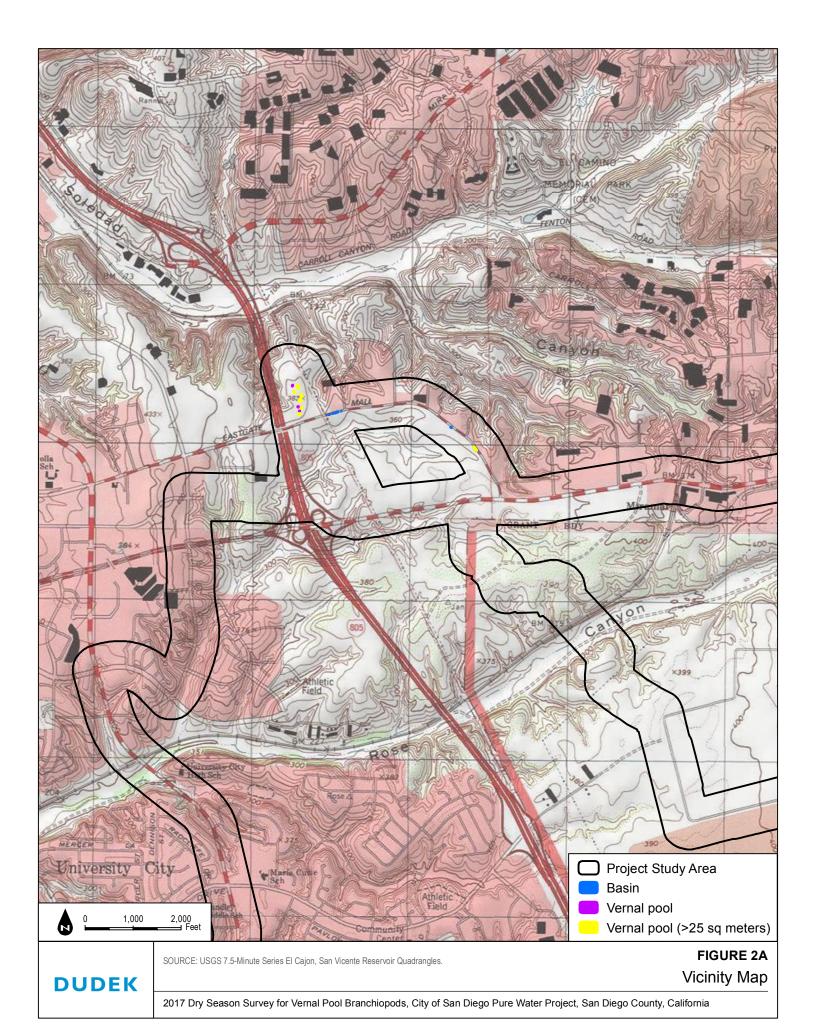
Bowman, R. H. 1973. *Soil Survey, San Diego Area, California, Part 1*. United States Department of Agriculture. 104 pp. + appendices.

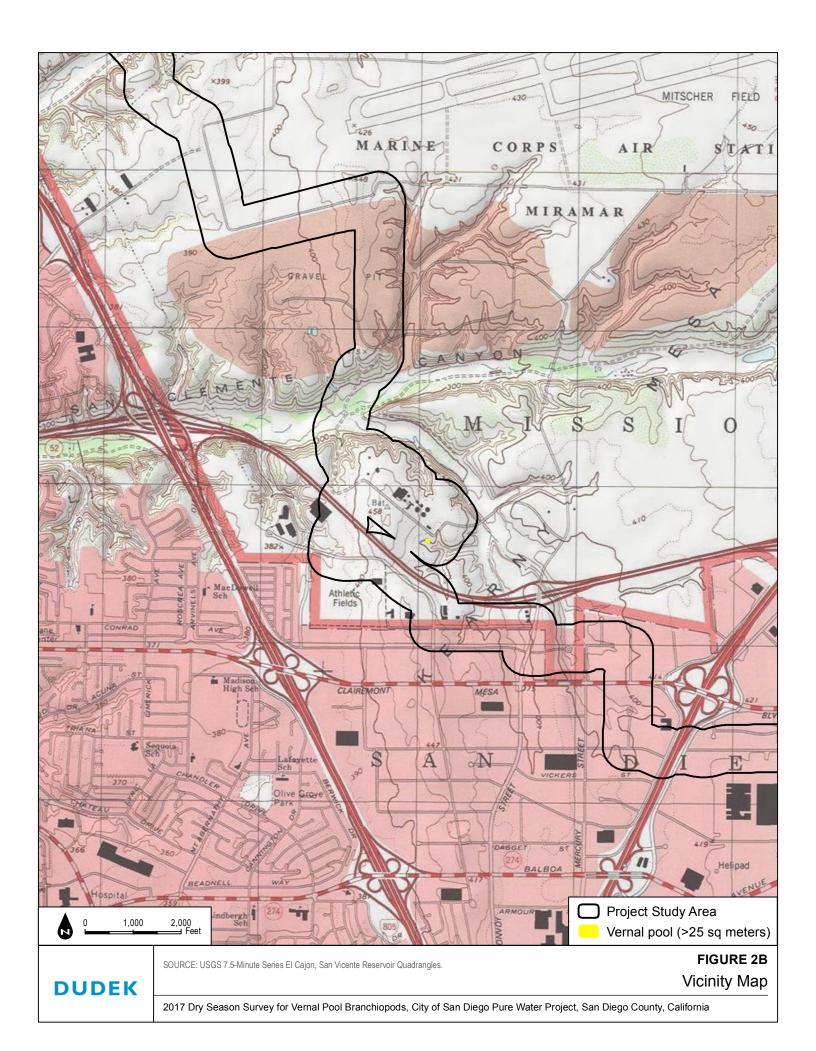
Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program. California Department of Fish and Game.

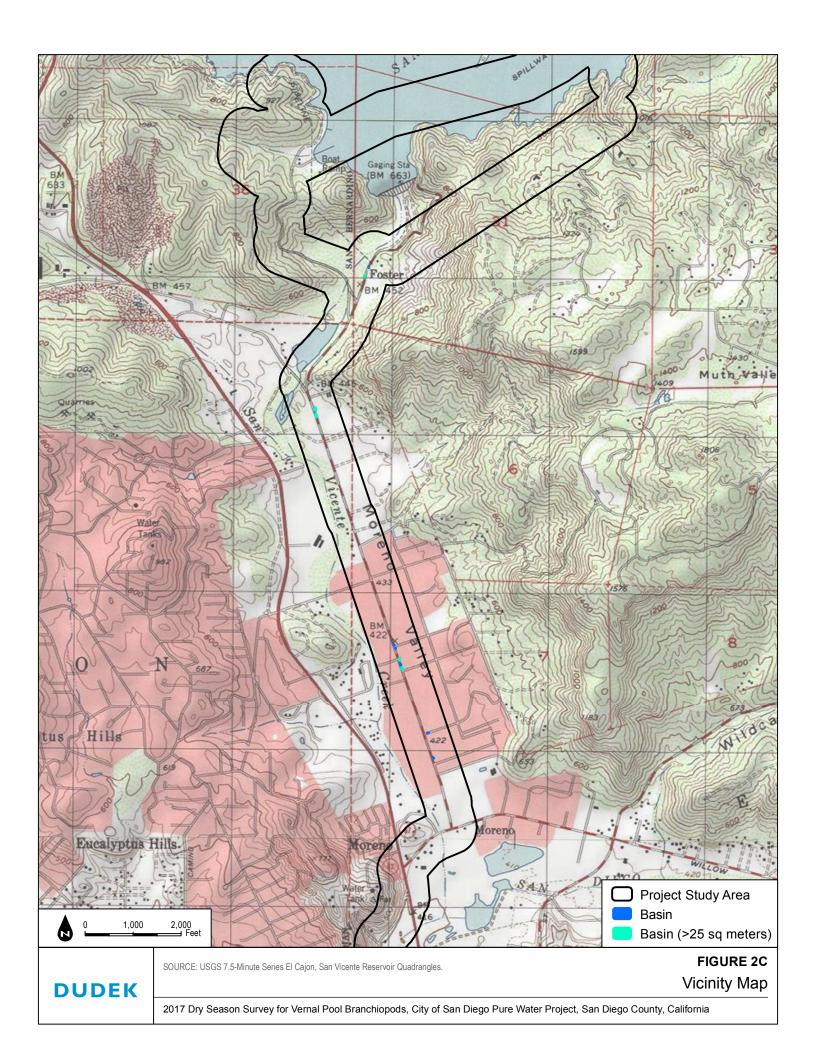
Oberbauer, Thomas, Meghan Kelley, and Jeremy Buegge. March 2008. *Draft Vegetation Communities of San Diego County*. Based on *Preliminary Descriptions of the Terrestrial Natural Communities of California*, Robert F. Holland, Ph.D., October 1986.

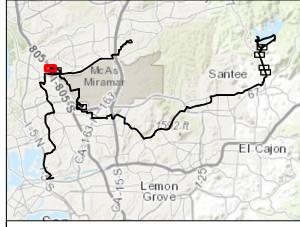
U.S. Fish and Wildlife Service (USFWS). 2015. Survey Guidelines for the Listed Large Branchiopods. Sacramento, California: U.S. Fish and Wildlife Service Sacramento Field Office. May 31.











LEGEND

Project Study Area

San Vicente Pure Water Pipeline (San Vicente Pipeline)

North City Pure Water Pipeline and San Vicente Pure Water Pipelines

Vernal Pool Study Area

Vernal Pool Survey Areas

Helix Vernal Pool Study Area

Survey Results * indicates pools >25 square meters

Basin with Branchinecta lindahli not present

Basin with Branchinecta lindahli present

Vernal pool with Branchinecta lindahli not

Vernal pool with Branchinecta lindahli





SOURCE: SANDAG, 2016; SanGIS 2016



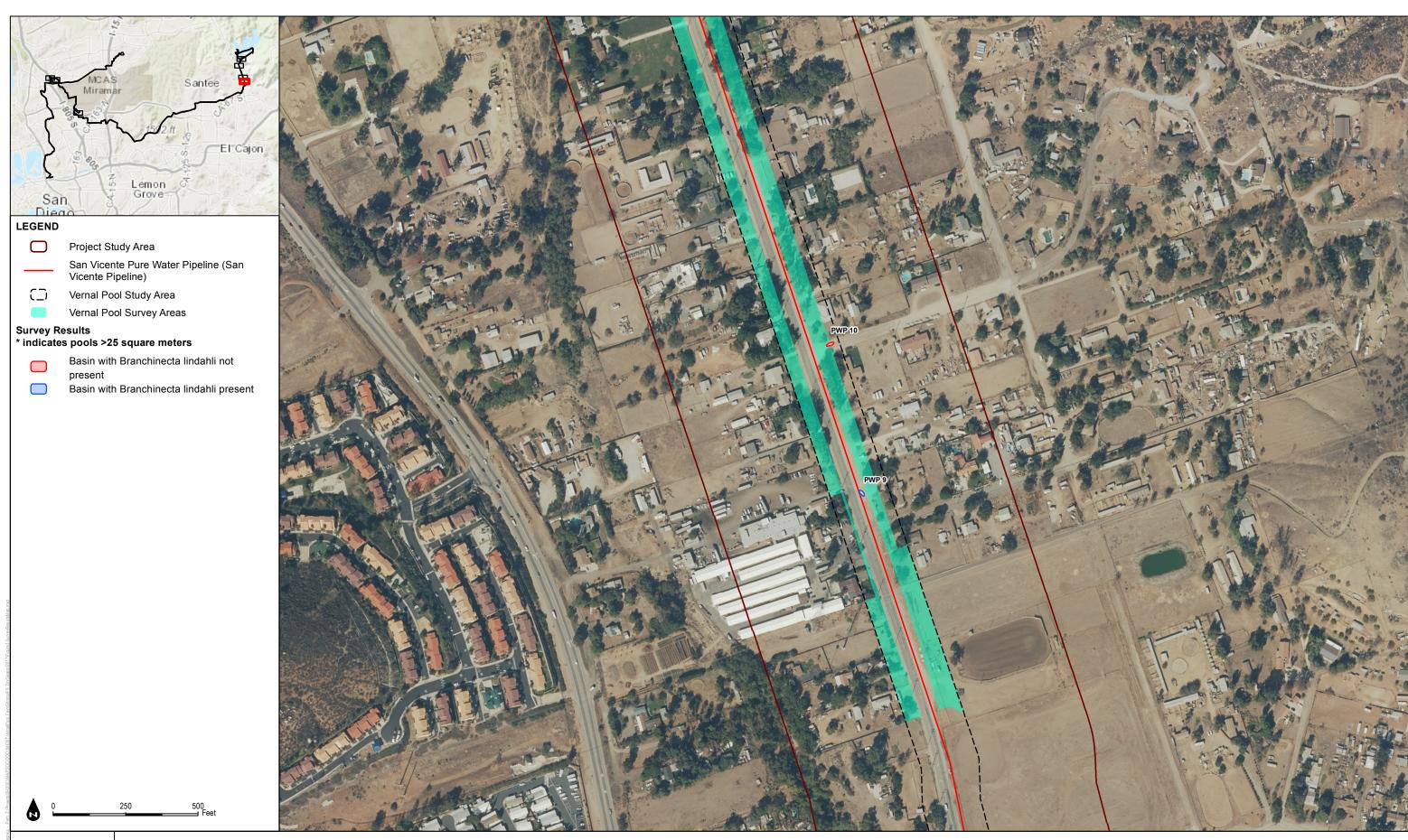
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FIGURE 3B
Survey Results Map



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FIGURE 3C Survey Results Map



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SOURCE: SANDAG, 2016; SanGIS 2016

FIGURE 3D Survey Results Map



SOURCE: SA

SOURCE: SANDAG, 2016; SanGIS 2016

DUDEK

FIGURE 3E Survey Results Map



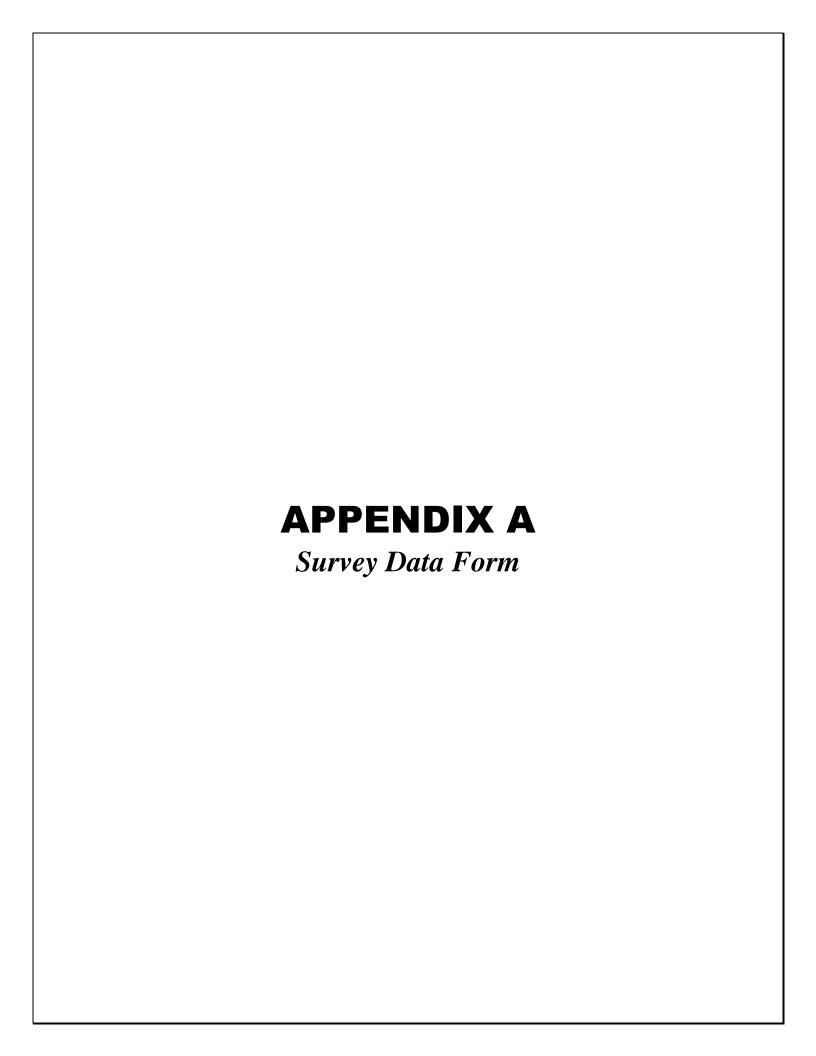
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FIGURE 3F Survey Results Map

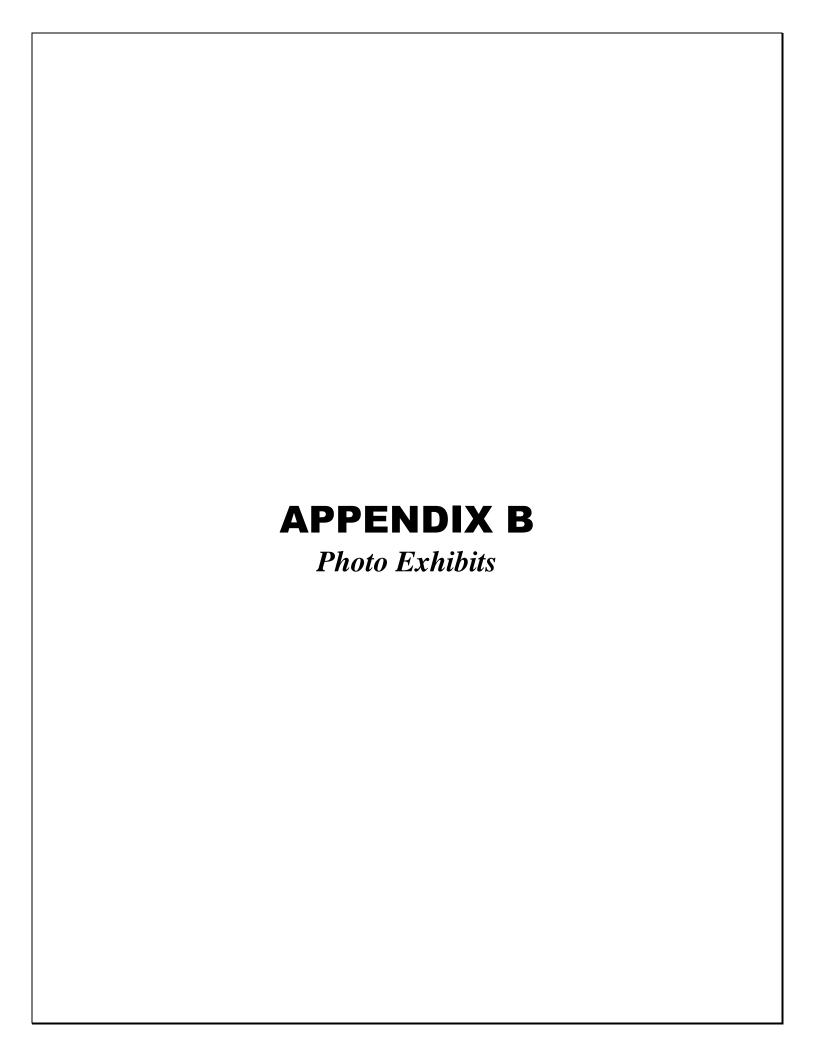


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FIGURE 3G Survey Results Map



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APPENDIX B Photo Exhibits



Overview photo of vernal pools VP5, VP8, VP10, VP11, VP12, VP15, VP17, VP18, VP19, VP26, and VP27

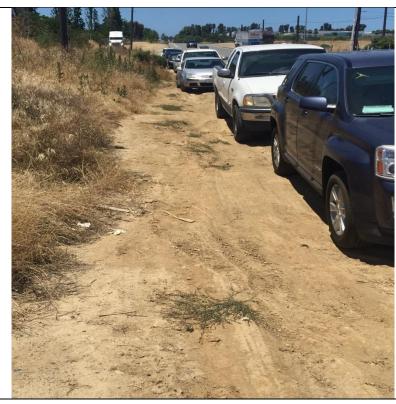


Photo of vernal pool PWP 1

APPENDIX B (Continued)



Photo of road rut PWP 1



Overview photo of road ruts PWP 3 through PWP 7

APPENDIX B (Continued)

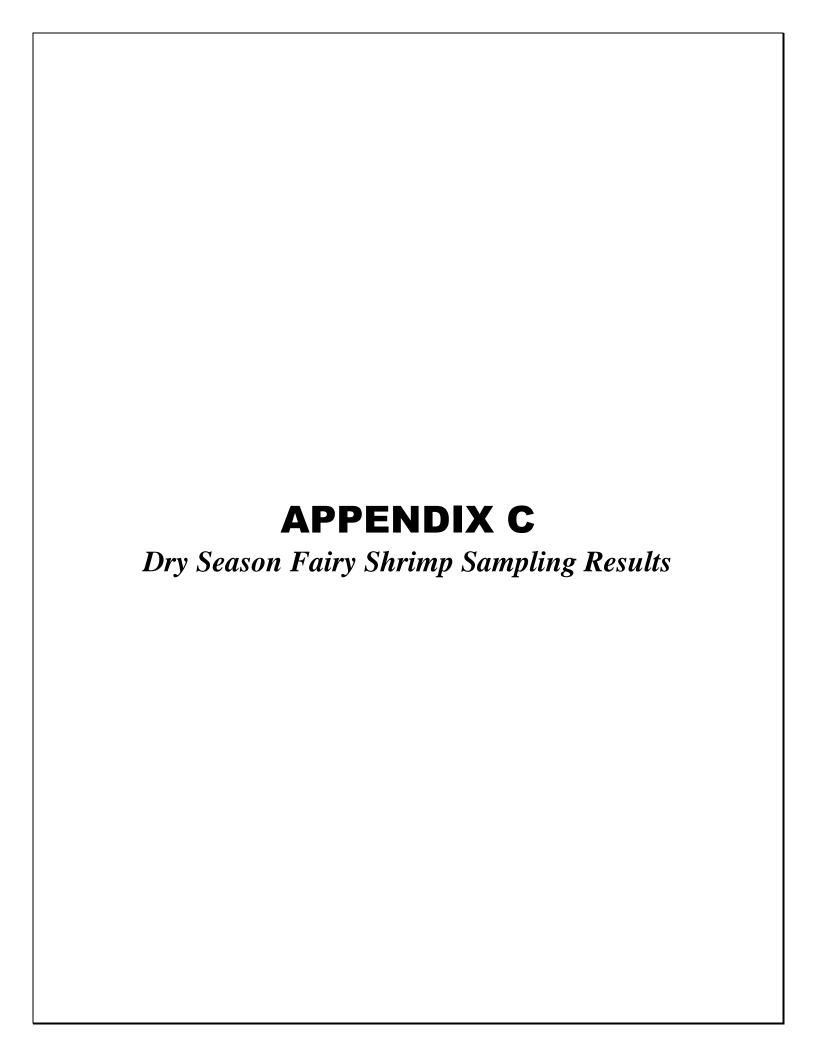


Photo of vernal pool PWP 8

APPENDIX B (Continued)



Overview photos of road ruts PWP 9 through PWP 19





July 23, 2017

Mr. Brock Ortega Dudek 605 Third Street Encinitas, CA 92024

Subject: Dry Season Fairy Shrimp Sampling Results

Dear Mr. Ortega:

This letter presents the results of dry season sampling conducted on soil samples collected from basins on the Pure Water site.

Methods

Dry Sampling

On Friday, June 9, 2017 Alden received soil samples collected from 30 basins on the Pure Water site. The soil was provided in bags labeled with the basin number. The collected soil from each basin was divided into 100ml subsamples, based on the area of the pool and the amount of soil collected. Each sample was then hydrated and processed through a series of sieves to separate out fairy shrimp cysts that may be present. The sieves used were of 710-, 355-, and 212-µm pore size screens. The final sieve pore size is smaller than the target fairy shrimp genera (*Branchinecta* and *Streptocephalus*) average cyst diameter and therefore would retain cysts. The material remaining on the final sieve was next placed in a brine solution to help separate organic from inorganic material. The organic portion was then filtered through a standard coffee filter and allowed to dry. The dried material on the filters was then examined under a stereo dissecting scope to determine if cysts were present. Cyst surface characteristics were then used to identify cysts to genus, if present.

Hatching

Fairy shrimp cysts of the species *Branchinecta* collected during the dry sampling effort were hydrated by placing them into plastic containers, filled with approximately 525 ml of filtered, non-chlorinated drinking water. The coffee filters with the collected cysts were slowly opened over the container and gently shaken to allow the material to fall into the water. The sides of the filter were then rubbed against one another to release any additional material. Finally, a squirt bottle filled with filtered drinking water was used to spray any additional material from the filter into the container.



The containers were given a sample id numbers and placed on a table in a climate controlled room. Lighting in the room was provided by indirect sunlight as well as an overhead light that was kept on approximately 12 hours a day to help emulate spring season lighting conditions. An overhead fan also was kept on at a low level to provide for some air movement across the water surface in the sample containers.

The samples were checked daily to see if any fairy shrimp had emerged. Once nauplii were observed, feeding began. The hatched shrimp were fed a single drop of prepared food on a daily basis until they were collected. The food used was a mix of active brewer's yeast, sugar, powdered fish food, and water.

The hatched shrimp were allowed to continue under these conditions until they had reached maturity, as determined by reaching full size, antennal development (males) and brood pouch (females). Once mature, the fairy shrimp were collected for identification by pouring the material in each container through a small strainer. Collected shrimp were then placed into a dish of carbonated (soda) water to slowly asphyxiate the shrimp. Once dead, the collected shrimp were placed in a 27 x 57 mm (5 dram) clear glass vial, filled with 70% ethyl alcohol. The collected shrimp were then identified to the species level with the aid of a stereo dissecting scope.

Results

Dry Sampling

Of the 30 basins, 14 were found to contain cysts of the genus *Branchinecta* (Table 1). The cyst densities in these 14 basins ranged from 2 to 4,122 cysts per basin. No *Streptocephalus* cysts were recovered from any of the basins.

Hatching

Two rounds of hydration and rearing were conducted for the samples that were found to have cysts present. Following the first round, Lindahl's fairy shrimp were collected and identified in 8 basins (Table 2). Following the second round, Lindahl's fairy shrimp were collected from an additional 5 basins. Only 2 basins (PWP 13 and PWP 16) failed to produce hatched shrimp. No listed San Diego fairy shrimp were identified in either rearing round.



		Table 1		
Dr	y Season Fai	ry Shrimp Sam	pling Results	
	Volume	Number of	Fairy Shrimp	Cysts Recovered
Basin	Collected (ml)	Subsamples Processed	Branchinecta	Streptocephalus
PWP1	2,500	25	0	0
PWP2	1,000	10	0	0
PWP3	1,000	10	45	0
PWP4	1,000	10	7	0
PWP5	1,000	10	5	0
PWP6	1,000	10	0	0
PWP7	1,000	10	0	0
PWP8	2,500	25	4,122	0
PWP9	1,000	10	2	0
PWP10	1,000	10	0	0
PWP11	2,500	25	358	0
PWP12	1,000	10	10	0
PWP13	2,500	25	73	0
PWP14	1,000	10	1,175	0
PWP15	1,000	10	108	0
PWP16	2,500	25	11	0
PWP17	2,500	25	30	0
PWP18	2,500	25	0	0
PWP19	1,000	10	0	0
Total	29,500	295	5,946	0
VP5	2,500	25	0	0
VP8	2,500	25	40	0
VP10	1,000	10	0	0
VP11	2,500	25	615	0
VP12	2,500	25	0	0
VP15	1,000	10	0	0
VP17	2,500	25	0	0
VP18	1,000	10	0	0
VP19	2,500	25	0	0
VP26	1,000	10	0	0
VP27	1,000	10	0	0
Total	20,000	200	655	0
Combined Total	49,500	495	6,601	0



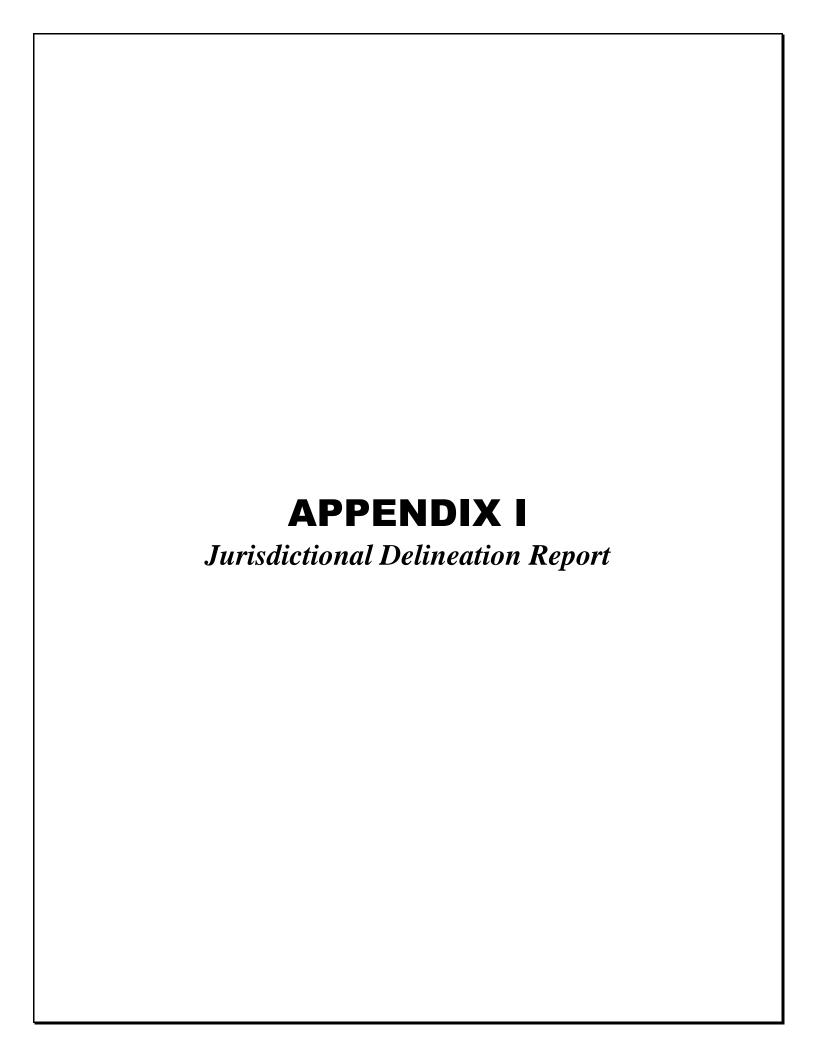
	Table 2							
Fairy Shri	Fairy Shrimp Hatching Results							
Basin	Branchine	cta lindahli						
Dusin	Male	Female						
PWP3	3	0						
PWP4	0	1						
PWP5	3	1						
PWP8	5	1						
PWP9	6	0						
PWP11	15	25						
PWP12	3	2						
PWP13	0	0						
PWP14	20	14						
PWP15	4	8						
PWP16	0	0						
PWP17	5	3						
VP8	3	2						
VP11	4	2						

The above text presents the final results of the dry season fairy shrimp and hatching effort conducted for the project. If you have any questions or need additional information please call.

Sincerely,

Greg Mason

Principal/Senior Biologist





MAIN OFFICE 605 THIRD STREET ENCINITAS, CALIFORNIA 92024 T 760.942.5147 T 800.450.1818 F 760.632.0164

July 21, 2017 9420

Ms. Keli Balo City of San Diego 9192 Topaz Way San Diego, California 92123

Subject: Jurisdictional Delineation Report for the North City Project, San Diego County, California

Dear Ms. Balo:

This report documents the results of a jurisdictional delineation for the proposed Pure Water San Diego Program North City project (North City Project). The 730.6-acre North City Project Study Area (Study Area) consists of the North City Project impacts and an approximately 50-foot buffer along the linear portions of the North City Project. The North City Project Alternatives include a variety of facilities located throughout the central coastal areas of San Diego County in the North City geographic area (Figure 1, Regional Map). The two alternatives, the Miramar Reservoir Alternative and San Vicente Reservoir Alternative, include overlapping areas. A new pure water facility and three pump stations would be located within the corporate boundaries of the City of San Diego (City). Pipelines would traverse a number of local jurisdictions, including the cities of San Diego and Santee and the community of Lakeside in unincorporated San Diego County, in addition to federal lands within Marine Corps Air Station (MCAS) Miramar (Figure 2, Vicinity Map).

This jurisdictional delineation report includes a description of jurisdictional delineation methods and the results of the jurisdictional delineation.

METHODS

Literature Review

Dudek reviewed aerial maps from the San Diego Association of Governments (SANDAG 2014) and Bing (Microsoft 2016); the U.S. Fish and Wildlife Service National Wetlands Inventory (USFWS 2016); the U.S. Geological Survey National Hydrography Dataset (NHD; USGS 2016); the Web Soil Survey (USDA 2016a); Overview of San Diego Region Watershed Management Areas (SDRWQCB 2002); vegetation mapping by Dudek in 2016; vernal pool and basin mapping (HELIX 2016a, 2016b); Draft Existing Conditions Letter Report for the Pure Water San

Diego Program North City Water Purifications Project (HELIX 2016c); topographic data (SANGIS 1999; SDSU n.d.); and historical aerials and topographic maps (Google Earth 2016; Historic Aerials Online 2016a, 2016b, 2016c, 2016d).

Jurisdictional Delineation

A formal jurisdictional delineation was completed by Dudek biologists in September and October 2016 (Table 1) to delineate the extent of jurisdictional aquatic features within the Study Area. In November 2016, the potential vernal pool areas were refined during the site visit. The riparian vegetation communities mapped by Dudek in 2016, vernal pool mapping (HELIX 2016a, 2016b), National Wetlands Inventory data (USFWS 2016), NHD data (USGS 2016), and focused drone flights were used to identify areas within the Study Area on which to concentrate the jurisdictional delineation.

Table 1
Survey Schedule

Date	Time	Surveyors ¹	Weather Conditions ²
9/26/2016	0930–1700	DM, CA	80°F- 93°F, 0% cc, 1 mph wind
9/27/2016	0930–1700	DM, CA, JW, KD	84°F-96°F, 0% cc, 0-2 mph wind
9/28/2016	0930–1700	DM, CA, JW, KD	80°F-93°F, 0% cc, 0-2 mph wind
10/5/2016	0930–1700	CA, PS	68°F-78°F, 0% cc, 0-2 mph wind
10/26/2016	0730–1050	KD	62°F-71°F, 0% cc, 0-3 mph wind
11/29/2016	1200-1600	ВО	56°F-69°F, 70% cc, 0-2 mph wind

Notes:

The delineation defined areas under the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600–1603 of the California Fish and Game Code, under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) pursuant to Section 404 of the federal Clean Water Act, under the jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Clean Water Act Section 401 and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and wetlands under the jurisdiction of the City of San Diego pursuant to Section 114 of the San Diego Municipal Code.

Specifically, the methodology used for each jurisdiction or regulating agency, including ACOE, CDFW, RWQCB, and the City, is described in the following paragraphs.

The ACOE wetlands delineation was performed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (Wetlands Manual; ACOE 1987), the Regional Supplement to the

¹ DM = Danielle Mullen; CA = Callie Amoaku; JW = Janice Wondolleck; KD = Katie Dayton; PS = Patricia Schuyler; BO = Brock Ortega.

[°]F = degrees Fahrenheit; cc = cloud cover; mph = miles per hour

Corps of Engineers Wetland Delineation Manual: Arid West Region (Regional Supplement; ACOE 2008), Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Updated OHWM Datasheet; ACOE 2010), and guidance provided by ACOE and the U.S. Environmental Protection Agency on the geographic extent of jurisdiction based on the U.S. Supreme Court's interpretation of the Clean Water Act (ACOE and EPA 2008). ACOE and RWQCB, pursuant to the federal Clean Water Act, include all areas supporting all three wetlands criteria described in the ACOE Wetlands Manual: hydric soils, hydrology, and hydrophytic vegetation. RWOCB may also take jurisdiction over surface waters lacking ACOE regulation pursuant to the state Porter-Cologne Act. These areas generally include areas that have at least one of the three wetlands indicators but that are isolated from a tributary of navigable water, as determined through lack of evidence of surface water hydrology. Jurisdiction of RWQCB is coincident with that of ACOE in accordance with the federal Clean Water Act, except in cases where a resource is determined to be isolated from navigable waters of the United States and where RWQCB may take jurisdiction under the Porter-Cologne Act. A predominance of hydrophytic vegetation, where associated with a stream channel, was used to determine CDFW-regulated riparian areas. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

Section 114 of the San Diego Municipal Code describes specific development regulations pertaining to sensitive biological resources, including wetlands. The City's definition of wetlands is broader than the definition applied by ACOE.

Collectively, areas under the jurisdiction of ACOE, RWQCB, and/or CDFW are termed "jurisdictional aquatic resources." All jurisdictional aquatic resources are considered wetlands under the City's jurisdiction.

To assist in the determination of jurisdictional areas on site, data was collected at 40 locations (i.e., data stations) using wetland determination data forms (Appendix A). Hydrology, vegetation, and soils were assessed and data were collected and captured on approved ACOE forms. The locations of data stations were collected using a Trimble GeoXT handheld Global Positioning System (GPS) unit with sub-meter accuracy. Based on the GPS data collected in the field, potentially jurisdictional areas were digitized in a geographic information system (GIS) using ArcGIS software.

Hydrophytic Vegetation

Changes in human land-use practices and seasonal changes in species composition, wildfires, and other natural disturbances can adversely affect the hydrophytic vegetation determination. During the delineation, a data station point was considered positive for hydrophytic vegetation if it passed the basic dominance test (Indicator 1), meaning that more than 50% of the dominant species sampled were characterized as either obligate wetland, facultative wetland, and/or facultative per the Arid West 2016 Regional Wetland Plant List (Lichvar et al. 2016). In those cases where the dominance test failed, the vegetation parameter was reevaluated using the prevalence index (Indicator 2), which takes into account all plant species in the community, not just dominants. All plant species observed during the surveys were identified and recorded. Where plant identification could not be made in the field, a sample was taken and later identified in the laboratory.

Hydric Soils

According to the National Technical Committee for Hydric Soils, hydric soils are "soils that are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (USDA 1994). Soil pits were prepared using a "sharp shooter" shovel to determine whether hydric soils were present. The presence of hydric soils was determined through consultations with the 1987 ACOE Wetlands Manual; Field Indicators of Hydric Soils in the United States, version 7.0 (USDA 2010); ACOE's Regional Supplement (ACOE 2008); and Munsell soil color charts (Munsell 2016). Where feasible, soil pits were prepared to depths ranging from 10 to 16 inches, and dry soils were moistened to obtain the most accurate color. Excavated soils were examined for evidence of hydric conditions, including low chroma values and mottling, vertical streaking, sulfidic odor, and high organic matter content in the upper horizon. Evidence of previous ponding or flooding was assessed along with the slope, slope shape, existing landform characteristics, soil material/composition, and hydrophytic vegetation to determine whether hydric soils were present.

Hydrology

Per the guidelines prescribed in the Regional Supplement (ACOE 2008), wetland hydrology indicators are separated into four major groups: groups A, B, C, and D. Group A indicators are based on direct observations of surface flow, ponding, and soil saturation/groundwater. Group B indicators consist of evidence that the Study Area has been or is currently subjected to ponding, including, but not limited to, water marks, drift deposits, and sediment deposits. Group C indicators include signs of previous and/or current saturation, including oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur, both of which are indicative

of extended periods of soil saturation. Group D indicators consist of "vegetation and soil features that are indicative of current rather than historic wet conditions and include a shallow aquitard and results of the Facultative (FAC)-Neutral test" (ACOE 2008). Each group is subdivided into primary and secondary categories based on their frequency and reliability to occur in the Arid West region. Signs of hydrology were investigated on the Study Area. For unvegetated areas, the Updated OHWM Datasheet (ACOE 2010) was used to assess hydrology.

Desktop Analysis

Desktop analysis was used to make preliminary determinations for areas where no access was permitted. Potential jurisdictional areas were mapped using riparian vegetation communities, nearby features accessed during the survey, location of the potential features, and other data (USGS 2016; USFWS 2016; Historic Aerials 2016d). One area is mapped as unvegetated channel, but based on the review of the NHD and topographic maps, there is no connectivity to waters of the United States; therefore, it was mapped under the jurisdiction of CDFW only. Another area within an access-restricted area is mapped as a vernal pool (PW53) in the vernal pool survey data (HELIX 2016a, 2016b); it is described in the HELIX report as being inundated for less than 7 days and not further described with regard to vernal pool indicator species (HELIX 2016c). Therefore, to be conservative, this feature was mapped as a potential vernal pool. Figure 3, Methods – No Access, shows the "no access" areas.

In addition, four vernal pools (PW55, PW56, PW57, and PW58), totaling 0.04 acre, were mapped by HELIX on the North City Pure Water Facility (NCPWF) and described in their report as having vernal pool indicator plant species present (HELIX 2016c) and therefore considered jurisdictional aquatic resources. Additional pools were mapped at NCPWF during the extraordinary rain events in 2017 totaling an additional 0.34 acre of vernal pool area. These pools were found to support indicator plant species, so are therefore considered to be vernal pools in accordance with the Draft Vernal Pool Habitat Conservation Plan (City of San Diego 2016b). Six of these 2017 pools expanded the surface area of the HELIX pools to 0.24 acre and created eleven new pools (0.14 acre). The total vernal pool acreage within the Miramar Reservoir Alternative study area is 0.38 acre including the expanded pools. HELIX and Rocks evaluated this site for potential jurisdictional drainages and none were identified. The vernal pools mapped on the NCPWF site are considered isolated from navigable waters with no federal nexus that would allow these pools to be considered jurisdictional wetlands by the ACOE under the federal Clean Water Act (HELIX 2016c). The RWQCB may try to assert jurisdiction over the vernal pools as wetland waters of the State under the Porter-Cologne Act; however, these pools are small, isolated, and contain limited biological value given that they do not support listed species (HELIX 2016c). The vernal pools would be considered City wetlands in accordance with the City's Biological Guidelines (HELIX 2016c).

The San Vicente Reservoir Dam Raise was completed in 2014 to raise the inundation area from the existing OHWM of 650 feet above mean sea level (amsl) to a new spillway elevation of approximately 766 feet amsl (excluding an Emergency Storage Project area, which was raised to approximately 710 feet amsl) (ACOE 2009). The new spillway elevation was used in combination with information provided by the City of San Diego (Adleberg, pers. comm. 2016a) to determine the OHWM of the San Vicente Reservoir.

Survey Limitations

The survey was conducted during the fall, thereby limiting detection of some annual plant species. However, based on characteristics observed at each of the investigation locations, this limitation is not expected to have affected the jurisdictional determination. Additionally, although the ongoing drought in the region may affect the current conditions observed in the field; other resources were reviewed to supplement the field survey in making the final determinations.

Where possible, plants were mapped to genus. The only areas where a spring survey may provide additional information are the vernal pools that were mapped by HELIX (2016a, 2016b) but were not addressed further in their draft report (HELIX 2016c); where access allowed, these areas were visited by Dudek in October, but survey timing did not coincide with the blooming period of most annual species and therefore not all plants could be identified.

Areas that were inaccessible due to restrictions were delineated via desktop analysis, but were not visited in person during the surveys.

The vernal pool survey area covered a portion of the Study Area, and it is possible there are other vernal pools within upland areas that were not surveyed as part of the jurisdictional delineation. Those potential vernal pool areas have been identified and are further analyzed as part of the 2016/2017 vernal pool surveys.

Biological Resource Mapping

Vegetation communities were mapped by Dudek prior to the jurisdictional delineation in early 2016; however, some vegetation communities and boundaries were refined as needed during the jurisdictional delineation, which mapped boundaries using a Trimble GeoXT GPS with submeter accuracy. These boundaries and locations were digitized by Dudek GIS technician Andrew Greis using ArcGIS software. Additional GIS data was received from HELIX in October and replaced previous vegetation mapping for the North City Pure Water Facility area (HELIX 2016d).

As adopted in the City Municipal Code, Land Development Code—Biology Guidelines (City of San Diego 2012), the vegetation community and land cover mapping follows the Preliminary

Descriptions of the Terrestrial Natural Communities of California (Holland 1986) as modified by the County and noted in Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008), with modifications to accommodate the lack of conformity of the observed communities to those of Holland. Plant species identified during the delineation are described by their scientific names according to the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2016) and common names follow the U.S. Department of Agriculture Natural Resources Conservation Service PLANTS Database (USDA 2016b).

PHYSICAL CHARACTERISTICS

Site Description

The North City Project Alternatives are located in San Diego, Santee, Lakeside, and MCAS Miramar (Figure 1). The Study Area is located on the U.S. Geological Survey 7.5-minute Del Mar, Poway, San Vicente Reservoir, La Jolla, La Mesa, and El Cajon quadrangles (Figure 2).

The Study Area ranges from approximately 10 feet amsl to 1,080 feet amsl. Much of the site is gently sloping or relatively flat, with steeper areas around the reservoirs.

Soils

Soil types within the Study Area are shown in Table 2 and on Figure 4, Soils Map (USDA 2016a). The hydric soils are indicated by shading (USDA 2010, 2015).

Table 2 Soils

Soil Category	Soil Description	Hydric Rating	Acreage
Acid igneous rock land	Acid igneous rock land	No	3.8
Altamont clay	Altamont clay, 9% to 15% slopes	No	0.6
Altamont clay	Altamont clay, 15% to 30% slopes	No	11.4
Altamont clay	Altamont clay, 30% to 50% slopes	No	1.9
Carlsbad gravelly loamy sand	Carlsbad gravelly loamy sand, 2% to 5% slopes	Yes	5.6
Carlsbad-Urban land complex	Carlsbad-Urban land complex, 2% to 9% slopes	No	11.5
Chestern fine sandy loam	Chesterton fine sandy loam, 5% to 9% slopes	No	3.5
Chestern fine sandy loam	Chesterton fine sandy loam, 9% to 15% slopes, eroded	No	1.3
Chestern fine sandy loam	Chesterton fine sandy loam, 2% to 5% slopes	Yes	47.9
Chestern-Urban land complex	Chesterton-Urban land complex, 2% to 9% slopes	No	39.4
Cieneba rocky coarse sandy loam	Cieneba rocky coarse sandy loam, 9% to 30% slopes, eroded	No	2.1

Table 2 Soils

Soil Category	Soil Description	Hydric Rating	Acreage
Cieneba very rocky coarse sandy loam	Cieneba very rocky coarse sandy loam, 30% to 75% slopes	No	23.4
Cieneba-Fallbrook rocky sandy loams	Cieneba-Fallbrook rocky sandy loams, 30% to 65% slopes, eroded	No	4.3
Corralis loamy sand	Corralitos loamy sand, 0% to 5% slopes	Yes	2.0
Diablo clay	Diablo clay, 2% to 9% slopes	No	5.7
Diablo clay	Diablo clay, 15% to 30% slopes	No	16.8
Diablo-Olivenhain complex	Diablo-Olivenhain complex, 9% to 30% slopes	No	15.1
Fallbrook rocky sandy loam	Fallbrook rocky sandy loam, 9% to 30% slopes	No	0.0
Fallbrook sandy loam	Fallbrook sandy loam, 9% to 15% slopes, eroded	No	7.5
Fallbrook-Vista sandy loams	Fallbrook-Vista sandy loams, 15% to 30% slopes	No	0.7
Friant rocky fine sandy loam	Friant rocky fine sandy loam, 30% to 70% slopes	No	4.3
Gaviota fine sandy loam	Gaviota fine sandy loam, 30% to 50% slopes	No	11.8
Grangeville fine sandy loam	Grangeville fine sandy loam, 0% to 2% slopes	Yes	2.0
Gravel pits	Gravel pits	No	1.6
Huerhuero loam	Huerhuero loam, 9% to 15% slopes, eroded	No	2.3
Huerhuero loam	Huerhuero loam, 15% to 30% slopes, eroded	No	9.0
Huerhuero loam	Huerhuero loam, 2% to 9% slopes	Yes	1.8
Huerhuero-Urban land complex	Huerhuero-Urban land complex, 2% to 9% slopes	No	22.2
Huerhuero-Urban land complex	Huerhuero-Urban land complex, 9% to 30% slopes	No	2.3
Lagoon water	Lagoon water	No	0.2
Loamy alluvial land-Huerhuero complex	Loamy alluvial land-Huerhuero complex, 9% to 50% slopes, severely eroded	Yes	0.9
Metamorphic rock land	Metamorphic rock land	No	4.3
Olivenhain cobbly loam	Olivenhain cobbly loam, 30% to 50% slopes	No	20.7
Olivenhain cobbly loam	Olivenhain cobbly loam, 9% to 30% slopes	Yes	0.5
Placentia sandy loam	Placentia sandy loam, thick surface, 2% to 9% slopes	Yes	8.6
Ramona sandy loam	Ramona sandy loam, 5% to 9% slopes	No	7.3
Redding cobbly loam	Redding cobbly loam, 9% to 30% slopes	Yes	26.9
Redding cobbly loam dissected	Redding cobbly loam, dissected, 15% to 50% slopes	No	17.9
Redding gravelly loam	Redding gravelly loam, 2% to 9% slopes	Yes	191.0
Redding-Urban land complex	Redding-Urban land complex, 2% to 9% slopes	No	30.6
Redding-Urban land complex	Redding-Urban land complex, 9% to 30% slopes	No	13.5
Riverwash	Riverwash	Yes	18.4
Salinas clay	Salinas clay, 0% to 2% slopes	No	2.6
Salinas clay loam	Salinas clay loam, 2% to 9% slopes	No	6.6
stony land	Stony land	No	2.7
Terrace escarpments	Terrace escarpments	No	28.5

Table 2 Soils

Soil Category	Soil Description	Hydric Rating	Acreage
Tujunga sand	Tujunga sand, 0% to 5% slopes	Yes	21.3
Urban land	Urban land	No	7.8
Visalia gravelly sandy loam	Visalia gravelly sandy loam, 2% to 5% slopes	No	1.8
Visalia gravelly sandy loam	Visalia gravelly sandy loam, 5% to 9% slopes	No	1.3
Visalia sandy loam	Visalia sandy loam, 0% to 2% slopes	Yes	38.6
Water	Water	No	16.9
		Total	730.6

Sources: USDA 2016a, 2010, 2015. **Note:** Shaded rows denote hydric soils.

Hydrology

The Study Area lies within the San Diego and Peñasquitos Hydrologic Units. The San Diego Hydrologic Unit (906.00) is a long, triangular area covering approximately 440 square miles; the Peñasquitos Hydrologic Unit (907.00) is a triangular area covering approximately 170 square miles (Figure 5, Hydrologic Setting) (SDRWQCB 2002). These hydrologic units are bordered by the San Dieguito Hydrologic Unit to the north and Pueblo San Diego and Sweetwater Hydrologic Units to the south. The Study Area lies within the Miramar, Miramar Reservoir, Tecolote, Mission San Diego, Santee, and Fernbrook Hydrologic Subareas (Figure 5).

The San Diego Hydrologic Unit includes the San Diego River and its tributaries, with the San Vicente, Jennings, Murray, El Capitan, and Cuyamaca Reservoirs providing major water storage within the unit. Historically the San Diego River flowed into San Diego Bay and Mission Bay; however, the channelized river now flows directly into the Pacific Ocean (SDRWQCB 2002).

The Peñasquitos Hydrologic Unit includes Tecolote Creek and several other small creeks and Miramar Reservoir. This hydrologic unit drains into Mission Bay or the San Diego River (SDRWQCB 2002).

The NHD identifies the San Diego River and Tecolote Creek and their tributaries as the drainage features within the Study Area. San Vicente Creek is also a prominent creek that flows into San Vicente Reservoir. Although the City does not routinely release water from the San Vicente Reservoir into the downstream portion of San Vicente Creek, the creek connects the reservoir to the San Diego River, which discharges into the Pacific Ocean near Mission Bay (SDCWA and ACOE 2008).

RESULTS OF SURVEY

Jurisdictional Aquatic Resources

As described in the introduction, the 730.6-acre Study Area consists of the North City Project Alternatives (Miramar Reservoir Alternative and the San Vicente Reservoir Alternative) and an approximately 50-foot buffer along the linear portions of the Proposed Action (Figure 2). The features evaluated during the survey were typically tributaries to, or part of, the San Diego River, Tecolote Creek, San Vicente Reservoir, and Miramar Reservoir. Other features included vernal pools, as well as riparian habitat not associated with waters of the United States.

This section includes the results of the survey described by each alternative separately; the results are shown on Figures 6A–6P, Special Aquatic Resources. Table 3 includes a detailed summary and description of the San Vicente Reservoir and San Vicente Creek, Miramar Reservoir, San Diego River, and Tecolote Creek, which was used to determine the jurisdictional aquatic resources subject to state and/or federal regulations.

Table 3
Summary of Jurisdictional Areas in Study Area

Attribute	San Vicente Reservoir and San Vicente Creek	Miramar Reservoir	San Diego River	Tecolote Creek	Rose Creek/San Clemente Creek
On-site location	The San Vicente Reservoir sits at the eastern extent of the San Vicente Pure Water Pipeline. The reservoir is located east of State Route 67 (SR-67) and north of Interstate 8 (I-8), north of the City of Lakeside, in San Diego County, California. The reservoir was formed within the Cuyamaca Mountains by the damming of San Vicente Creek and the Colorado River via the First San Diego Aqueduct. The reservoir is surrounded by steep, rocky slopes containing mostly chaparral and coastal sage scrub habitats. Wetland vegetation along the shoreline is limited due to the fluctuating water levels and maintenance activities. The San Vicente Reservoir Dam Raise was completed in 2014 to raise the inundation area from the existing OHWM of 650 feet amsl to a new spillway elevation of approximately 766 feet amsl (excluding an Emergency Storage Project area, which was raised to approximately 710 feet amsl)	The Miramar Reservoir sits at the northern extent of the North City Pure Water Pipeline located within the Scripps Ranch community of the City of San Diego. The reservoir is located east of I-15, north of Pomerado Road, and south of Scripps Poway Parkway. The dam and reservoir were completed in 1960 as part of the Second San Diego Aqueduct project. Water flowing south to the reservoir originates from both the Colorado River Aqueduct and the California Aqueduct¹ (City of San Diego 2016a). The reservoir is surrounded by a mixture of wetland and upland habitats, including coastal sage scrub and eucalyptus woodland. Wetland vegetation, mainly freshwater marsh, is found along the majority of the reservoir's perimeter (Figure 6F).	The San Diego River originates north of SR-79 between San Ysabel and Julian within the Cuyamaca Mountains, and runs southwest through an unincorporated area of San Diego County before entering El Capitan Reservoir. Downstream of El Capitan Reservoir, the river flows westward through the cities of Santee and San Diego and past Famosa Slough to the San Diego River Estuary. The river discharges into the Pacific Ocean just south of the jettied entrance of Mission Bay in the community of Ocean Beach (Figure 5). The San Vicente Pure Water Pipeline crosses the San Diego River three times, once near the intersection of West Hills Parkway and SR-52, once south of Carlton Oaks Drive, and	Tecolote Creek sits between I-5 and I-805, north of I-8, forming the southern boundary of Clairemont Mesa, a community within the north-central portion of the City of San Diego (Figure 5). The Wastewater Forcemain and Brine Line (Morena Pipelines) intersect Tecolote Creek along West Moreno Boulevard (Figure 6A).	The proposed Morena Pipelines crosses San Clemente Creek south of SR-52 east of Marian Bear Memorial Park and crosses Rose Creek north of SR-52, east of Rose Canyon Open Space Park. The Landfill Gas (LFG) Pipeline crosses both creeks farther east.

Table 3
Summary of Jurisdictional Areas in Study Area

Attribute	San Vicente Reservoir and San Vicente Creek	Miramar Reservoir	San Diego River	Tecolote Creek	Rose Creek/San Clemente Creek
	(ACOE 2009). The new spillway elevation was used in combination with information provided by the City (Adleberg, pers. comm. 2016a) to determine the OHWM of the San Vicente Reservoir (Figures 6O, 6P).		again north of the intersection of Mission Gorge and Princess View Drive.		
Tributaries present	There are approximately 10 intermittent tributaries that flow into the San Vicente Reservoir from the surrounding steep slopes. Two named tributaries, San Vicente Creek and the First San Diego Aqueduct, are the major inflow sources to the reservoir. The San Vicente Creek watershed (upstream of the dam) covers approximately 74 square miles and includes several ephemeral drainages, including Padre Barona Creek, Foster Creek, West Branch Creek, and San Vicente Creek (SDCWA and ACOE 2008). San Vicente Creek flows southwest from Ramona through the Cuyamaca Mountains and into the reservoir. San Vicente Creek continues downstream of the San Vicente Dam until it merges with the San Diego River. The First San	The Second San Diego Aqueduct is the major inflow source to the Miramar Reservoir. There are no natural sources of flow into the reservoir. Based on a review of NHD flowlines, historic aerials, and topographic maps, there is only one NHD flowline at the northeastern end of the reservoir that terminates approximately 1,100 feet away from the reservoir.	The San Diego River has numerous tributaries along the entirety of its length, but the major inflow sources can be ascribed to the following tributaries: Boulder Creek, Cedar Creek, Conejos Creek, Chocolate Creek, Los Coches Creek, San Vicente Creek, and Forester Creek (USGS 2016). Only a few of these, including Forester Creek and San Vicente Creek, occur in the vicinity of the Study Area. San Vicente Creek flows southwest from Ramona, through the Cuyamaca Mountains and into the San Vicente Creek	There are approximately seven intermittent tributaries that flow into Tecolote Creek from the surrounding steep slopes and canyons (USGS 2016).	San Clemente Creek is a tributary to Rose Creek. There are five unnamed tributaries of Rose Creek upstream of the confluence of Rose and San Clemente creeks. There are three unnamed tributaries of San Clemente Creek.

Table 3
Summary of Jurisdictional Areas in Study Area

Attribute	San Vicente Reservoir and San Vicente Creek	Miramar Reservoir	San Diego River	Tecolote Creek	Rose Creek/San Clemente Creek
	Diego Aqueduct flows from the		continues downstream of		
	Colorado River Aqueduct in San		the San Vicente Dam until		
	Jacinto, California, south through		it merges with the San		
	underground pipes to the		Diego River. The		
	reservoir. The First San Diego		headwaters for Forester		
	Aqueduct enters the reservoir		Creek begin north of		
	along the southwestern edge,		Crest, an unincorporated		
	where it flows aboveground		community in San Diego		
	through a water discharge		County. Forester Creek		
	structure and into a perennial		parallels La Cresta Road		
	stream that flows into the		as it heads west toward I-		
	reservoir.		8 into El Cajon. Once in El		
			Cajon, the creek flows		
			north into Santee along		
			North Johnson and		
			Marshall Avenues. The		
			creek flows under SR-52		
			and converges with the		
			San Diego River near SR- 52 and West Hills		
			Parkway. Forester Creek		
			is channelized all through El Cajon and Santee, but		
			the headwaters contain		
			oak woodland, and		
			southern willow scrub can		
			be found at the		
			downstream end of the		
			creek near its confluence		
			with the San Diego River		
			(Google Earth 2016).		

Table 3
Summary of Jurisdictional Areas in Study Area

Attribute	San Vicente Reservoir and San Vicente Creek	Miramar Reservoir	San Diego River	Tecolote Creek	Rose Creek/San Clemente Creek
On-site topography	The San Vicente Reservoir is surrounded by steep slopes due to the surrounding hilly terrain. San Vicente Creek and West Branch San Vicente Creek are the longest tributaries to the reservoir, with elevations of approximately 2,690 feet amsl and 1,800 feet amsl, respectively. The First San Diego Aqueduct flows aboveground through the discharge structure at approximately 760 feet amsl before entering the reservoir. The other tributaries range in elevation from 1,340 feet amslo to 1,760 feet amsl, flowing into the reservoir from the east, north, and west.	The elevation of the Miramar Reservoir is approximately 700 feet amsl, and the reservoir surrounded by residential development and the Miramar Water Treatment Plant.	The San Diego River flows from its headwaters within the Cuyamaca Mountains at approximately 3,720 feet amsl to its mouth at the Pacific Ocean.	Tecolote Creek flows from its headwaters at approximately 350 feet amsl to the Pacific Ocean via Mission Bay and the San Diego River.	San Clemente Creek occurs at approximately 480 feet amsl at the headwaters and 120 feet at the confluence of San Clemente Creek and Rose Creek. Rose Creek occurs at approximately 10 feet amsl to 640 feet amsl. The proposed LFG Pipeline crosses both San Clemente Creek and Rose Creek at approximately 280 feet amsl. The Morena Pipelines cross both creeks at approximately 200 feet amsl.
Hydrology	The San Vicente Reservoir lies within the Fernbrook Hydrologic Subarea of the San Vicente Hydrologic Area of the San Diego Hydrologic Unit (Figure 5) (SDRWQCB 1995). The San Diego Hydrologic Unit is approximately 440 square miles, is drained by the San Diego River, and receives annual precipitation ranging from less than 11 inches	The Miramar Reservoir lies within the Miramar Hydrologic Area of the Peñasquitos Hydrologic Unit (Figure 5) (SDRWQCB 1995). The Peñasquitos Hydrologic Unit is approximately 170 square miles, is drained by several small creeks, and receives annual precipitation ranging from less than 8 inches along	The San Diego River is within the San Diego Hydrologic Unit of the San Diego River Watershed Management Area (Figure 5). The San Diego Hydrologic Unit is approximately 440 square miles, is drained by the San Diego River, and receives annual	Tecolote Creek is within the Peñasquitos Hydrologic Unit (Figure 5), an area of approximately 170 square miles extending from the City of Poway to the east and the City of La Jolla to the west. Annual precipitation in the hydrologic unit ranges from less than 8 inches along the coast to 18 inches inland.	Rose Creek and San Clemente Creek lie within the Miramar Subarea of the Peñasquitos Hydrologic Unit. The Peñasquitos Hydrologic Unit is approximately 100 square miles. It drains the largely urbanized areas west of I-15 in

Table 3
Summary of Jurisdictional Areas in Study Area

Attribute	San Vicente Reservoir and San Vicente Creek	Miramar Reservoir	San Diego River	Tecolote Creek	Rose Creek/San Clemente Creek
	along the coast to about 35 inches around the Cuyamaca and El Capitan reservoirs (SDRWQCB 2002).	the coast to approximately 18 inches inland (SDRWQCB 2002).	precipitation ranging from less than 11 inches along the coast to about 35 inches around the Cuyamaca and El Capitan Reservoirs (SDRWQCB 2002).	Several small creeks drain this hydrologic unit, including Tecolote Creek. Drainage from the hydrologic unit ultimately flows into Mission Bay or the San Diego River.	coastal San Diego County. The major receiving waters include Los Peñasquitos Lagoon and Mission Bay.
Tributary to?	San Vicente Creek flows downstream of the San Vicente Dam, and although the City does not routinely release water from the San Vicente Reservoir into San Vicente Creek, the creek connects the reservoir to the San Diego River, which discharges into the Pacific Ocean near Mission Bay (SDCWA and ACOE 2008). According to the Carryover Storage and San Vicente Dam Raise Environmental Impact Report/ Environmental Impact Statement (SDCWA and ACOE 2008), this downstream portion of San Vicente Creek contains both jurisdictional wetlands and waters regulated by ACOE and CDFW.	The Miramar Reservoir does not have connectivity to waters of the United States. There are no natural sources of flows into the reservoir. The reservoir itself stores water from the Colorado River, which is transported through the Second San Diego Aqueduct. Water is not released from the reservoir. The pond located south of the reservoir ("Evans Pond") receives water from a storm drain and untreated water from various reservoirs (Adleberg, pers. comm. 2016b).	The San Diego River historically flowed into Mission Bay; however, the river has been channelized and redirected to now flow directly into the Pacific Ocean (SDRWQCB 2002).	Tecolote Creek flows into Mission Bay and out to the Pacific Ocean.	San Clemente Creek is a tributary to Rose Creek. Rose Creek is not a tributary to any other waters and flows to the Pacific Ocean via Mission Bay.
Riparian vegetation present?	Within the Study Area, there are two areas within San Vicente Creek that contain riparian	Within the Study Area, there is riparian vegetation, mapped as freshwater marsh, present	The San Diego River contains an extensive amount of riparian	Tecolote Creek is a natural streambed containing riparian vegetation as it	On site, southern sycamore–alder riparian woodland and
p. soone.	vegetation. The first area	along the Miramar Reservoir's	vegetation, and within the	flows through the open	southern willow scrub

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Summary of Jurisdictional Areas in Study Area

Attribute	San Vicente Reservoir and San Vicente Creek	Miramar Reservoir	San Diego River	Tecolote Creek	Rose Creek/San Clemente Creek
	(containing mulefat scrub) is downstream of the dam (Figure 6N), just south of the quarry and west of Moreno Avenue. The other area is farther south along the San Vicente Pure Water Pipeline and contains southern willow scrub where San Vicente Creek passes underneath Willow Road just west of Moreno Avenue (Figure 6M).	perimeter.	Study Area riparian vegetation occurs within all areas where the San Vicente Pure Water Pipeline crosses the San Diego River. The vegetation includes southern arroyo willow riparian forest, southern willow scrub, freshwater marsh, and Arundo- dominated riparian.	space of Tecolote Canyon, but becomes an unvegetated concrete-lined channel as it flows out into Mission Bay.	are mapped at San Clemente Creek. At Rose Creek, southern willow scrub is mapped.
Potential ACOE jurisdiction?	Yes. ACOE issued a permit for the Carryover Storage and San Vicente Reservoir Dam Raise Project (ACOE 2009).	Potential; needs ACOE confirmation. Prior to construction of the Miramar Reservoir, there was an impoundment at this location. Based on historic topographic maps, the impoundment received flow from a channel to the northeast that originated in the adjacent hills. Water discharged from the impoundment flowed south/southwest into another channel, which discharged into another impoundment (Historic Aerials 2016c). Since both of the dams were created prior to September 1, 1976	Yes	Yes	Yes

Table 3
Summary of Jurisdictional Areas in Study Area

Attribute	San Vicente Reservoir and San Vicente Creek	Miramar Reservoir	San Diego River	Tecolote Creek	Rose Creek/San Clemente Creek
		(grandfathered under the Nationwide Permits per 33 CFR 330.3), at the time the Clean Water Act began to be enforced in this area the reservoir was already long isolated from the downstream creek, so it may not be considered an (a)(4) water body.			

Note:

¹ The NHD refers to this as the Second San Diego Aqueduct (USGS 2016).

Waters of the United States

Areas mapped as waters of the United States exhibit characteristics of ACOE/RWQCB waters (ACOE 2008, 2010) and CDFW streambeds (i.e., defined bed and bank). Through either on-site evaluation or literature review, the channels, floodplains, or reservoirs were determined to connect to the San Vicente Creek, San Diego River, or Tecolote Creek and therefore to be hydrologically connected to navigable waters of the United States and jurisdictional under ACOE, RWQCB, and CDFW regulations.

Because an Approved Jurisdictional Determination has not been provided by the ACOE, for the purposes of this report, Miramar Reservoir and the pond to the south are considered potential waters of the United States. Based on a review of historic aerials and topographic maps (Historic Aerials 2016c), there was some hydrology in this area prior to construction of the dam; however, the reservoir itself stores water from the Colorado River that is transported through the Second San Diego Aqueduct. Water is not released from the reservoir, and the reservoir has no hydrologic connection to the downstream relic creek channel. Miramar Reservoir in its current condition is an isolated intrastate water body. The pond located south of the reservoir ("Evans Pond") receives water from a storm drain and untreated water from various reservoirs (Adleberg, pers. comm. 2016b).

Areas that did not exhibit hydrology characteristics per the ACOE guidelines (ACOE 1987, 2008, 2010) were not mapped as waters of the United States.

Waters of the State

The second type of potential jurisdictional aquatic resource includes riparian vegetation communities associated with stream channels. These areas are located on the slopes or banks outside the limits of the OHWM and therefore of the ACOE/RWQCB-regulated areas. The third type of jurisdictional aquatic resource on site is waters or riparian areas that do not appear to be associated with waters of the United States. These areas are mapped as CDFW-regulated resources.

California Coastal Commission

The North City Project is entirely outside the coastal zone, with the exception of one overflow pipe that extends approximately 200 feet within the boundary along Friars Road. However, based on communication with Alexander Llerandi at the CCC, the City has received concurrence that the overflow pipe is within the City's jurisdiction (and the CC's coastal development permit appealable jurisdiction) and can be processed locally (Llerandi, pers. comm. 2017). Therefore, no jurisdictional aquatic resources are considered to be regulated by the CCC.

City of San Diego

The City of San Diego regulates jurisdictional aquatic resources, or "wetlands," according to the City's Biological Guidelines (City of San Diego 2012). The intention of the definition is to differentiate uplands from wetlands. Under the City's definition, wetlands can include vegetation communities such as freshwater marsh, riparian forest, riparian scrub, or vernal pools. They may also include areas that have hydric soil or wetland hydrology, but human activities have resulted in a lack of hydrophytic vegetation (e.g., channelized streambeds) or recurring natural events (City of San Diego 2012). However, "seasonal drainage patterns that are sufficient enough to etch the landscape (i.e., ephemeral/intermittent drainages) may not be sufficient enough to support wetland dependent vegetation. These types of drainages would not satisfy the City's wetland definition unless wetland dependent vegetation is either present in the drainage or lacking due to past human activities. Seasonal drainage patterns may constitute "waters of the United States" which are regulated by the Army Corps of Engineers and/or the California Department of Fish and Game" (City of San Diego 2012).

Jurisdictional Aquatic Resources Summary by Alternative

Wetlands and non-wetland waters within the Study Area for both Project Alternatives under the jurisdiction of ACOE/RWQCB, streambeds and associated riparian areas under CDFW jurisdiction, and/or wetlands regulated by the City of San Diego total 35.27 acres; these resources are shown on Figures 6A–6P.

Miramar Reservoir Alternative

The total wetlands and non-wetland waters in the Miramar Reservoir Alternative under the jurisdiction of ACOE/RWQCB, streambeds and associated riparian areas under CDFW jurisdiction, and/or wetlands regulated by the City of San Diego is 2.96 acres.

Table 4 lists the jurisdictional aquatic resources and acreages in the Miramar Reservoir Alternative, and Figures 6A–6G show the location of those resources.

Table 4
Jurisdictional Aquatic Resources in the Miramar Reservoir Alternative (Acres)

Jurisdictional Aquatic Resource	ACOE/RWQCB1	CDFW ¹	City of San Diego Wetlands ¹
Wetland or Riparian Areas			
Cismontane alkali marsh	0.02	0.02	0.02
Coast live oak woodland	_	0.09	0.09
Coastal and valley freshwater marsh	0.37	0.37	0.37

Table 4

Jurisdictional Aquatic Resources in the Miramar Reservoir Alternative (Acres)

Jurisdictional Aquatic Resource	ACOE/RWQCB1	CDFW ¹	City of San Diego Wetlands ¹
Disturbed coast live oak woodland	_	0.06	0.06
Disturbed southern riparian forest	_	0.02	0.02
Mulefat scrub	0.04	0.07	0.07
Southern arroyo willow riparian forest	_	0.02	0.02
Southern willow scrub	0.25	0.25	0.25
Vernal pool	0.56	_	0.982
Total riparian/wetlands	1.23	0.89	1.88
Non-wetla	and Waters/Streambed		
Ephemeral stream channel (Developed – Concrete Channel)	0.03	0.03	_
Ephemeral Stream Channel (Disturbed Wetland)	0.11	0.11	0.11
Ephemeral Stream Channel (Non-vegetated Channel)	0.51	0.46	0.46
Perennial stream channel	0.51	0.51	0.51
Total non-wetland waters/streambed	1.16	1.12	1.10
Total jurisdictional area ³	2.40	2.01	2.96

Notes:

- 1 The acreages listed in the ACOE, RWQCB, CDFW, and City of San Diego Wetlands columns overlap and should not be summed together.
- ² This 0.98 acre of vernal pool may also be regulated by the RWQCB.

ACOE- jurisdictional areas within the Miramar Reservoir Alternative total 2.40 acres, including 1.23 acres of jurisdictional wetlands and 1.16 acres of non-wetland stream channels or lake features. Vernal pools within MCAS Miramar are considered ACOE- and RWQCB-jurisdictional and total 0.56 acre. This total includes the vernal pools within the LFG Pipeline (0.45 acre) and North City Pipeline (0.10 acre) study areas.

CDFW jurisdiction extends over all areas under ACOE and RWQCB jurisdiction discussed above and includes areas that meet ACOE wetland (i.e., hydrophytic) vegetation criteria but lack wetlands hydrology and/or hydric soils indicators. CDFW-jurisdictional areas on site total 2.01 acres, including 0.89 acres of riparian habitat and 1.12 acres of streambed or lake features.

The majority of the jurisdictional aquatic resources are considered wetlands by the City of San Diego, with the exception of 0.03 acre of ephemeral stream channel (developed – concrete channel within Tecolote Creek) that do not meet the City's criteria for a wetland. Also included under City jurisdiction are vernal pools, totaling 0.98 acre. The vernal pools occur with the study area for four components including LFG Pipeline (0.45 acre), Metro Biosolids Center (0.03 acre), North City Pipeline (0.12 acre), and the NCPWF (0.38 acre). The vernal pools at the

Acreage may not sum precisely due to rounding.

NCPWF, one vernal pool at the MBC, and one vernal pool along the North City Pipeline are small, isolated, and do not support listed species. However, RWQCB may try to assert jurisdiction over the vernal pools as wetland waters of the State under the Porter–Cologne Act (HELIX 2016c). The vernal pools would be considered City wetlands in accordance with the City's Biological Guidelines (City of San Diego 2012).

The Miramar Reservoir Alternative includes 0.03 acre within the Coastal Overlay Zone.

San Vicente Reservoir Alternative

The total wetlands and non-wetland waters in the San Vicente Reservoir Alternative under the jurisdiction of ACOE/RWQCB, streambeds and associated riparian areas under CDFW jurisdiction, and/or wetlands regulated by the City of San Diego is 32.31 acres.

Table 5 lists the jurisdictional aquatic resources and acreages in the San Vicente Reservoir Alternative and Figures 6A–6C and 6G–6P show the location of those resources.

Table 5

Jurisdictional Aquatic Resources in the San Vicente Reservoir Alternative (Acres)

Jurisdictional Aquatic Resource	ACOE/RWQCB1	CDFW ¹	City of San Diego Wetlands ¹	
Wetland or Riparian Areas				
Arundo-dominated riparian	0.33	0.39	0.39	
Cismontane alkali marsh	0.02	0.02	0.02	
Coast live oak woodland	_	0.09	0.09	
Coastal and valley freshwater marsh	0.29	0.29	0.29	
Disturbed coast live oak woodland	_	0.06	0.06	
Disturbed mulefat scrub	_	0.17	0.17	
Disturbed southern riparian forest	_	0.02	0.02	
Mulefat scrub	0.04	0.23	0.23	
Southern arroyo willow riparian forest	1.12	1.56	1.56	
Southern cottonwood-willow riparian forest		0.08	0.08	
Southern sycamore–alder riparian woodland	_	0.58	0.58	
Southern willow scrub	0.80	1.88	1.88	
Vernal pool	1.33	_	1.732	
Total riparian/wetlands	3.93	5.37	7.10	
Non-wetland Waters/Streambed				
Ephemeral Stream Channel (Developed – Concrete Channel)	0.03	0.03	_	
Ephemeral Stream Channel (Disturbed Wetland)	0.11	0.11	0.11	

Table 5

Jurisdictional Aquatic Resources in the San Vicente Reservoir Alternative (Acres)

Jurisdictional Aquatic Resource	ACOE/RWQCB1	CDFW ¹	City of San Diego Wetlands ¹
Ephemeral Stream Channel (Non-vegetated Channel)	1.69	0.95	0.94
Intermittent stream channel	0.06	0.06	0.06
Perennial stream channel/lake	24.10	24.10	24.10
Total non-wetland waters/streambed	25.99	25.26	25.24
Total jurisdictional area ³	29.92	30.63	32.31

Notes:

- 1 The acreages listed in the ACOE/RWQCB, CDFW, and City of San Diego Wetlands columns overlap and should not be summed together.
- This 1.73 acre of vernal pool may also be regulated by the RWQCB.
- Acreage may not sum precisely due to rounding.

ACOE- and RWQCB-jurisdictional areas within the San Vicente Reservoir Alternative total 29.92 acres, including 3.93 acres of jurisdictional wetlands and 25.99 acres of non-wetland stream channels/lake. Vernal pools within MCAS Miramar are considered ACOE- and RWQCB-jurisdictional and total 1.33 acres. This total includes the vernal pools within the LFG Pipeline (0.45 acre), and the San Vicente Pipeline – Repurposed 36-inch Recycled Water Line (0.87 acre) study areas.

CDFW jurisdiction extends over all areas under ACOE and RWQCB jurisdiction discussed above and includes areas that meet ACOE wetland (i.e., hydrophytic) vegetation criteria but lack wetlands hydrology and/or hydric soils indicators. CDFW-jurisdictional areas on site total 30.63 acres, including 5.37 acres of riparian habitat and 25.26 acres of non-wetland stream channels/lake.

The San Vicente Reservoir Alternative includes 0.03 acre within the Coastal Overlay Zone.

The majority of the jurisdictional aquatic resources are considered wetlands by the City of San Diego, with the exception of 0.75 acre of ephemeral stream channels (i.e., developed – concrete channel and non-vegetated channel) that do not meet the City's criteria for a wetland. Also included only under City jurisdiction, and potentially under RWQCB jurisdiction, are vernal pools, totaling 1.73 acre. Vernal pools occur within the study area of the following four components: LFG Pipeline (0.45 acre), MBC (0.03 acre), NCPWF (0.38 acre), and the along the San Vicente Pipeline – Repurposed 36-inch Recycled Water Line (0.87 acre). The vernal pools at the NCPWF, and the one vernal pool at the MBC are small, isolated, and do not support listed species. However, RWQCB may assert jurisdiction over the vernal pools as wetland waters of the state under the Porter-Cologne Act. The vernal pools would be considered City wetlands in accordance with the City's Biological Guidelines (City of San Diego 2012).

Data Stations

Vegetation, hydrology, and soils were examined at 40 wetland sampling points (data stations) within the Study Area (Figures 6A–6P) to determine the extent of jurisdictional aquatic resources. Due to access limitations and vegetation cover, some data stations are located outside the feature but within representative conditions of the feature. Table 6 lists the results of these data stations in terms of the three criteria that determine jurisdiction: vegetation, hydrology, and soils. Appendix A includes the data station forms, and Appendix B includes representative photos at each data station.

Table 6
Jurisdictional Data Station Results

Data Station	Wetland Vegetation	Wetland Soils	Hydrology	Jurisdictional Determination
1a	No	No	Yes	ACOE/CDFW/RWQCB
1b	No	Yes	Yes	ACOE/CDFW/RWQCB
1c	Yes	No	Yes	ACOE/CDFW/RWQCB
1d	No	No	No	CDFW
2	Yes	No	No	CDFW
3a	Yes	Yes	Yes	ACOE/CDFW/RWQCB
3b	No	No	No	Non-jurisdictional
4a	Yes	Yes	Yes	ACOE/CDFW/RWQCB
4b	Yes	Yes	Yes	ACOE/CDFW/RWQCB
4c	No	No	No	Non-jurisdictional
5a	Yes	No	Yes	ACOE/CDFW/RWQCB
5b	No	No	No	Non-jurisdictional
6a	No	No	Yes	ACOE/CDFW/RWQCB
6b	Yes	No	No	CDFW
6c	No	No	No	CDFW
6d	No	No	No	CDFW
7a	No	No	Yes	ACOE/CDFW/RWQCB
7b	No	No	No	Non-jurisdictional
8	No	No	Yes	ACOE/CDFW/RWQCB
9a	No	No	Yes	ACOE/CDFW/RWQCB
9b	Yes	No	No	CDFW
9c	No	No	No	Non-jurisdictional
10	Yes	No	Yes	CDFW
11	Yes	No	No	CDFW
12a	No	Yes	Yes	ACOE/CDFW/RWQCB
12b	Yes	Yes	Yes	ACOE/CDFW/RWQCB
12c	Yes	Yes	Yes	ACOE/CDFW/RWQCB

Data **Wetland Vegetation Wetland Soils** Station Hydrology **Jurisdictional Determination** 13 Yes No No **CDFW** 14a Yes Yes Yes ACOE/CDFW/RWQCB 14b Yes ACOE/CDFW/RWQCB No No 15a No Yes Yes ACOE/CDFW/RWQCB 15b Yes Yes ACOE/CDFW/RWQCB Yes 16a Yes **CDFW** Yes No 16b No No No Non-jurisdictional ACOE/CDFW/RWQCB 17a Yes Yes Yes 17b Yes Yes Yes ACOE/CDFW/RWQCB 17c No Non-jurisdictional No No 18 Yes ACOE/CDFW/RWQCB Nο Nο 19a No No Non-jurisdictional No 19b Yes Yes Yes ACOE/CDFW/RWQCB

Table 6
Jurisdictional Data Station Results

Potential Vernal Pool Areas

As stated in the methods, HELIX provided vernal pool data for areas surveyed in 2015/2016 (HELIX 2016c) over a variation of the Study Area at that time. The vernal pool survey area covered a portion of the jurisdictional delineation Study Area. The delineation focused on riparian vegetation communities and areas with NHD or topography that indicated potential aquatic features. Based on soil types (hydric and clay soils), slope (0%–10%), and vegetation, there may be potential for additional vernal pool features to occur in upland areas that have not been surveyed. On November 29, 2016, Dudek biologist Brock Ortega visited these areas and further refined the potential locations. Figures 7A–7F, Potentially Suitable for Vernal Pools, show these areas that were surveyed during the 2016/2017 wet season.

APPLICABLE REGULATIONS AND PERMIT REQUIREMENTS

Local – City of San Diego

Section 114 of the San Diego Municipal Code describes specific development regulations pertaining to sensitive biological resources, including wetlands. The City's definition of wetlands is broader than the definition applied by ACOE. Guidelines that supplement the development regulation requirements described in this section are provided in the San Diego Municipal Code,

Land Development Code—Biology Guidelines (City of San Diego 2012). The majority of the waters of the United States and/or state are considered wetlands under the City's guidelines.

State and Federal

The following is a summary of permit requirements relative to the jurisdictional waters/wetlands identified on site.

ACOE

ACOE has two programs that allow for fill of jurisdictional waters pursuant to Section 404 of the Clean Water Act: Nationwide Permits (NWPs) and Individual Permits. A review of environmental impacts associated with authorizations under NWPs has been completed in accordance with the National Environmental Policy Act, and a determination has been made that, based on criteria included in NWPs, impacts resulting from authorization of its use across the nation will not result in more than minimal adverse effect on aquatic resources. Further review of the proposed impacts and consultation with ACOE would be required to determine whether any NWPs authorize the proposed activities. An Individual Permit can be pursued if no NWPs apply to the Proposed Action.

RWQCB

According to the federal Clean Water Act, ACOE may not authorize the fill of jurisdictional waters without certification that the authorized activity will not substantially impact water quality. This provision is known as a Section 401 Water Quality Certification. Within California, the 401 Water Quality Certification is issued by the RWQCB where the activity is located. The Study Area lies within the San Diego Region (Region 9) of the State Water Resources Control Board.

RWQCB typically accepts the ACOE jurisdictional determination and will process a 401 Water Quality Certification for the areas considered for authorization of impacts by ACOE following a review of short- and long-term water quality control measures and overall project avoidance, minimization, and mitigation of jurisdictional impacts. In general, water quality control measures are reviewed with greater scrutiny but still based on the applicable local and state discharge requirements. RWQCB has, in select cases, taken jurisdiction over lands not included within the ACOE jurisdiction, generally consisting of isolated surface water, additional CDFW-jurisdictional wetlands, and in the case of vernal pools, isolated wetlands. The State Water Resources Control Board is considering adopting a statewide wetlands definition that, as currently contemplated, would include CDFW-jurisdictional riparian areas. RWQCB will not be able to issue the 401 Water Quality Certification or Waste Discharge Requirement until a valid

California Environmental Quality Act (CEQA) document covering the Proposed Action has been certified/adopted by the lead agency.

CDFW

In accordance with the Section 1600 of the California Fish and Game Code, a Streambed Alteration Agreement is required for fill and/or vegetation removal within CDFW-jurisdictional riparian areas and streambeds. CDFW will not issue a Streambed Alteration Agreement until a valid CEQA document is certified/adopted.

California Coastal Act

As mentioned above, no features are considered regulated by the CCC. The jurisdictional delineation study area surveyed included a 50-foot buffer from the proposed impact area, and there are resources in the San Diego River floodplain within this buffer that would be considered wetlands within the Coastal Overlay Zone, and therefore would require adherence to the Coastal Overlay Zone wetland buffer regulations (City of San Diego 2012). According to the City's Biological Guidelines, a wetland buffer is an area surrounding a wetland that helps protect the function and value of the adjacent wetland by reducing physical disturbance; provides a transition zone where one habitat phases into another; and acts to slow flood waters for flood and erosion control, sediment filtration, water purification, ground water recharge (City of San Diego 2012). Within the Coastal Overlay Zone, wetland buffers should be a minimum of 100 feet wide (as determined on a case-by-case basis in consultation with CDFW, USFWS, and the ACOE) adjacent to a wetland. The width of the buffer is determined by factors such as type and size of development, sensitivity of the wetland resource to edge effects, topography, and the need for upland transition (City of San Diego 2012).

Should you have any questions regarding this report or require additional information, please do not hesitate to contact me at 760.479.4293 or cford@dudek.com.

Sincerely,

Callie Amoaku
Biologist

Att: Figures 1–7F

Appendix A: Wetland Determination Data Forms Appendix B: Representative Photographs

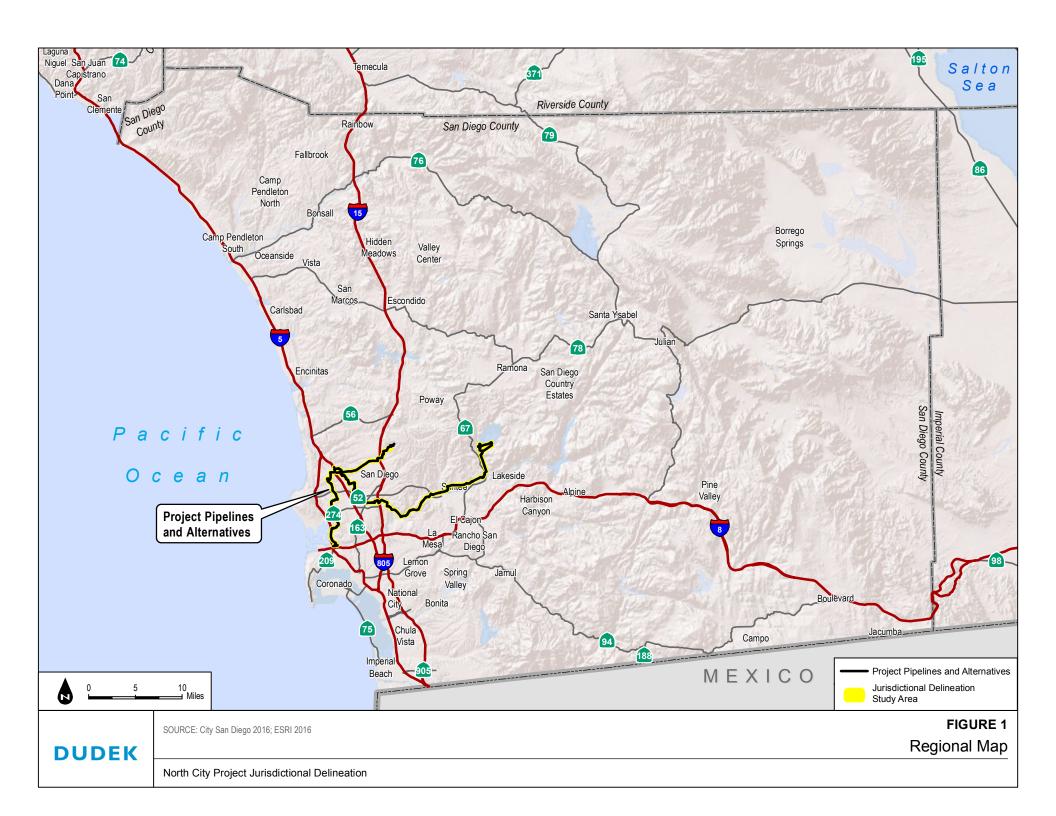
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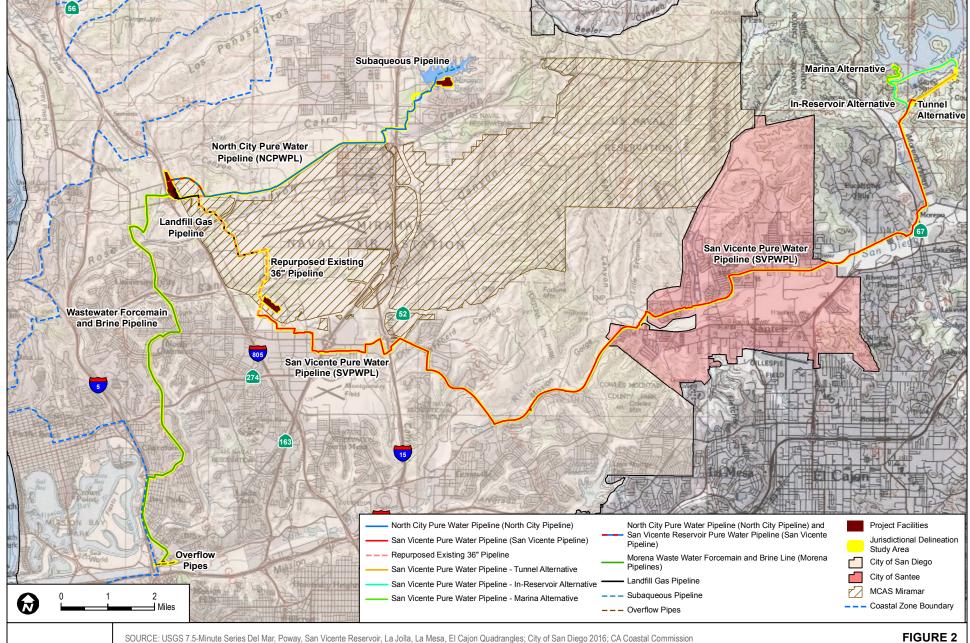
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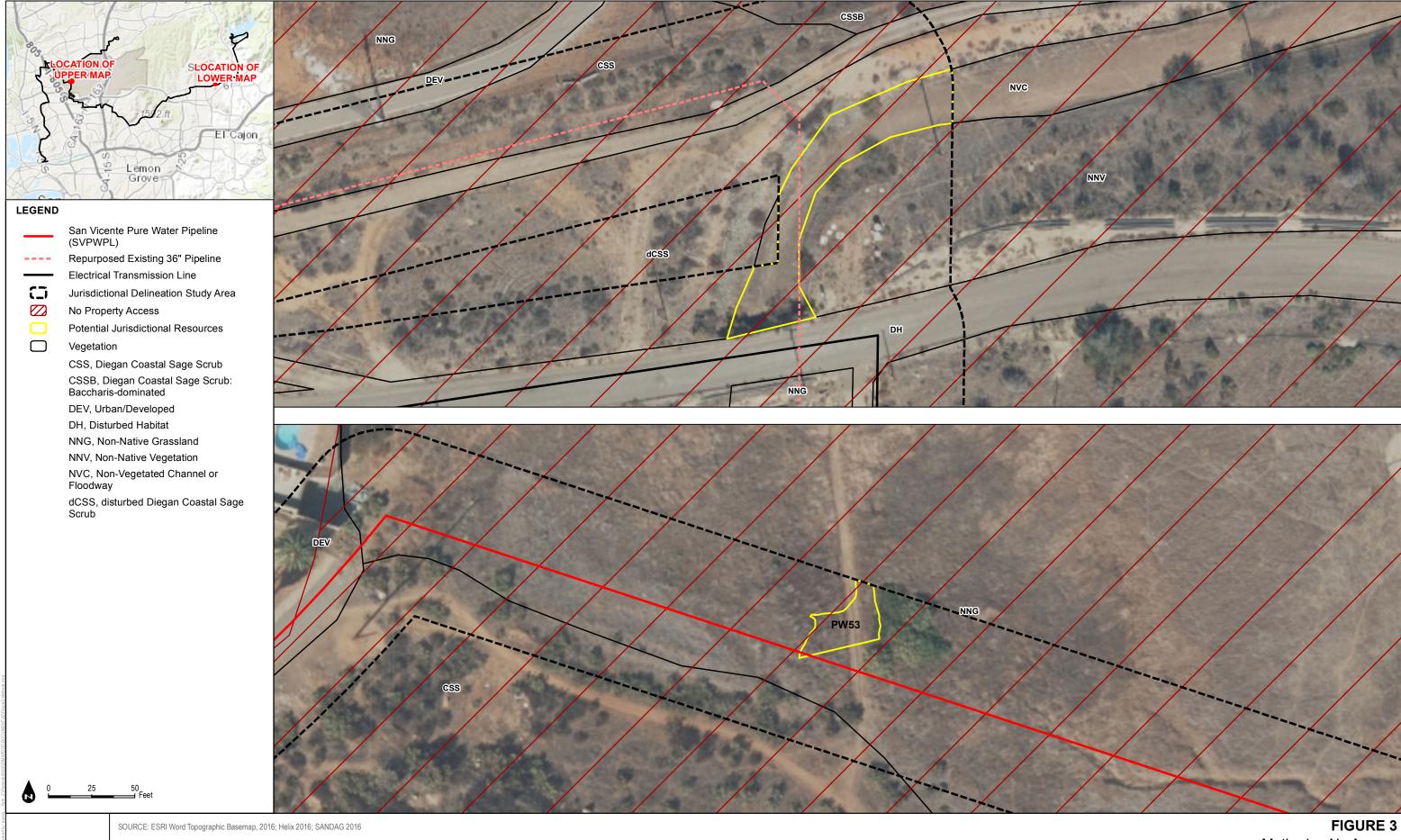




Vicinity Map

North City Project Jurisdictional Delineation

DUDEK



DUDEK

Methods - No Access

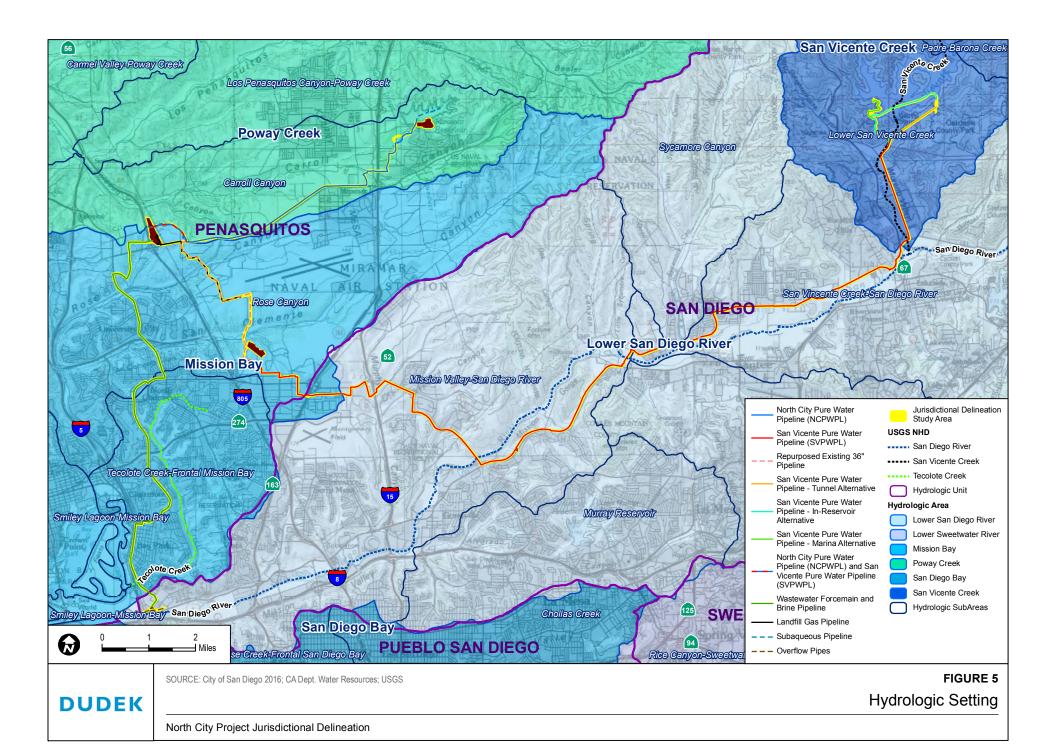


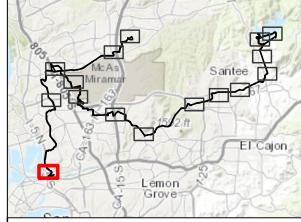
SOURCE: City of San Diego 2016; SanGIS 2016

DUDEK

Soils Map

North City Project Jurisdictional Delineation





 \Box

Moreno Wastewater Forcemain and Brine Line

Overflow Pipes

Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

CAM, Cismontane Alkali Marsh

FWM, Coastal and Valley Freshwater Marsh

MFS, Mulefat Scrub

NVC, Non-Vegetated Channel or Floodway

SWS, Southern Willow Scrub

Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

DUDEK

Non-wetland Water - Ephemeral

Wetland or Riparian Area

California Coastal Commission

CCC-regulated Wetlands Coastal Zone Boundary

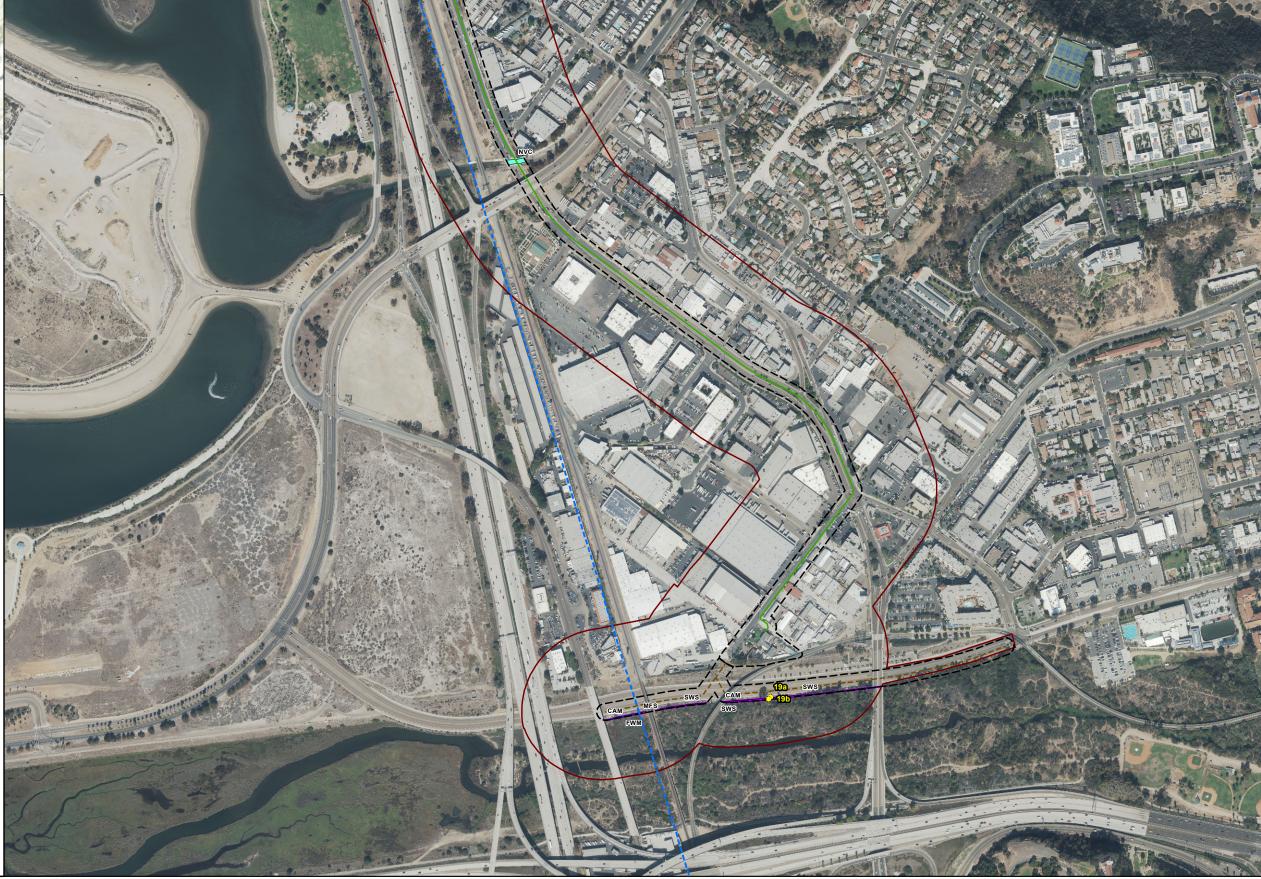
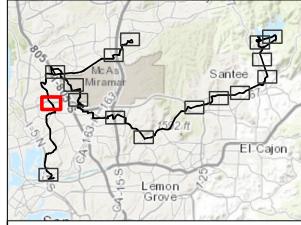




FIGURE 6A Special Aquatic Resources



Moreno Wastewater Forcemain and Brine Line

Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

NVC, Non-Vegetated Channel or Floodway

SWRF, Southern Arroyo Willow Riparian Forest

Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

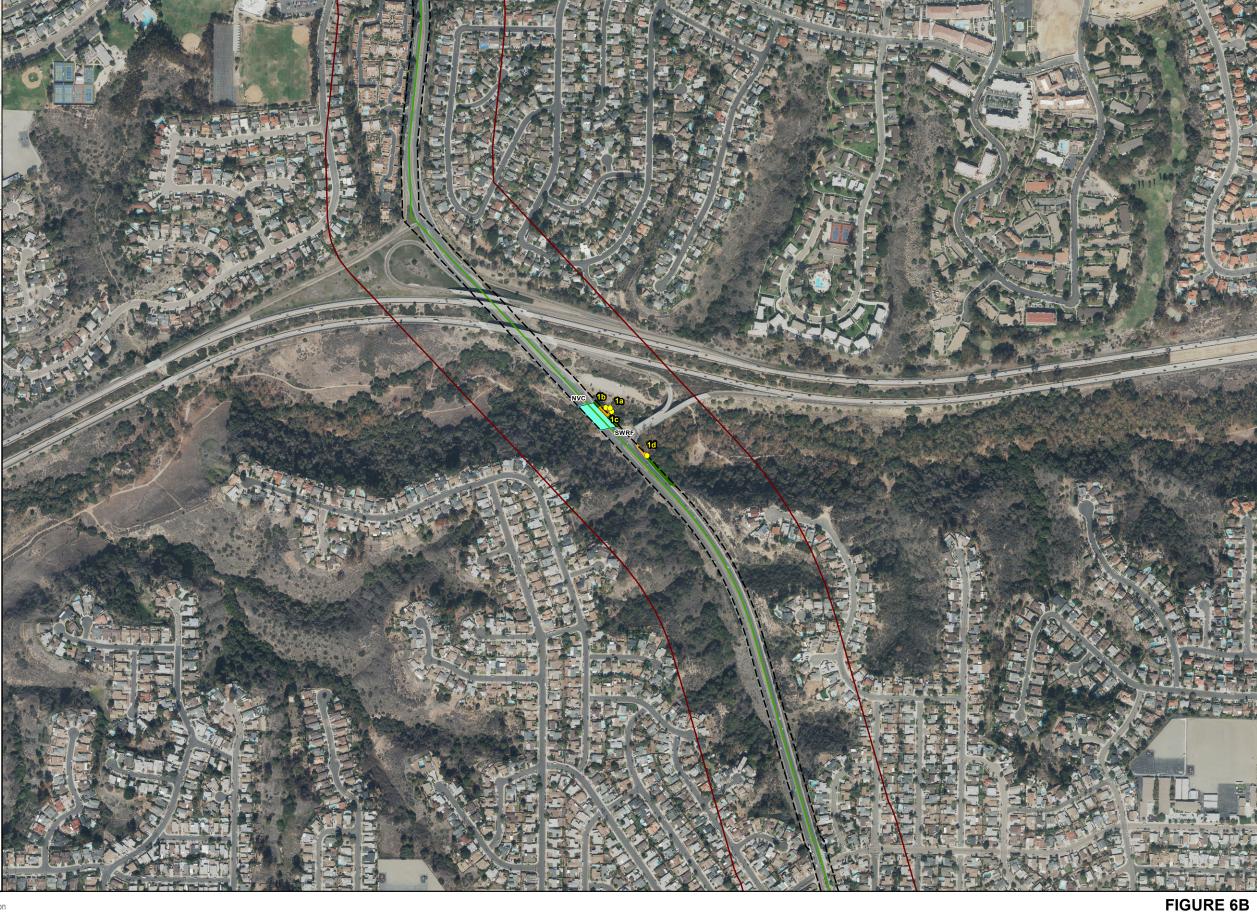
Non-wetland Water - Ephemeral

Waters of the State (CDFW Only)

Wetland or Riparian Area

Waters of the U.S. and State (ACOE/RWQCB)/Riparian Habitat (CDFW)

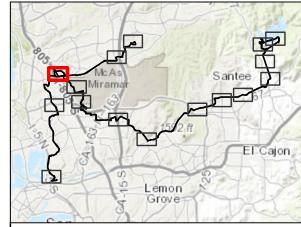
Non-wetland Water - Ephemeral (ACOE/RWCQB)/Riparian Area (CDFW)



0 500 1,000 Feet

DUDEK

SOURCE: SANDAG, 2016; CA Coastal Commission



North City Pipeline

San Vicente Pipeline

Repurposed Existing 36" Pipeline

North City Pipeline and San Vicente Pipeline

Moreno Wastewater Forcemain and Brine

Landfill Gas Pipeline

 \Box Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

FWM, Coastal and Valley Freshwater Marsh

MFS, Mulefat Scrub

SWS, Southern Willow Scrub

VP, Vernal Pool

Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

Wetland or Riparian Area

Waters of the State (CDFW Only)

Wetland or Riparian Area

Waters of the State (RWQCB/CDFW)

Wetland or Riparian Area





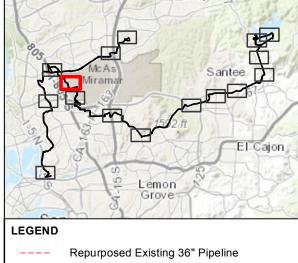
DUDEK

SOURCE: SANDAG, 2016; CA Coastal Commission

FIGURE 6C

Special Aquatic Resources

North City Project Jurisdictional Delineation



Landfill Gas Pipeline \Box

Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

FWM, Coastal and Valley Freshwater Marsh

NVC, Non-Vegetated Channel or Floodway

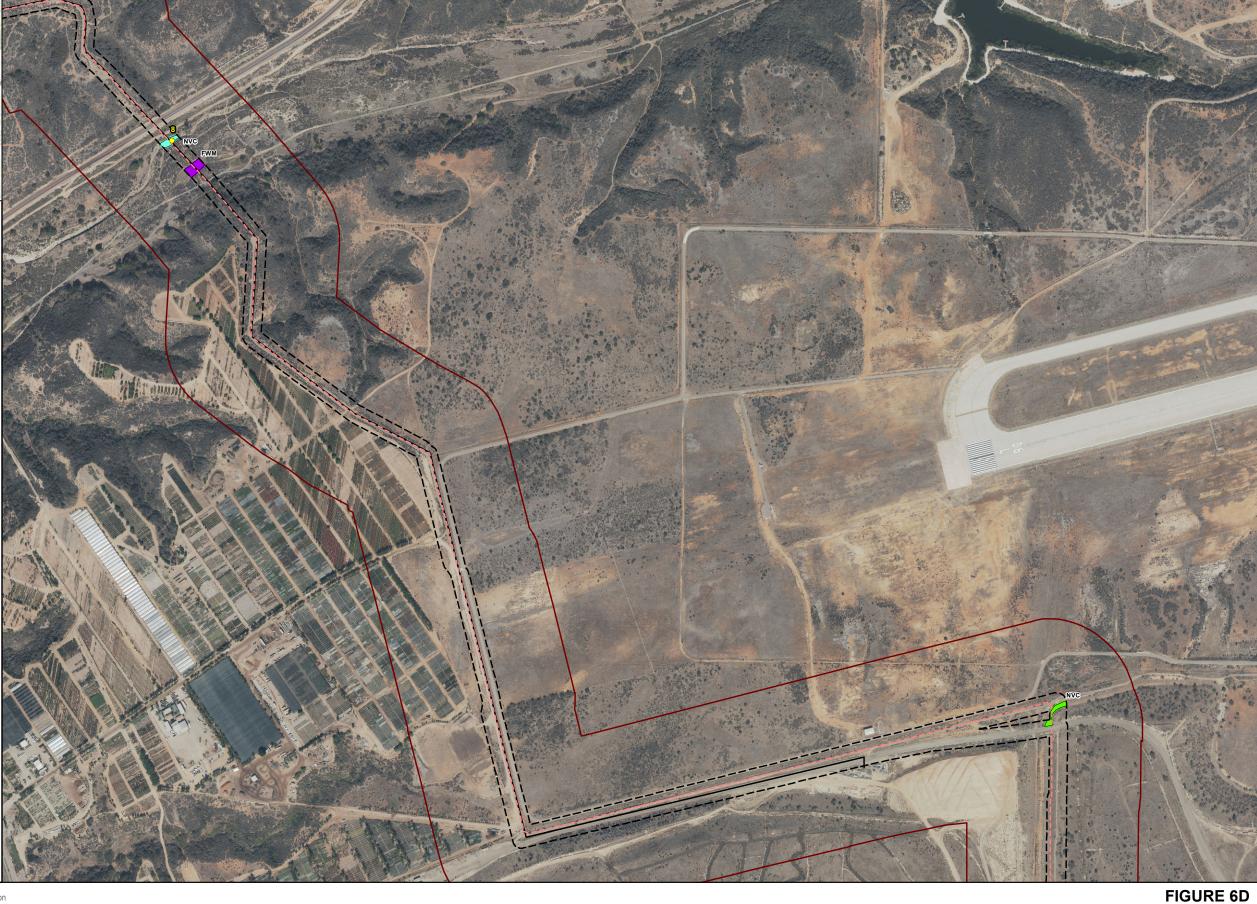
Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

Non-wetland Water - Ephemeral

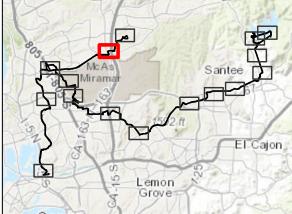
Wetland or Riparian Area Waters of the State (CDFW Only)

Non-wetland Water - Ephemeral



SOURCE: SANDAG, 2016; CA Coastal Commission





North City Pipeline

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Jurisdictional Delineation Study Area

Project Study Area

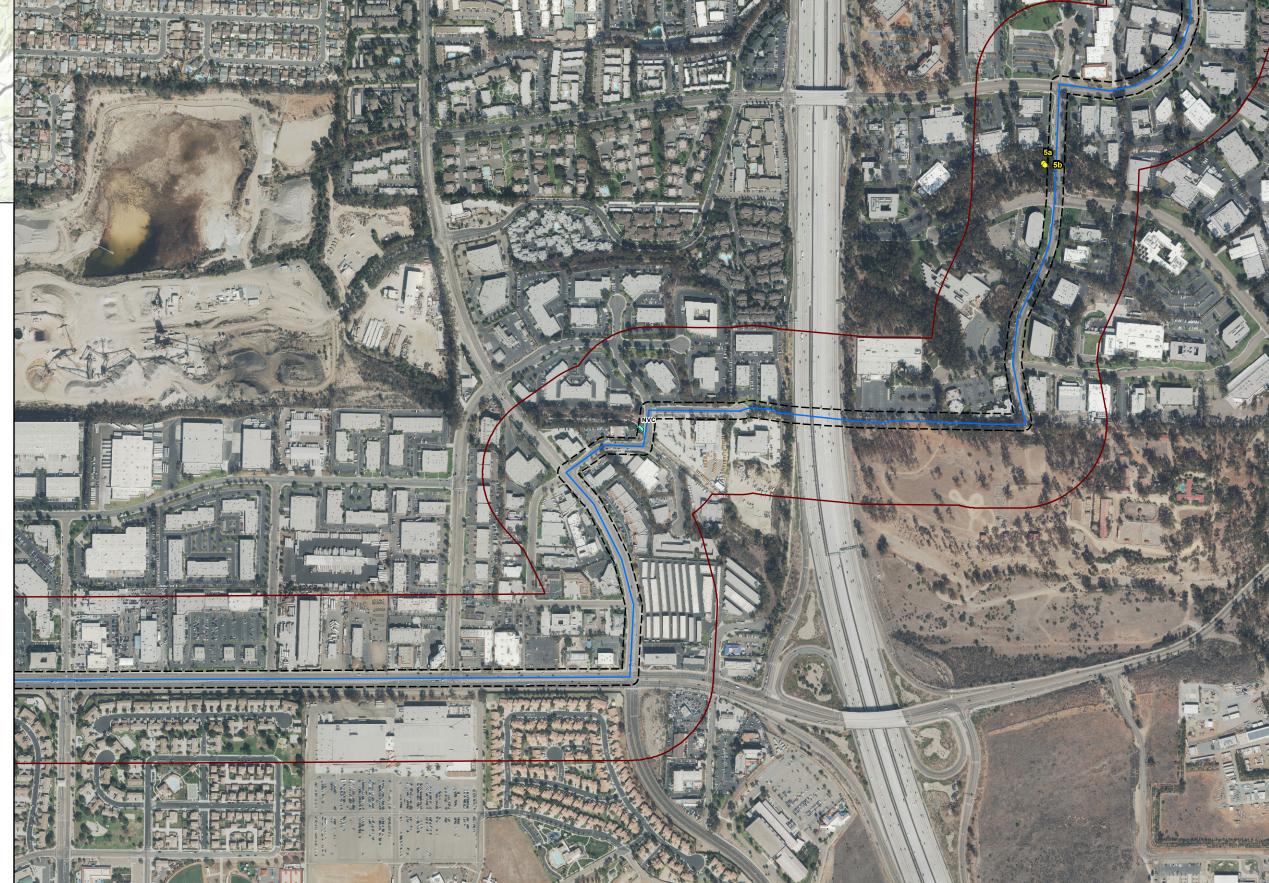
Vegetation (Wetland Communities Only)

NVC, Non-Vegetated Channel or
Floodway

Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

Non-wetland Water - Ephemeral



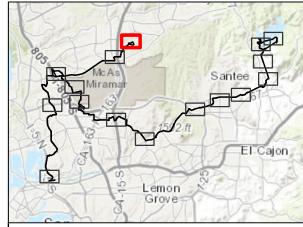
0 500 1,000 Fee

SOURCE: SANDAG, 2016; CA Coastal Commission

DUDEK

Special Aquatic Resources

FIGURE 6E



North City Pipeline

Subaqueous Pipeline

Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

FWM, Coastal and Valley Freshwater Marsh

NVC, Non-Vegetated Channel or Floodway

Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

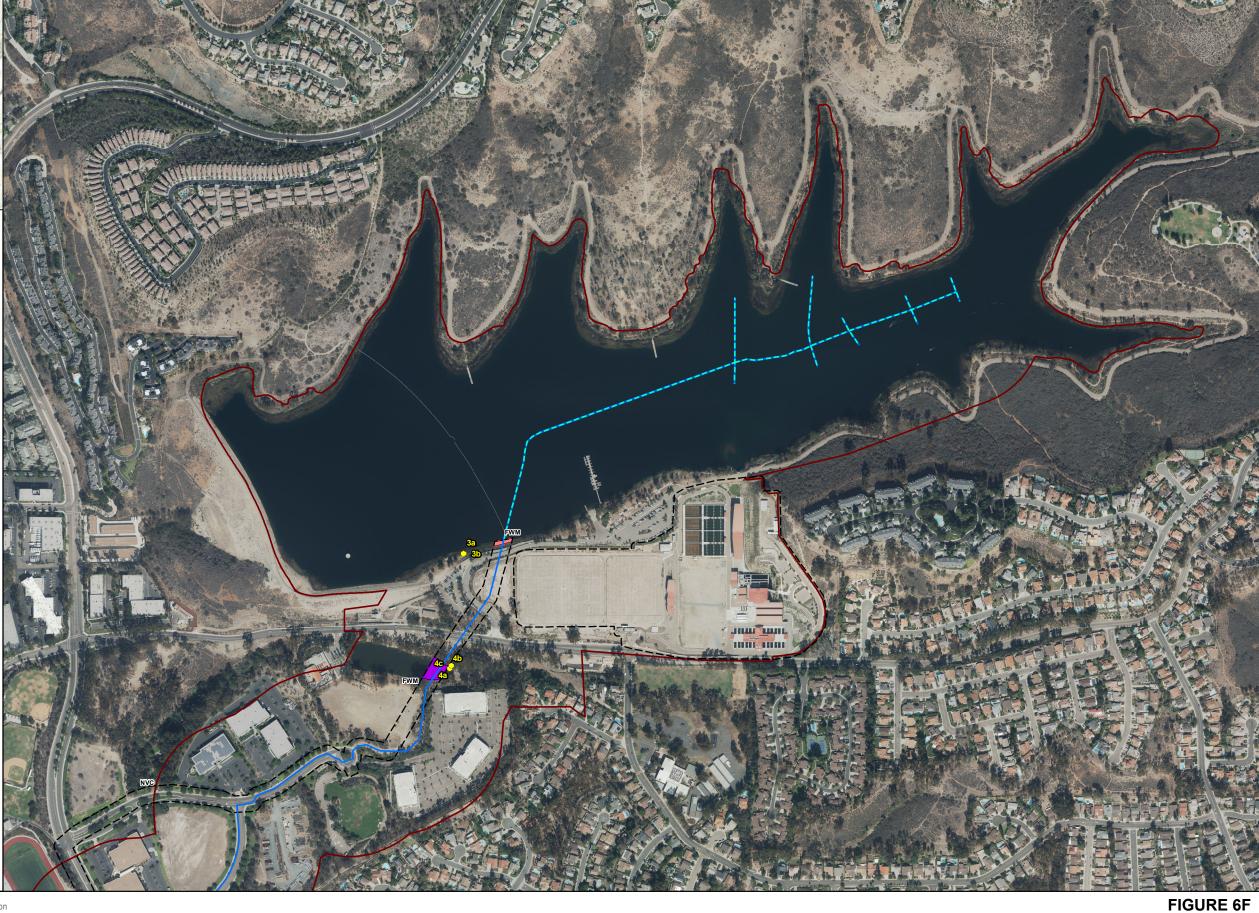
Non-wetland Water - Ephemeral

Non-wetland Water - Perennial

Wetland or Riparian Area

Waters of the State (ACOE/RWQCB/CDFW)

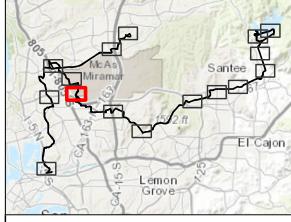
Water of the State (ACOE/RWQCB/CDFW), Wetland or Riparian Area





DUDEK

SOURCE: SANDAG, 2016; CA Coastal Commission



Repurposed Existing 36" Pipeline

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Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

NVC, Non-Vegetated Channel or Floodway

SARW, Southern Sycamore-Alder Riparian Woodland

SWS, Southern Willow Scrub

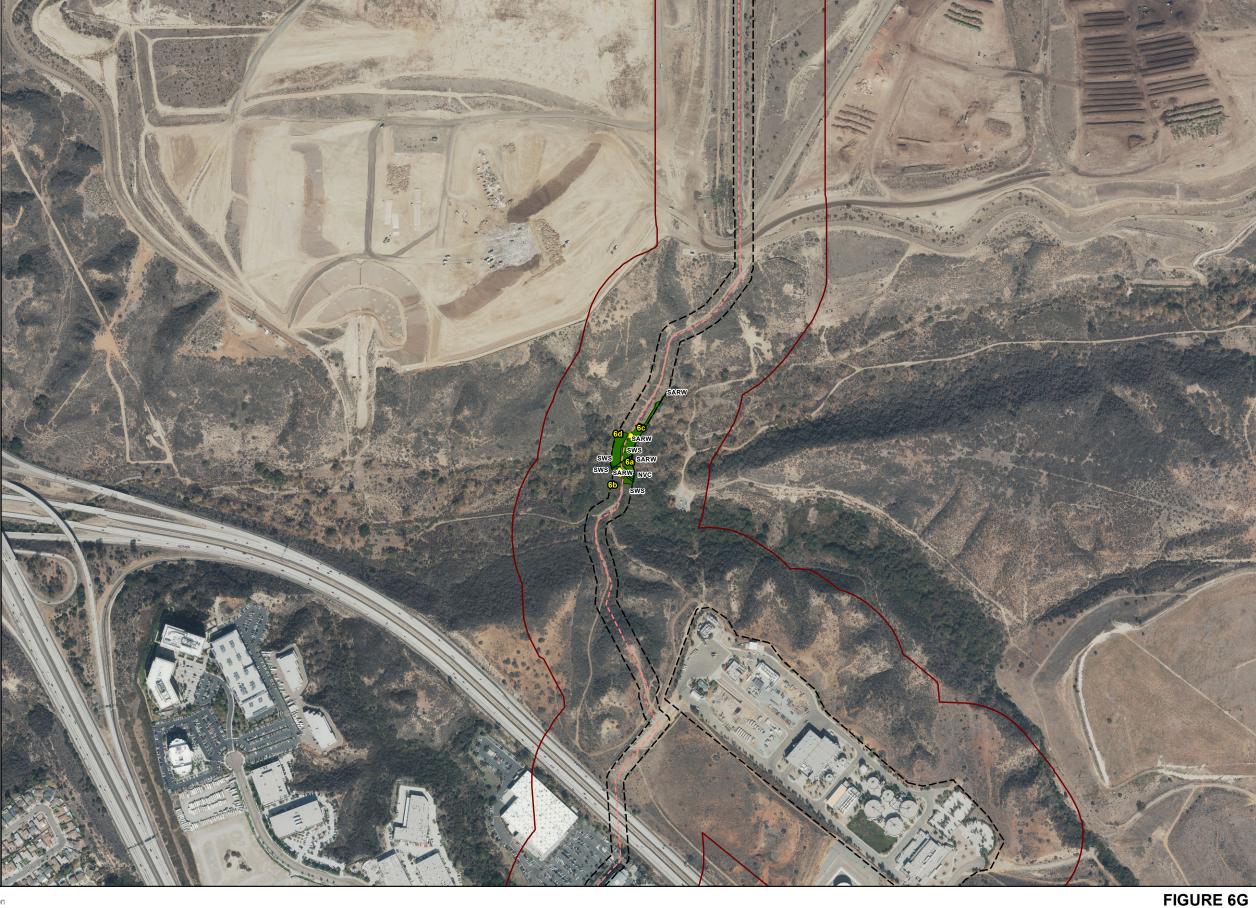
Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

Non-wetland Water - Ephemeral

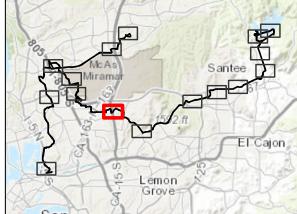
Waters of the State (CDFW Only)

Wetland or Riparian Area



SOURCE: SANDAG, 2016; CA Coastal Commission

DUDEK



San Vicente Pipeline

Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

NVC, Non-Vegetated Channel or Floodway

SCWRF, Southern Cottonwood-Willow Riparian Forest

SWS, Southern Willow Scrub

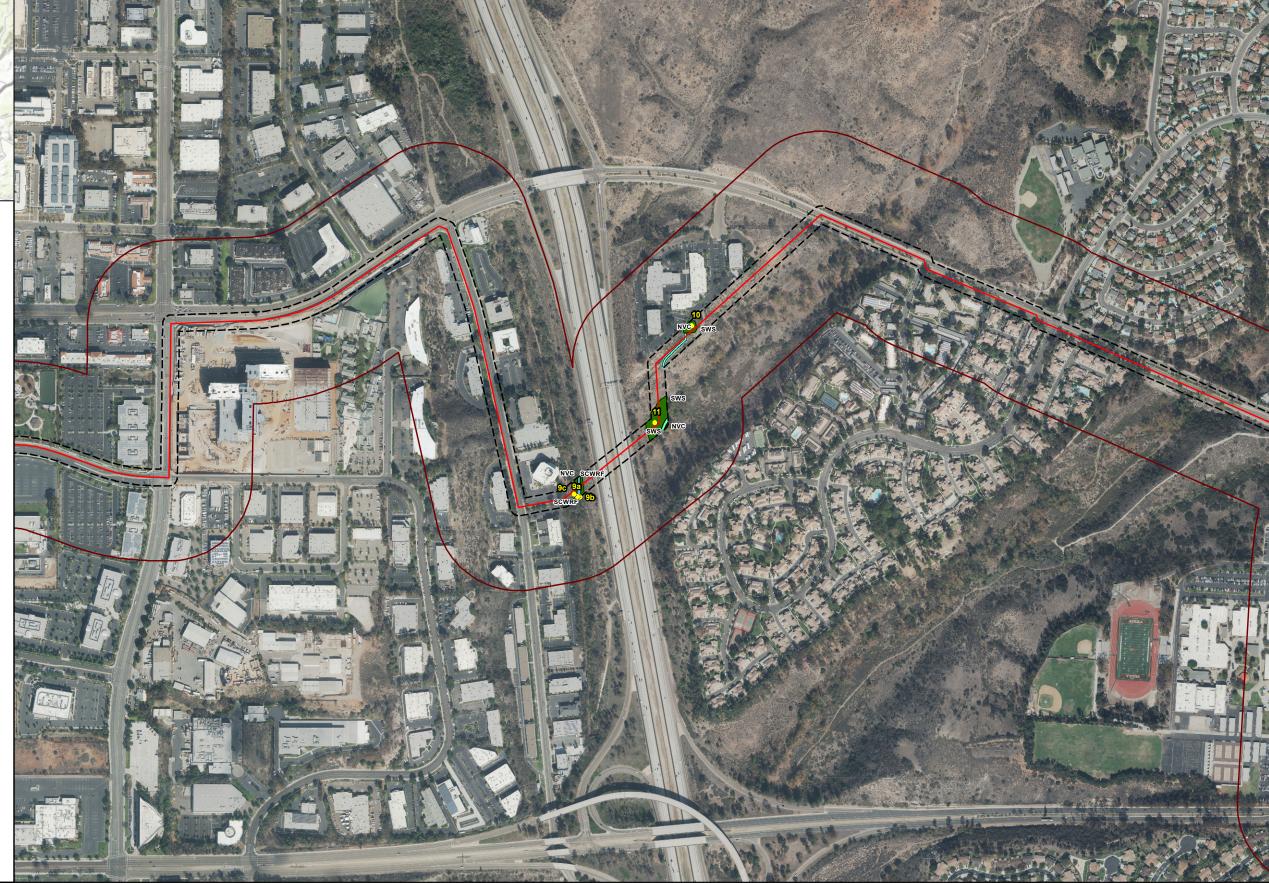
Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

Non-wetland Water - Ephemeral
Non-wetland Water - Intermittent

Waters of the State (CDFW Only)

Wetland or Riparian Area

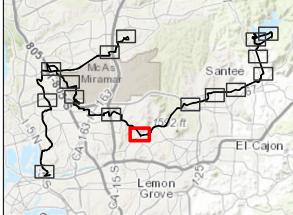




DUDEK

SOURCE: SANDAG, 2016; CA Coastal Commission

FIGURE 6H



San Vicente Pipeline

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Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

ARU, Arundo-Dominated Riparian

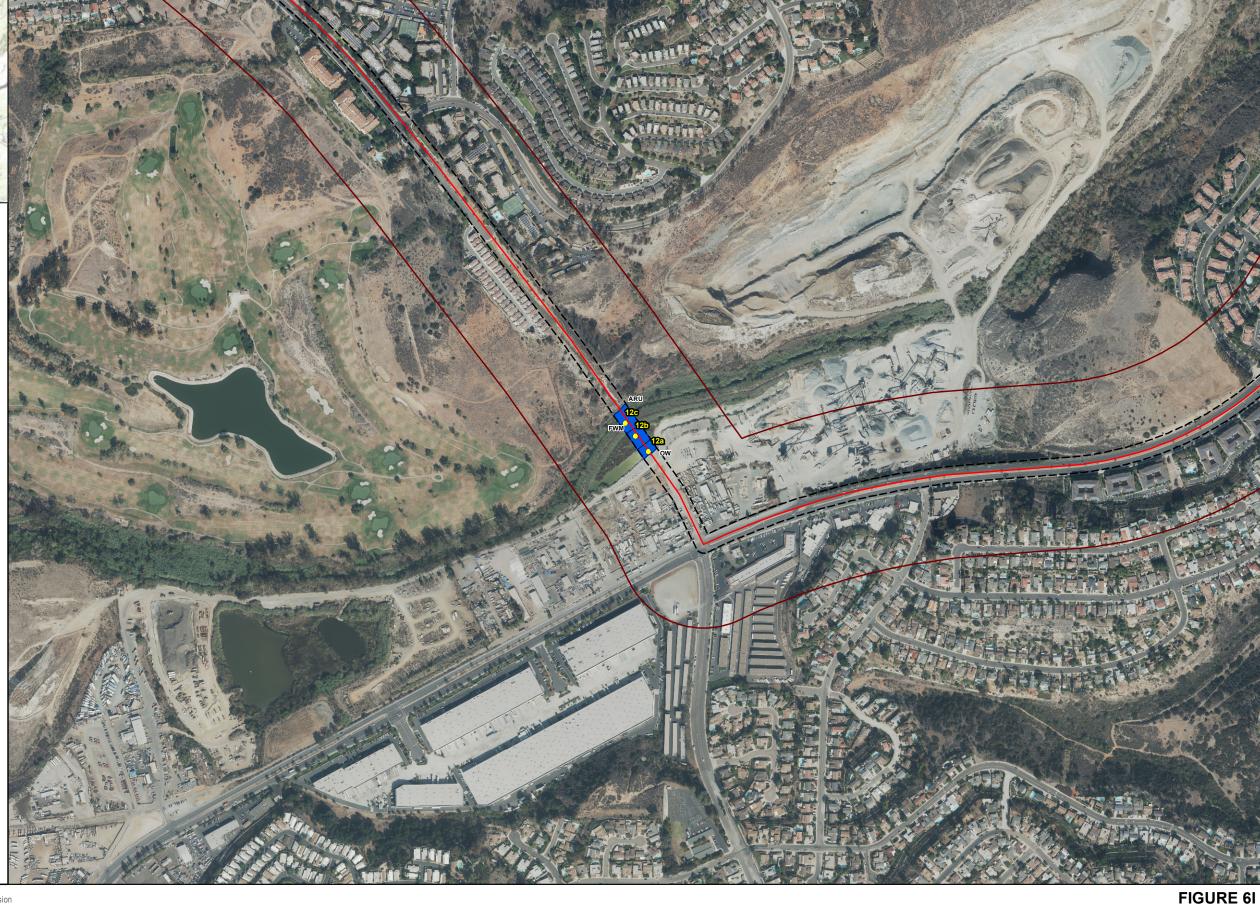
FWM, Coastal and Valley Freshwater Marsh

OW, Open Water

Data Stations

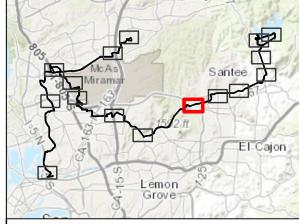
Waters of the U.S. (ACOE/RWQCB/CDFW)

Non-wetland Water - Perennial



SOURCE: SANDAG, 2016; CA Coastal Commission

DUDEK



San Vicente Pipeline

Jurisdictional Delineation Study Area

Project Study Area

Vegetation (Wetland Communities Only)

NVC, Non-Vegetated Channel or Floodway

SWRF, Southern Arroyo Willow Riparian Forest

SWS, Southern Willow Scrub

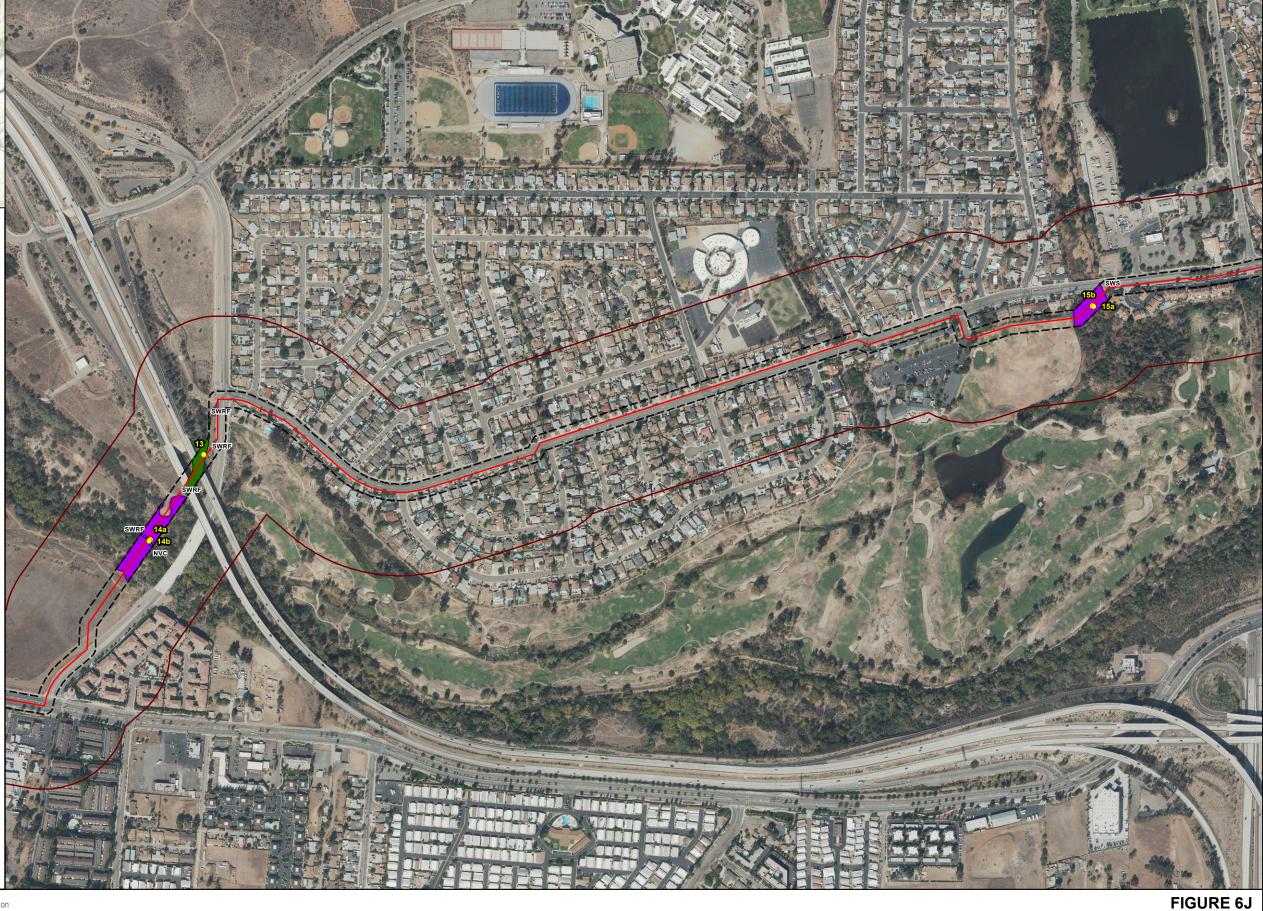
Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)

Non-wetland Water - Perennial
Wetland or Riparian Area

Waters of the State (CDFW Only)

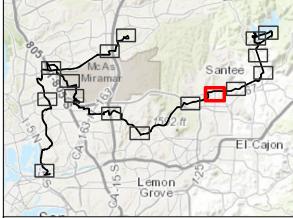
Wetland or Riparian Area





DUDEK

SOURCE: SANDAG, 2016; CA Coastal Commission



— San Vicente Pipeline

Jurisdictional Delineation Study Area

- Carlodional Benneation Ctady / tree

Project Study Area

Vegetation (Wetland Communities Only)
NVC, Non-Vegetated Channel or
Floodway

Waters of the U.S. (ACOE/RWQCB/CDFW)

Non-wetland Water - Ephemeral



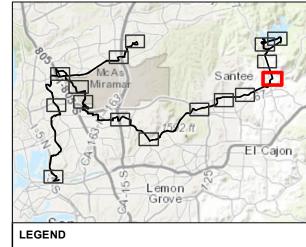


SOURCE: SANDAG, 2016; CA Coastal Commission

FIGURE 6KSpecial Aquatic Resources



SOURCE: SANDAG, 2016; CA Coastal Commission



San Vicente Pipeline

Jurisdictional Delineation Study Area

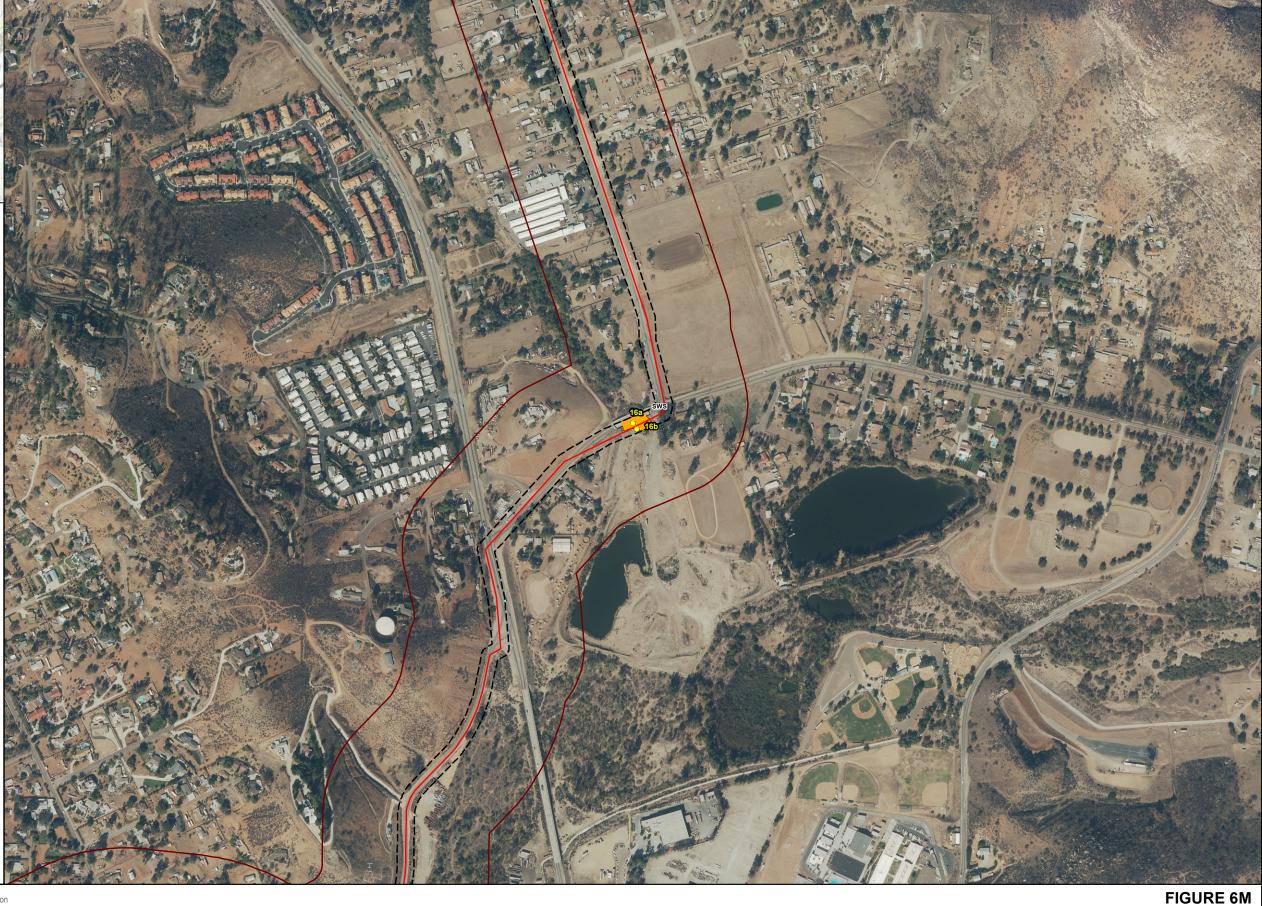
Project Study Area

> Vegetation (Wetland Communities Only) SWS, Southern Willow Scrub

Data Stations

Waters of the U.S. and State (ACOE/RWQCB)/Riparian Habitat (CDFW)

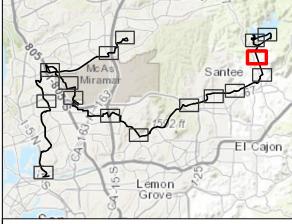
Non-wetland Water - Ephemeral (ACOE/RWCQB)/Riparian Area (CDFW)





DUDEK

SOURCE: SANDAG, 2016; CA Coastal Commission



San Vicente Pipeline

Juris

Jurisdictional Delineation Study Area

Project Study Area

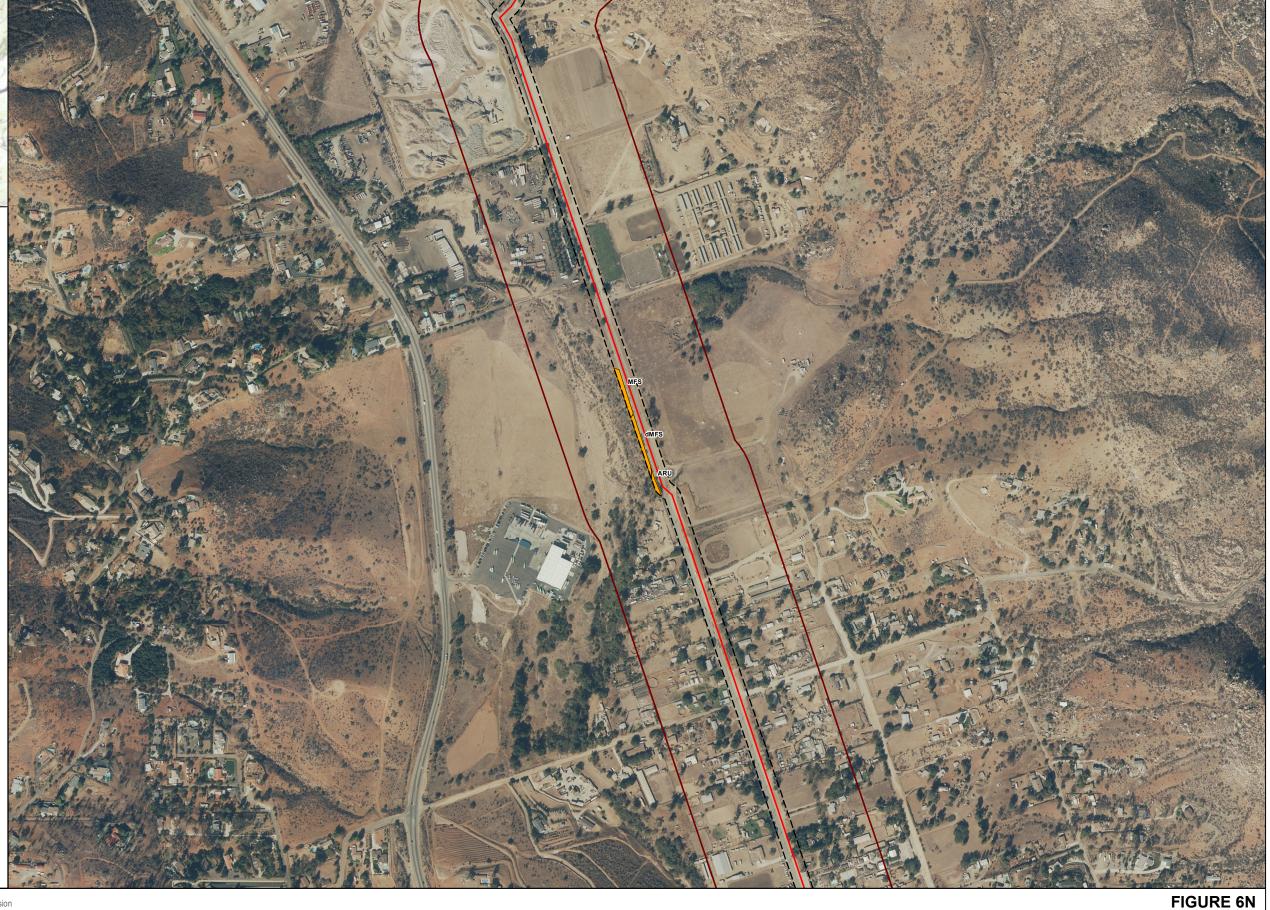
Vegetation (Wetland Communities Only)

ARU, Arundo-Dominated Riparian MFS, Mulefat Scrub

dMFS, disturbed Mulefat Scrub

Waters of the U.S. and State (ACOE/RWQCB)/Riparian Habitat (CDFW)

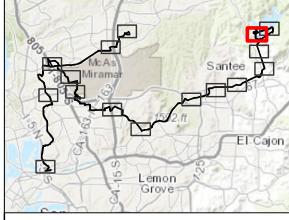
Non-wetland Water - Ephemeral (ACOE/RWCQB)/Riparian Area (CDFW)





SOURCE: SANDAG, 2016; CA Coastal Commission

DUDEK



San Vicente Pipeline

San Vicente Pure Water Pipeline - Tunnel

San Vicente Pure Water Pipeline - In-Reservoir Alternative

San Vicente Pure Water Pipeline - Marina

 \Box Jurisdictional Delineation Study Area

Project Study Area

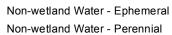
Vegetation (Wetland Communities Only)

NVC, Non-Vegetated Channel or Floodway

OW, Open Water

Data Stations

Waters of the U.S. (ACOE/RWQCB/CDFW)





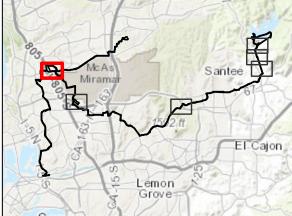
DUDEK

SOURCE: SANDAG, 2016; CA Coastal Commission

FIGURE 60 Special Aquatic Resources



SOURCE: SANDAG, 2016; CA Coastal Commission



North City Pipeline

San Vicente Pipeline

Repurposed Existing 36" Pipeline

North City Pipeline and San Vicente Pipeline

Moreno Wastewater Forcemain and Brine

Landfill Gas Pipeline

Ci Verr

Vernal Pool Study Area

Project Study Area

Helix Vernal Pool Study Area

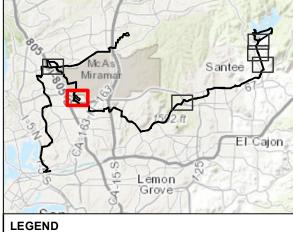
Potential for Vernal Pools





SOURCE: SANDAG, 2016; SanGIS 2016

FIGURE 7A



San Vicente Pipeline

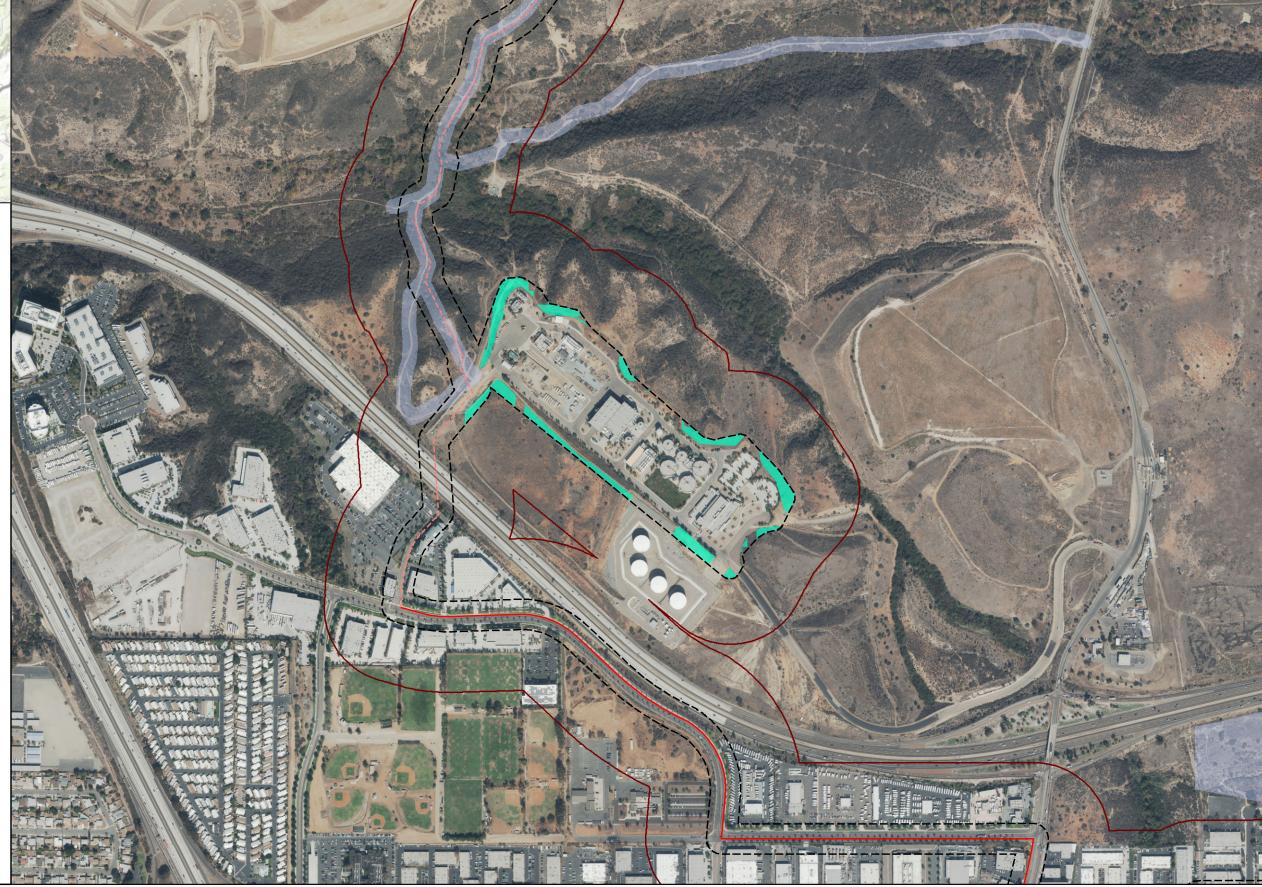
Repurposed Existing 36" Pipeline

 \Box Vernal Pool Study Area

Project Study Area

Helix Vernal Pool Study Area

Potential for Vernal Pools

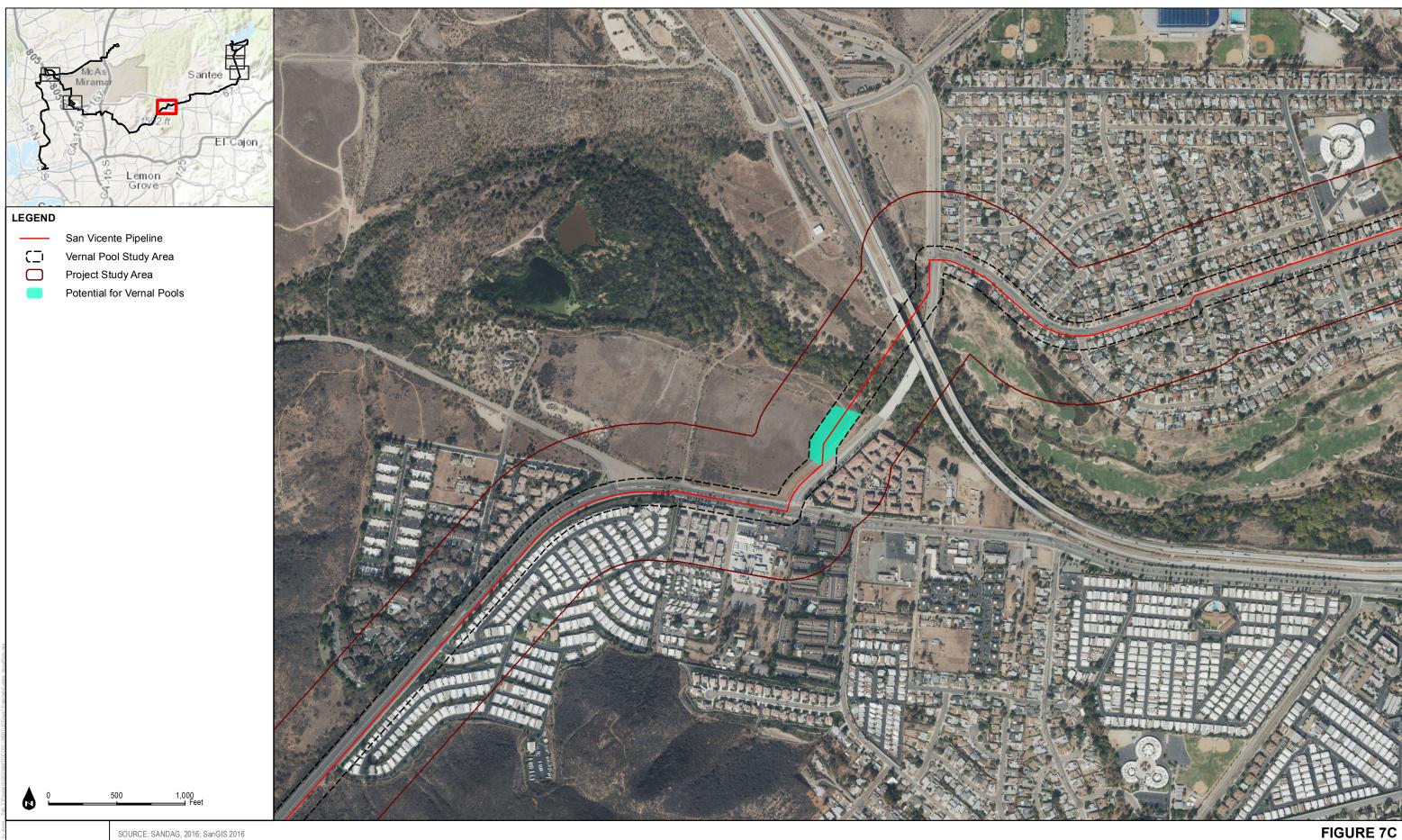




DUDEK

SOURCE: SANDAG, 2016; SanGIS 2016

FIGURE 7B Potentially Suitable for Vernal Pools



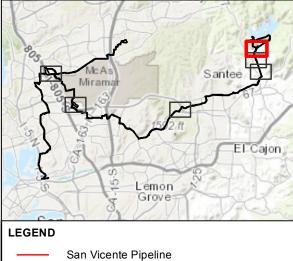
SOURCE: SANDAG, 2016; SanGIS 2016



SOURCE: SANDAG, 2016; SanGIS 2016



SOURCE: SANDAG, 2016; SanGIS 2016



San Vicente Pure Water Pipeline - Tunnel

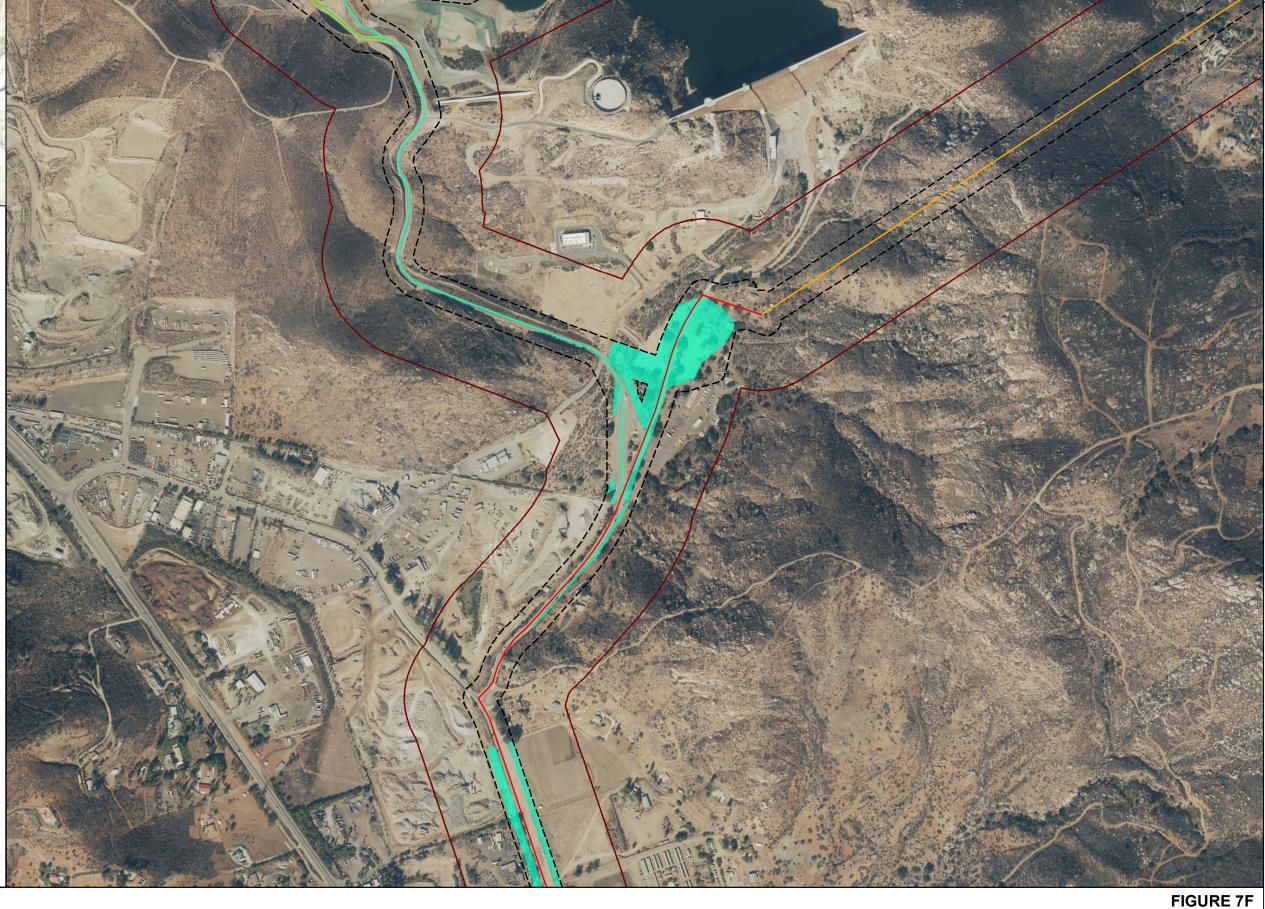
San Vicente Pure Water Pipeline - In-Reservoir Alternative

San Vicente Pure Water Pipeline - Marina Alternative

 \Box Vernal Pool Study Area

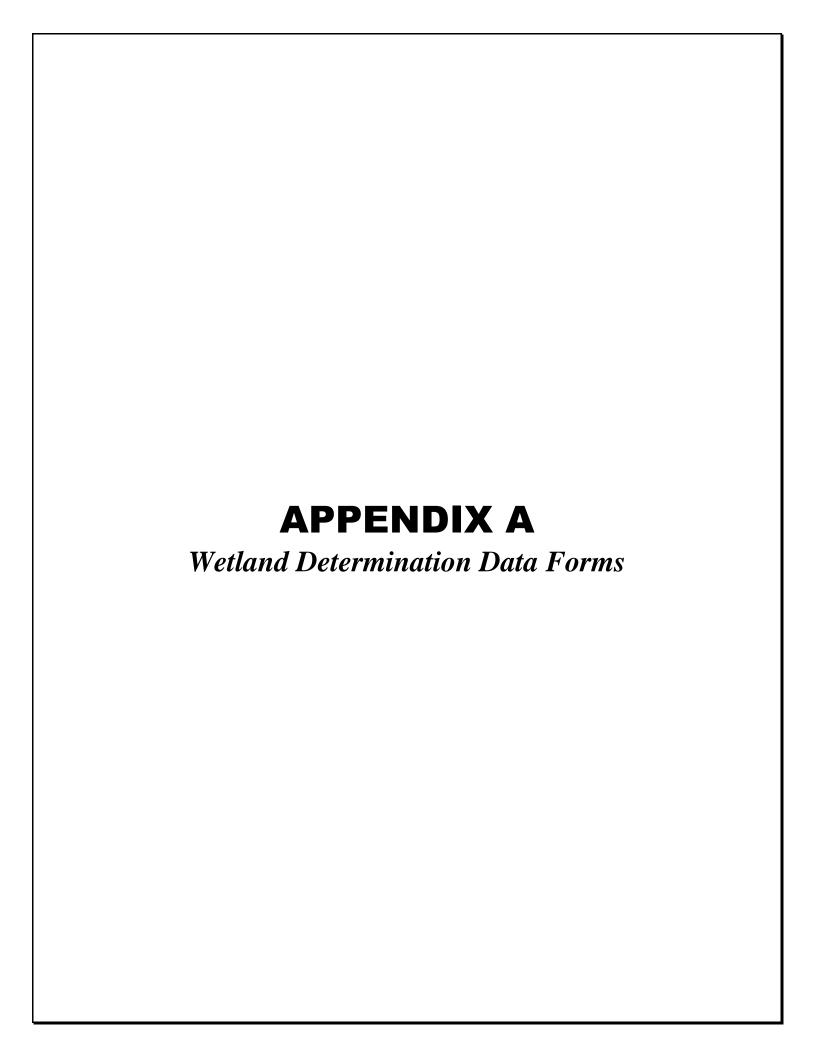
Project Study Area

Potential for Vernal Pools



SOURCE: SANDAG, 2016; SanGIS 2016

DUDEK



WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Pure Water Program		City/Count	ty:San Dieg	go/San Diego	San	npling Date:)9/26/20	16
Applicant/Owner: City of San Diego				State:CA	San	npling Point:	la	
Investigator(s):Callie Ford, Danielle Mullen		Section, T	ownship, Ra	ange: 28, 15S, 3W		-		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave,	convex, none): Non	e	Slo	pe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.8	84		Long:-117.20		 Datu	ım:	
Soil Map Unit Name: Riverwash				NWI cl	assification	: Freshwate	er foreste	d/shru
Are climatic / hydrologic conditions on the site typical for this t	ime of ye	ear? Yes (• No ((If no, explai	n in Remar	ks.)		
Are Vegetation Soil or Hydrology sig.	nificantly	disturbed?	? Are	"Normal Circumstan	ces" prese	nt? Yes	No	\circ
Are Vegetation Soil or Hydrology nat	turally pro	oblematic?	(If n	eeded, explain any a	answers in	Remarks.)		
SUMMARY OF FINDINGS - Attach site map sh			·			,	atures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
Hydric Soil Present? Yes No	-	ls t	he Sample	d Area				
Wetland Hydrology Present? Yes No			hin a Wetla		0	No 💿		
Remarks: The data station was taken outside of the low	v flow c	hannel wi	ithin the ac	tive floodplain.				
VEGETATION								
	bsolute	Dominant	Indicator	Dominance Test	workshoo	.4-		
	6 Cover	Species?		Number of Domir				
1.				That Are OBL, FA) ((A)
2.				Total Number of I	Cominant			
3.				Species Across A		1	1 ((B)
4				Percent of Domin	ant Specie	S		
Sapling/Shrub Stratum	%			That Are OBL, FA		_	.0 % ((A/B)
1.Baccharis sarothroides	5	No	FACU	Prevalence Inde	x workshe	et:		
2-Malosma laurina	2	No	Not Listed	Total % Cove	er of:	Multip	ly by:	
3.		-	-	OBL species		x 1 =	0	
4.				FACW species		x 2 =	0	
5.				FAC species	5	x 3 =	15	
Total Cover:	7 %			FACU species	30	x 4 =	120	
Herb Stratum	2.5	* 7		UPL species	5	x 5 =	25	
1.Ambrosia psilostachya	25	Yes	FACU	Column Totals:	40	(A)	160	(B)
2. Foeniculum vulgare 3. Heterotheca grandiflora	2	No No	Not Listed	Prevalence	Index = B/	'A =	4.00	
4-Plantago lanceolata	<u>1</u> 5	No	Not Listed FAC	Hydrophytic Ve	getation In	dicators:		
5.		-110	-	Dominance 1	est is >509	%		
6.				Prevalence I	ndex is ≤3.0	D ¹		
7.				Morphologica				ng
8.				- data in Re		n a separate	,	,
Total Cover:	33 %			- Problematic	пушторпуш	vegetation	(Explain	'
Woody Vine Stratum				¹ Indicators of hyd	lric soil and	d wetland hy	/drology r	nust
1			-	be present.		a wouldn't in	arology ii	iidot
Total Cover:	%			Hydrophytic				
		D		Vegetation	v			
% Bare Ground in Herb Stratum % Cover o	n RIOIIC (Jiust	<u>%</u>	Present?	Yes (No (ソ	
Remarks:								

SOIL Sampling Point: 1a Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) Color (moist) Loc² Texture³ (inches) Type¹ Remarks 100 0-410 YR 3/2 Sand 4-6 N/A 100 Cobbles ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. 3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils: Histosol (A1) Sandy Redox (S5) 1 cm Muck (A9) (LRR C) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Loamy Mucky Mineral (F1) Black Histic (A3) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Depleted Matrix (F3) Other (Explain in Remarks) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (**LRR D**) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) ⁴Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type:Bedrock Depth (inches):4 **Hydric Soil Present?** Yes (No (Remarks: The sandy, cobbly soil sample had a restrictive layer of bedrock at 4 inches deep.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine)
Surface Water (A1) Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
High Water Table (A2) Biotic Crust (B12)	Drift Deposits (B3) (Riverine)
Saturation (A3) Aquatic Invertebrates (B13)	Drainage Patterns (B10)
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Livi	ng Roots (C3) Thin Muck Surface (C7)
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6) Recent Iron Reduction in Plowed	Soils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No O Depth (inches):	
(includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available.
Remarks: The data station is adjacent to the low flow channel within the active	floodplain.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Pure Water Program	City/County:San Diego	o/San Diego	Sampling Date: 09/	26/2016
Applicant/Owner: City of San Diego		State:CA	Sampling Point:1b	
Investigator(s): Callie Ford, Danielle Mullen	Section, Township, Ra	nge: 28, 15S, 3W		
Landform (hillslope, terrace, etc.): Low flow channel	Local relief (concave, o	convex, none):Concave	Slope	: (%):
Subregion (LRR):C - Mediterranean California Lat:32.	84	Long:-117.20	 Datum:	:
Soil Map Unit Name: Riverwash		NWI classifi	ication: Freshwater fo	rrested/shrub
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No ((If no, explain in F	Remarks.)	
Are Vegetation Soil or Hydrology significantl	y disturbed? Are "	'Normal Circumstances"	present? Yes	No 🔘
Are Vegetation Soil or Hydrology naturally pr	roblematic? (If ne	eded, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing	g sampling point lo	ocations, transects	s, important feat	ures, etc.
Hydrophytic Vegetation Present? Yes No No				
Hydric Soil Present? Yes No	Is the Sampled	Area		
Wetland Hydrology Present? Yes No	within a Wetlar		No 💿	
Remarks: This data station was taken within the active floodp	lain in a low flow cha	nnel. The recent drou	ight may have impa	acted this
area.				
VEGETATION				
Absolute	Dominant Indicator	Dominance Test wor	ksheet:	
Tree Stratum (Use scientific names.) % Cover		Number of Dominant S		
1		That Are OBL, FACW,	or FAC: 0	(A)
2		Total Number of Domi	nant	
3		Species Across All Str	rata: 0	(B)
4		Percent of Dominant S		
Sapling/Shrub Stratum Total Cover: %		That Are OBL, FACW,	, or FAC: 0	% (A/B)
1.		Prevalence Index wo	rksheet:	
2.		Total % Cover of:	Multiply b	oy:
3		OBL species	x 1 =	0
4		FACW species	x 2 =	0
5. Total Cayor:		FAC species FACU species	x 3 = x 4 =	0
Total Cover: % Herb Stratum	1	UPL species	x 5 =	0
1.		Column Totals:	(A)	0 (B)
2.				0 (2)
3.	-	Prevalence Inde		
4.		Hydrophytic Vegetat		
5	- 	Dominance Test in Prevalence Index		
6.			าร ≤3.0 aptations¹ (Provide รเ	ınnortina
7. 8.			ks or on a separate sh	
Total Cover:		Problematic Hydro	ophytic Vegetation¹ (E	Explain)
Woody Vine Stratum				
1		¹ Indicators of hydric s be present.	oil and wetland hydro	ology must
2				
Total Cover: %		Hydrophytic Vegetation		
% Bare Ground in Herb Stratum % Cover of Biotic	Crust%		es O No 💿	
Remarks: This data station is within the non-vegetated, low	flow channel in open	water.		

SOIL

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

¹ Type: C=Conc	Color (moist) %	Color (moist) % Type¹ L	Sandy Cobbles Pebbles	Remarks
³ Soil Textures: • Hydric Soil Indic Histosol (A1			Cobbles	
³ Soil Textures: • Hydric Soil Indic Histosol (A1				
³ Soil Textures: • Hydric Soil Indic Histosol (A1			Pebbles	
³ Soil Textures: • Hydric Soil Indic Histosol (A1				
³ Soil Textures: • Hydric Soil Indic Histosol (A1				
³ Soil Textures: • Hydric Soil Indic Histosol (A1				
³ Soil Textures: • Hydric Soil Indic Histosol (A1				
³ Soil Textures: • Hydric Soil Indic Histosol (A1				
³ Soil Textures: • Hydric Soil Indic Histosol (A1				
³ Soil Textures: • Hydric Soil Indic Histosol (A1	entration, D=Depletion, RM	=Reduced Matrix 2 ocation: PL=Pore Lin	ing, RC=Root Channel, M	=Matrix
Histosol (A1		y, Loam, Sandy Clay Loam, Sandy Loam, Cl	•	
		RRs, unless otherwise noted.)	<u> </u>	roblematic Hydric Soils:
Histic Epipe	•	Sandy Redox (S5)		(A9) (LRR C)
	• •	Stripped Matrix (S6)		(A10) (LRR B)
Black Histic	' '	Loamy Mucky Mineral (F1)	Reduced Ve	
Hydrogen S		Loamy Gleyed Matrix (F2)		Material (TF2)
	ayers (A5) (LRR C) (A9) (LRR D)	Depleted Matrix (F3) Redox Dark Surface (F6)	Utilei (Expi	ain in Remarks)
	elow Dark Surface (A11)	Depleted Dark Surface (F7)		
	Surface (A12)	Redox Depressions (F8)		
	ky Mineral (S1)	Vernal Pools (F9)	⁴ Indicators of hy	drophytic vegetation and
	ved Matrix (S4)		•	rology must be present.
Restrictive Lay	er (if present):			
Type:				
Depth (inche	es):		Hydric Soil Pres	sent? Yes No
IYDROLOGY				
•	logy Indicators:			Indicators (2 or more required)
	ors (any one indicator is suf	ficient)		Marks (B1) (Riverine)
X Surface Wa	` '	Salt Crust (B11)		ent Deposits (B2) (Riverine)
High Water		Biotic Crust (B12)		eposits (B3) (Riverine)
Saturation (, ,	Aquatic Invertebrates (B13)		age Patterns (B10)
	ss (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	<u></u>	eason Water Table (C2)
<u> </u>	Deposits (B2) (Nonriverine)		• • • • • • • • • • • • • • • • • • • •	fluck Surface (C7)
	its (B3) (Nonriverine)	Presence of Reduced Iron (C4)		sh Burrows (C8)
<u> </u>	il Cracks (B6)	Recent Iron Reduction in Plowed	` ' <u> </u>	ation Visible on Aerial Imagery (C9)
	Visible on Aerial Imagery (E	Other (Explain in Remarks)		w Aquitard (D3)
	ned Leaves (B9)		FAC-N	Neutral Test (D5)
Field Observati	_	No. C. Donate Grade and C.		
Surface Water F	\sim	No Depth (inches): 24		
Water Table Pre		No Depth (inches):		
Saturation Prese (includes capilla	100 (No Depth (inches):	Wetland Hydrology Pre	esent? Yes No
		onitoring well, aerial photos, previous inspec		
	. 3 3 7	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	,-	
Remarks:				

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Pure Water Program				City/County: San Diego/San Diego				Sampling Date: 09/26/2016		
Applicant/Owner: City of San Diego				State: CA Sampling Point: 1c						
Investigator(s): Callie Ford, Danielle	e Mullen		Section,	Township, Ra	ange: 28, 15S, 3W		<u>-</u>			
Landform (hillslope, terrace, etc.): Bai	nk				convex, none): Nor		SI	ope (%):		
Subregion (LRR):C - Mediterranean		Lat:32.8	-	(*********************************	Long:-117.20	<u> </u>		um:		
	Camorina	Lat. 32.0	0-1			accification	on: Freshwate		1/ahanak	
Soil Map Unit Name: Riverwash				<u> </u>				Torrestec	J/SIII'ut	
Are climatic / hydrologic conditions on		-			•		, _			
Are Vegetation Soil or	Hydrology	significantly	/ disturbed	d? Are	"Normal Circumstar	nces" pres	sent? Yes (No No	O	
Are Vegetation Soil or	Hydrology r	naturally pr	oblematic	? (If n	eeded, explain any	answers i	n Remarks.)			
SUMMARY OF FINDINGS - A	Attach site map	showing	j sampli	ing point l	ocations, trans	ects, ir	nportant fe	atures,	etc.	
		. 0								
Hydrophytic Vegetation Present?	~	10 (
Hydric Soil Present? Wetland Hydrology Present?	~	10 (<u>)</u> 10 (<u>)</u>		the Sample			N - 6			
Remarks: This data station was ta	~		I .	vithin a Wetla		~	No ①	may have		
impacted this area.	ken within the teti	ve mooup	rain aaja	cent to the r	ow now enamer.	THE TEEL	ant drought i	nay nave		
impacted tins area.										
VEGETATION										
		Absolute	Domina	nt Indicator	Dominance Tes	t worksh	eet:			
Tree Stratum (Use scientific name	s.)	% Cover	Species		Number of Domir					
1.Salix gooddingii		30	Yes	FACW	That Are OBL, F			3	(A)	
2.Salix lasiolepis		15	Yes	FACW	Total Number of	Dominant				
3.Platanus racemosa		25	Yes	FAC	Species Across A			3	(B)	
4.					Percent of Domir	ant Spec	ies			
Capling/Chruh Ctratum	Total Cove	er: 70 %			That Are OBL, F			00.0 %	(A/B)	
Sapling/Shrub Stratum		-	Ma	D. OW.	Prevalence Inde	v workel	noot:			
1. Juncus acutus		$-\frac{5}{5}$	No No	FACW	Total % Cov			oly by:		
2-Baccharis salicifolia 3.			No	FAC	OBL species	CI OI.	x 1 =	0		
4.					FACW species	50	x 2 =	100		
5.					FAC species	30	x 3 =	90		
o	Total Cove	er: 10 %			FACU species	30	x 4 =	0		
Herb Stratum	. 314 3313	10 %			UPL species		x 5 =	0		
1.Pennisetum spp.		2	No		Column Totals:	80	(A)	190	(B)	
2.							. ,		()	
3.					Prevalence			2.38		
4.					Hydrophytic Ve	_				
5					→ Dominance					
6		_			× Prevalence I					
7		_					tions¹ (Provider on a separat		ng	
8		_					tic Vegetation)	
Woody Vine Stratum	Total Cove	er: 2 %				, ,	J	` '	,	
1.					¹ Indicators of hyd	dric soil a	ind wetland h	ydrology r	nust	
2.					be present.			,		
-	Total Cove	er: %			Hydrophytic					
0/ Dara Craund in Harb Stratum				0/	Vegetation	V (D No. (
% Bare Ground in Herb Stratum	% % Cove	er of Biotic (Jiust	<u>%</u>	Present?	Yes (No ()		
Remarks:								_		

SOIL Sampling Point: 1c

Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)		Type ¹	Loc ²	Texture ³	Remarks
0-10	10 YR 2/2	50					Sandy	
0-10	N/A	50					Cobble	
0 10	- 14/11							
	_							
	_							
Type: C=0	 Concentration, D=Dep	letion. RM=F	Reduced Matrix.	² I ocation: F	PI =Pore I	inina RO	C=Root Chann	nel M=Matrix
						-		oam, Silt Loam, Silt, Loamy Sand, Sand
lydric Soil	Indicators: (Applicab	le to all LRRs	s, unless otherwis	e noted.)			Indicators	for Problematic Hydric Soils:
Histoso	ol (A1)		Sandy Redo	x (S5)			1 cm N	Muck (A9) (LRR C)
	Epipedon (A2)		Stripped M	, ,				Muck (A10) (LRR B)
	Histic (A3)			cky Mineral (I				ced Vertic (F18)
	gen Sulfide (A4)	21	Depleted N	yed Matrix (F	-2)			arent Material (TF2)
	ed Layers (A5) (LRR (⁄luck (A9) (LRR D)	•)		iatrix (F3) k Surface (F6	6)		U Other	(Explain in Remarks)
I	ed Below Dark Surfac	e (A11)		ark Surface (,			
	Dark Surface (A12)	- ()		ressions (F8	` '			
Sandy	Mucky Mineral (S1)		Vernal Poo	ls (F9)			⁴ Indicators	of hydrophytic vegetation and
Sandy	Gleyed Matrix (S4)						wetland	I hydrology must be present.
Restrictive	Layer (if present):							
Type:Co								
Donth /								
	nches): <u>0-10</u>						Hydric Soil	Present? Yes No No
Remarks:	nches): <u>0-10</u>						Hydric Soil	Present? Yes No No
	nches):(<u>0</u> -1()						Hydric Soil	Present? Yes No No
	nches): <u>0-10</u>						Hydric Soil	Present? Yes No No
Remarks:							Hydric Soil	Present? Yes No No
Remarks:	OGY							
Remarks: YDROL(OGY ydrology Indicators:		ent)				Secon	ndary Indicators (2 or more required)
YDROLO Wetland H Primary Inc	OGY ydrology Indicators: dicators (any one indic			· (R11)			Secon U	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine)
YDROLO Wetland H Primary Inc	OGY ydrology Indicators: dicators (any one indic		Salt Crus				Secon W	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
YDROLO Wetland H Primary Inc Surface High W	DGY ydrology Indicators: dicators (any one indicate Water (A1) Vater Table (A2)		Salt Crus Biotic Cru	st (B12)	(B13)		Secon W X S X D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine)
YDROLO Wetland H Primary Inc Surfac High W	ydrology Indicators: dicators (any one indicate Water (A1) Vater Table (A2) tion (A3)	ator is suffici	Salt Crus Biotic Cru Aquatic Ir	st (B12) vertebrates (Secon W X S X D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10)
YDROLO Wetland H Primary Inc Surface High W Satura Water	ydrology Indicators: dicators (any one indicators (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver	ator is suffici	Salt Crus Biotic Cru Aquatic Ir Hydroger	st (B12) vertebrates (Sulfide Odor	r (C1)	vina Roo	Secor X S D D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedimo	ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (No	ator is suffici ine) nriverine)	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized	st (B12) overtebrates (Sulfide Odol Rhizospheres	r (C1) s along Liv	ring Roo	Secon X S X D D ots (C3)	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Chin Muck Surface (C7)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedimo	ydrology Indicators: dicators (any one indice e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriverient Deposits (B2) (Nonriverience)	ator is suffici ine) nriverine)	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced	r (C1) s along Liv Iron (C4)		Secor W X S X D D D ots (C3) T	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)
YDROLO Wetland H Primary Inc Surfac High W Satura Water Sedimo Drift Do	ydrology Indicators: dicators (any one indicater (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver (B2) (None (B3)) Marks (B3) (Nonriver (B3)) Marks (B3) (Nonriver (B3))	ator is suffici- ine) nriverine) rine)	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	st (B12) overtebrates (Sulfide Odor Rhizospheres of Reduced on Reduction	r (C1) s along Liv Iron (C4) i in Plowed		Secon W S S C S C C C S C C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Chin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
YDROLO Wetland H Primary Inc Surfac High W Satura Water Sedime Drift Do Surfac	ydrology Indicators: dicators (any one indicater (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver (B2)) Marks (B3) (Nonriver (B3)) Marks (B3) (Nonriver (B3)) Monriver (B3) (Nonriver (B3))	ator is suffici- ine) nriverine) rine)	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced	r (C1) s along Liv Iron (C4) i in Plowed		Secor W S S C S C C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland H Primary Inc Surfac High W Satura Water Sedime Drift De Surfac Inunda Water-	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I eStained Leaves (B9)	ator is suffici- ine) nriverine) rine)	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	st (B12) overtebrates (Sulfide Odor Rhizospheres of Reduced on Reduction	r (C1) s along Liv Iron (C4) i in Plowed		Secor W S S C S C C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Chin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse	ydrology Indicators: dicators (any one indicater (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver (B2) (None (B3)) Marks (B3) (Nonriver (B3)) More (B3) (Nonriver (B3)) Mo	ator is suffici- ine) nriverine) rine) magery (B7)	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	st (B12) Invertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Rema	r (C1) s along Liv Iron (C4) i in Plowed		Secor W S S C S C C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (None) eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I estained Leaves (B9) ervations: ater Present?	ine) nriverine) rine) magery (B7)	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Rema	r (C1) s along Liv Iron (C4) i in Plowed		Secor W S S C S C C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Tabl	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) e Soil Cracks (B6) etion Visible on Aerial I estained Leaves (B9) ervations: ater Present? e Present? y	ine) nriverine) magery (B7) es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Rema	r (C1) s along Liv Iron (C4) i in Plowed		Secor W S S C S C C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Wa Water Tabl Saturation (includes ca	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (None) eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I estained Leaves (B9) ervations: ater Present? Present? Y Present? yapillary fringe)	ine) nriverine) rine) magery (B7) es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Remainable aches): aches):	r (C1) s along Liv Iron (C4) in Plowed arks)	d Soils (C	Secor W X S S D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Wa Water Tabl Saturation (includes ca	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) e Soil Cracks (B6) ation Visible on Aerial I estained Leaves (B9) ervations: ater Present? Present? Y Present?	ine) nriverine) rine) magery (B7) es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Remainable aches): aches):	r (C1) s along Liv Iron (C4) in Plowed arks)	d Soils (C	Secor W X S S D	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Oranage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Seaturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) SAC-Neutral Test (D5)
Wetland H Primary Inc Surface High W Satura Water Sedime Surface Inunda Water-Field Obse Surface Wa Water Tabl Saturation (includes ca	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (None) eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I estained Leaves (B9) ervations: ater Present? Present? Y Present? yapillary fringe)	ine) nriverine) rine) magery (B7) es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Remainable aches): aches):	r (C1) s along Liv Iron (C4) in Plowed arks)	d Soils (C	Secor W X S S D	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Oranage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Seaturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) SAC-Neutral Test (D5)
Remarks: YDROL(Wetland H Primary Inc Surface Water Sedime Drift De Surface Water Surface Water Surface Surface Surface Surface Saturation Surface Saturation Saturation	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (None) eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I estained Leaves (B9) ervations: ater Present? Present? Y Present? yapillary fringe)	ine) nriverine) magery (B7) es \ Notes	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Remainches): eches): photos, previous	r (C1) s along Liv Iron (C4) n in Plowed arks)	Wetlactions), i	Secor W X S D D ots (C3) T C6) S F and Hydrolog if available:	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Oranage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Seaturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) SAC-Neutral Test (D5)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift Do Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	ydrology Indicators: dicators (any one indice e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (None eposits (B3) (Nonriver) e Soil Cracks (B6) ation Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? y apillary fringe) lecorded Data (stream	ine) nriverine) magery (B7) es \ Notes	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Remainches): eches): photos, previous	r (C1) s along Liv Iron (C4) n in Plowed arks)	Wetlactions), i	Secor W X S D D ots (C3) T C6) S F and Hydrolog if available:	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Oranage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Seaturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) SAC-Neutral Test (D5)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift Do Surface Inunda Water- Field Obse Surface Water Table Saturation includes co	ydrology Indicators: dicators (any one indice e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (None eposits (B3) (Nonriver) e Soil Cracks (B6) ation Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? y apillary fringe) lecorded Data (stream	ine) nriverine) magery (B7) es \ Notes	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Remainches): eches): photos, previous	r (C1) s along Liv Iron (C4) n in Plowed arks)	Wetlactions), i	Secor W X S D D ots (C3) T C6) S F and Hydrolog if available:	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Oranage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Seaturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) SAC-Neutral Test (D5)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift Do Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	ydrology Indicators: dicators (any one indice e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (None eposits (B3) (Nonriver) e Soil Cracks (B6) ation Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? y apillary fringe) lecorded Data (stream	ine) nriverine) magery (B7) es \ Notes	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	st (B12) evertebrates (Sulfide Odor Rhizospheres of Reduced on Reduction plain in Remainches): eches): photos, previous	r (C1) s along Liv Iron (C4) n in Plowed arks)	Wetlactions), i	Secor W X S D D ots (C3) T C6) S F and Hydrolog if available:	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Oranage Patterns (B10) Ory-Season Water Table (C2) Thin Muck Surface (C7) Orayfish Burrows (C8) Seaturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) SAC-Neutral Test (D5)

WETLAND DETERMINATION DATA FORM - Arid West Region

Soil Map Unit Name: Salinas clay loam Are climatic / hydrologic conditions on the site typical for this time	at: <u>32.8</u>	Local relie		State:CA nge: 28, 15S, 3W convex, none):Non		mpling Poin		
Landform (hillslope, terrace, etc.): Subregion (LRR):C - Mediterranean California La Soil Map Unit Name: Salinas clay loam Are climatic / hydrologic conditions on the site typical for this time		Local relie			0			
Subregion (LRR):C - Mediterranean California La Soil Map Unit Name: Salinas clay loam Are climatic / hydrologic conditions on the site typical for this time	at: <u>32.8</u>		ef (concave,	convex, none):Non	0			
Soil Map Unit Name: Salinas clay loam Are climatic / hydrologic conditions on the site typical for this time	at:32.8				C		Slope (%):	
Soil Map Unit Name: Salinas clay loam Are climatic / hydrologic conditions on the site typical for this time		4		Long:-117.19		 Da	atum:	
Are climatic / hydrologic conditions on the site typical for this time					assificatio			
	e of ve	ar? Yes (No (
	-	disturbed?		'Normal Circumstan		,	No.	
					•	,		\circ
		blematic?		eeded, explain any a				
SUMMARY OF FINDINGS - Attach site map show	wing	samplir	ig point lo	ocations, trans	ects, im	portant 1	features	, etc.
Hydrophytic Vegetation Present? Yes No (7							
Hydric Soil Present? Yes No		ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No			hin a Wetlaı		\circ	No (•)		
Remarks:								
VEGETATION								
VEGETATION	-1-4-	Danis	la dia atau	- Development Tool				
	olute Cover	Dominant Species?		Dominance Test Number of Domin				
1.Quercus agrifolia		Yes	Not Listed	That Are OBL, FA			1	(A)
	60	Yes	FAC	· Total Number of [Cominant			
3.				Species Across A			3	(B)
4.			-	Percent of Domin	ant Spacia	ne.		
Total Cover:	120%			That Are OBL, FA			33.3 %	(A/B)
Sapling/Shrub Stratum	70	V	T. 077	Prevalence Inde	v worksh			
1. Toxicodendron diversilobum 2.	70	Yes	FACU	Total % Cove			iply by:	
3.				OBL species	, OI.	x 1 =	0	_
4.				FACW species		x 2 =	0	
5.				FAC species	60	x 3 =	180	
Total Cover:	70 %			FACU species	70	x 4 =	280	
Herb Stratum				UPL species	60	x 5 =	300	
1				Column Totals:	190	(A)	760	(B)
2.				Drovolones	Indov = D	/A —	4.00	
3.				Prevalence			4.00	
4.				Hydrophytic Veg Dominance T				
5.				Prevalence Ir				
6				Morphologica			de supporti	ina
8.						on a separa		5
Total Cover:				Problematic I	Hydrophyt	c Vegetatio	on¹ (Explair	1)
Woody Vine Stratum	%							
1				¹ Indicators of hyd be present.	lric soil ar	d wetland	hydrology	must
2				be present.				
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum % % Cover of B	Biotic C	rust	%	Present?	Yes (No	•	
Remarks: The jurisdiction is CDFW only from the toe of	of the s	slope to the	—— he sidewall	along Genesse A	ve.			

SOIL Sampling Point: 1d Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Loc² Color (moist) Texture³ (inches) Color (moist) Type¹ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. 3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils: Histosol (A1) 1 cm Muck (A9) (LRR C) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Redox Dark Surface (F6) 1 cm Muck (A9) (**LRR D**) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) ⁴Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type: **Hydric Soil Present?** No (Depth (inches): Yes (Remarks: No soil sample was taken due to very dense poison oak. **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water Marks (B1) (Riverine) Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine) High Water Table (A2) Biotic Crust (B12) Drift Deposits (B3) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Shallow Aquitard (D3) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes (No (Depth (inches): Water Table Present? Yes (No (Depth (inches): Saturation Present? Depth (inches): Yes (No (Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: This data station is located on a slope above the ACOE active floodplain, and there is no evidence of a bed and bank.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Pure Water Program		City/Count	San Diego	o/San Diego	Samp	oling Date: 09/	/26/20	16
Applicant/Owner:City of San Diego				State:CA	Samp	oling Point:2		
Investigator(s):Callie Ford, Danielle Mullen		Section, T	ownship, Rar	nge: 09, 15S, 3W				
Landform (hillslope, terrace, etc.):		Local relie	ef (concave, c	convex, none): None	 e	Slope	e (%):0	
Subregion (LRR):C - Mediterranean California La	at:32.8	37		Long:-117.19		 Datum	ı:	
Soil Map Unit Name: Altamont clay/Redding cobbly loam				NWI cla	assification:	—— Freshwater en	nergent	wetland
Are climatic / hydrologic conditions on the site typical for this tim	ne of ye	ar? Yes	No ((If no, explain	n in Remark	.s.)		
	-	disturbed?		Normal Circumstan	ces" present	t? Yes 💿	No	\circ
	•	blematic?		eded, explain any a				
SUMMARY OF FINDINGS - Attach site map sho							tures,	etc.
Hydrophytic Vegetation Present? Yes No ()							
Hydric Soil Present? Yes No		ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No (Remarks:	•	wit	hin a Wetlan	d? Yes	O N	No 💿		
VEGETATION								
1	solute	Dominant		Dominance Test	worksheet:			
	Cover 70	Species? Yes	Status	Number of Domina				, <u>,</u> ,
1.Salix lasiolepis 2.	70	168	FACW	That Are OBL, FA		2: 2		(A)
3.				Total Number of D Species Across A		2		(B)
4.						_	,	
Sapling/Shrub Stratum	70 %			Percent of Domina That Are OBL, FA) % ((A/B)
1.Baccharis salicifolia	5	Yes	FAC	Prevalence Index	worksheet	t:		
2.				Total % Cove	r of:	Multiply I	by:	_
3.				OBL species		x 1 =	0	
4.				FACW species	70	x 2 =	140	
5				FAC species	5	x 3 =	15	
Total Cover: Herb Stratum	5 %			FACU species	20	x 4 =	80	
1-Helminthotheca echioides (dead)	20	No	FACU	UPL species		x 5 =	0	(D)
2.		110		Column Totals:	95	(A)	235	(B)
3.				Prevalence			2.47	
4.				Hydrophytic Veg	etation Indi	icators:		
5.				Dominance T				
6.				× Prevalence In				
7				Morphologica data in Re		is' (Provide si i a separate s		ng
8Total Cover:	20 **			Problematic H	lydrophytic \	Vegetation ¹ (I	Explain)
Woody Vine Stratum	20 %							
1				¹ Indicators of hyd be present.	ric soil and	wetland hydr	ology n	nust
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum60 %	Biotic C	rust	%	Present?	Yes	No 🔘		
Remarks:								

SOIL Sampling Point: 2 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) Color (moist) Texture³ (inches) Type¹ Loc² Remarks 0-210 YR 3/2 100 Loam 2-20 10 YR 3/2 5 Loam 95 2 - 202.5 YR 5/4 Silty clay loam ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. 3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils: Histosol (A1) 1 cm Muck (A9) (LRR C) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) ⁴Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type: Depth (inches): **Hydric Soil Present?** No (Yes (Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water Marks (B1) (Riverine) Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine) High Water Table (A2) Biotic Crust (B12) Drift Deposits (B3) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7)

Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Shallow Aquitard (D3) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes (No (Depth (inches): Water Table Present? Yes (No (Depth (inches): Saturation Present? Depth (inches): Yes (No (Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: There is no bed and bank present. US Army Corps of Engineers Arid West - Version 11-1-2006

Project/Site: Pure Water Program		City/Count	y:San Dieg	o/San Diego	Sam	pling Date:()	9/27/20	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:3	a	
Investigator(s):Callie Ford, Janice Wondolleck		Section, T	ownship, Ra	nge: 32, 14S, 2W		_		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave,	convex, none):Non	e	Slo	pe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.9	91		Long:-117.10		 Datu	m: —	
Soil Map Unit Name: Redding-urban land complex				NWI cla	assification	Freshwater of	emergent	wetland
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No ((If no, explain	n in Remar	 ks.)		
	_	disturbed?		'Normal Circumstan	ces" preser	nt? Yes	No	\circ
		oblematic?		eeded, explain any a				
SUMMARY OF FINDINGS - Attach site map si	• •						atures,	etc.
Hydrophytic Vegetation Present? Yes No								
Hydric Soil Present? Yes No		ls t	he Sampled	l Area				
		I .	hin a Wetlar			No 🔘		
Remarks: This data station was taken within freshwater	er marsh	adjacent	to the San \	Vicente Reservoir	•			
VEGETATION								
	Absolute	Dominant	Indicator	Dominance Test	workshee	t:		
	% Cover	Species?		Number of Domin				
1				That Are OBL, FA	CW, or FA	C: 1		(A)
2			-	Total Number of D	Dominant			
3				Species Across A	II Strata:	1		(B)
4				Percent of Domina		_		
Sapling/Shrub Stratum Total Cover:	%			That Are OBL, FA	CW, or FA	C: 100	0.0 %	(A/B)
1.Baccharis salicifolia	5	No	FAC	Prevalence Index	k workshed	et:		
2.Baccharis sarothroides	10	No	FACU	Total % Cove	r of:	Multiply	y by:	
3.Salvia mellifera	1	No	Not Listed	OBL species	100	x 1 =	100	
4			-	FACW species		x 2 =	0	
5.	160/			FAC species FACU species	5	x 3 =	15	
Total Cover: Herb Stratum	16 %			UPL species	10	x 4 = x 5 =	40 5	
1.Schoenoplectus acutus	100	Yes	OBL	Column Totals:	116	(A)	160	(B)
2.				Oolumin Totals.	110	(~)	100	(5)
3.				Prevalence			1.38	
4.				Hydrophytic Veg				
5.				Dominance TPrevalence Ir				
6.				Prevalence Ir Morphologica			cunnortir	na
7						n a separate		19
8Total Cover:	100			Problematic F	Hydrophytic	Vegetation ¹	(Explain)
Woody Vine Stratum	100%							
1				¹ Indicators of hyd be present.	ric soil and	d wetland hy	drology r	nust
2								
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum % Cover	of Biotic C	Crust	%	Present?	Yes 💿	No C		
Remarks:								$\neg \neg$

SOIL Sampling Point: 3a

Profile Des	scription: (Describe Matrix	to the depth	needed to document the indicator or Redox Features	confirm	the absence of in	dicators.)
(inches)	Color (moist)	%		Loc ²	Texture ³	Remarks
0-3	7.5 YR 2.5/1	100		I	Loam	
	7.6 11(2.6)1					
	<u> </u>					
1T C-(Composituation D-Don	letien DM-D	adversed Matrice 21 time DI Down II			B.AAritic
• .	Concentration, D=Dep		educed Matrix. ² Location: PL=Pore Li oam, Sandy Clay Loam, Sandy Loam, C	-		
			unless otherwise noted.)	lay Loan		oblematic Hydric Soils:
Histoso		e to all Livins,	Sandy Redox (S5)			(A9) (LRR C)
	Epipedon (A2)		Stripped Matrix (S6)			(A10) (LRR B)
	Histic (A3)		Loamy Mucky Mineral (F1)		Reduced Ve	
	jen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Red Parent	Material (TF2)
	ed Layers (A5) (LRR (()	Depleted Matrix (F3)		Other (Expla	ain in Remarks)
	luck (A9) (LRR D)	- (044)	Redox Dark Surface (F6)			
	ed Below Dark Surfac Dark Surface (A12)	e (A11)	Depleted Dark Surface (F7) Redox Depressions (F8)			
	Mucky Mineral (S1)		Vernal Pools (F9)		⁴ Indicators of hy	drophytic vegetation and
	Gleyed Matrix (S4)					ology must be present.
Restrictive	Layer (if present):					
Type:Ro	oots, gravel					
Depth (ii					Hydric Soil Pres	ent? Yes No
		due to inun	dation and obligate vegetation.			
	,		2 2			
HYDROLO	ncv					
	ydrology Indicators:				Secondary	Indicators (2 or more required)
	licators (any one indic	ator is sufficio	nt)			Marks (B1) (Riverine)
		ator is sufficie			— 🖂	
<u>• •</u>	e Water (A1) /ater Table (A2)		Salt Crust (B11) Biotic Crust (B12)			ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
	tion (A3)		Aguatic Invertebrates (B13)			ge Patterns (B10)
	Marks (B1) (Nonriver i	ine)	Hydrogen Sulfide Odor (C1)			eason Water Table (C2)
- 1	ent Deposits (B2) (No	,	Oxidized Rhizospheres along Liv	ina Root	<u></u>	luck Surface (C7)
	eposits (B3) (Nonrive	,	Presence of Reduced Iron (C4)	ing recor	` '	sh Burrows (C8)
	e Soil Cracks (B6)		Recent Iron Reduction in Plowed	Soils (C		tion Visible on Aerial Imagery (C9)
	tion Visible on Aerial I	magery (B7)	Other (Explain in Remarks)			w Aquitard (D3)
Water-	Stained Leaves (B9)	0 , (,	,			leutral Test (D5)
Field Obse						
Surface Wa	ater Present? Y	es (No	Depth (inches):			
Water Table		~	Depth (inches):			
Saturation I	-		Depth (inches):	1		
(includes ca	apillary fringe)		<u> </u>		nd Hydrology Pre	sent? Yes No
Describe R	ecorded Data (stream	gauge, monit	oring well, aerial photos, previous inspe	ctions), if	available:	
Remarks:						
JS Army Cor	os of Engineers					

_			State: <u>CA</u> nge: 32, 14S, 2W	Sa	mpling Point	3b	
Lo							
_	ocal relie	f (concave					
2.91		i (concave,	convex, none):Non	e	SI	ope (%):	
			Long:-117.10		 Dat	um:	
				assificatio	n: Freshwate:	r emergen	t wetla
f vear	? Yes (•	No (
-			•		,) No	
		•			ŕ	aturas	etc
ily so		g point it	Cations, trans	-ct3, III	portant	zatui c s	, 616.
		-					
	with	nin a Wetlar	nd? Yes	0	No 💿		
		Indicator Status					
						0	(A)
			Total Number of [Dominant			
			Species Across A	II Strata:		1	(B)
%			That Are OBL, FA	CW, or F.	AC: (0.0 %	(A/B)
Y	es	FACU	Prevalence Inde	x worksh	eet:		-
N	0	Not Listed	Total % Cove	er of:	Multi	oly by:	_
N	0	FAC	OBL species	5	x 1 =	5	
				_			
%			'				
N	0	OBL					(B)
			Column Totals.	53	(A)	163	(D)
						3.49	
						e sunnort	ina
							ii ig
			Problematic I	Hydrophyt	ic Vegetation	n¹ (Explair	1)
%							
				ric soil ar	nd wetland h	ydrology	must
			be present.				
%			Hydrophytic				
ic Crus	st	%	Present?	Yes (No (•	
		problematic? Is the with the with the problematic in the problematic	problematic? (If near sampling point Ice	respective and section and sec	Is the Sampled Area within a Wetland? Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or Factor Total % Cover of: No Not Listed No FAC OBL species 5 FACU Species 15 FACU species 30 UPL species 40 UPL specie	roblematic? (If needed, explain any answers in Remarks.) Is the Sampled Area within a Wetland? Species Status	Is the Sampled Area within a Wetland? Sampled Area Within a Wetland? Yes

SOIL Sampling Point: 3b

Profile Des Depth	cription: (Describe Matrix	to the depth n	needed to document the indicator or Redox Features	confirn	n the absence of	indicators.)
(inches)	Color (moist)	% (Color (moist) % Type ¹	Loc ²	Texture ³	Remarks
0-6	N/A	50			Gravel/cobble	Fill material
0-6	7.5 YR 4/3	50			Sandy loam	Fill material
	-					
	-					-
	-					-
1Type: C=C	Concentration, D=Dep	letion PM=Pe	duced Matrix. ² Location: PL=Pore L	ining D	C-Poot Channel	M-Matrix
			am, Sandy Clay Loam, Sandy Loam, (-		
			unless otherwise noted.)			Problematic Hydric Soils:
Histoso	ol (A1)		Sandy Redox (S5)		1 cm Muc	k (A9) (LRR C)
	Epipedon (A2)		Stripped Matrix (S6)			k (A10) (LRR B)
	listic (A3) en Sulfide (A4)		Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2)			Vertic (F18) nt Material (TF2)
	ed Layers (A5) (LRR (;)	Depleted Matrix (F3)			plain in Remarks)
	luck (A9) (LRR D)	,	Redox Dark Surface (F6)		,	,
	ed Below Dark Surface	e (A11)	Depleted Dark Surface (F7)			
	Oark Surface (A12) Mucky Mineral (S1)		Redox Depressions (F8) Vernal Pools (F9)		⁴ Indicators of	hydrophytic vegetation and
	Gleyed Matrix (S4)		Verrial Pools (F9)			drology must be present.
	Layer (if present):				1	
Type:						
Depth (ir	nches):				Hydric Soil Pr	esent? Yes No No
Remarks:						
HYDROLO	OGY					
Wetland Hy	/drology Indicators:				Seconda	ry Indicators (2 or more required)
Primary Ind	icators (any one indicators	ator is sufficier	nt)		Wate	er Marks (B1) (Riverine)
Surface	e Water (A1)		Salt Crust (B11)		Sedi	ment Deposits (B2) (Riverine)
High W	ater Table (A2)		Biotic Crust (B12)		Drift	Deposits (B3) (Riverine)
Saturat	ion (A3)		Aquatic Invertebrates (B13)			nage Patterns (B10)
	Marks (B1) (Nonriveri	,	Hydrogen Sulfide Odor (C1)			Season Water Table (C2)
	ent Deposits (B2) (No	,	Oxidized Rhizospheres along Li	ving Roo	` ' 🗀	Muck Surface (C7)
	eposits (B3) (Nonriver e Soil Cracks (B6)	ine)	Presence of Reduced Iron (C4) Recent Iron Reduction in Plower	d Soile (fish Burrows (C8) ration Visible on Aerial Imagery (C9)
	tion Visible on Aerial I	magery (B7)	Other (Explain in Remarks)	a oons (low Aquitard (D3)
	Stained Leaves (B9)	magory (Dr)	Curer (Explain in Terriane)			-Neutral Test (D5)
Field Obse						. ,
Surface Wa	ter Present? Y	es No	Depth (inches):			
Water Table	e Present? Y	es No	Depth (inches):			
Saturation F		es No	Depth (inches):	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1 1 b - d 1 B	
	apillary fringe)	dalide monito	oring well, aerial photos, previous inspe		and Hydrology P	resent? Yes () No (•)
Describe IV	ecorded Data (Stream	gauge, monito	ining well, aeriai priotos, previous irispe	cuons),	ii available.	
Remarks:						
. tomanto.						

Project/Site: Pure Water Program	City/County:San Diego	o/San Diego	Sampling Date	≥:09/27/2016
Applicant/Owner: City of San Diego		State:CA	Sampling Poin	nt:4a
Investigator(s): Callie Ford, Janice Wondolleck	Section, Township, Ra	nge: 32, 14S, 2W	_	
Landform (hillslope, terrace, etc.):	Local relief (concave, o	convex, none):None		Slope (%):
Subregion (LRR):C - Mediterranean California Lat:32.	91	Long:-117.10	Da	atum:
Soil Map Unit Name: Redding gravelly loam		NWI clas	sification: Freshwa	ater pond
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No			1
		/ 'Normal Circumstance	es" present? Yes (No (
		eded, explain any ans		
SUMMARY OF FINDINGS - Attach site map showing	·			
Hydrophytic Vegetation Present? Yes No				
Hydric Soil Present? Yes No	Is the Sampled	Area		
Wetland Hydrology Present? Yes No	within a Wetlar		● No ○	
Remarks: This data station was taken within freshwater marsh	n south of the Mirama	r Reservoir.		
VECETATION				
VEGETATION	Daminant Indicates	Dominones Test		
Absolute Tree Stratum (Use scientific names.) % Cover	Dominant Indicator Species? Status	Number of Dominar		
1.		That Are OBL, FAC	•	1 (A)
2.		Total Number of Do	minant	
3.		Species Across All		1 (B)
4.		Percent of Dominar	nt Species	
Total Cover: % Sapling/Shrub Stratum		That Are OBL, FAC	'	00.0 % (A/B)
1.		Prevalence Index v	worksheet	
2.		Total % Cover		tiply by:
3.		OBL species	100 x 1 =	100
4.		FACW species	x 2 =	0
5.		FAC species	x 3 =	0
Total Cover: %	,	FACU species	x 4 =	0
Herb Stratum		UPL species	x 5 =	0
1-Typha domingensis 100	Yes OBL	Column Totals:	100 (A)	100 (B)
2.		Prevalence In	dex = B/A =	1.00
4.		Hydrophytic Veget		1.00
5.		X Dominance Tes		
6.		× Prevalence Ind	ex is ≤3.0 ¹	
7.			Adaptations ¹ (Provi	
8.			arks or on a separa	,
Total Cover: 100%	,	Problematic Hy	drophytic Vegetation	on (Explain)
Woody Vine Stratum		¹ Indicators of hydric	s soil and wetland	hydrology must
1		be present.	, soil and wetland	nydrology must
Z		Hydrophytic		
		Vegetation	_	_
% Bare Ground in Herb Stratum % % Cover of Biotic	Crust	Present?	Yes No	0
Remarks:				

SOIL Sampling Point: 4a

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Featur %	es Type ¹	Loc ²	Texture ³	Remarks
								Remarks
0-12	2.5 YR 3/1	- 98	7.5 YR 4/6		<u>C</u>	_ <u>PL</u>	Silty clay loam	
					-			
	_							
Type: C=0	Concentration, D=Dep	letion, RM	=Reduced Matrix.	² Location	on: PL=Poi	e Lining, F	RC=Root Channel, M=	Matrix.
Soil Textu	res: Clay, Silty Clay, S	Sandy Clay	y, Loam, Sandy Clay	y Loam, S	Sandy Loar	n, Clay Loa		Silt Loam, Silt, Loamy Sand, Sar
-	Indicators: (Applicab	le to all LR	RRs, unless otherwis	se noted.)				blematic Hydric Soils:
Histoso	` '		Sandy Red	. ,			1 cm Muck (A	, ,
	Epipedon (A2)		Stripped M					A10) (LRR B)
	Histic (A3)		Loamy Mu	-			Reduced Ve	
	gen Sulfide (A4) ed Layers (A5) (LRR (~)	Loamy Gle Depleted N	-				Material (TF2) in in Remarks)
	fluck (A9) (LRR D)	•)	Redox Dai				U Other (Expla	iii iii Neiliaiks)
	ed Below Dark Surfac	e (A11)	Depleted [, ,			
	Dark Surface (A12)	, ,	Redox De	pressions	(F8)			
Sandy	Mucky Mineral (S1)		Vernal Poo	ols (F9)			⁴Indicators of hyd	rophytic vegetation and
Sandy	Gleyed Matrix (S4)						wetland hydro	logy must be present.
Type:								
Depth (i							Hydric Soil Prese	ent? Yes No
	ncnes): Assume hydric soils	due to in	nundation and obl	igate ve	getation.		Hydric Soil Prese	ent? Yes No
		due to in	nundation and obl	igate ve	getation.		Hydric Soil Prese	ent? Yes No No
		due to in	nundation and obl	igate ve	getation.		Hydric Soil Prese	ent? Yes No No
Remarks: /	Assume hydric soils	due to in	nundation and obl	igate ve	getation.		Hydric Soil Prese	ent? Yes No
Remarks: A	Assume hydric soils		nundation and obl	igate ve	getation.			
YDROLO Vetland H	Assume hydric soils OGY ydrology Indicators:			igate ve	getation.		Secondary I	ndicators (2 or more required)
YDROL(Vetland H	Assume hydric soils OGY ydrology Indicators: dicators (any one indic		ficient)		getation.		Secondary I	ndicators (2 or more required) Marks (B1) (Riverine)
YDROLO Vetland H Primary Inc	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1)		ficient)	et (B11)	getation.		Secondary I Water N	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine)
YDROLO Vetland H Primary Inc Surface High W	OGY ydrology Indicators: dicators (any one indicators (A1) Water Table (A2)		ficient) Salt Crus Biotic Cru	et (B11) ust (B12)			Secondary I Water N Sedime Drift De	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine)
YDROLO Vetland H Primary Inc X Surfac High W X Satura	OGY ydrology Indicators: dicators (any one indicators (A1) Vater Table (A2) tion (A3)	ator is suff	ficient) Salt Crus Biotic Cru Aquatic I	st (B11) ust (B12) nvertebra	tes (B13)		Secondary I Water N Sedime Drift De Drainag	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) te Patterns (B10)
YDROLO Vetland H Primary Inc Surface High W Satura Water	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver	ator is suff	ficient) Salt Crus Biotic Cru Aquatic II	st (B11) ust (B12) nvertebra n Sulfide (tes (B13) Odor (C1)		Secondary I Water N Sedime Drift De Drainag Dry-Sea	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) he Patterns (B10) hason Water Table (C2)
YDROLO Vetland H Primary Inc Surface High W Satura Water Sedimo	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	ator is suff ine) nriverine)	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph	tes (B13) Odor (C1) neres alonç		Secondary I Sedime Drift De Drainag Dry-Sea	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) le Patterns (B10) ason Water Table (C2) lick Surface (C7)
YDROLO Vetland H Primary Inc Surface High W X Satura Water Sedimo	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Noriver eposits (B3) (Nonriver)	ator is suff ine) nriverine)	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph	tes (B13) Odor (C1) neres along ced Iron (C	(4)	Secondary I Water M Sedime Drift De Drainag Dry-Sea ots (C3) Crayfish	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) ack Surface (C7) n Burrows (C8)
YDROLO Vetland H Primary Inc Surface High W Satura Water Sedime Drift De	Assume hydric soils OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonrivereposits (B3) (Nonrivereposits (B3) (Nonrivereposits (B6))	ator is suff ine) nriverine) rine)	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Redu	tes (B13) Odor (C1) neres alonç ced Iron (C	(4)	Secondary I Water M Sedime Drift De Drainag Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) te Patterns (B10) te Surface (C7) to Burrows (C8) ton Visible on Aerial Imagery (C8)
YDROLO Vetland H Primary Inc Surface High W Satura Water Sedime Drift Do Surface Inunda	Assume hydric soils OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6)) e Soil Cracks (B6) ation Visible on Aerial I	ator is suff ine) nriverine) rine)	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph	tes (B13) Odor (C1) neres alonç ced Iron (C	(4)	Secondary I Sedime Drift De Drianag Dry-Sea ots (C3) Crayfish (C6) Saturati Shallow	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) ack Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) of Aquitard (D3)
YDROLO Vetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water-	Assume hydric soils OGY ydrology Indicators: dicators (any one indicators (any one indicators) Water Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3) (Nonriverses) Example Soil Cracks (B6) Water Table (A2) Marks (B1) (Nonriverses) Extended Leaves (B9)	ator is suff ine) nriverine) rine)	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Redu	tes (B13) Odor (C1) neres alonç ced Iron (C	(4)	Secondary I Sedime Drift De Drianag Dry-Sea ots (C3) Crayfish (C6) Saturati Shallow	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) te Patterns (B10) te Surface (C7) to Burrows (C8) ton Visible on Aerial Imagery (C8)
YDROLO Vetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Noriver e Soil Cracks (B6) ation Visible on Aerial I Stained Leaves (B9) ervations:	ator is suff ine) nriverine) rine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduc ron Reduc xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	(4)	Secondary I Sedime Drift De Drianag Dry-Sea ots (C3) Crayfish (C6) Saturati Shallow	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) ack Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) of Aquitard (D3)
YDROLO Vetland H Primary Inc X Surface High W X Satura Water Sedimo Drift Do Surface Inunda Water- Field Obse	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial I eStained Leaves (B9) ervations: ater Present?	ator is suffine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Redu ron Redu xplain in F	tes (B13) Odor (C1) neres alonç ced Iron (C	(4)	Secondary I Sedime Drift De Drianag Dry-Sea ots (C3) Crayfish (C6) Saturati Shallow	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) ack Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) of Aquitard (D3)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse	Assume hydric soils OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) es Soil Cracks (B6) ation Visible on Aerial I estained Leaves (B9) ervations: ater Present? Y	ator is suffine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduc ron Reduc xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	(4)	Secondary I Sedime Drift De Drianag Dry-Sea ots (C3) Crayfish (C6) Saturati Shallow	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) ack Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) of Aquitard (D3)
YDROLO Vetland H Primary Inc Surface High W Satura Orift Do Surface Inunda Water- Field Obse Surface Water Table Saturation	Assume hydric soils OGY ydrology Indicators: dicators (any one indice e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver ent Deposits (B3) (Nonriver e Soil Cracks (B6) ation Visible on Aerial I estained Leaves (B9) ervations: ater Present? Present? Y Present? Y	ator is suffine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduc ron Reduc xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Water M Sedime Drift De Drainag Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) n Aquitard (D3) eutral Test (D5)
YDROLO Wetland H Primary Inc Surface Water Surface Inunda Water- Field Obse Surface Wa Water Tabl Saturation includes ca	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) Evations: ater Present? Present? Y Present? Apillary fringe)	ator is sufficiency ine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduct ron Reduct xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Sedime Drift De Drift De Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) n Aquitard (D3) eutral Test (D5)
YDROLO Vetland H Primary Inc X Surface High W X Satura Water Sedimo Unift Do Unift D	Assume hydric soils OGY ydrology Indicators: dicators (any one indice e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver ent Deposits (B3) (Nonriver e Soil Cracks (B6) ation Visible on Aerial I estained Leaves (B9) ervations: ater Present? Present? Y Present? Y	ator is sufficiency ine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduct ron Reduct xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Sedime Drift De Drift De Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) n Aquitard (D3) eutral Test (D5)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift Do Surface Inunda Water- Field Obse Surface Water Table Saturation includes ca	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) Evations: ater Present? Present? Y Present? Apillary fringe)	ator is sufficiency ine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduct ron Reduct xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Sedime Drift De Drift De Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) n Aquitard (D3) eutral Test (D5)
YDROLO Wetland H Primary Inc Surface Water Surface Inunda Water- Field Obse Surface Wa Water Tabl Saturation includes ca	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) Evations: ater Present? Present? Y Present? Apillary fringe)	ator is sufficiency ine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduct ron Reduct xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Sedime Drift De Drift De Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) n Aquitard (D3) eutral Test (D5)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift Do Surface Inunda Water- Field Obse Surface Water Table Saturation includes ca	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) Evations: ater Present? Present? Y Present? Apillary fringe)	ator is sufficiency ine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduct ron Reduct xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Sedime Drift De Drift De Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C8) n Aquitard (D3) eutral Test (D5)
YDROLO Vetland H Primary Inc Surface Water Sedime Drift De Surface Ununda Water- Field Obse Surface Water Table Saturation Includes ca	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) Evations: ater Present? Present? Y Present? Apillary fringe)	ator is sufficiency ine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduct ron Reduct xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Sedime Drift De Drift De Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C6) n Aquitard (D3) eutral Test (D5)
YDROLO Vetland H Primary Inc Surface Water Sedime Drift De Surface Ununda Water- Field Obse Surface Water Table Saturation Includes ca	Assume hydric soils OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) Evations: ater Present? Present? Y Present? Apillary fringe)	ator is sufficiency ine) nriverine) magery (B	ficient) Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	et (B11) ust (B12) nvertebra n Sulfide (Rhizosph e of Reduct ron Reduct xplain in F	tes (B13) Odor (C1) neres along ced Iron (C ction in Plo Remarks)	wed Soils (Secondary I Sedime Drift De Drift De Dry-Sea ots (C3) Thin Mu Crayfish (C6) Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) nason Water Table (C2) nck Surface (C7) n Burrows (C8) on Visible on Aerial Imagery (C6) n Aquitard (D3) eutral Test (D5)

Project/Site: Pure Water Program		City/Cour	nty:San Dieg	o/San Diego	San	npling Date:0	9/27/201	16
Applicant/Owner: City of San Diego				State:CA	San	npling Point:4	b	
Investigator(s): Callie Ford, Janice Wondolleck		Section,	Township, Ra	inge: 32, 14S, 2W	7	_		
Landform (hillslope, terrace, etc.):		Local rel	ief (concave,	convex, none): No	ne	Slo	pe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.9	91		Long:-117.10		 Datu	m:	
Soil Map Unit Name: Redding gravelly loam				NWI c	lassification	: Freshwate	r pond	
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No (ain in Remar		1	
	ignificantly			"Normal Circumsta	nces" prese	nt? Yes	No (
	aturally pro			eeded, explain any			•	
SUMMARY OF FINDINGS - Attach site map s							atures,	etc.
Hydrophytic Vegetation Present? Yes No	o (i)							
Hydric Soil Present? Yes No	0	Is	the Sampled	l Area				
	0		ithin a Wetla	nd? Ye	s 💿	No 🔘		
Remarks: This data station is located near the freshwa	ater mars	h.						
VEGETATION								
	Absolute	Dominar	nt Indicator	Dominance Tes	t workshee	t:		
Tree Stratum (Use scientific names.)	% Cover	Species'		Number of Domi				
1			_	That Are OBL, F	ACW, or FA	C: 2	(4	A)
2				Total Number of	Dominant			
3.				Species Across	All Strata:	2	(1	B)
4				Percent of Domi		_		
Sapling/Shrub Stratum Total Cover	: %			That Are OBL, F	ACW, or FA	C: 100).0 % (A	A/B)
1.				Prevalence Inde	ex workshe	et:		
2.			<u> </u>	Total % Cov	er of:	Multipl	y by:	
3.				OBL species	60	x 1 =	60	
4				FACW species	40	x 2 =	80	
5			_	FACIL appeirs		x 3 =	0	
Total Cover Herb Stratum	%			FACU species UPL species		x 4 = x 5 =	0	
1.Schoenoplectus spp.	60	Yes	OBL	Column Totals:	100		0 140	(B)
2. Pluchea odorata	30	Yes	FACW	_ Column rotals.	100	(A)	140	(D)
3. Atriplex prostrata	10	No	FACW		e Index = B		1.40	
4.				Hydrophytic Ve	_			
5.				× Dominance				
6				× Prevalence				_
7						ons¹ (Provide on a separate		ig
8.				- Problematic	Hydrophytic	C Vegetation ¹	(Explain)	
Total Cover Woody Vine Stratum	100%							
1.				¹ Indicators of hy	dric soil and	d wetland hy	drology m	nust
2.				be present.				
Total Cover	%			Hydrophytic				
% Bare Ground in Herb Stratum % % Cover	of Biotic C	Crust	%	Vegetation Present?	Yes 💿	No ()	
Remarks:				I	_	_		
				•				

SOIL Sampling Point: 4b

Depth (inches) Matrix Color (moist) Redox Features Type¹ Loc² Texture³ Remarks 0-12 N/A 20 Cobble 0-6 7.5 YR 2.5/1 70 5 YR 3/4 3 C M Loamy sand 0-12 7.5 YR 2.5/1 70 5 YR 4/6 1 C PL Loamy sand 0-12 10 YR 4/2 10 Loamy sand 6-12 7.5 YR 2.5/1 70 5 YR 3/4 8 C M Loamy sand	
0-6 7.5 YR 2.5/1 70 5 YR 3/4 3 C M Loamy sand 0-12 7.5 YR 2.5/1 70 5 YR 4/6 1 C PL Loamy sand 0-12 10 YR 4/2 10 Loamy sand Loamy sand	
0-12 7.5 YR 2.5/1 70 5 YR 4/6 1 C PL Loamy sand 0-12 10 YR 4/2 10 Loamy sand Loamy sand	
0-12 10 YR 4/2 10 Loamy sand	
6-12 7.5 YR 2.5/1 70 5 YR 3/4 8 C M Loamy sand	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ² Location: PL=Pore Lining, RC=Root Channel, M=Matrix.	
3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand,	Sand.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils.	
Histosol (A1) Sandy Redox (S5) 1 cm Muck (A9) (LRR C) Stripped Matrix (S6)	
Histic Epipedon (A2) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Reduced Vertic (F18)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2)	
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks)	
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7)	
Thick Dark Surface (A12) Redox Depressions (F8)	
Sandy Mucky Mineral (S1) Vernal Pools (F9) Indicators of hydrophytic vegetation and	
Sandy Gleyed Matrix (S4) wetland hydrology must be present.	
Restrictive Layer (if present):	
Type: Depth (inches): Hydric Soil Present? Yes No	
Remarks: Assume hydric soils due to inundation and obligate vegetation.	
Assume nyuric sons due to mundation and obligate vegetation.	
HYDROLOGY	
Wetland Hydrology Indicators: Secondary Indicators (2 or more require	<u>i)</u>
Primary Indicators (any one indicator is sufficient) Water Marks (B1) (Riverine)	
Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine)	
High Water Table (A2) Biotic Crust (B12) Drift Deposits (B3) (Riverine)	
High Water Table (A2) Biotic Crust (B12) Saturation (A3) Biotic Crust (B12) Aquatic Invertebrates (B13) Drainage Patterns (B10)	
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)	
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7)	
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Riverine) Aquatic Invertebrates (B13) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) X Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8)	(00)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres along Living Roots (C3) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Shallow Aquitard (D3)	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Drift Deposits (B3) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Water-Stained Leaves (B9) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Shallow Aquitard (D3) FAC-Neutral Test (D5)	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Dry-Season Water Table (C2) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Water-Stained Leaves (B9) Field Observations:	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Riverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Surface Water Present? Biotic Crust (B12) Aquatic Invertebrates (B13) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Shallow Aquitard (D3) FAC-Neutral Test (D5)	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Porift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Shallow Aquitard (D3) FAC-Neutral Test (D5)	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	(C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No	(C9)
High Water Table (A2) Saturation (A3)	(C9)
High Water Table (A2) Saturation (A3)	(C9)
High Water Table (A2) Saturation (A3)	(C9)
High Water Table (A2) Saturation (A3)	(C9)

Project/Site: Pure Water Program		City/Count	ty:San Diego	o/San Diego	Samp	ling Date: 09/	27/2016
Applicant/Owner: City of San Diego				State:CA	Sampl	ling Point:4c	
Investigator(s):Callie Ford, Janice Wondolleck		Section, T	ownship, Rai	nge: 32, 14S, 2W			
Landform (hillslope, terrace, etc.):		Local relie	ef (concave, o	convex, none): Non	e	Slope	(%):
Subregion (LRR):C - Mediterranean California	Lat:32.9	91		Long:-117.10		 Datum:	-
Soil Map Unit Name: Redding gravelly loam				NWI cla	assification: I	 Freshwater _I	ond
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes	No (_		
	-	disturbed?		Normal Circumstan	ces" present	? Yes 💿	No 🔘
		oblematic?		eded, explain any a			
SUMMARY OF FINDINGS - Attach site map sh	• •		,				ures, etc.
Hydrophytic Vegetation Present? Yes No	•						
	•	ls t	he Sampled	Area			
Wetland Hydrology Present? Yes No			hin a Wetlan		O N	o (•)	
Remarks: This data station was taken within a eucalyp	tus grov	e outside	of the fresh	water marsh (see	map 15, an	nd data stati	on A6a and
A6b).							
VEGETATION							
	bsolute	Dominant	Indicator	Dominance Test	workshoot:		
	% Cover	Species?		Number of Domin			
1.Eucalyptus globulus	40	Yes	Not Listed	That Are OBL, FA		0	(A)
2				Total Number of D	Dominant		
3				Species Across A		1	(B)
4				Percent of Domin	ant Species		
Sapling/Shrub Stratum	40 %			That Are OBL, FA	CW, or FAC	0.0	% (A/B)
1.				Prevalence Index	x worksheet	:	
2.				Total % Cove	er of:	Multiply b	oy:
3.				OBL species		x 1 =	0
4.				FACW species		x 2 =	0
5				FAC species		x 3 =	0
Total Cover: Herb Stratum	%			FACU species UPL species		x 4 = x 5 =	0
1.					40	. •	200 (P)
2.				Column Totals:	40	(A)	200 (B)
3.				Prevalence	Index = B/A	=	5.00
4.				Hydrophytic Veg	etation Indi	cators:	
5.				Dominance T			
6.				Prevalence Ir		1.00	
7				Morphologica data in Re		s (Provide si a separate sh	
8.				Problematic I		•	
Total Cover: Woody Vine Stratum	%						
1.				¹ Indicators of hyd	Iric soil and v	wetland hydro	ology must
2.				be present.			
Total Cover:	%			Hydrophytic Vegetation			
% Bare Ground in Herb Stratum % % Cover of	of Biotic C	rust	%	Present?	Yes 🔘	No 💿	
Remarks:							

SOIL Sampling Point: 4c

Depth (inches)	Matrix Color (moist)	 _	Redox Features	oc ² Texture ³	Domonico
	Color (moist)		Color (moist) % Type ¹ Lo		Remarks
0-6	7.5 YR 3/2			Sandy loam	_
	<u></u>				
	-				-
					_
					_
	Concentration, D=Dep			•	
			oam, Sandy Clay Loam, Sandy Loam, Cla	· · · · · · · · · · · · · · · · · · ·	
-		le to all LRRs	, unless otherwise noted.)		Problematic Hydric Soils:
Histoso	, ,		Sandy Redox (S5)		ck (A9) (LRR C)
	Epipedon (A2)		Stripped Matrix (S6)		ck (A10) (LRR B)
	Histic (A3)		Loamy Mucky Mineral (F1)		l Vertic (F18) ent Material (TF2)
	en Sulfide (A4)	3)	Loamy Gleyed Matrix (F2)	<u> </u>	` '
	ed Layers (A5) (LRR (luck (A9) (LRR D)	5)	Depleted Matrix (F3) Redox Dark Surface (F6)		xplain in Remarks)
	ed Below Dark Surfac	ρ (Δ11)	Depleted Dark Surface (F7)		
	Dark Surface (A12)	C (A11)	Redox Depressions (F8)		
	Mucky Mineral (S1)		Vernal Pools (F9)	⁴ Indicators of	hydrophytic vegetation and
	Gleyed Matrix (S4)		Vernal Fools (Fo)		ydrology must be present.
Type:					
	Layer (if present):				
· · —	nches):			Hvdric Soil P	resent? Yes No 💿
Depth (ii	nches):			Hydric Soil P	resent? Yes No No
Depth (ii	, <u> </u>			Hydric Soil P	resent? Yes No •
Depth (in the depth control of	DGY				
Depth (ii Remarks: YDROL(OGY ydrology Indicators:			Seconda	ary Indicators (2 or more required)
Depth (in Depth	OGY ydrology Indicators: icators (any one indic			Seconda Wa	ary Indicators (2 or more required) ter Marks (B1) (Riverine)
Depth (ii Remarks: YDROLO Vetland Hy Primary Ind Surface	OGY ydrology Indicators: icators (any one indic		Salt Crust (B11)	Seconda War Sec	ary Indicators (2 or more required) ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine)
Depth (ii Remarks: YDROLO Vetland Hy Primary Ind Surface	OGY ydrology Indicators: icators (any one indic			Seconda War Sec	ary Indicators (2 or more required) ter Marks (B1) (Riverine)
Depth (ii Remarks: YDROLO Vetland Hy rimary Ind Surface High W	OGY ydrology Indicators: icators (any one indic		Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Seconda War Sec Drif Dra	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10)
Depth (ii Remarks: YDROLO Vetland Hy Primary Ind Surface High W Saturat	ydrology Indicators: icators (any one indicators) water (A1) vater Table (A2)	ator is sufficie	Salt Crust (B11) Biotic Crust (B12)	Seconda War Sec Drif Dra	ary Indicators (2 or more required) ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine)
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Depth (ii Remarks: YDROLO Vetland Hy rimary Ind Surface High W Satural Water I Sedime	OGY ydrology Indicators: icators (any one indice Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver	ine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Seconda War Sec Drif Dra Dry g Roots (C3) Thir	ary Indicators (2 or more required) ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2)
Depth (ii Remarks: YDROLO Vetland Hy Surface High W Saturat Water I Sedime Drift De	ydrology Indicators: icators (any one indicators) (any one indicators) (any one indicators) (atternation (A1) (atternation (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3)	ine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin	Seconda War Seconda Drift Drift Dra Dry g Roots (C3) Thin	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) in Muck Surface (C7) tyfish Burrows (C8)
Depth (ii Remarks: YDROLO Vetland Hy rimary Ind Surface High W Saturat Water I Sedime Drift De Surface	ydrology Indicators: icators (any one indicators (any one indicators) (any one indicators) (atternation (A2) (atternation (A3) (A3) (A3) (A3) (A3) (A3) (A4) (A4) (A4) (A4) (A4) (A4) (A4) (A4	ine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	Seconda War Seconda Seconda Drif Dra Dra Dry g Roots (C3) Thir Cra Soils (C6) Sat	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) in Muck Surface (C7) tyfish Burrows (C8)
Depth (ii Depth (ii Depth (ii Demarks: YDROLO Vetland Hy rimary Ind Surface High W Saturat Water I Sedime Drift De Surface Inunda	ydrology Indicators: icators (any one indicators) (any one indicators) (any one indicators) (atter Table (A2) (atter Table (A2) (atter Table (A2) (Nonrivers) (B1) (Nonrivers) (B2) (Nonrivers) (B3) (B3) (B3) (B3) (B3) (B3) (B3) (B3	ine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed S	Seconda Wa Sec Drif Dra Dry g Roots (C3) Thir Cra Soils (C6) Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) in Muck Surface (C7) yfish Burrows (C8) uration Visible on Aerial Imagery (Ca
Primary Ind Saturat Water I Surface Surface Surface Surface Union	ydrology Indicators: icators (any one indicate Water (A1) /ater Table (A2) icion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver es Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9)	ine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed S	Seconda Wa Sec Drif Dra Dry g Roots (C3) Thir Cra Soils (C6) Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) n Muck Surface (C7) yfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3)
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Depth (ii Remarks: YDROLO Vetland Hy rimary Ind Surface High W Saturat Vater I Sedime Unit De Surface Inunda Water- Vield Obse	ydrology Indicators: icators (any one indicate Water (A1) /ater Table (A2) icion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver es Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ater Present? yde Present? yderology Indicators:	ine) nriverine) Imagery (B7) Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed S Other (Explain in Remarks)	Seconda Wa Sec Drif Dra Dry g Roots (C3) Thir Cra Soils (C6) Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) n Muck Surface (C7) yfish Burrows (C8) uration Visible on Aerial Imagery (C
Depth (ii Remarks: YDROLO Vetland Hy rimary Ind Surface High W Saturat Sedime Drift De Surface Inunda Water- Field Obse Furface Water Table Staturation I	order of the present?	ine) nriverine) rine) Imagery (B7) (es	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed S Other (Explain in Remarks)	Seconda Wa Sec Drif Dra Dry g Roots (C3) Thir Cra Soils (C6) Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) in Muck Surface (C7) yfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3) C-Neutral Test (D5)
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Depth (ii Remarks: YDROLO Vetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation Includes ca	pdrology Indicators: icators (any one indicators (any one indicators) water (A1) vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Oracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? Present? prince of the present of	ine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed S Other (Explain in Remarks) Depth (inches): Depth (inches):	Seconda War Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) in Muck Surface (C7) yfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3) C-Neutral Test (D5)
Depth (ii Remarks: YDROLO Vetland Hy Primary Ind Surface High W Satural Vater I Sedime United Obse Surface Wa Vater Table Saturation I Includes ca	pdrology Indicators: icators (any one indicators (any one indicators) water (A1) vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Oracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? Present? prince of the present of	ine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed S Other (Explain in Remarks) Depth (inches): Depth (inches):	Seconda War Seconda	ary Indicators (2 or more required) ter Marks (B1) (Riverine) timent Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) in Muck Surface (C7) yfish Burrows (C8) uration Visible on Aerial Imagery (Cillow Aquitard (D3) C-Neutral Test (D5)
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2.	Project/Site: Pure Water Program		City/Count	y:San Dieg	go/San Diego	Sa	mpling Date:	09/27/20	16
Local relief (concave, convex, none): None Slope (%): Subtregion (LRR)C - Mediticrranean California Lat 32.90 Long-117.11 Datum: NWI classification: Freshwater formesed should be climated. Pydrologic conditions on the site typical for this time of year? Yes • No (If no, explain in Remarks.) Nev Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes • No (If needed, explain any answers in Remarks.) Nev Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, e Hydrophytic Vegetation Present? Yes • No (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, e Hydrophytic Vegetation Present? Yes • No (If needed, explain any answers in Remarks.) **VEGETATION** Tree Stratum (Use scientific names.) **Absolute Dominant Indicator Species Status No (If needed, explain any answers in Remarks.) **VEGETATION** Tree Stratum (Use scientific names.) **Absolute Dominant Indicator Species Status No (If needed, explain any answers in Remarks.) **VEGETATION** Tree Stratum (Use scientific names.) **Absolute Dominant Indicator No (If needed, explain any answers in Remarks.) **VEGETATION** Tree Stratum (Use scientific names.) **Absolute Dominant Indicator No (If needed, explain any answers in Remarks.) **Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A. Total Number of Dominant Species That Are OBL, FACW or FAC: 100.0 % (A. Prevalence Index worksheet: Total Number of Dominant Species That Are OBL, FACW or FAC: 100.0 % (A. Prevalence Index worksheet: Total % Cover of Multiply by: Total % Cover of Multiply by: Total % Cover of Multiply by: No (If needed, explain No (If needed, exp	Applicant/Owner: City of San Diego				State:CA	Sa	mpling Point	:5a	
Solid Map Unit Name: Reading cobibly loam	nvestigator(s):Callie Ford, Janice Wondolleck		Section, T	ownship, Ra	ange: 05, 15S, 2W				
No No No No No No No No	.andform (hillslope, terrace, etc.):		Local relie	ef (concave,	convex, none): Nor	ie	SI	lope (%):	
As climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, e Hydrophytic Vegetation Present? Yes No No	Subregion (LRR):C - Mediterranean California	Lat:32.9	90		Long:-117.11		 Dat	tum:	
Are Vegetation Soil or Hydrology Instituted? Are "Normal Circumstances" present? Yes No Note Vegetation Soil or Hydrology Instituted? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, explain any answers in Remarks.) Hydrophytic Vegetation Present? Yes No Within a Wetland? Yes No	Soil Map Unit Name: Redding cobbly loam				NWI cl	assificatio	n: Freshwater	forrested/sh	rub wetl
Absolute Species Tratar (Use scientific names.) Tree Stratum (Use scientific names.) Sapling/Shrub Stratum Total Cover: % Total Cover: % Herb Stratum 1. Cotula coronopijolia 2. Anemopsis californica 3. Cyperus eragrostis 1. Cotula Covers Total Cover: % Total	Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes (No ((If no, expla	ain in Rem	arks.)		
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Is the Sampled Area within a Wetland? Yes No Is the Sample Area within a Wetland? Yes No Is the Sample Area within a Wetland? Yes No Is the Sample Area within a Wetland? Yes No Is the Sample Area within a Wetland? Yes No Is the Sample	Are Vegetation Soil or Hydrology sig	gnificantly	disturbed?	Are '	'Normal Circumstan	ces" prese	nt? Yes	No	0
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, e Hydrophytic Vegetation Present? Yes No No Is the Sampled Area Wetland Hydrology Present? Yes No No No No Within a Wetland? Yes No		aturally pr	oblematic?	(If n	eeded, explain any	answers in	Remarks.)		
Hydrophytic Vegetation Present? Yes No Wes No Westand Hydrology Present? Yes No No Westand No Westand? Yes No No No Westand No No No Westand No No Westand No No No No No Westand No	SUMMARY OF FINDINGS - Attach site map s	howing	samplin	ng point l	ocations, trans	ects, im	portant fo	eatures,	etc.
Sapiling/Shrub Stratum					<u> </u>				
Wetland Hydrology Present? Yes No within a Wetland? Yes No •• Remarks: VEGETATION Tree Stratum (Use scientific names.) Absolute % Cover Species? Dominant Indicator Species Number of Dominant Species Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A 2 (A A A Total Number of Dominant Species Across All Strata: 2 (B Percent of Dominant Species Across All Strata: 2 (B Percent of Dominant Species Across All Strata: 2 (B Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A Percent of Dominant Species That Are OBL, FACW, or F	, , , ,		ls t	he Sample	d Area				
Absolute Dominant Indicator Species? Status							No 💿		
Absolute % Cover Species? Status Indicator Status									
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A		Aheoluta	Dominant	Indicator	Dominance Tes	worksho	ot.		
3.	<u>Tree Stratum</u> (Use scientific names.)				Number of Domir	nant Speci	es	2	(A)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (Av. Fac. 100.								2	(B)
Total Cover: % Total Cover: % Total Cover: % Total Cover of: Multiply by:	4.				Percent of Domir	ant Speci	es		
Prevalence Index worksheet:		: %						00.0%	(A/B)
3. 4. 5.	·				Prevalence Inde	x worksh	eet:		
4.	2.				Total % Cov	er of:	Multi	ply by:	_
Total Cover: % Herb Stratum 1. Cotula coronopifolia 2. Anemopsis californica 3. Cyperus eragrostis 4. Paspalum dilatatum 5. Yes FAC 6. 7.	3.			-	OBL species	30	x 1 =	30	
Total Cover: % Herb Stratum 1. Cotula coronopifolia 2. Anemopsis californica 3. Cyperus eragrostis 3. No FACW 4. Paspalum dilatatum 5. Yes FAC 5.	4.				FACW species	3	x 2 =	6	
Herb Stratum 1 · Cotula coronopifolia 20 Yes OBL OBL Column Totals: 83 (A) 186 2 · Anemopsis californica 10 No OBL Prevalence Index = B/A = 2.24 3 · Cyperus eragrostis 3 No FACW Hydrophytic Vegetation Indicators: X Dominance Test is >50% 5 · OBL Yes FAC Hydrophytic Vegetation Indicators: X Dominance Test is >50% 6 · OBL Yes FAC Hydrophytic Vegetation Indicators: Y Prevalence Index is ≤3.0¹ 8 · OBL Yes FAC Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 9 · OBL Prevalence Index = B/A = 2.24 1 · OBL Yes FAC Hydrophytic Vegetation Indicators: Y Problematic Hydrophytic Vegetation¹ (Explain) 1 · OBL Yes FAC Yes Prevalence Index is ≤3.0¹ Yes Prevale	5				_	50	x 3 =	150	
1. Cotula coronopifolia 20 Yes OBL Column Totals: 83 (A) 186 2. Anemopsis californica 10 No OBL Prevalence Index = B/A = 2.24 3. Cyperus eragrostis 3 No FACW Hydrophytic Vegetation Indicators: 4. Paspalum dilatatum 50 Yes FAC Hydrophytic Vegetation Indicators: 5. X Dominance Test is >50% X Prevalence Index is ≤3.0¹ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Morphological Adaptations¹ (Explain) Problematic Hydrophytic Vegetation¹ (Explain) Woody Vine Stratum 1 Indicators of hydric soil and wetland hydrology mube present. he present. Hydrophytic		%			· ·				
2. Anemopsis californica 3. Cyperus eragrostis 4. Paspalum dilatatum 5. So Yes FAC 5. So Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Woody Vine Stratum 1. So Woody Vine Stratum 1. Total Cover: 83 % Total Cover: % 10 No OBL Prevalence Index = B/A = 2.24 Hydrophytic Vegetation Indicators: X Dominance Test is >50% X Prevalence Index is ≤3.0¹ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology mube present. Hydrophytic		20	Ves	OBI					(D)
3. Cyperus eragrostis 4. Paspalum dilatatum 50 Yes FAC Hydrophytic Vegetation Indicators: Dominance Test is >50% X Prevalence Index is ≤3.0¹ No FACW Hydrophytic Vegetation Indicators: Dominance Test is >50% X Prevalence Index is ≤3.0¹ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Moody Vine Stratum 1.					_ Column Totals:	83	(A)	186	(B)
4. Paspalum dilatatum 50 Yes FAC Hydrophytic Vegetation Indicators:	1 0				Prevalence	Index = E	3/A =	2.24	
5.					Hydrophytic Ve	getation li	ndicators:		
7.									
8.	6.				• •				
Total Cover: 83 % Woody Vine Stratum 1. 2. Total Cover: % Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology mube present. Hydrophytic	7.				Morphologica	al Adaptati emarks or	ons¹ (Provid on a senarat	le supporti te sheet)	ng
Woody Vine Stratum 1									1)
1. 1. 1. 1. 1. 1. 1. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.		83 %				J -1- J	0	V 1	,
2be present					¹ Indicators of hyd	dric soil ar	nd wetland h	nydrology i	must
					be present.				
Vegetation	Total Cover:	%							
% Bare Ground in Herb Stratum % % Cover of Biotic Crust % Present? Yes (No (of Biotic (Crust	%	Vegetation Present?	Yes (No (\cap	
Remarks: While there is a small amount of vegetation present in patches in the channel (including where sampled in the study are	% Bare Ground in Herb Stratum % % Cover			/U	i i oooiiti	: 03 (, 140 (. /	

SOIL Sampling Point: 5a

(inches)	Color (moist)	%	Color (moist) %	Typo1	Loc ²	Texture ³	Remarks
	- `		<u> </u>	Type ¹			Remarks
0-4	10 YR 2/1					Sandy loam	
	-		·				
	_						
	_						
	Concentration, D=Dep				-	=Root Channel, M=	
					, Clay Loan		Silt Loam, Silt, Loamy Sand, Sar
		le to all LRRs,	unless otherwise noted	.)			oblematic Hydric Soils:
Histoso	DI (A1) Epipedon (A2)		Sandy Redox (S5)	6)			A9) (LRR C)
	Histic (A3)		Stripped Matrix (S Loamy Mucky Min	,		Reduced Ve	A10) (LRR B)
	gen Sulfide (A4)		Loamy Gleyed Ma				Material (TF2)
	ed Layers (A5) (LRR (C)	Depleted Matrix (F				ain in Remarks)
	fuck (A9) (LRR D)	,	Redox Dark Surfa	,			,
	ed Below Dark Surfac	e (A11)	Depleted Dark Su	rface (F7)			
	Dark Surface (A12)		Redox Depression	ns (F8)			
	Mucky Mineral (S1)		Vernal Pools (F9)			•	drophytic vegetation and
	Gleyed Matrix (S4)					wetland hydro	plogy must be present.
	Layer (if present):						
Type:Ro							
	nches):4					Hydric Soil Pres	ent? Yes No No
Remarks:							
YDROLO	OGY						
	DGY ydrology Indicators:	:				Secondary	Indicators (2 or more required)
Wetland H	ydrology Indicators:		nt)				· · · · ·
Wetland H	ydrology Indicators: licators (any one indic					Water I	Marks (B1) (Riverine)
Wetland H	ydrology Indicators: licators (any one indic e Water (A1)		Salt Crust (B11)	()		Water I	Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
Wetland H	ydrology Indicators: licators (any one indic e Water (A1) /ater Table (A2)		Salt Crust (B11) Biotic Crust (B12			Water I Sedime	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
Wetland H Primary Ind Surface High W Satura	ydrology Indicators: licators (any one indic e Water (A1) /ater Table (A2) tion (A3)	cator is sufficier	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb	rates (B13)		Water I Sedime X Drift De X Draina	Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
Primary Ind Surface High W Satura Water	ydrology Indicators: dicators (any one indic e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver	cator is sufficient	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb	rates (B13) e Odor (C1)	Livina Root	Water I Sedime X Drift De X Drainae Dry-Se	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2)
Wetland History India Surface High W Satura Water Sedime	ydrology Indicators: licators (any one indic e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	cator is sufficient rine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos	rates (B13) e Odor (C1) oheres along	•	Water I Sedime X Drift De X Draina Dry-Se s (C3) Thin M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7)
Wetland High Primary Indix Surface X High W Satura Water Sedime	ydrology Indicators: dicators (any one indic e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver	cator is sufficient rine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb	rates (B13) e Odor (C1) oheres along uced Iron (C4	ł)	Water I Sedime X Drift De X Drainag Dry-Se s (C3) Thin M Crayfis	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2)
Wetland H Primary Ind X Surface X High W Satura Water Sedime Drift De	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverence Soil Cracks (B6)	cator is sufficier rine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos	rates (B13) e Odor (C1) oheres along uced Iron (C4 uction in Plow	ł)	Water I Sedime X Drift De X Drainag Dry-Se s (C3) Thin M Crayfis 6) Saturat	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8)
Wetland History India X Surface X High W Satura Water Sedime Drift De Surface Inunda	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Noneposits (B3))	cator is sufficier rine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red	rates (B13) e Odor (C1) oheres along uced Iron (C4 uction in Plow	ł)	Water I Sedime X Drift De X Drainae Dry-Se s (C3) Thin M Crayfis 6) Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C9)
Wetland H Primary Ind X Surface X High W Satura Water Sedime Drift De Surface Inunda Water-	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9)	cator is sufficier rine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red	rates (B13) e Odor (C1) oheres along uced Iron (C4 uction in Plow	ł)	Water I Sedime X Drift De X Drainae Dry-Se s (C3) Thin M Crayfis 6) Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
Wetland H Primary Ind X Surface X High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse	ydrology Indicators: dicators (any one indicate Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver es Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9)	rine) nriverine) rine) Imagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) oheres along uced Iron (C4 uction in Plow	ł)	Water I Sedime X Drift De X Drainae Dry-Se s (C3) Thin M Crayfis 6) Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
Wetland Himary Indix Surface Water Sedime Drift De Surface Water- Field Obse	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6)) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present?	rine) nriverine) rine) Imagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) oheres along uced Iron (C4 uction in Plow	ł)	Water I Sedime X Drift De X Drainae Dry-Se s (C3) Thin M Crayfis 6) Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
Wetland H Primary Ind X Surface X High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table	ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Y e Present? Y	rine) Imagery (B7) Yes No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) oheres along uced Iron (C4 uction in Plow	ł)	Water I Sedime X Drift De X Drainae Dry-Se s (C3) Thin M Crayfis 6) Saturat Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
Wetland High Water Sedime Drift De Surface Water-Field Obse Surface Water Table Saturation Includes ca	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	red Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)
Wetland High Water Sedime Drift De Surface Water-Field Obse Surface Water Table Saturation Includes ca	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	red Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)
Wetland High Water Sedime Drift De Surface Ununda Water- Field Obse Surface Water Table Saturation I (includes ca	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	red Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)
Wetland Himary Indix Surface Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation I	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	red Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)
Wetland History India X Surface X High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation I (includes ca	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	ved Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)
Wetland Historical Primary Indix Surface Water-Field Obset Surface Water Table Saturation Includes cape Surface Research Primary Includes Capescribe Research Inc	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	ved Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)
Wetland Historical Primary Indix Surface Water-Field Obset Surface Water Table Saturation Includes cape Surface Research Primary Includes Capescribe Research Inc	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	ved Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)
Wetland Historical Primary Indix Surface Water-Field Obset Surface Water Table Saturation Includes capes cribe R	ydrology Indicators: licators (any one indicaters (any one indicaters) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? e Present? Present? papillary fringe)	rine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Other (Explain in	rates (B13) e Odor (C1) bheres along uced Iron (C4 uction in Plow Remarks)	ved Soils (C	Water I Sedime X Drift De X Drainag Dry-Se S (C3) Thin M Crayfis Saturat Shallov FAC-No	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagery (C8) v Aquitard (D3) eutral Test (D5)

Project/Site: Pure Water Program		City/Coun	ty:San Diego	/San Diego	Samp	oling Date:09	/27/20	16
Applicant/Owner: City of San Diego				State:CA	Samp	oling Point:5b		
Investigator(s): Callie Ford, Janice Wondolleck		Section, T	ownship, Ran	ige: 05, 15S, 2W		_		
Landform (hillslope, terrace, etc.):		Local reli	ef (concave, c	onvex, none): None	e	Slope	e (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.9	0		Long:-117.11		 Datum	1:	
Soil Map Unit Name: Redding cobbly loam				NWI cla	assification:	None		
Are climatic / hydrologic conditions on the site typical for this ti	me of ye	ar? Yes (No ((If no, explain	– n in Remark	s.)		
	_	disturbed1		Normal Circumstan	ces" presen	t? Yes 🕡	No	\circ
	urally pro	blematic?		eded, explain any a				
SUMMARY OF FINDINGS - Attach site map sh							lures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
Hydric Soil Present? Yes No	-	Ist	he Sampled	Area				
Wetland Hydrology Present? Yes No Remarks:	•	wit	hin a Wetlan	d? Yes	O N	lo 💿		
VEGETATION								
Al	bsolute	Dominan	Indicator	Dominance Test	worksheet	:		
	Cover	Species?	_Status_	Number of Domin				
1.Washingtonia robusta		No	FACW	That Are OBL, FA	CW, or FAC	0		(A)
2.Eucalyptus camaldulensis	10	No	FAC	Total Number of D				(D)
3				Species Across A	II Strata:	0		(B)
4Total Cover:	15 o/			Percent of Domina				(• (B)
Sapling/Shrub Stratum	15 %			That Are OBL, FA	CVV, or FAC	0	%	(A/B)
1				Prevalence Index	workshee	t:		
2				Total % Cove	r of:	Multiply	•	-
3				OBL species		x 1 =	0	
4				FACW species	5	x 2 =	10	
5.	0/			FAC species FACU species	10	x 3 = x 4 =	30	
Total Cover: Herb Stratum	%			UPL species		x 5 =	0	
1.				Column Totals:	1.5		0 40	(B)
2.				Column Totals.	15	(A)	40	(D)
3.				Prevalence			2.67	
4.				Hydrophytic Veg		icators:		
5				Dominance T				
6. 7.				Prevalence Ir Morphologica			upporti	na
8.						a separate s		9
Total Cover:	%			Problematic F	Hydrophytic	Vegetation ¹ (I	Explain	1)
Woody Vine Stratum	%							
1				¹ Indicators of hyd be present.	ric soil and	wetland hydr	ology r	must
Total Cover:	%			Hydrophytic Vegetation			_	
% Bare Ground in Herb Stratum % Cover of	f Biotic C	rust	%	Present?	Yes 🔘	No 💿		
Remarks:								

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SOIL Sampling Point: 5b

Depth (inches)	Matrix Color (moist)	%	Color (moist)	dox Featur %	es Type¹	Loc ²	Texture ³	Remarks
								Remarks
0-10	10 YR 5/3	99	10 YR 5/8		<u>C</u>	_ <u>M</u>	Loamy sand	
			-					
			-					
		-	-					
			-			_		
Гуре: С=0	Concentration, D=Dep	letion, RM	M=Reduced Matrix.	² Locatio	on: PL=Po	re Lining, F	RC=Root Channel, M	I=Matrix.
Soil Textur	es: Clay, Silty Clay, S	Sandy Cla	ıy, Loam, Sandy Cl	ay Loam, S	Sandy Loa	m, Clay Lo	am, Silty Clay Loam,	Silt Loam, Silt, Loamy Sand, San
ydric Soil	Indicators: (Applicab	le to all LF	RRs, unless otherw	ise noted.)			Indicators for Pr	roblematic Hydric Soils⁴:
Histoso	, ,		Sandy Re	dox (S5)			1 cm Muck	(A9) (LRR C)
	Epipedon (A2)			Matrix (S6				(A10) (LRR B)
	Histic (A3)			lucky Mine	, ,		Reduced V	
	jen Sulfide (A4)	2/		leyed Matr	. ,			Material (TF2)
	ed Layers (A5) (LRR (luck (A9) (LRR D)	(م		Matrix (F3 ark Surface			Uther (Expi	ain in Remarks)
	ed Below Dark Surfac	e (A11)		Dark Surface	` '			
	Dark Surface (A12)	0 (/ (epressions	` '			
	Mucky Mineral (S1)		Vernal Po		(- /		⁴Indicators of hy	drophytic vegetation and
	Gleyed Matrix (S4)						wetland hydr	ology must be present.
	Layer (if present):							
Type:								
Depth (ii	nches):						Hydric Soil Pres	sent? Yes No No
	nches):						Hydric Soil Pres	sent? Yes No
	nches):						Hydric Soil Pres	sent? Yes No No
· `	nches):						Hydric Soil Pres	sent? Yes No No
demarks:	, <u> </u>						Hydric Soil Pres	sent? Yes No No
Remarks:	DGY							
YDROLO Vetland H	OGY ydrology Indicators:		(Ficient)				Secondary	Indicators (2 or more required)
YDROLO Vetland Hy	OGY ydrology Indicators: licators (any one indic			upt (P11)			Secondary Water	Indicators (2 or more required) Marks (B1) (Riverine)
YDROL(Vetland Hyrimary Ind	DGY ydrology Indicators: icators (any one indices Water (A1)		Salt Cru	ist (B11)			Secondary Water Sedim	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
YDROLO Vetland Hyrimary Ind Surface High W	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2)		Salt Cru Biotic C	rust (B12)	toe (P13)		Secondary Water Sedim Drift D	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
YDROLO Vetland Hy Primary Ind Surface High W Satura	ogy ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3)	ator is suf	Salt Cru Biotic C Aquatic	rust (B12) Invertebra	` ,		Secondary Water Sedim Drift D	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Water	OGY ydrology Indicators: icators (any one indice water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver	ator is suf	Salt Cru Biotic C Aquatic Hydroge	rust (B12) Invertebra en Sulfide (Odor (C1)	a Living Po	Secondary Water Sedim Drift D Draina Dry-Se	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B10) eposits (B10) eposits (B10) eposits (B10)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Water Sedime	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	ator is suf ine) nriverine	Salt Cru Biotic C Aquatic Hydroge Oxidize	rust (B12) Invertebra en Sulfide (d Rhizosph	Odor (C1) neres alon	g Living Ro	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) fuck Surface (C7)
YDROLO Vetland Hy Primary Ind Surface High W Saturar Water Sedime Drift De	ydrology Indicators: licators (any one indicators (any one indicators) water (A1) water Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	ator is suf ine) nriverine	Salt Cru Biotic C Aquatic Hydroge Oxidize	rust (B12) Invertebra en Sulfide (d Rhizosph	Odor (C1) neres alon ced Iron (C	C4)	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8)
YDROLO Vetland Hy Primary Ind Surface High W Saturar Water Sedime Drift De	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver ent Soil Cracks (B6)	ator is suf ine) nriverine)	Salt Cru Biotic C Aquatic Hydroge Oxidize Presenc	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduction	Odor (C1) neres alon ced Iron (C ction in Plo	0 0	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Crayfis (C6) Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) ation Visible on Aerial Imagery (C5)
YDROLO Vetland Hy Primary Ind Surface High W Saturar Water Sedime Drift De	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver ea Soil Cracks (B6) tion Visible on Aerial I	ator is suf ine) nriverine)	Salt Cru Biotic C Aquatic Hydroge Oxidize Presenc	rust (B12) Invertebra en Sulfide (d Rhizosph	Odor (C1) neres alon ced Iron (C ction in Plo	C4)	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) ation Visible on Aerial Imagery (C5) w Aquitard (D3)
YDROLO Vetland Hy Primary Ind Surface High W Satural Sedime Sedime Drift De Surface Inunda Water-	ydrology Indicators: icators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver es Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9)	ator is suf ine) nriverine)	Salt Cru Biotic C Aquatic Hydroge Oxidize Presenc	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduction	Odor (C1) neres alon ced Iron (C ction in Plo	C4)	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) ation Visible on Aerial Imagery (Ca
YDROLO Vetland Hy Primary Ind Surface High W Satura' Water Sedime Drift De Surface Ununda Water- Water-	ydrology Indicators: iicators (any one indicators (any one indicators) water (A1) water Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Noneposits (B3) (Nonriver) ent Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations:	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presenc Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduction Red	Odor (C1) neres alon ced Iron (C ction in Plo	C4)	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) ation Visible on Aerial Imagery (C5) w Aquitard (D3)
YDROLO Vetland Hy Primary Ind Surface Water Sedime Drift De Surface Inunda Water-	pdrology Indicators: licators (any one indicate Water (A1) licator (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6)) licator (B6) licator (A1) licator (A2) licator (A3) licator (ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduction Red	Odor (C1) neres alon ced Iron (C ction in Plo	C4)	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) ation Visible on Aerial Imagery (C5) w Aquitard (D3)
YDROLO Vetland Hy Primary Ind Surface High W Satural Sedime Surface Ununda Water- Field Obse Surface Water Table	ydrology Indicators: icators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver es Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) irvations: ater Present? ydrology Indicators: ater Present?	ine) nriverine; rine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presenc Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ee of Reduct Iron Reduct Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo	C4)	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) ation Visible on Aerial Imagery (C5) w Aquitard (D3)
YDROLO Vetland Hy Primary Ind Surface High W Satural Sedime Surface Ununda Ununda Water- Field Obse Surface Water Table Saturation I	pdrology Indicators: dicators (any one indicated water (A1) dater Table (A2) dition (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver ent Deposits (B3) (Nonriver ent Deposits (B6) (tion Visible on Aerial I Stained Leaves (B9) divortions: deter Present? Present? Present? Yeresent? Yeresent?	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presenc Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduction Red	Odor (C1) neres alon ced Iron (C ction in Plo	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C5 w Aquitard (D3) deutral Test (D5)
YDROLO Vetland Hy Primary Ind Surface High W Satural Sedime Surface Inunda Water- Field Obse Surface Water Table Saturation I includes ca	pdrology Indicators: licators (any one indicated water (A1) later Table (A2) ltion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6) ltion Visible on Aerial I Stained Leaves (B9) leaver Present? Leter Present P	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduc Iron Reduc Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo Remarks)	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura Shallo FAC-M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C5 w Aquitard (D3) deutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface High W Satural Sedime Surface Inunda Water- Field Obse Surface Water Table Saturation I includes ca	pdrology Indicators: dicators (any one indicated water (A1) dater Table (A2) dition (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver ent Deposits (B3) (Nonriver ent Deposits (B6) (tion Visible on Aerial I Stained Leaves (B9) divortions: deter Present? Present? Present? Yeresent? Yeresent?	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduc Iron Reduc Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo Remarks)	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura Shallo FAC-M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C6) w Aquitard (D3) deutral Test (D5)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation I Includes ca	pdrology Indicators: licators (any one indicated water (A1) later Table (A2) ltion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6) (Indicated by the position Visible on Aerial Instance Leaves (B9) leaver Present? Present? Present? pupillary fringe)	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduc Iron Reduc Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo Remarks)	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura Shallo FAC-M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C5 w Aquitard (D3) deutral Test (D5)
YDROLO Vetland Hy Primary Ind Surface High W Satural Sedime Surface Inunda Water- Field Obse Surface Water Table Saturation I includes ca	pdrology Indicators: licators (any one indicated water (A1) later Table (A2) ltion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6) (Indicated by the position Visible on Aerial Instance Leaves (B9) leaver Present? Present? Present? pupillary fringe)	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduc Iron Reduc Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo Remarks)	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura Shallo FAC-M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C5 w Aquitard (D3) deutral Test (D5)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inunda Water- Water- Water- Sedime Surface Vater Table Saturation I Sedime Surface Water- Surf	pdrology Indicators: licators (any one indicated water (A1) later Table (A2) ltion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6) (Indicated by the position Visible on Aerial Instance Leaves (B9) leaver Present? Present? Present? pupillary fringe)	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduc Iron Reduc Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo Remarks)	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura Shallo FAC-M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C5 w Aquitard (D3) deutral Test (D5)
YDROLO Vetland Hyrimary Ind Surface High W Saturat Sedime Surface Inunda Water- ield Obse Surface Water Table Staturation Includes ca	pdrology Indicators: licators (any one indicated water (A1) later Table (A2) ltion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6) (Indicated by the position Visible on Aerial Instance Leaves (B9) leaver Present? Present? Present? pupillary fringe)	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduc Iron Reduc Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo Remarks)	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura Shallo FAC-M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C6) w Aquitard (D3) deutral Test (D5)
Primary Ind Surface Water Sedime Surface Water Water Water Ununda Water- ield Obse wrface Water Table aturation I	pdrology Indicators: licators (any one indicated water (A1) later Table (A2) ltion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6) (Indicated by the position Visible on Aerial Instance Leaves (B9) leaver Present? Present? Present? pupillary fringe)	ine) nriverine) magery (E	Salt Cru Biotic C Aquatic Hydroge Oxidize Presence Recent Other (E	rust (B12) Invertebra en Sulfide (d Rhizosph ce of Reduc Iron Reduc Explain in F (inches): (inches):	Odor (C1) neres alon ced Iron (C ction in Plo Remarks)	C4) owed Soils	Secondary Water Sedim Drift D Draina Dry-Se ots (C3) Thin M Crayfis (C6) Satura Shallo FAC-M	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) eposits (B3) (Riverine) eposits (B10) eason Water Table (C2) Muck Surface (C7) sh Burrows (C8) etion Visible on Aerial Imagery (C w Aquitard (D3) leutral Test (D5)

Project/Site: Pure Water Program	C	ity/County:	San Diego	o/San Diego	Sampling Date:	09/27/20	16
Applicant/Owner: City of San Diego				State:CA	Sampling Point	:6a	
Investigator(s): Callie Ford, Janice Wondollecl	k S	ection, Tov	vnship, Ra	nge: 26, 15S, 3W	_		
Landform (hillslope, terrace, etc.):	L	ocal relief	(concave,	convex, none): None	S	lope (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.84			Long:-117.16	Dat	tum:	
Soil Map Unit Name: Riverwash				NWI classi	fication: Freshwater	Forested/Shi	rub wetlan
Are climatic / hydrologic conditions on the site typi	cal for this time of year	r? Yes 💿	No ((If no, explain in	Remarks.)		
Are Vegetation Soil or Hydrology	significantly d		Are "	Normal Circumstances	present? Yes	No	\circ
Are Vegetation Soil or Hydrology	naturally prob			eded, explain any answ			
SUMMARY OF FINDINGS - Attach sit						eatures,	etc.
			, ,				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		le the	e Sampled	Area			
Wetland Hydrology Present? Yes	~		n a Wetlar		No (•)		
Remarks:			n a monai	100 (,		
VEGETATION							
Tree Stratum (Use scientific names.)		Dominant I Species?	ndicator Status	Dominance Test wo			
1.	70 00001		Otatao	Number of Dominant That Are OBL, FACW		0	(A)
2.						U	(,,
3.				Total Number of Dom Species Across All St		0	(B)
4.						U	
Т	otal Cover: %			Percent of Dominant That Are OBL, FACW		0 %	(A/B)
Sapling/Shrub Stratum						0 /0 ((,,,,,
1				Prevalence Index wo		andre de la com	
2.				Total % Cover of		ply by:	-
3.				OBL species FACW species	x 1 = x 2 =	0	
4.				FAC species	x 3 =	0	
5	otal Cover: %			FACU species	x 4 =	0	
Herb Stratum	otal cover. %			UPL species	x 5 =	0	
1.				Column Totals:	(A)	0	(B)
2.				Column Fotalo.	(7.1)	O	(-)
3.				Prevalence Inde			
4.				Hydrophytic Vegeta			
5.				Dominance Test			
6				Prevalence Index			
7					laptations¹ (Provid ks or on a separa		ng
8.	-1-1-0				ophytic Vegetation)
Woody Vine Stratum	otal Cover: %						
1.				¹ Indicators of hydric s	soil and wetland h	ıydrology r	must
2.				be present.			
То	otal Cover: %			Hydrophytic			
% Bare Ground in Herb Stratum %	% Cover of Biotic Cru	ıst	%	Vegetation Present?	′es ∩ No (
						<u> </u>	
Remarks: Data station represents the unveg	getateu channel.						

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SOIL Sampling Point: <u>6a</u>

Depth	Matrix	to the depth h	eeded to document the indicator or Redox Features	COMMITT		aicatol 5.)
(inches)	Color (moist)	% C		Loc ²	Texture ³	Remarks
0-8	N/A	50			Cobble	
0-8	10 YR 3/2	50			Loamy sand	
	-	·				
	-					
1T C-0		leties DM-Dec	lucad Matrix 21 tion DI Donal	indu a Di		Matric
• .	Concentration, D=Dep		luced Matrix. ² Location: PL=Pore L am, Sandy Clay Loam, Sandy Loam, C	-		
			nless otherwise noted.)	nay Lou		oblematic Hydric Soils:
Histoso	٠	•	Sandy Redox (S5)			A9) (LRR C)
	Epipedon (A2)		Stripped Matrix (S6)			A10) (LRR B)
	Histic (A3)		Loamy Mucky Mineral (F1)		Reduced Ve	
	en Sulfide (A4) ed Layers (A5) (LRR (~)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)			Material (TF2) iin in Remarks)
	luck (A9) (LRR D)	•)	Redox Dark Surface (F6)		Other (Exple	iii iii Neiliaiks)
	ed Below Dark Surface	e (A11)	Depleted Dark Surface (F7)			
	Oark Surface (A12)		Redox Depressions (F8)			
	Mucky Mineral (S1)		Vernal Pools (F9)		•	drophytic vegetation and
	Gleyed Matrix (S4) Layer (if present):				welland nydro	plogy must be present.
Type:	Layer (ii present).					
Depth (ii	nches):		_		Hydric Soil Prese	ent? Yes No (•)
Remarks:					11,4	
IVDDOL	acv.					
HYDROLO					Casandani	Indicators (2 or more required)
	ydrology Indicators:		A			Indicators (2 or more required)
	icators (any one indic	ator is sufficien	<u> </u>		— 🖳	Marks (B1) (Riverine)
	e Water (A1) /ater Table (A2)		Salt Crust (B11) Biotic Crust (B12)		<u> </u>	ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
	tion (A3)		Aquatic Invertebrates (B13)			ge Patterns (B10)
<u></u>	Marks (B1) (Nonriver i	ine)	Hydrogen Sulfide Odor (C1)		<u> </u>	ason Water Table (C2)
	ent Deposits (B2) (No	,	Oxidized Rhizospheres along Liv	ving Roc		uck Surface (C7)
Drift De	eposits (B3) (Nonrive	rine)	Presence of Reduced Iron (C4)	•	Crayfis	h Burrows (C8)
Surface	e Soil Cracks (B6)		Recent Iron Reduction in Plowed	d Soils (0	C6) Saturat	ion Visible on Aerial Imagery (C9)
Inunda	tion Visible on Aerial I	magery (B7)	Other (Explain in Remarks)		Shallow	v Aquitard (D3)
Water-	Stained Leaves (B9)				FAC-Ne	eutral Test (D5)
Field Obse	rvations:					
		es O No (Depth (inches):			
Water Table		es O No (
Saturation I	Present? Y apillary fringe)	es O No (Depth (inches):	Wetla	and Hydrology Pres	sent? Yes No
		gauge, monito	ring well, aerial photos, previous inspe			
Remarks:						
C A C	os of Engineers					

Project/Site: Pure Water Program		City/Cour	nty:San Diego	o/San Diego	Sam	pling Date:	09/27/20	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:	6b	
Investigator(s):Callie Ford, Janice Wondolleck		Section,	Township, Ra	nge: 26, 15S, 3W		-		
Landform (hillslope, terrace, etc.):		Local rel	lief (concave,	convex, none): None	e	Slo	ope (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.8	34		Long:-117.16		 Datı	um:	
Soil Map Unit Name: Riverwash				NWI cla	assification	None		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No ((If no, explain	n in Remar	ks.)		
	-	disturbed		'Normal Circumstan	ces" presei	nt? Yes 🕡) No	\circ
	turally pro	oblematic		eded, explain any a	·			
SUMMARY OF FINDINGS - Attach site map sl							atures,	etc.
Hydrophytic Vegetation Present? Yes No								
	•	Is	the Sampled	Area				
Wetland Hydrology Present? Yes No Remarks:	•	W	ithin a Wetlar	nd? Yes	0	No ①		
VEGETATION								
VEGETATION	Absolute	Dominar	nt Indicator	Dominance Test	workshee	t:		
	% Cover	Species		Number of Domin				
1.Platanus racemosa	50	Yes	FAC	That Are OBL, FA	CW, or FA	C: 2	2	(A)
2. Salix laevigata	35	Yes	FACW	Total Number of D	Dominant			
3 Quercus agrifolia	3	No	Not Listed	Species Across A	ll Strata:	2	2	(B)
4	00.4			Percent of Domina		_		
Total Cover: Sapling/Shrub Stratum	88 %			That Are OBL, FA	CW, or FA	C: 10	0.0 %	(A/B)
1.Baccharis salicifolia	20	No	FAC	Prevalence Index	workshe	et:		
2.Toxicodendron diversilobum	1	No	FACU	Total % Cove	er of:	Multip	ly by:	-
3. Cyperus eragrostis	5	No	FACW	OBL species		x 1 =	0	
4				FACW species	50	x 2 =	100	
5				FAC species	70	x 3 =	210	
Total Cover: Herb Stratum	26 %			FACU species UPL species	1	x 4 = x 5 =	4	
1-Juncus mexicanus	10	No	FACW	Column Totals:	3		15	(B)
2.				Column rotals.	124	(A)	329	(D)
3.				Prevalence			2.65	
4.				Hydrophytic Veg				
5.				× Dominance T				
6.				× Prevalence Ir				
7				Morphologica data in Re		ns: (Provide n a separate		ng
8.				Problematic I	Hydrophytic	: Vegetation	¹ (Explain	1)
Total Cover: Woody Vine Stratum	10 %							
1. 2.			_	¹ Indicators of hyd be present.	ric soil and	d wetland hy	ydrology r	must
Total Cover:	%		_	Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 50 %	of Biotic C	Crust	%	Present?	Yes	No ()	
Remarks:								

SOIL Sampling Point: 6b

	scription: (Describe	to the depth r			cator or co	onfirm the ab	sence of in	dicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo: Color (moist)	Features % T	ype¹ Lo	oc² Tex	ture ³	Remarks
			COIOI (IIIOISI)		ype LC		luie	Remarks
0-8	10 YR 4/3					Sand		
	_							
								-
	-							
	_							
¹ Type: C=0	Concentration, D=Dep	letion, RM=Re	duced Matrix.	² Location: Pl	L=Pore Lini	ng, RC=Root	Channel, M	=Matrix.
³ Soil Textur	res: Clay, Silty Clay, S	Sandy Clay, Lo	oam, Sandy Clay	Loam, Sandy	Loam, Cla	y Loam, Silty	Clay Loam,	Silt Loam, Silt, Loamy Sand, Sand.
Hydric Soil	Indicators: (Applicable	le to all LRRs,	unless otherwise	noted.)		Indi	cators for Pr	oblematic Hydric Soils⁴:
Histoso	, ,		Sandy Redo	. ,				(A9) (LRR C)
	Epipedon (A2)		Stripped Ma	, ,	4)			(A10) (LRR B)
	Histic (A3)			ky Mineral (F ved Matrix (F2			Reduced Vo	ertic (F18) Material (TF2)
	gen Sulfide (A4) ed Layers (A5) (LRR (;)	Depleted M	•	')			ain in Remarks)
	fluck (A9) (LRR D)	3)		Surface (F6))		Other (Expi	an in remarko)
	ed Below Dark Surface	e (A11)		ark Surface (F	•			
Thick [Dark Surface (A12)		Redox Dep	ressions (F8)				
	Mucky Mineral (S1)		Vernal Poo	s (F9)			-	drophytic vegetation and
	Gleyed Matrix (S4)					V	vetland hydr	ology must be present.
Restrictive	Layer (if present):							
Type:Ro	ocks							
Depth (ii	nches):8					Hydr	ic Soil Pres	sent? Yes No No
Remarks:								
HYDROLO	nev							
							Cocondon	Indicators (2 or more required)
1	ydrology Indicators:		- 43					Indicators (2 or more required)
	licators (any one indicators	ator is sufficier		(5.44)				Marks (B1) (Riverine)
	e Water (A1)		Salt Crust					ent Deposits (B2) (Riverine)
	/ater Table (A2)		Biotic Crus		240)			eposits (B3) (Riverine)
	tion (A3)	! \		vertebrates (E	,			ge Patterns (B10)
	Marks (B1) (Nonriveri	,		Sulfide Odor	. ,	a Booto (C2)		eason Water Table (C2) luck Surface (C7)
	ent Deposits (B2) (No r eposits (B3) (Nonrive r			Rhizospheres of Reduced Ir	_	g Roots (C3)		sh Burrows (C8)
	e Soil Cracks (B6)	iiie)		n Reduction i	` '	Soils (C6)		tion Visible on Aerial Imagery (C9)
	tion Visible on Aerial I	magery (R7)		olain in Rema		0013 (00)		w Aquitard (D3)
🗀	Stained Leaves (B9)	magery (Br)		nam m rema	iko)			leutral Test (D5)
Field Obse								
		es No	Depth (in	ches).				
Water Table		es No		· —				
Saturation I				· —				
	apillary fringe)	es O No	Depth (in			Wetland Hy	drology Pre	esent? Yes O No 💿
	ecorded Data (stream	gauge, monito	oring well, aerial	ohotos, previo		-		
Remarks:								
1								

Project/Site: Pure Water Program		City/Coun	ty:San Dieg	o/San Diego	Sam	pling Date:()	9/27/20	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:6	С	
Investigator(s):Callie Ford, Janice Wondolleck		Section, 7	ownship, Ra	nge: 26, 15S, 3W		_		
Landform (hillslope, terrace, etc.):		Local reli	ef (concave,	convex, none): None	e	Slop	pe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.8	34		Long:-117.16		 Datu	m:	
Soil Map Unit Name: Riverwash				NWI cla	assification:	None		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes (• No ((If no, explain	n in Remar	ks.)		
	-	disturbed		'Normal Circumstan	ces" preser	nt? Yes	No	\circ
	turally pro	oblematic?		eeded, explain any a				
SUMMARY OF FINDINGS - Attach site map sh							atures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
	•	Is	the Sampled	Area				
	•		thin a Wetlar		0	No 💿		
Remarks: Data Station taken within area mapped as So	outhern	Sycamore	e-Alder Ripa	arian Woodland.				
VEGETATION								
	Absolute		t Indicator	Dominance Test	workshee	t:		
	<u>% Cover</u> 40	Species? Yes		Number of Domin				(A)
1. Salix lasiolepis 2. Quercus agrifolia	30	Yes	FACW Not Listed	That Are OBL, FA	CVV, OI FA	C: 1		(A)
3.	30	168	- Not Listed	Total Number of D Species Across A		2		(B)
4.			- -	Species Across A	ii Siraia.	3	,	(6)
Total Cover:	70 %		<u>.</u>	 Percent of Domina That Are OBL, FA 		_	2 0/	(A/B)
Sapling/Shrub Stratum	70 70			That Aic Obe, 17	10 VV, 01 1 A	0. 33.	.3 % ((~/0)
1.Toxicodendron diversilobum	50	Yes	FACU	Prevalence Index				
2-Baccharis sarothroides	<1	No	FACU	Total % Cove	er of:	Multiply		
3. Artemisia dracunculus	<1	No	Not Listed	OBL species	4.0	x 1 =	0	
4			_	FACW species	40	x 2 = x 3 =	80	
5 Total Cover:	50 0/			FAC species FACU species	50	x 3 = x 4 =	200	
Herb Stratum	50 %			UPL species	50 30	x 5 =	200 150	
1.				Column Totals:	120	(A)	430	(B)
2.				Oolumin rotals.	120	(八)	430	(5)
3.			-	Prevalence			3.58	
4.				Hydrophytic Veg				
5.				Dominance T				
6				Prevalence Ir				
7.				Morphologica data in Re		ns (Provide n a separate		ng
8.				Problematic I	Hydrophytic	: Vegetation ¹	(Explain)
Total Cover: Woody Vine Stratum	%							
1.				¹ Indicators of hyd	ric soil and	l wetland hy	drology r	nust
2.		,		be present.				
Total Cover:	%			Hydrophytic				
% Bare Ground in Herb Stratum % % Cover of	of Biotic C	Crust	%	Vegetation Present?	Yes (No (•)	
Remarks:								
I .								

SOIL Sampling Point: 6c

Depth	Scription: (Describe Matrix	to the de		nent the x Featur		or confirm	m the absence of indi	cators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture ³	Remarks
0-8	N/A	20					Cobble	
0-8	10 YR 4/4	80					Sandy loam	
6-8	10 YR 4/4	80	7.5 YR 5/8	<1	C	 M	Sandy loam	
	-							
1Type: C=0	Concentration, D=Dep	letion, RM	1=Reduced Matrix.	² Location	n: PL=Po	 re Linina. R	RC=Root Channel, M=N	Matrix.
	•							ilt Loam, Silt, Loamy Sand, Sand.
l <u>-</u>	Indicators: (Applicab	le to all LF	RRs, unless otherwise	noted.)			Indicators for Prol	olematic Hydric Soils:
Histoso	` '		Sandy Redo	. ,			1 cm Muck (A	, ,
	Epipedon (A2) Histic (A3)		Stripped Ma	,	•		2 cm Muck (A	, ,
	gen Sulfide (A4)		Loamy Gley	-			Red Parent M	` '
	ed Layers (A5) (LRR (S)	Depleted M				Other (Explain	n in Remarks)
	fluck (A9) (LRR D)		Redox Dark		` '		_	
	ed Below Dark Surfac Dark Surface (A12)	e (A11)	Depleted D					
I L	Mucky Mineral (S1)		Redox Dep Vernal Pool		(ГО)		⁴ Indicators of hydr	ophytic vegetation and
	Gleyed Matrix (S4)		voinai v ooi	0 (1 0)			•	ogy must be present.
Restrictive	Layer (if present):							
Type:								
Depth (i	nches):						Hydric Soil Prese	nt? Yes No 💿
Remarks:								
HYDROL	OGY							
Wetland H	ydrology Indicators:						Secondary Ir	ndicators (2 or more required)
Primary Ind	licators (any one indic	ator is suf	ficient)				Water M	arks (B1) (Riverine)
	e Water (A1)		Salt Crust	` '				nt Deposits (B2) (Riverine)
	/ater Table (A2)		Biotic Crus					posits (B3) (Riverine)
l <u> </u>	tion (A3)	· \	Aquatic In		` ′			e Patterns (B10)
📖	Marks (B1) (Nonriver ent Deposits (B2) (No l	,	Hydrogen			a Livina Po	<u></u>	son Water Table (C2) ck Surface (C7)
	ent Deposits (B2) (Nonrive	,	Presence		`	g Living Ro (4)	` / 🗀	Burrows (C8)
🗀	e Soil Cracks (B6)	illo)			`	wed Soils (on Visible on Aerial Imagery (C9)
l <u>—</u>	tion Visible on Aerial I	magery (E	=					Aquitard (D3)
Water-	Stained Leaves (B9)				,			utral Test (D5)
Field Obse	ervations:							
Surface Wa	ater Present? Y	es 🔘	No Depth (in	ches):				
Water Table	e Present? Y	es 🔘	No Depth (in	ches):				
Saturation		es 🔘	No Depth (in	ches):		N/ot	land Hydrology Proc	ent? Yes No 💿
	apillary fringe) ecorded Data (stream	gauge, m	onitoring well, aerial	ohotos.	orevious in		land Hydrology Prese if available:	ent? Yes (No (•)
		33-,	g,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	
Remarks:								
US Army Cor	ps of Engineers							

Project/Site: Pure Water Program		City/Count	y:San Diego	o/San Diego	Sam	pling Date:09	9/27/20	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:60	d	
Investigator(s):Callie Ford, Janice Wondolleck		Section, T	ownship, Rai	nge: 26, 15S, 3W		_		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave, o	convex, none): None	 е	Slop	oe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.8	34		Long:-117.16		 Datur	n: —	
Soil Map Unit Name: Riverwash				NWI cla	assification:	None		
Are climatic / hydrologic conditions on the site typical for this t	ime of ye	ar? Yes	No ((If no, explain	- n in Remark	(S.)		
	-	disturbed?		Normal Circumstan	ces" presen	nt? Yes	No	\circ
	•	oblematic?		eded, explain any a				
SUMMARY OF FINDINGS - Attach site map sh							ıtures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
Hydric Soil Present? Yes No		ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No	•		hin a Wetlar		0 1	No 💿		
Remarks: Data Station taken within area mapped as So	outhern S	Sycamore	-Alder Ripa	arian Woodland				
VEGETATION								
	bsolute 6 Cover	Dominant Species?	Indicator Status	Dominance Test				
1. Quercus agrifolia	10	No	Not Listed	Number of Domin That Are OBL, FA			((A)
2.	10					0	,	(, (,
3.				Total Number of E Species Across A		2	((B)
4.						_	,	(-)
Total Cover:	10 %			Percent of Domina That Are OBL, FA		_) % ((A/B)
Sapling/Shrub Stratum					•	0.0	70 (, , , ,
1 Baccharis sarothroides	25	Yes	FACU	Prevalence Index				
2-Acmispon glaber	1	No	Not Listed	Total % Cove	r ot:	Multiply		
3.Eriogonum fasciculatum	1	No	Not Listed	OBL species FACW species		x 1 = x 2 =	0	
4				FAC species		x 2 =	0	
Total Cover:	27 %			FACU species	35	x 4 =	140	
Herb Stratum	21 70			UPL species	12	x 5 =	60	
1-Ambrosia psilostachya	10	Yes	FACU	Column Totals:	47	(A)	200	(B)
2.						, ,	200	(-)
3.				Prevalence			4.26	
4.				Hydrophytic Veg				
5				Dominance T				
6				Prevalence Ir Morphologica			ou no o ortio	
7						ns (Provide : n a separate		ig
8.				Problematic I	- Hydrophytic	Vegetation ¹	(Explain)
Total Cover: Woody Vine Stratum	10 %							
1.				¹ Indicators of hyd	ric soil and	wetland hyd	Irology n	nust
2.				be present.				
Total Cover:	%			Hydrophytic				
% Bare Ground in Herb Stratum % % Cover o	of Biotic C	Crust	%	Vegetation Present?	Yes (No (•)		
Remarks:						- 0		

SOIL Sampling Point: 6d

Profile Des	scription: (Describe Matrix	to the depth	needed to document the indicator or or Redox Features	confirm t	tne absence of in	aicators.)
(inches)	Color (moist)	%		_OC ²	Texture ³	Remarks
0-2	10 YR 3/2	100		S	Sandy loam	
				<u>~</u>		
	-					
	- -					
1		 				
• .	Concentration, D=Dep			-		
			oam, Sandy Clay Loam, Sandy Loam, Cl	ay Loam		
Hydric Soil Histoso	`	le to all LRRS	, unless otherwise noted.) Sandy Redox (S5)			oblematic Hydric Soils: (A9) (LRR C)
	Epipedon (A2)		Stripped Matrix (S6)			(A10) (LRR B)
	Histic (A3)		Loamy Mucky Mineral (F1)		Reduced Ve	
	gen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Red Parent	Material (TF2)
Stratifie	ed Layers (A5) (LRR (C)	Depleted Matrix (F3)		Other (Expla	ain in Remarks)
	fuck (A9) (LRR D)		Redox Dark Surface (F6)			
	ed Below Dark Surfac	e (A11)	Depleted Dark Surface (F7)			
	Dark Surface (A12)		Redox Depressions (F8)		41-41-4-4-4-4-6-6-4-4	dua n.h. 4:a a a a 4 a 4:a
	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Pools (F9)			drophytic vegetation and blogy must be present.
	Layer (if present):				wettaria riyan	biogy must be present.
Type:Ro						
	nches):2		<u> </u>		Hydric Soil Pres	ent? Yes No 📵
Remarks:					Hydric Soli Fres	ent: res No (
ixemaiks.						
HYDROL	OGY					
Wetland H	ydrology Indicators:				Secondary	Indicators (2 or more required)
Primary Ind	licators (any one indic	ator is sufficie	ent)		Water	Marks (B1) (Riverine)
Surface	e Water (A1)		Salt Crust (B11)		Sedime	ent Deposits (B2) (Riverine)
High W	/ater Table (A2)		Biotic Crust (B12)		Drift De	eposits (B3) (Riverine)
Satura	tion (A3)		Aquatic Invertebrates (B13)		Draina	ge Patterns (B10)
Water	Marks (B1) (Nonriver	ine)	Hydrogen Sulfide Odor (C1)		Dry-Se	ason Water Table (C2)
	ent Deposits (B2) (No	,	Oxidized Rhizospheres along Livi	ng Roots	` ' 🔲	uck Surface (C7)
	eposits (B3) (Nonrive	rine)	Presence of Reduced Iron (C4)			h Burrows (C8)
\sqsubseteq	e Soil Cracks (B6)		Recent Iron Reduction in Plowed	Soils (C		tion Visible on Aerial Imagery (C9)
	tion Visible on Aerial I	magery (B7)	Other (Explain in Remarks)			v Aquitard (D3)
	Stained Leaves (B9)				FAC-N	eutral Test (D5)
Field Obse	ervations:					
Surface Wa	ater Present? Y	es O No	Depth (inches):	1		
Water Table	e Present? Y	es No	Depth (inches):			
Saturation I		es No	Depth (inches):	\A/a4lau	ad Hardrala arr Dua	
	apillary fringe)	gaugo moni	toring well, aerial photos, previous inspec		nd Hydrology Pre	sent? Yes () No (•)
Describe K	ecorded Data (Stream	gauge, mon	toring well, aeriai priotos, previous irispec	, ii	avallable.	
D						
Remarks:						
JS Army Cori	ps of Engineers					

Project/Site: Pure Water Program		City/Count	y:Lakeside/	San Diego	Sam	pling Date:()	9/28/20	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:7	a	
Investigator(s):Callie Ford, Janice Wondolleck		Section, T	ownship, Ra	nge: 36, 14S, 1W		_		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave,	convex, none):Non	e	Slo	pe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.9	90		Long:-116.92		 Datu	m:	
Soil Map Unit Name: Riverwash				NWI cla	assification	Riverine		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No ((If no, explai	n in Remar	ks.)		
	-	disturbed?		'Normal Circumstan	ces" prese	nt? Yes	No	\circ
		oblematic?		eeded, explain any a				
SUMMARY OF FINDINGS - Attach site map sl							atures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
	•	ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No			hin a Wetlar		\circ	No 💿		
Remarks: This data station is located within an active	floodpla	in of the S	San Vicente	Creek.				
VEGETATION								
	Absolute		Indicator	Dominance Test	workshee	t:		
	% Cover	Species?	Status	Number of Domin				
1				That Are OBL, FA	CW, or FA	C: 0		(A)
2				Total Number of D				
3				Species Across A	ll Strata:	1		(B)
4				Percent of Domin		_		
Total Cover: Sapling/Shrub Stratum	%			That Are OBL, FA	CW, or FA	C: 0.	0 %	(A/B)
1.Eriogonum fasciculatum	5	No	Not Listed	Prevalence Index	workshe	et:		
2.Baccharis sarothroides	50	Yes	FACU	Total % Cove	er of:	Multipl	y by:	-
3.Baccharis salicifolia	20	No	FAC	OBL species		x 1 =	0	
4. Acmispon glaber	1	No	Not Listed	FACW species		x 2 =	0	
5				FAC species	20	x 3 =	60	
Total Cover: Herb Stratum	76 %			FACU species	50	x 4 =	200	
	-1	Ma	FLOW	UPL species	6	x 5 =	30	
1.Heliotropium curassavicum 2.	<1	No	FACU	Column Totals:	76	(A)	290	(B)
3.				Prevalence	Index = B/	A =	3.82	
4.				Hydrophytic Veg	etation Inc	dicators:		
5.				Dominance T	est is >50%	6		
6.				Prevalence Ir	ndex is ≤3.0)1		
7.				Morphologica				ng
8.						n a separate	,	,
Total Cover:	0 %			Problematic I	Hydropnytic	vegetation	(Explain	1)
Woody Vine Stratum				¹ Indicators of hyd	ric soil and	l wotland by	drology	muet
1				be present.	nc son and	i welland ny	arology i	iiusi
2		-		Usalrophytic				
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 20 %	of Biotic C	Crust	%	Present?	Yes 🔘	No 🖲)	
Remarks:				1				

SOIL Sampling Point: 7a

Profile Des	cription: (Describe t	o the depth n	eeded to docur	nent the	indicator	or confire	m the abs	sence of inc	licators.)
Depth	Matrix			c Feature					
(inches)	Color (moist)	% C	color (moist)	%	Type ¹	Loc ²	Text	ure ³	Remarks
0-6	10 YR 4/3	50					Loamy s	and	
0-6	10 YR 4/3	502.5	Y 6/8	<1	C	<u>M</u>	Sand		
6-12	10 YR 3/3	90					Sand		
6-12	10 YR 4/3	10					Loamy s	and	
	-								
	-								
	-								
¹ Type: C=C	Concentration, D=Depl	etion RM=Red	duced Matrix	² Locatio	n: PI =Pore	Lining R	C=Root (Channel, M=	Matrix
	·					_			Silt Loam, Silt, Loamy Sand, San
Hydric Soil	Indicators: (Applicable	e to all LRRs, ι	ınless otherwise	noted.)			Indic	ators for Pro	blematic Hydric Soils:
Histoso	ol (A1)		Sandy Redo	x (S5)				1 cm Muck (A	49) (LRR C)
Histic E	pipedon (A2)		Stripped Ma	trix (S6)				2 cm Muck (A	A10) (LRR B)
Black H	listic (A3)		Loamy Muc	ky Miner	al (F1)		F	Reduced Ver	tic (F18)
Hydrog	en Sulfide (A4)		Loamy Gley						Material (TF2)
	ed Layers (A5) (LRR C	:)	Depleted M					Other (Expla	in in Remarks)
	uck (A9) (LRR D)		Redox Dark		` '				
	ed Below Dark Surface	e (A11)	Depleted Da						
	Park Surface (A12)		Redox Depi		(F8)		4, ,,		
	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Pool	s (F9)				-	rophytic vegetation and logy must be present.
	Layer (if present):						VV	elianu nyuru	logy must be present.
Type:	Layer (ii present).								
" —	achoo);		_				Llyalui	e Ceil Dress	unt2 Voc O No O
Depth (ir Remarks:							пуап	c Soil Prese	ent? Yes No •
Remarks.									
HYDROLO	OGY								
Wetland Hy	/drology Indicators:							Secondary I	ndicators (2 or more required)
1	icators (any one indica	ator is sufficien	t)						Marks (B1) (Riverine)
	e Water (A1)	ttor to cameion	Salt Crust	(B11)					nt Deposits (B2) (Riverine)
	ater Table (A2)		Biotic Crust	` '					posits (B3) (Riverine)
	ion (A3)		Aquatic In		oo (D12)			<u> </u>	e Patterns (B10)
	` '	20)	·		` ,				, ,
	Marks (B1) (Nonriveri	,	Hydrogen		eres along	Living Do	oto (C2)		ason Water Table (C2)
	ent Deposits (B2) (Non	•			_	_	ois (C3)		ick Surface (C7)
1 🖳	eposits (B3) (Nonriver	ine)			ced Iron (C	,	(C6)		n Burrows (C8)
🗀	e Soil Cracks (B6)	(D7)			tion in Plov	veu Solis ((06)		on Visible on Aerial Imagery (C9
	tion Visible on Aerial Ir	nagery (B7)	Other (Exp	nain in R	temarks)				Aquitard (D3)
	Stained Leaves (B9)							FAC-NE	eutral Test (D5)
Field Obse		O N.	Daniella (in	- l \·					
		es No (· —					
Water Table		es No (· · ·					
Saturation F		es 🔘 No (Depth (included)	ches):		Wet	land Hvd	rology Pres	ent? Yes No
	pillary fringe) ecorded Data (stream	gauge monito	ring well aerial i	nhotos r	revious ins		_		ent: res & no O
20001100110		J J, 111011110		, p	51.000 1110	, Journal,	, ,		
Remarks:									
nemarks.									
US Army Corp	os of Engineers								

Project/Site: Pure Water Program		City/Count	y:Lakeside/	San Diego	Sam	pling Date: 09	/28/20)16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:7b)	
Investigator(s):Callie Ford, Janice Wondolleck		Section, T	ownship, Rar	nge: 36, 14S, 1W	7	_		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave, c	convex, none): Nor	ne	Slop	e (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.9	90		Long:-116.92		 Datum	n: —	
Soil Map Unit Name: Riverwash				NWI c	lassification:	—— Riverine		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No ((If no, expla	in in Remarl	ks.)		
	-	disturbed?		Normal Circumsta	nces" preser	nt? Yes	No	
		oblematic?		eded, explain any				
SUMMARY OF FINDINGS - Attach site map sh							tures.	, etc.
Hydrophytic Vegetation Present? Yes (No	•							
	•	ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No	•		hin a Wetlan			No 💿		
Remarks: This data station is located within the San V	icente C	reek outs	ide of the ac	ctive floodplain.				
VEGETATION								
VEGETATION								
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tes				
1.				Number of Domin				(A)
2.				Total Number of				. ,
3.				Species Across		0		(B)
4.				Percent of Domir	nant Snacies			
Total Cover:	%			That Are OBL, F			%	(A/B)
Sapling/Shrub Stratum	25	Me	E4 CIV	Prevalence Inde	v worksho	at·		
1 Baccharis sarothroides 2 Brickellia desertorum	25 25	No No	FACU Not Listed	Total % Cov		Multiply	hv.	
3.Hirschfeldia incana	<1	No	Not Listed Not Listed	OBL species		x 1 =	0	
4.	<u> </u>		- Tot Elisted	FACW species		x 2 =	0	
5.				FAC species		x 3 =	0	
Total Cover:	50 %			FACU species	25	x 4 =	100	
Herb Stratum				UPL species	25	x 5 =	125	
1. Pseudognaphalium spp.	<1	No		Column Totals:	50	(A)	225	(B)
2.				Prevalence	Index = B/	Δ =	4.50	
3. 4.				Hydrophytic Ve			4.50	
5.				Dominance 1	_			
6.				Prevalence I				
7.						ns¹ (Provide s		ing
8.						n a separate s	,	
Total Cover:	0 %			Problematic	Hydrophytic	Vegetation ¹ (Explain	1)
Woody Vine Stratum	0 /0			11	مسمانه منا	امريط امصطامينا		4
1				¹ Indicators of hybe present.	aric soil and	i wetiand nyd	rology i	must
2				Usalrombutio				
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 50 %	of Biotic C	Crust	<u>%</u>	Present?	Yes 🔘	No 💿		
Remarks:								

SOIL Sampling Point: 7b_____

Depth	Matrix (maint)	0/	Redox Features	Texture ³	Damada
(inches)	Color (moist)		Color (moist) % Type ¹ Lo		Remarks
0-10	7.5 YR 4/4			Sand	
0-10	7.5 YR 4/6			Sand	
	_				
					-
	-				-
	_				_
	Concentration, D=Dep			-	
			pam, Sandy Clay Loam, Sandy Loam, Clay		
Iydric Soil Histoso		le to all LRRs,	unless otherwise noted.)		Problematic Hydric Soils:
	Epipedon (A2)		Sandy Redox (S5) Stripped Matrix (S6)		ck (A10) (LRR B)
	Histic (A3)		Loamy Mucky Mineral (F1)		Vertic (F18)
	gen Sulfide (A4)		Loamy Gleyed Matrix (F2)		nt Material (TF2)
Stratifie	ed Layers (A5) (LRR (C)	Depleted Matrix (F3)	Other (E)	plain in Remarks)
	Muck (A9) (LRR D)		Redox Dark Surface (F6)		
	ed Below Dark Surfac	e (A11)	Depleted Dark Surface (F7)		
	Dark Surface (A12)		Redox Depressions (F8)	⁴ Indicators of	hydrophytic vegetation and
	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Pools (F9)		hydrophytic vegetation and rdrology must be present.
	Layer (if present):			Wettaria	droidgy must be present.
Type:	Layer (ii present).				
	nches).			Hydric Soil Pr	esent? Ves No A
Depth (i	nches):		<u> </u>	Hydric Soil Pr	esent? Yes No
	nches):		<u> </u>	Hydric Soil Pr	esent? Yes No No
Depth (i	nches):			Hydric Soil Pr	esent? Yes No No
Depth (i	nches):			Hydric Soil Pr	esent? Yes No No
Depth (i	, 			Hydric Soil Pr	esent? Yes No No
Depth (in Remarks:	, 				esent? Yes No nry Indicators (2 or more required)
Depth (i Remarks: YDROL(DGY		nt)	Seconda	
Depth (i Remarks: YDROLO Vetland Hy	OGY ydrology Indicators:		nt) Salt Crust (B11)	Seconda	ry Indicators (2 or more required)
Depth (i Remarks: YDROLO Wetland H Primary Ind Surface	OGY ydrology Indicators: dicators (any one indicators)		Salt Crust (B11)	Seconda Wat	ary Indicators (2 or more required) er Marks (B1) (Riverine)
Depth (i Remarks: YDROLO Vetland H Primary Ind Surface High W	OGY ydrology Indicators: licators (any one indic			Seconda Wat Sed Drift	ory Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine)
Depth (i Remarks: YDROLO Wetland H Primary Ind Surface High W Satura	OGY ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2)	ator is sufficie	Salt Crust (B11) Biotic Crust (B12)	Seconda Wat Sed Drift Drai	er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Depth (i Remarks: YDROLO Wetland H Primary Ind Surface High W Satura Water	DGY ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3)	cator is sufficient	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Seconda Wat Sed Drift Drai	er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)
Depth (i Remarks: YDROLO Wetland H Primary Ind Surface High W Satura Water Sedime	ydrology Indicators: dicators (any one indicater (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver	ine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Seconda Seconda Sed Drift Drai Dry- Roots (C3)	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)
Depth (ii Remarks: YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De	ydrology Indicators: licators (any one indice e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	ine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Seconda Wat Sed Drift Drai Dry- Roots (C3) Thir Cray	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7)
Depth (ii Remarks: YDROLO Vetland High W Satura Water Sedime Drift De	ydrology Indicators: dicators (any one indicaters (any one indicaters) water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (No	ine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Seconda Wat Sed Drift Drai Dry- g Roots (C3) Thir Cray	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) //fish Burrows (C8)
Depth (ii Remarks: YDROLO Vetland High W Satura Water Sedime Drift De Surface Inunda	ydrology Indicators: licators (any one indicate Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriverent Deposits (B2) (Noeposits (B3) (Nonriverence Soil Cracks (B6)	ine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Se	Seconda Wat Sed Drift Drai Dry- g Roots (C3) Thir Cray Dils (C6) Satu	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9
Primary Ind Satura Water Surface Surface Surface Vater Vater Surface Vater	ydrology Indicators: dicators (any one indicater (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial (Stained Leaves (B9)	ine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Se	Seconda Wat Sed Drift Drai Dry- g Roots (C3) Thir Cray Dils (C6) Satu	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) offish Burrows (C8) uration Visible on Aerial Imagery (C9) Illow Aquitard (D3)
Depth (ii Remarks: YDROLO Vetland H Primary Ind Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse	ydrology Indicators: dicators (any one indicater (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver es Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9)	ine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Sc Other (Explain in Remarks)	Seconda Wat Sed Drift Drai Dry- g Roots (C3) Thir Cray Dils (C6) Satu	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Infish Burrows (C8) Irration Visible on Aerial Imagery (CS) Illow Aquitard (D3)
Depth (ii Remarks: YDROLO Vetland High W Satura Water Sedime Surface Inunda Water- Field Obse	pdrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial (Stained Leaves (B9) ervations: ater Present?	ine) nriverine) rine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Solution Other (Explain in Remarks)	Seconda Wat Sed Drift Drai Dry- g Roots (C3) Thir Cray Dils (C6) Satu	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Infish Burrows (C8) Irration Visible on Aerial Imagery (CS) Illow Aquitard (D3)
Depth (ii Remarks: YDROLO Vetland High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table	ydrology Indicators: dicators (any one indicater (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? y	ine) nriverine) Imagery (B7) Yes No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Solution Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Seconda Wat Sed Drift Drai Dry- Roots (C3) Thir Cray Cray Shat FAC	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Irration Visible on Aerial Imagery (CS) Illow Aquitard (D3) E-Neutral Test (D5)
Depth (ii Remarks: YDROLO Wetland High W Satura: Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation includes ca	ydrology Indicators: licators (any one indicators (any one indicators) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Deposits (B3) (Nonriver) ent Cracks (B6) tion Visible on Aerial (Stained Leaves (B9)) ervations: ater Present? Present? present? present?	ine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed So Other (Explain in Remarks)	Seconda Wat Sed Drift Drai Dry- Roots (C3) Thir Cray Satu Sha FAC	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Irration Visible on Aerial Imagery (CS) Illow Aquitard (D3) E-Neutral Test (D5)
Depth (ii Remarks: YDROLO Wetland High W Satura: Water Sedime Drift De Surface Inunda Water- Field Obse Surface Wa Water Table Saturation I includes ca	ydrology Indicators: licators (any one indicators (any one indicators) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Deposits (B3) (Nonriver) ent Cracks (B6) tion Visible on Aerial (Stained Leaves (B9)) ervations: ater Present? Present? present? present?	ine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Solution Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Seconda Wat Sed Drift Drai Dry- Roots (C3) Thir Cray Satu Sha FAC	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Irration Visible on Aerial Imagery (CS) Illow Aquitard (D3) E-Neutral Test (D5)
Depth (ii Remarks: YDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation I includes ca Describe R	ydrology Indicators: licators (any one indicators (any one indicators) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Deposits (B3) (Nonriver) ent Cracks (B6) tion Visible on Aerial (Stained Leaves (B9)) ervations: ater Present? Present? present? present?	ine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed So Other (Explain in Remarks)	Seconda Wat Sed Drift Drai Dry- Roots (C3) Thir Cray Satu Sha FAC	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Irration Visible on Aerial Imagery (CS) Illow Aquitard (D3) E-Neutral Test (D5)
Depth (ii Remarks: YDROLO Wetland High W Satura: Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation includes ca	ydrology Indicators: licators (any one indicators (any one indicators) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Deposits (B3) (Nonriver) ent Cracks (B6) tion Visible on Aerial (Stained Leaves (B9)) ervations: ater Present? Present? present? present?	ine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed So Other (Explain in Remarks)	Seconda Wat Sed Drift Drai Dry- Roots (C3) Thir Cray Satu Sha FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9 Illow Aquitard (D3)
Depth (ii Remarks: YDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation I includes ca Describe R	ydrology Indicators: licators (any one indicators (any one indicators) e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Deposits (B3) (Nonriver) ent Cracks (B6) tion Visible on Aerial (Stained Leaves (B9)) ervations: ater Present? Present? present? present?	ine) nriverine) rine) Imagery (B7) Yes \(\) No Yes \(\) No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed So Other (Explain in Remarks)	Seconda Wat Sed Drift Drai Dry- Roots (C3) Thir Cray Satu Sha FAC	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Irration Visible on Aerial Imagery (CS) Illow Aquitard (D3) E-Neutral Test (D5)
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Project/Site: Pure Water Program		City/County	San Diego	o/San Diego	Sam	oling Date:()	9/28/20)16
Applicant/Owner: City of San Diego				State:CA	 Samp	oling Point:8		
Investigator(s): Callie Ford, Janice Wondolleck		Section, To	ownship, Ra	nge: 15, 15S, 3W		_		
Landform (hillslope, terrace, etc.):		Local relie	f (concave,	convex, none): None	9	Slo	pe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.8	36		Long:-117.18		Datu	m:	
Soil Map Unit Name: Riverwash				NWI cla	ssification:	Riverine		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No ((If no, explain	- n in Remark	s.)		
Are Vegetation Soil or Hydrology sig	nificantly	disturbed?	Are "	Normal Circumstand	ces" presen	t? Yes 💿	No	0
Are Vegetation Soil or Hydrology na	turally pro	oblematic?	(If ne	eded, explain any a	nswers in R	temarks.)		
SUMMARY OF FINDINGS - Attach site map sh	nowing	samplin	g point lo	ocations, transe	ects, imp	ortant fea	atures,	, etc.
Hydrophytic Vegetation Present? Yes (No	•							
	•	ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No		witl	nin a Wetlar	nd? Yes	0	√o o		
Remarks:								
VEGETATION								
	Absolute	Dominant	Indicator	Dominance Test	worksheet	<u> </u>		
	% Cover	Species?	Status	Number of Domina				
1.Eucalyptus globulus	5	No	Not Listed	That Are OBL, FA				(A)
2				Total Number of D	ominant			
3				Species Across Al	l Strata:	2		(B)
4	5 0/			Percent of Domina				
Sapling/Shrub Stratum Total Cover:	5 %			That Are OBL, FA	CW, or FAC	50.	.0 %	(A/B)
1.Baccharis salicifolia	20	No	FAC	Prevalence Index	workshee	t:		
2-Baccharis sarothroides	5	No	FACU	Total % Cove	r of:	Multiply		_
3.				OBL species		x 1 =	0	
4				FACW species	10	x 2 =	20	
5	27			FAC species	23	x 3 =	69	
Total Cover: Herb Stratum	25 %			FACU species UPL species	10	x 4 = x 5 =	40	
1-Ambrosia psilostachya	5	Yes	FACU	Column Totals:	5		25	(B)
2. Cyperus eragrostis (dead)	10	Yes	FACW	Column rotals.	48	(A)	154	(D)
3. Plantago lanceolata	3	No	FAC	Prevalence I			3.21	
4.				Hydrophytic Veg				
5.				Dominance T				
6				Prevalence In				
7				Morphologica data in Re		is' (Provide i a separate		ng
8.				Problematic F			,	1)
Total Cover: Woody Vine Stratum	18 %							
1.				¹ Indicators of hyd	ric soil and	wetland hy	drology i	must
2.				be present.				
Total Cover:	%			Hydrophytic				
% Bare Ground in Herb Stratum 50 % % Cover of	of Biotic C	Crust	%	Vegetation Present?	Yes (No (•		
Remarks: Mulefat present in sporadic patches.								
Parameter Parameter Parameter								

SOIL

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

Type: C=Concentra Soil Textures: Clay ydric Soil Indicator Histosol (A1) Histic Epipedon Black Histic (A3 Hydrogen Sulfic Stratified Layers 1 cm Muck (A9) Depleted Below Thick Dark Surf Sandy Mucky M Sandy Gleyed M Sandy Gleyed M Sandy Gleyed M Type: Depth (inches): Emarks: YDROLOGY Vetland Hydrology Irimary Indicators (a Surface Water (a High Water Tab Saturation (A3)	ation, D=Depler, Silty Clay, Sas: (Applicable) (A2) ble (A4) s (A5) (LRR C) t (LRR D) t Dark Surface ace (A12) lineral (S1) Matrix (S4)	andy Clay, L to all LRRs	Loam, Sand s, unless ot Sand Strip Load Load Dep Red Dep Red	atrix. dy Clay cherwise dy Redox oped Ma my Muc my Gley oleted Ma dox Dark oleted Dark	noted.) x (S5) htrix (S6) ky Mineral red Matrix atrix (F3) Surface (ark Surface ressions (F	(F1) (F2) (F6) e (F7)	Lining, R	Indicators for 1 cm Muc 2 cm Muc Reduced Red Pare Other (Ex	M=Matrix.	ric Soils:
Type: C=Concentrations of the state of the s	ation, D=Depler, Silty Clay, Sas: (Applicable) (A2) ble (A4) s (A5) (LRR C) t (LRR D) t Dark Surface ace (A12) lineral (S1) Matrix (S4)	etion, RM=R andy Clay, L	Loam, Sand s, unless ot Sand Strip Load Load Dep Red Dep Red	dy Clay therwise dy Redox oped Ma my Muc my Gley oleted Ma dox Dark oleted Da dox Depr	noted.) x (S5) htrix (S6) ky Mineral red Matrix atrix (F3) Surface (ark Surface ressions (F	(F1) (F2) (F6) e (F7)	Lining, R	C=Root Channel, m, Silty Clay Loar Indicators for 2 cm Muc Reduced Red Pare Other (Ex	m, Silt Loam, Silt, Problematic Hydr ck (A9) (LRR C) ck (A10) (LRR B) Vertic (F18) ent Material (TF2) kplain in Remarks	ric Soils:
Type: C=Concentro Soil Textures: Clay Indicator Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfic Stratified Layers 1 cm Muck (A9) Depleted Below Thick Dark Surf Sandy Mucky M Sandy Gleyed M Sandy Gleyed M Type: Depth (inches): Itemarks: TOROLOGY Vetland Hydrology Trimary Indicators (a) Surface Water (a) High Water Tab	ation, D=Depler, Silty Clay, Sas: (Applicable) (A2) ble (A4) s (A5) (LRR C) t (LRR D) t Dark Surface ace (A12) lineral (S1) Matrix (S4)	etion, RM=R andy Clay, L	Loam, Sand s, unless ot Sand Strip Load Load Dep Red Dep Red	dy Clay therwise dy Redox oped Ma my Muc my Gley oleted Ma dox Dark oleted Da dox Depr	noted.) x (S5) htrix (S6) ky Mineral red Matrix atrix (F3) Surface (ark Surface ressions (F	(F1) (F2) (F6) e (F7)	Lining, R0	C=Root Channel, m, Silty Clay Loan Indicators for	m, Silt Loam, Silt, Problematic Hydr ck (A9) (LRR C) ck (A10) (LRR B) Vertic (F18) ent Material (TF2) kplain in Remarks	ric Soils:
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Stratified Layers 1 cm Muck (A9) Depleted Below Thick Dark Surf Sandy Mucky M Sandy Gleyed M estrictive Layer (i Type: Depth (inches): emarks: DROLOGY etland Hydrology imary Indicators (a Surface Water (a) High Water Tab	s (A5) (LRR C) (LRR D) Dark Surface ace (A12) lineral (S1) Matrix (S4)	,	Dep Red Dep Red	oleted Mark dox Dark oleted Da dox Depr	atrix (F3) : Surface (ark Surface ressions (F	F6) e (F7)		Other (Ex	kplain in Remarks) tation and
1 cm Muck (A9) Depleted Below Thick Dark Surf Sandy Mucky M Sandy Gleyed M estrictive Layer (i Type: Depth (inches): emarks: DROLOGY etland Hydrology imary Indicators (a Surface Water (i High Water Tab	(LRR D) Dark Surface ace (A12) Ineral (S1) Matrix (S4)	,	Red Dep	lox Dark leted Da lox Depr	Surface (ark Surface ressions (F	e (F7)		⁴Indicators of	hydrophytic veget	tation and
Depleted Below Thick Dark Surf Sandy Mucky M Sandy Gleyed M estrictive Layer (i Type: Depth (inches): emarks: DROLOGY etland Hydrology rimary Indicators (a Surface Water (a) High Water Tab	Dark Surface ace (A12) lineral (S1) Matrix (S4)	(A11)	Dep Red	oleted Da lox Depr	ark Surface essions (F	e (F7)			, , , ,	
Thick Dark Surf Sandy Mucky M Sandy Gleyed M estrictive Layer (i Type: Depth (inches): emarks: DROLOGY etland Hydrology imary Indicators (a Surface Water (i	ace (A12) lineral (S1) Matrix (S4)	(A11)	Red	lox Depr	essions (F				, , , ,	
Sandy Mucky M Sandy Gleyed M estrictive Layer (i Type: Depth (inches): emarks: DROLOGY etland Hydrology rimary Indicators (a Surface Water (i High Water Tab	lineral (S1) Matrix (S4)				•	-8)			, , , ,	
Sandy Gleyed Mestrictive Layer (in Type: Depth (inches): Emarks: DROLOGY etland Hydrology imary Indicators (and Surface Water (and Hydrology) High Water Tab	Matrix (S4)				5 (୮୬)				, , , ,	
DROLOGY etland Hydrology imary Indicators (a Surface Water (a) High Water Tab								wettarid fly	rarology mast be p	present.
Type: Depth (inches): emarks: DROLOGY etland Hydrology imary Indicators (a) Surface Water (a) High Water Tab	i present).									
Depth (inches): emarks: DROLOGY etland Hydrology imary Indicators (a Surface Water (a High Water Tab										
emarks: DROLOGY etland Hydrology imary Indicators (a Surface Water (.a v .	
TDROLOGY Tetland Hydrology Timary Indicators (a Surface Water (a) High Water Tab								Hydric Soil Pr	resent? Yes	No 💿
rimary Indicators (a Surface Water (High Water Tab										
Surface Water (High Water Tab	/ Indicators:							Seconda	ary Indicators (2 or	r more required)
Surface Water (High Water Tab		tor is sufficie	ient)					□ Wat	er Marks (B1) (Riv	verine)
High Water Tab				It Crust	(B11)				iment Deposits (B	•
_	,			otic Crus	,				Deposits (B3) (Ri	, ,
	ile (AZ)				vertebrates	e (B13)		=	nage Patterns (B1	
☐ Water Marks (B	1) (Nonriverin	10)		'	Sulfide Od	, ,			Season Water Ta	
Sediment Depo	, ,	,		-		res along L	ivina Poo		Muck Surface (C	` '
Drift Deposits (E	` , `	,				d Iron (C4)	-		yfish Burrows (C8)	,
_ ' `	, (ne)				on in Plow	•		uration Visible on <i>i</i>	,
Surface Soil Cra		2000n/(P7)					ou Solis (C			
Inundation Visib Water-Stained I		lagery (b7)		ilei (Exp	olain in Rei	IIIaiks)			llow Aquitard (D3) C-Neutral Test (D5	,
_	, ,								Neutral Test (D3	·)
eld Observations		. O N		onth /!	ahaa):					
urface Water Prese			_	epth (ind	· ·		\dashv			
ater Table Presen				epth (ind	<i>'</i> ——		_			
aturation Present?	10	s No	o 💿 D	epth (ind	ches):		Watle	and Hydrology 5	Present? Yes	No (
ncludes capillary frescribe Recorded		auge moni	itorina well	. aerial r	ohotos pre	evious insr				9 110 (
5551155 1 10001 1000	_ 4.4 (5.1.54111 9	, ~ ~ ~ · · · · · · · · · · · · · · · ·		, 401141	o.oo, pre	- 1.000 IIIOF	. 5545113),	a vanabio.		
emarks:										

US Army Corps of Engineers

Project/Site: Pure Water Program		City/County	San Dieg	go/San Diego	Sampling Date:	09/27/2016
Applicant/Owner: City of San Diego				State:CA	Sampling Point:	9a
Investigator(s): Danielle Mullen, Katie Dayton	;	Section, To	wnship, Ra	ange: 32, 15S, 2W		
Landform (hillslope, terrace, etc.):		Local relief	f (concave,	convex, none):None	Slo	ope (%):()
Subregion (LRR):C - Mediterranean California	Lat:32.8	2		Long:-117.11	 Dat	um:
Soil Map Unit Name: Riverwash				NWI class	ification: Freshwater I	Forested/Shrub we
Are climatic / hydrologic conditions on the site typical f	or this time of yea	ar? Yes (•) No ((If no, explain i	n Remarks.)	
Are Vegetation Soil or Hydrology	significantly	disturbed?	Are "	'Normal Circumstances'	present? Yes	No (
Are Vegetation Soil or Hydrology	naturally pro	blematic?		eeded, explain any ansv		
SUMMARY OF FINDINGS - Attach site m						eatures, etc
	No (·	•	•
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No (le th	ne Sample	d Δrea		
Wetland Hydrology Present? Yes	No (in a Wetla		No (•)	
Remarks: Non-vegetated channel within souther		I		The state of the s		in low flow
channel.						
VEGETATION						
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo		
1.				Number of Dominant That Are OBL, FACV		(A)
2.				_		0 ()
3.				Total Number of Dom Species Across All S		(B)
4.				- Percent of Dominant		
	Cover: %			That Are OBL, FACV	. '	0 % (A/B)
Sapling/Shrub Stratum				Prevalence Index w		
1				Total % Cover of		nly by:
3.				OBL species	x 1 =	0
4.				FACW species	x 2 =	0
5.				FAC species	x 3 =	0
Total (Cover: %			FACU species	x 4 =	0
Herb Stratum				UPL species	x 5 =	0
1				Column Totals:	(A)	(B)
2.				Prevalence Ind	ev = R/Δ =	
3.				Hydrophytic Vegeta		
4. 5.				Dominance Test		
6.				Prevalence Inde		
7.					daptations¹ (Provide	
8.	Cover				rophytic Vegetation	
Total (Woody Vine Stratum	over: %					
1				¹ Indicators of hydric be present.	soil and wetland h	ydrology must
2				_		
Total (Cover: %			Hydrophytic Vegetation		
% Bare Ground in Herb Stratum % 0	Cover of Biotic Co	rust	%		Yes No (•
Remarks: No vegetation within channel.						

SOIL Sampling Point: 9a

Depth (inches)	Matrix	0/	Redox		Turs = 1	1002	T-1-4	.3	D	rko
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture		Rema	IKS
0-0.5	10 YR 2/1						mucky sand			
0.5-4	7.5 YR 3/2						sandy with	cobbl		
	-									
	-									
Type: C=C	Concentration, D=Dep	letion, RM=Red	duced Matrix.	Location:	PL=Pore	Lining, R	C=Root Ch	annel, M=N	Matrix.	
	es: Clay, Silty Clay, S		am, Sandy Clay	Loam, Sar			am, Silty Cla	ıy Loam, Si	ilt Loam, Silt, Loar	· .
	Indicators: (Applicab	le to all LRRs, ι		-					olematic Hydric So	ils:
Histoso	Epipedon (A2)		Sandy Redox Stripped Ma	. ,				•	9) (LRR C) 10) (LRR B)	
	listic (A3)		Loamy Muc	` '	(F1)			duced Vert	, ,	
	en Sulfide (A4)		Loamy Gley	-					aterial (TF2)	
	ed Layers (A5) (LRR (C)	Depleted Ma		(- –)				n in Remarks)	
	luck (A9) (LRR D)	-,	Redox Dark	, ,	F6)			. (,	
I	ed Below Dark Surface	e (A11)	Depleted Da	,	,					
Thick D	ark Surface (A12)		Redox Depr	essions (F	8)					
Sandy	Mucky Mineral (S1)		Vernal Pool	s (F9)			⁴Indicat	ors of hydro	ophytic vegetation	and
Sandy	Gleyed Matrix (S4)						wetla	and hydrolo	ogy must be prese	nt.
Restrictive	Layer (if present):									
Type:col	bbles									
Depth (ir	nches):4						Hydric S	Soil Preser	nt? Yes 🔘	No 💿
Remarks: S	oil is cobbly betwe	en 2-6 inches	s. Sandy soil ha	as dark m	ucky lay	er on su	rveys. Cou	ıld not dig	g past 4 inches d	ue to
	estrictive cobbles.		·				•	_	•	
VDDOL 6										
							Se	econdary In	dicators (2 or mon	e required)
Wetland Hy	drology Indicators:		+\				Se		dicators (2 or mor	• /
Wetland Hy	drology Indicators:		•	(D44)			[Water Ma	arks (B1) (Riverin	e)
Wetland Hy Primary Ind Surface	ydrology Indicators: icators (any one indic e Water (A1)		Salt Crust	` ,			Se	Water Ma	arks (B1) (Riverin t Deposits (B2) (R	e) iverine)
Wetland Hy Primary Ind Surface High W	ydrology Indicators: icators (any one indic e Water (A1) vater Table (A2)		Salt Crust Biotic Crus	t (B12)	(0.40)		[Water Mail Sedimen Drift Dep	arks (B1) (Riverin t Deposits (B2) (Riverin	e) iverine)
Wetland Hy Primary Ind X Surface High W Saturat	ydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3)	ator is sufficien	Salt Crust Biotic Crus Aquatic Inv	st (B12) vertebrates	` '		[Water Ma Sedimen Drift Dep Drainage	arks (B1) (Riverin It Deposits (B2) (Riverin Posits (B3) (Riverin Patterns (B10)	e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I	ydrology Indicators: icators (any one indic e Water (A1) later Table (A2) ion (A3) Warks (B1) (Nonriver	ator is sufficien	Salt Crust Biotic Crust Aquatic Inv Hydrogen	st (B12) vertebrates Sulfide Od	or (C1)		X	Water Ma Sedimen Drift Dep Drainage	arks (B1) (Riverin it Deposits (B2) (R osits (B3) (Riverin e Patterns (B10) son Water Table (e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I	ydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3)	ator is sufficien	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F	et (B12) vertebrates Sulfide Od Rhizospher	or (C1) es along	Ū	X	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc	arks (B1) (Riverin it Deposits (B2) (Riverin e Patterns (B10) son Water Table (CK)	e) iverine) ne)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ydrology Indicators: icators (any one indic e Water (A1) later Table (A2) ion (A3) Warks (B1) (Nonriver	ator is sufficien ine) nriverine)	Salt Crust Biotic Crust Aquatic Inv Hydrogen	et (B12) vertebrates Sulfide Od Rhizospher	or (C1) es along	Ū	X	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc	arks (B1) (Riverinated Proposition (Riverinate	e) iverine) ne)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ydrology Indicators: icators (any one indic e Water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	ator is sufficien ine) nriverine)	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F	et (B12) vertebrates Sulfide Od Rhizospher of Reduce	or (C1) es along d Iron (C4	·)	ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc	arks (B1) (Riverin it Deposits (B2) (Riverin e Patterns (B10) son Water Table (CK)	e) iverine) ne)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	drology Indicators: icators (any one indicate Water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriverse (B2) (Noriverse (B3) (Nonriverse (B3	ator is sufficien ine) nriverine) rine)	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F	et (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reduction	or (C1) es along d Iron (C4 on in Plow	·)	ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio	arks (B1) (Riverinated Proposition (Riverinate	e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I X Sedime Drift De Surface	drology Indicators: icators (any one indicated water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriverient Deposits (B2) (Nonriveries Soil Cracks (B6)	ator is sufficien ine) nriverine) rine)	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence	et (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reduction	or (C1) es along d Iron (C4 on in Plow	·)	ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio	arks (B1) (Riverinal transfer (B2) (Riverinal transfer (B2) (Riverinal transfer (B10) (Riverina transf	e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I X Sedime Drift De Surface Inundat Water-S	ydrology Indicators: icators (any one indicated water (A1) later Table (A2) ion (A3) Marks (B1) (Nonriverient Deposits (B2) (Nonriverient Deposits (B3) (Nonriverient Caposits (B6)) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9)	ator is sufficien ine) nriverine) rine)	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence	et (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reduction	or (C1) es along d Iron (C4 on in Plow	·)	ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio	arks (B1) (Riverinated Deposits (B2) (Riverinated Patterns (B10) son Water Table (CK) Burrows (C8) on Visible on Aeria Aquitard (D3)	e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I X Sedime Drift De Surface Inundat Water-S Field Obse	ydrology Indicators: icators (any one indice water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Non eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations:	ator is sufficien ine) nriverine) rine)	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates Sulfide Od Rhizospher of Reduce n Reduction	or (C1) es along d Iron (C4 on in Plow	·)	ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio	arks (B1) (Riverinated Deposits (B2) (Riverinated Patterns (B10) son Water Table (CK) Burrows (C8) on Visible on Aeria Aquitard (D3)	e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I X Sedime Drift De Surface Inundat Water-S Field Obse Surface Wa	drology Indicators: icators (any one indicated water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriverset Deposits (B2) (Nonriverset Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: tter Present?	ine) nriverine) magery (B7)	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates Sulfide Od Rhizospher of Reduce n Reductio plain in Red	or (C1) es along d Iron (C4 on in Plow	·)	ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio	arks (B1) (Riverinated Deposits (B2) (Riverinated Patterns (B10) son Water Table (CK) Burrows (C8) on Visible on Aeria Aquitard (D3)	e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I X Sedime Drift De Surface Inundat Water-S Field Obse Surface Water Table	ydrology Indicators: icators (any one indicators (any one indicators) water (A1) later Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) esposits (B3) (Nonriver) esposits (B3) (Nonriver) esposits (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? Ye Present? Ye Present? Ye Present?	ine) nriverine) magery (B7) es No (Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) /ertebrates Sulfide Oc Rhizospher of Reduce n Reductic plain in Ref	or (C1) es along d Iron (C4 on in Plow	·)	ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio	arks (B1) (Riverinated Deposits (B2) (Riverinated Patterns (B10) son Water Table (CK) Burrows (C8) on Visible on Aeria Aquitard (D3)	e) iverine) ne)
Wetland Hy Primary Ind X Surface High W Saturat Water I X Sedime Drift De Surface Inundal Water-S Field Obse Surface Water Table Saturation Fincludes ca	drology Indicators: icators (any one indicated (any	ine) nriverine) magery (B7) (es \ No (Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Other (Exp	st (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reductic clain in Rel ches): ches):	or (C1) es along d Iron (C4 on in Plow marks)	ed Soils (ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio Shallow A FAC-Neu	arks (B1) (Riverinated Deposits (B2) (Riverinated Patterns (B10) son Water Table (CK) Burrows (C8) on Visible on Aeria Aquitard (D3)	e) iverine) ne)
Primary Ind Surface High W Saturat Water Surface Drift De Surface Inundal Water-Selfeld Obse Surface Water Table Saturation Figinal of Calculation of Calculat	drology Indicators: icators (any one indicated (any	ine) nriverine) magery (B7) (es \ No (Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Other (Exp	st (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reductic clain in Rel ches): ches):	or (C1) es along d Iron (C4 on in Plow marks)	ed Soils (ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio Shallow A FAC-Neu	arks (B1) (Riverinal arks (B1) (Riverinal arks (B2) (Riverinal arks (B3) (Riverinal arks (B10) arks	e) iverine) ne) C2) I Imagery (C9)
Primary Ind X Surface High W Saturat Water I X Sedime Drift De Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	ydrology Indicators: icators (any one indice we Water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Non eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? e Present? y epillary fringe) ecorded Data (stream	ine) nriverine) magery (B7) es No (es No (es No (es No (es monito))	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Other (Exp Depth (inc Depth (inc pepth (inc	st (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reductic blain in Rel ches): ches):	or (C1) es along d Iron (C4 on in Plow marks)	ed Soils (ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio Shallow A FAC-Neu	arks (B1) (Riverinal arks (B1) (Riverinal arks (B2) (Riverinal arks (B3) (Riverinal arks (B10) arks	e) iverine) ne) C2) I Imagery (C9)
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Primary Ind Surface High W Saturat Water I Surface Drift De Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F includes ca Describe Re	ydrology Indicators: icators (any one indice we Water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Non eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? e Present? y epillary fringe) ecorded Data (stream	ine) nriverine) magery (B7) es No (es No (es No (es No (es monito))	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Other (Exp Depth (inc Depth (inc pepth (inc	st (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reductic blain in Rel ches): ches):	or (C1) es along d Iron (C4 on in Plow marks)	ed Soils (ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio Shallow A FAC-Neu	arks (B1) (Riverinal arks (B1) (Riverinal arks (B2) (Riverinal arks (B3) (Riverinal arks (B10) arks	e) iverine) ne) C2) I Imagery (C9)
Wetland Hy Primary Ind Surface High W Saturat Water I Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F includes ca Describe Re	ydrology Indicators: icators (any one indice we Water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Non eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? e Present? y epillary fringe) ecorded Data (stream	ine) nriverine) magery (B7) es No (es No (es No (es No (es monito))	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Other (Exp Depth (inc Depth (inc pepth (inc	st (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reductic blain in Rel ches): ches):	or (C1) es along d Iron (C4 on in Plow marks)	ed Soils (ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio Shallow A FAC-Neu	arks (B1) (Riverinal arks (B1) (Riverinal arks (B2) (Riverinal arks (B3) (Riverinal arks (B10) arks	e) iverine) ne) C2) I Imagery (C9)
Primary Ind Surface High W Saturat Water I Surface Drift De Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F includes ca Describe Re	ydrology Indicators: icators (any one indice we Water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Non eposits (B3) (Nonriver) e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? e Present? y epillary fringe) ecorded Data (stream	ine) nriverine) magery (B7) es No (es No (es No (es No (es monito))	Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F Presence of Recent Iro Other (Exp Depth (inc Depth (inc pepth (inc	st (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reductic blain in Rel ches): ches):	or (C1) es along d Iron (C4 on in Plow marks)	ed Soils (ots (C3)	Water Mail Sedimen Drift Dep Drainage Dry-Seas Thin Muc Crayfish Saturatio Shallow A FAC-Neu	arks (B1) (Riverinal arks (B1) (Riverinal arks (B2) (Riverinal arks (B3) (Riverinal arks (B10) arks	e) iverine) ne) C2) I Imagery (C9)

Project/Site: Pure Water Program		City/Coun	ty:San Dieg	o/San Diego	Sam	pling Date:	09/27/201	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:	9b	
Investigator(s): Danielle Mullen, Katie Dayton		Section, 7	ownship, Ra	nge: 32, 15S, 2W		-		
Landform (hillslope, terrace, etc.):		Local reli	ef (concave,	convex, none):Non	e	Slo	ope (%):()	
Subregion (LRR):C - Mediterranean California	Lat:32.8	32		Long:-117.11		 Datı	 um:	
Soil Map Unit Name: Riverwash				NWI cla	assification	Freshwater f	orrested/Shrı	ub wetl
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes (• No ((If no, explai	n in Remar	 ks.)		
	-	disturbed		'Normal Circumstan	ces" prese	nt? Yes 🕡) No (
		oblematic?		eeded, explain any a			,	
SUMMARY OF FINDINGS - Attach site map si			,	, ,		,	eatures,	etc.
Hydrophytic Vegetation Present? Yes No								
	•	Is	the Sampled	l Area				
Wetland Hydrology Present? Yes No Remarks:	•	wi	thin a Wetlaı	nd? Yes	0	No ①		
VEGETATION	N haaluta	Dominon	t Indicator	Dominance Test	warkahaa	4.		
	Absolute % Cover	Species?	t Indicator Status	Number of Domin				
1 Salix lasiolepis	80	Yes	FACW	That Are OBL, FA			1 (4	A)
2. Eucalyptus camaldulensis	5	No	FAC	Total Number of [Dominant			
3. Washingtonia robusta	5	No	FACW	Species Across A			1 (F	B)
4			_	Percent of Domin	ant Species	S		
Total Cover: Sapling/Shrub Stratum	90 %			That Are OBL, FA	CW, or FA	C: 10	0.0 %	A/B)
1.Cortaderia selloana	30	No	FACU	Prevalence Inde	x workshe	et:		
2.			-	Total % Cove	er of:	Multip	ly by:	
3.				OBL species		x 1 =	0	
4.		-		FACW species	85	x 2 =	170	
5				FAC species	5	x 3 =	15	
Total Cover: Herb Stratum	30 %			FACU species	30	x 4 =	120	
1.				UPL species		x 5 =	0	(5)
2.				Column Totals:	120	(A)	305	(B)
3.				Prevalence	Index = B/	A =	2.54	
4.			-	Hydrophytic Veg	etation Inc	dicators:		
5.			_	Dominance T	est is >50%	6		
6.				× Prevalence Ir				
7.				Morphologica		ns¹ (Provide n a separate		g
8				Problematic I				į
Total Cover: Woody Vine Stratum	%				, ,	3	(1 /	
1				¹ Indicators of hyd be present.	Iric soil and	d wetland hy	ydrology m	ıust
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 40 % % Cover	ot Biotic C	rust	<u>%</u>	Present?	Yes 💿	No ()	
Remarks:								

US Army Corps of Engineers

SOIL Sampling Point: 9b

Profile Des	scription: (Describe	to the depth n	eeded to docui	ment the indic	ator or confi	rm the absence of i	ndicators.)
Depth	Matrix			x Features		Tavatura 3	Demondo
(inches)	Color (moist)		Color (moist)		rpe ¹ Loc ²	Texture ³	Remarks
0-0.5	10 YR 2/1					mucky sand	
0.5-8	7.5 YR 3/2	100				sand	
	- 1						
1Tyron C=0	Concentration D=Dan	letion DM=Do	duced Matrix	21 - anting DI	-Dava Linina		A-NA-huis
	Concentration, D=Dep				-	RC=Root Channel, N	, Silt Loam, Silt, Loamy Sand, Sand.
	Indicators: (Applicable				Loam, Clay Lo		roblematic Hydric Soils:
Histoso		e to all LRRS, t	Sandy Redo	-			(A9) (LRR C)
	Epipedon (A2)		Stripped Ma	, ,			(A3) (LRR B)
	Histic (A3)			ky Mineral (F1)	Reduced V	` ,` ,
	jen Sulfide (A4)			ed Matrix (F2)			t Material (TF2)
	ed Layers (A5) (LRR (>)	Depleted M			Other (Exp	lain in Remarks)
1 cm N	luck (A9) (LRR D)	,	Redox Dark	Surface (F6)			
Deplete	ed Below Dark Surface	e (A11)	Depleted D	ark Surface (F	7)		
Thick D	Dark Surface (A12)			ressions (F8)			
1 🗀 -	Mucky Mineral (S1)		Vernal Poo	s (F9)			ydrophytic vegetation and
	Gleyed Matrix (S4)					wetland hyd	rology must be present.
Restrictive	Layer (if present):						
Type:			_				
Depth (ii	nches):					Hydric Soil Pre	sent? Yes No No
Remarks:							
HYDROLO	DGY						
Wetland H	ydrology Indicators:					Secondary	y Indicators (2 or more required)
Primary Ind	licators (any one indicators	ator is sufficien	t)			Water	Marks (B1) (Riverine)
Surface	e Water (A1)		Salt Crust	(B11)		Sedin	nent Deposits (B2) (Riverine)
High W	ater Table (A2)		Biotic Crus	st (B12)		Drift [Deposits (B3) (Riverine)
Saturat	tion (A3)			vertebrates (B	13)		age Patterns (B10)
Water I	Marks (B1) (Nonriver i	ne)	Hydrogen	Sulfide Odor (C1)	Dry-S	eason Water Table (C2)
Sedime	ent Deposits (B2) (Noi	nriverine)	Oxidized F	Rhizospheres a	along Living R	oots (C3) Thin I	Muck Surface (C7)
Drift De	eposits (B3) (Nonrive	ine)	Presence	of Reduced Iro	on (C4)	Crayf	sh Burrows (C8)
Surface	e Soil Cracks (B6)		Recent Iro	n Reduction in	Plowed Soils	(C6) Satur	ation Visible on Aerial Imagery (C9)
Inunda	tion Visible on Aerial I	magery (B7)	Other (Ex	olain in Remarl	ks)	Shallo	ow Aquitard (D3)
Water-	Stained Leaves (B9)					FAC-	Neutral Test (D5)
Field Obse	rvations:						
Surface Wa	ater Present? Y	es No (Depth (in	ches):			
Water Table		es No (_	· ·			
Saturation I				· -			
	apillary fringe)	es O No (Deptii (iii		We	tland Hydrology Pr	esent? Yes No •
	ecorded Data (stream	gauge, monito	ring well, aerial	photos, previou			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
Remarks:T	he sand is moist, ho	wever it is no	ot saturated				
			s. sataratoa.				
US Army Corp	os of Engineers						

Project/Site: Pure Water Program		City/Count	San Diego	o/San Diego	Sam	pling Date:09	7/27/201	6
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:9c	;	
Investigator(s): Danielle Mullen, Katie Dayton		Section, To	ownship, Rar	nge: 31, 15S, 2W		_		
Landform (hillslope, terrace, etc.):		Local relie	f (concave, o	convex, none): None	e	Slop	e (%):()	
Subregion (LRR):C - Mediterranean California	Lat:32.8	32		Long:-117.11		 Datun	n:	
Soil Map Unit Name: Riverwash				NWI cla	assification:	None		
Are climatic / hydrologic conditions on the site typical for this til	me of ye	ar? Yes (No ((If no, explain	n in Remarl	(S.)		
Are Vegetation Soil or Hydrology sign	nificantly	disturbed?	Are "	Normal Circumstan	ces" preser	nt? Yes 💿	No (\supset
Are Vegetation Soil or Hydrology natu	urally pro	oblematic?	(If ne	eded, explain any a	inswers in F	Remarks.)		
SUMMARY OF FINDINGS - Attach site map she							tures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
Hydric Soil Present? Yes No	•	ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No Remarks:	•	with	nin a Wetlan	nd? Yes	0	No ①		
VEGETATION								
	bsolute Cover	Dominant Species?	Indicator Status	Dominance Test				
1.				Number of Domin That Are OBL, FA			()	A)
2.				Total Number of D				
3.				Species Across A		1	(F	В)
4.				Percent of Domina	ant Snecies			
Total Cover:	%			That Are OBL, FA		_	% (A	4/B)
Sapling/Shrub Stratum 1.Baccharis sarothroides	50	Yes	FACU	Prevalence Index	k workshee	et:		
2. Cortaderia selloana	30	No	FACU	Total % Cove		Multiply	bv:	
3.				OBL species		x 1 =	0	
4.				FACW species		x 2 =	0	
5.				FAC species		x 3 =	0	
Total Cover:	80 %			FACU species	85	x 4 =	340	
Herb Stratum	_	NT.		UPL species	5	x 5 =	25	
1. Pseudognaphalium californicum	5	No No	Not Listed	Column Totals:	90	(A)	365	(B)
2-Ambrosia psilostachya 3.		NO	FACU	Prevalence	Index = B/	4 =	4.06	
4.				Hydrophytic Veg	etation Inc	licators:		
5.				Dominance T	est is >50%			
6.				Prevalence Ir	ndex is ≤3.0	1		
7.				Morphologica		ns¹ (Provide s n a separate s		g
8.				Problematic I		•	,	
Total Cover: Woody Vine Stratum	10 %				19 01 0 01 19 110	vogotation (xpidii i)	
1.				¹ Indicators of hyd	ric soil and	wetland hyd	rology m	nust
2.				be present.				
Total Cover:	%			Hydrophytic				
% Bare Ground in Herb Stratum 30 % % Cover of	f Biotic C	Crust	%	Vegetation Present?	Yes (No (•)		
Remarks:	0.00				.000	(9)		
I .								

SOIL Sampling Point: 9c

(inches)	Matrix Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
0-4	7.5 YR 3/2	100	<u> </u>				loam	<u>—</u>
<u> </u>								-
								_
	_							
Tyne: C=0	 Concentration, D=Dep	letion RM=	=Reduced Matrix	2l ocation	· PI =Porc			 M=Matrix
						-		m, Silt Loam, Silt, Loamy Sand, Sand
	Indicators: (Applicab				-, -54111	,,		Problematic Hydric Soils:
Histos			Sandy Red	-				ck (A9) (LRR C)
Histic E	Epipedon (A2)		Stripped M	. ,			2 cm Mud	ck (A10) (LRR B)
	Histic (A3)			cky Minera				Vertic (F18)
	gen Sulfide (A4)	- \		eyed Matrix	(F2)			ent Material (TF2)
	ed Layers (A5) (LRR	C)	Depleted N	` '	(E6)		Other (Ex	plain in Remarks)
	Muck (A9) (LRR D)	ο (Δ11)		k Surface (,			
	ed Below Dark Surfac Dark Surface (A12)	E (ATT)	1 1 '	Dark Surfac pressions (I	. ,			
	Mucky Mineral (S1)		Vernal Poo	,	· •)		⁴ Indicators of	hydrophytic vegetation and
	Gleyed Matrix (S4)		U VOINGIT OC	(. 0)				drology must be present.
	Layer (if present):						,	
Type:co								
71 30								
Depth (i	nches):4						Hydric Soil Pr	esent? Yes No 💿
		per due to	restrictive laver a	and cobble	es.		Hydric Soil Pr	esent? Yes No No
	nches):4 Not able to dig deep	per due to	restrictive layer a	and cobble	es.		Hydric Soil Pr	esent? Yes No No
		per due to	restrictive layer a	and cobble	es.		Hydric Soil Pr	esent? Yes No No
Remarks:]	Not able to dig deep	per due to	restrictive layer a	and cobble	es.		Hydric Soil Pr	esent? Yes No No
Remarks:]	Not able to dig deep		restrictive layer a	and cobble	es.			
Remarks: N	Not able to dig deep		restrictive layer a	and cobble	es.		Seconda	iry Indicators (2 or more required)
Remarks: 1 YDROLO Wetland H	Not able to dig deep			and cobble	es.		Seconda	
Remarks:] YDROLO Wetland H Primary Inc	Not able to dig deep OGY ydrology Indicators:				es.		Seconda	iry Indicators (2 or more required)
Remarks:] YDROL(Wetland H Primary Inc. Surface	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators)		cient)	t (B11)	es.		Seconda Wat	ory Indicators (2 or more required) er Marks (B1) (Riverine)
Remarks:] YDROL(Wetland H Primary Inc Surface High W	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (Water (A1))		cient) Salt Crus Biotic Cru	t (B11)			Seconda Wat Sed Drift	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine)
Wetland H Primary Inc Surfac High W	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (A1) Water Table (A2)	cator is suffi	cient) Salt Crus Biotic Cru Aquatic Ir	t (B11) ust (B12) nvertebrate n Sulfide Od	s (B13) dor (C1)		Seconda Wat Sed Drift Drai	er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Remarks:] Wetland H Primary Inc Surface High W Satura Water	OGY ydrology Indicators: dicators (any one indicators (A1) Vater Table (A2) tion (A3)	cator is suffi	cient) Salt Crus Biotic Cru Aquatic Ir	t (B11) ust (B12) nvertebrate	s (B13) dor (C1)	Living Roo	Seconda Wat Sed Drift Drai	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)
Wetland H Primary Inc Surfac High W Satura Water Sedime	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (A1) Water Table (A2) tion (A3) Marks (B1) (Nonriver	cator is sufficience)	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized	t (B11) ust (B12) nvertebrate n Sulfide Od	s (B13) dor (C1) res along	_	Seconda Wat Sed Drift Drai Dry- ots (C3) Thin	ery Indicators (2 or more required) er Marks (B1) (Riverine) ement Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) offish Burrows (C8)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	cator is sufficience)	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe	s (B13) dor (C1) res along ed Iron (C4	1)	Seconda Wat Sed Drift Drai Dry- ots (C3) Thin	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7)
Wetland H Primary Inc Surfac High W Satura Water Sedime Drift De	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive	cator is sufficience) rine) rine) rine)	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe	s (B13) dor (C1) res along d Iron (C4 on in Plow	1)	Seconda Wat Sed Drift Drai Dry- ots (C3) Thin Cray C6) Satu	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Iration Visible on Aerial Imagery (C9)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriverent Deposits (B2) (Norriverent Deposits (B3) (Nonriverent Deposits (B4) (Nonriv	cator is sufficience) rine) rine) rine)	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce	s (B13) dor (C1) res along d Iron (C4 on in Plow	1)	Seconda Wat Sed Drift Drai Dry- ots (C3) Thin Cray C6) Satu	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) rfish Burrows (C8) irration Visible on Aerial Imagery (C9)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (any one indicators) Water Table (A2) tion (A3) Marks (B1) (Nonriversent Deposits (B2) (Nonriversent Deposits (B3) (Nonri	cator is sufficience) rine) rine) rine)	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce	s (B13) dor (C1) res along d Iron (C4 on in Plow	1)	Seconda Wat Sed Drift Drai Dry- ots (C3) Thin Cray C6) Satu	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Iration Visible on Aerial Imagery (C9)
Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Ununda Water- Field Obse	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations:	cator is sufficience) enriverine) erine) Imagery (B7	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	t (B11) ust (B12) nvertebrate n Sulfide Or Rhizosphe e of Reduce on Reduction	s (B13) dor (C1) res along d Iron (C4 on in Plow	1)	Seconda Wat Sed Drift Drai Dry- ots (C3) Thin Cray C6) Satu	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Iration Visible on Aerial Imagery (C9)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial estained Leaves (B9) ervations: ater Present?	cator is sufficiency inniverine) Imagery (B7	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Or Rhizosphe e of Reduce on Reduction colored in Re	s (B13) dor (C1) res along d Iron (C4 on in Plow	1)	Seconda Wat Sed Drift Drai Dry- ots (C3) Thin Cray C6) Satu	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) Affish Burrows (C8) Iration Visible on Aerial Imagery (C9)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Tabl Saturation	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ee Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present?	cator is sufficience) Intrine) Imagery (B7	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reduction cplain in Re	s (B13) dor (C1) res along d Iron (C4 on in Plow	l) ved Soils (Seconda Wat Sed Drift Drai Dry- Dry- Cray C6) Satu Sha	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift De Surface Inunda Water-Field Obse Surface Wa Water Tabl Saturation (includes ca	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ution Visible on Aerial Stained Leaves (B9) Prvations: ater Present? e Present? Present? apillary fringe)	cator is sufficience) Imagery (B7 //es 1	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reducti colain in Re nches): nches):	s (B13) dor (C1) res along ed Iron (C4 on in Plow marks)	ved Soils (Seconda Wat Sed Drift Drai Dry- ots (C3) Thin Cray C6) Satu Sha FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)
Primary Inc. Surface High Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ee Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present?	cator is sufficience) Imagery (B7 //es 1	cient) Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reducti colain in Re nches): nches):	s (B13) dor (C1) res along ed Iron (C4 on in Plow marks)	ved Soils (Seconda Wat Sed Drift Drai Dry- ots (C3) Thin Cray C6) Satu Sha FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)
Remarks: No Primary Inc. Surface High Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present? Present? apillary fringe) lecorded Data (stream	cator is sufficience) Imagery (B7 /es /es /es /es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reduction xplain in Re nches): nches): nches):	s (B13) dor (C1) res along ed Iron (C4 on in Plow emarks)	Wetlpections),	Seconda Wat Sed Drift Dry- ots (C3) Thin Cray C6) Satu FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)
Remarks: No Primary Inc. Surface High Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	Not able to dig deep OGY ydrology Indicators: dicators (any one indicators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ution Visible on Aerial Stained Leaves (B9) Prvations: ater Present? e Present? Present? apillary fringe)	cator is sufficience) Imagery (B7 /es /es /es /es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reduction xplain in Re nches): nches): nches):	s (B13) dor (C1) res along ed Iron (C4 on in Plow emarks)	Wetlpections),	Seconda Wat Sed Drift Dry- ots (C3) Thin Cray C6) Satu FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)
Remarks: No Primary Inc. Surface High Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present? Present? apillary fringe) lecorded Data (stream	cator is sufficience) Imagery (B7 /es /es /es /es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reduction xplain in Re nches): nches): nches):	s (B13) dor (C1) res along ed Iron (C4 on in Plow emarks)	Wetlpections),	Seconda Wat Sed Drift Dry- ots (C3) Thin Cray C6) Satu FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)
Remarks: No Primary Inc. Surface High Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present? Present? apillary fringe) lecorded Data (stream	cator is sufficience) Imagery (B7 /es /es /es /es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reduction xplain in Re nches): nches): nches):	s (B13) dor (C1) res along ed Iron (C4 on in Plow emarks)	Wetlpections),	Seconda Wat Sed Drift Dry- ots (C3) Thin Cray C6) Satu FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)
YDROLO Wetland H Primary Inc Surface High W Satura Water Sedime Drift Do Surface Inunda Water- Field Obse Surface Water Tabl Saturation (includes ca	Not able to dig deep OGY ydrology Indicators: dicators (any one indic e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) ation Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present? Present? apillary fringe) lecorded Data (stream	cator is sufficience) Imagery (B7 /es /es /es /es	Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reduction xplain in Re nches): nches): nches):	s (B13) dor (C1) res along ed Iron (C4 on in Plow emarks)	Wetlpections),	Seconda Wat Sed Drift Dry- ots (C3) Thin Cray C6) Satu FAC	er Marks (B1) (Riverine) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) Muck Surface (C7) /fish Burrows (C8) irration Visible on Aerial Imagery (C9) Illow Aquitard (D3) 5-Neutral Test (D5)

Project/Site: Pure Water Program		City/County	San Diego	/San Diego	Sam	oling Date:09	/27/20	16
Applicant/Owner: City of San Diego				State:CA	Samp	oling Point:10		
Investigator(s): Danielle Mullen, Katie Dayton		Section, To	ownship, Ran	ige: 32, 15S, 2W		_		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave, c	onvex, none):None	e	Slope	(%):0	
Subregion (LRR):C - Mediterranean California L	at:32.8	3		Long:-117.11		 Datum	: _	
Soil Map Unit Name: Redding cobbly loam dissected				NWI cla	ssification:]	None		
Are climatic / hydrologic conditions on the site typical for this tin	ne of ye	ar? Yes	No ((If no, explair	- n in Remark	(s.)		
	-	disturbed?		Normal Circumstan	ces" presen	t? Yes 🕡	No	\circ
	•	blematic?		eded, explain any a				
SUMMARY OF FINDINGS - Attach site map sho	-						ures,	etc.
Hydrophytic Vegetation Present? Yes No (0							
Hydric Soil Present? Yes No	•	Is t	he Sampled	Area				
Wetland Hydrology Present? Yes No (Remarks:	9	witl	hin a Wetlan	d? Yes	0 1	No 💿		
VECETATION								
VEGETATION Ab:	solute	Dominant	Indicator	Dominance Test	worksheet	:		
	Cover	Species?	Status	Number of Domina				
1. Salix lasiolepis	80	Yes	FACW	That Are OBL, FA			((A)
2				Total Number of D	ominant			
3				Species Across Al	l Strata:	1	((B)
4				Percent of Domina				
Sapling/Shrub Stratum Total Cover:	80 %			That Are OBL, FA	CW, or FAC	100.0) % (A/B)
1.Toxicodendron diversilobum	5	No	FACU	Prevalence Index	workshee	t:		
2. Cortaderia selloana	10	No	FACU	Total % Cove	r of:	Multiply		
3				OBL species		x 1 =	0	
4				FACW species	80	x 2 =	160	
5.	15 0/			FAC species FACU species	1.5	x 3 =	0	
Total Cover: Herb Stratum	15 %			UPL species	15	x 4 = x 5 =	60	
1.				Column Totals:	95	(A)	220	(B)
2.				Column Totals.	93	(~)	220	(5)
3.				Prevalence I			2.32	
4.				Hydrophytic Veg				
5.				✗ Dominance T✗ Prevalence In				
6.				Prevalence In Morphologica			unnortir	na
7						a separate s		'9
Total Cover:	0.1			Problematic F	lydrophytic	Vegetation ¹ (I	Explain)
Woody Vine Stratum	%							
1				¹ Indicators of hydbe present.	ric soil and	wetland hydr	ology n	nust
Total Cover:	%			Hydrophytic Vegetation		_		
% Bare Ground in Herb Stratum % % Cover of	Biotic C	rust	<u>%</u>	Present?	Yes	No 🔘		
Remarks:								

SOIL

Sampling Point: 10

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

Profile Des	scription: (Describe Matrix	to the depth i	needed to document the indicator or or Redox Features	confirm	the absence of indi	cators.)
(inches)	Color (moist)	%		_OC ²	Texture ³	Remarks
0-3	7.5 YR 3/2	100			Sand	
3-6	10 YR 2/1	100			Loam	
	-					
	-					
	-	· — —				
	· .	·				
1 0 0						
	Concentration, D=Dep		duced Matrix. ² Location: PL=Pore Li bam, Sandy Clay Loam, Sandy Loam, C	-		
			unless otherwise noted.)	iay Loai		plematic Hydric Soils:
Histoso			Sandy Redox (S5)		1 cm Muck (A	-
	Epipedon (A2)		Stripped Matrix (S6)		2 cm Muck (A	, ,
	Histic (A3)		Loamy Mucky Mineral (F1)		Reduced Vert	,
1 🗀 🗼	jen Sulfide (A4)	-1	Loamy Gleyed Matrix (F2)		Red Parent M	,
	ed Layers (A5) (LRR (luck (A9) (LRR D)	•)	Depleted Matrix (F3) Redox Dark Surface (F6)		Other (Explain	Till Reliaiks)
	ed Below Dark Surfac	e (A11)	Depleted Dark Surface (F7)			
Thick D	Dark Surface (A12)		Redox Depressions (F8)			
I 🗀 -	Mucky Mineral (S1)		Vernal Pools (F9)		•	ophytic vegetation and
	Gleyed Matrix (S4)				wetland hydrolo	ogy must be present.
	Layer (if present): llow roots and cobl	alos				
Depth (ii		oies	_		Hydric Soil Preser	nt? Yes No (
		rtive laver of	cobbles and roots. It is difficult to	dia a s	_	~ ~
	the son has a testin	ctive layer of	cooles and roots. It is difficult to	uig a s	on sample deeper t	man o menes.
	201					
HYDROLO					0	disates (O serves as assisted)
·	ydrology Indicators:		-0			adicators (2 or more required)
	licators (any one indic	ator is sufficier			— <u> </u>	arks (B1) (Riverine)
	e Water (A1) /ater Table (A2)		Salt Crust (B11) Biotic Crust (B12)			nt Deposits (B2) (Riverine) posits (B3) (Riverine)
<u> </u>	tion (A3)		Aquatic Invertebrates (B13)			e Patterns (B10)
l <u> </u>	Marks (B1) (Nonriver	ine)	Hydrogen Sulfide Odor (C1)			son Water Table (C2)
🗀	ent Deposits (B2) (No	,	Oxidized Rhizospheres along Liv	ing Roo		ck Surface (C7)
	eposits (B3) (Nonrive	,	Presence of Reduced Iron (C4)	Ü	` ′ Ш	Burrows (C8)
	e Soil Cracks (B6)	,	Recent Iron Reduction in Plowed	Soils (C	C6) Saturatio	on Visible on Aerial Imagery (C9)
Inunda	tion Visible on Aerial I	magery (B7)	Other (Explain in Remarks)		Shallow .	Aquitard (D3)
Water-	Stained Leaves (B9)				FAC-Net	utral Test (D5)
Field Obse	rvations:					
Surface Wa	ater Present? Y	es O No	Depth (inches):			
Water Table	e Present? Y	es O No	Depth (inches):			
Saturation I		es O No	Depth (inches):	Wotls	and Hydrology Prese	ent? Yes No
	apillary fringe) ecorded Data (stream	gauge, monito	oring well, aerial photos, previous inspe			int: les 🕒 No
	(2.0.34	J - 1 J - 1 - 1 - 1 - 1	5 - 7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	/,		
Remarks:						
I I C A C	os of Engineers					

Project/Site: Pure Water Program		City/Count	y:San Dieg	o/San Diego	Sam	pling Date:()9/27/20	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:	.1	
Investigator(s): Danielle Mullen, Katie Dayton		Section, T	ownship, Ra	nge: 32, 15S, 2W		_		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave,	convex, none): None	e	Slo	pe (%):()	
Subregion (LRR):C - Mediterranean California	Lat:32.8	32		Long:-117.11		 Datu	m:	
Soil Map Unit Name: Riverwash				NWI cla	assification	Freshwater for	rrested/shri	ub wetlar
Are climatic / hydrologic conditions on the site typical for this t	time of ye	ar? Yes (No ((If no, explain	n in Remar	 ks.)		
	-	disturbed?		'Normal Circumstan	ces" prese	nt? Yes	No	\circ
		oblematic?		eded, explain any a		_		
SUMMARY OF FINDINGS - Attach site map sh							atures,	etc.
Hydrophytic Vegetation Present? Yes No								
Hydric Soil Present? Yes No	•	ls t	he Sampled	Area				
Wetland Hydrology Present? Yes No Remarks:	•	wit	hin a Wetlar	nd? Yes	0	No ①		
VEGETATION								
-	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test				
1.Salix laevigata	80	Yes	FACW	Number of Domin That Are OBL, FA				(A)
2.				Total Number of D				, ,
3.				Species Across A		1		(B)
4.				Percent of Domina	ant Snecies	2		
Total Cover:	80 %			That Are OBL, FA		_	0.0 %	(A/B)
Sapling/Shrub Stratum 1.Helminthotheca echioides	20	No	FACU	Prevalence Index	k workshe	et:		
2. Lysimachia arvensis	1	No	FAC	Total % Cove		Multipl	v bv:	
3.Brassica nigra	3	No	Not Listed	OBL species		x 1 =	0	
4.				FACW species	80	x 2 =	160	
5.				FAC species	1	x 3 =	3	
Total Cover:	24 %			FACU species	20	x 4 =	80	
Herb Stratum				UPL species	3	x 5 =	15	
1.				Column Totals:	104	(A)	258	(B)
2.		-		Prevalence	Index = B/	A =	2.48	
4.				Hydrophytic Veg			2.40	
5.				➤ Dominance T				
6.				× Prevalence Ir	ndex is ≤3.0)1		
7				Morphologica data in Re		ns¹ (Provide n a separate		ng
8. Total Cover:	0.1			Problematic H				1)
Woody Vine Stratum	%							
1				¹ Indicators of hyd be present.	ric soil and	d wetland hy	drology r	must
Total Cover:	%	`munt	-	Hydrophytic Vegetation	Vo.	No. C		
% Bare Ground in Herb Stratum 20 % % Cover of	אונוסום וכ	ust	<u>%</u>	Present?	Yes 💿	No ()	
Remarks:								

SOIL Sampling Point: 11 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) Color (moist) Loc² Texture³ (inches) Type¹ Remarks 100 0-410 YR 2/1 Clay loam 4 - 127.5 YR 3/2 100 Sandy clay loam ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. 3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils: Histosol (A1) 1 cm Muck (A9) (LRR C) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) ⁴Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type: Depth (inches): **Hydric Soil Present?** No (Yes (Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water Marks (B1) (Riverine) Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine) High Water Table (A2) Biotic Crust (B12) Drift Deposits (B3) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Shallow Aquitard (D3) Water-Stained Leaves (B9) FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes (No (Depth (inches): Water Table Present? Yes (No (Depth (inches): Saturation Present? Depth (inches): Yes (No (Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: US Army Corps of Engineers Arid West - Version 11-1-2006

Project/Site: Pure Water Program	City/County:San Diego	o/San Diego	Sampling Date: 09/27/2016
Applicant/Owner: City of San Diego		State:CA	Sampling Point:12a
Investigator(s): Danielle Mullen, Katie Dayton	Section, Township, Ra	 nge:	
Landform (hillslope, terrace, etc.):	Local relief (concave, o	convex, none): None	Slope (%):()
Subregion (LRR):C - Mediterranean California Lat:	_	Long:	 Datum:
Soil Map Unit Name: Gravel pits		NWI classific	eation: Freshwater pond
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes No (
		Normal Circumstances" p	present? Yes No No
		eded, explain any answe	
SUMMARY OF FINDINGS - Attach site map showing			
Hydrophytic Vegetation Present? Yes No No			
Hydric Soil Present? Yes No No	Is the Sampled	Area	
Wetland Hydrology Present? Yes No No	within a Wetlar	nd? Yes 🔘	No 💿
Remarks:This data station is located in open water.	·		
VEGETATION			
Absolute	Dominant Indicator	Dominance Test work	sheet:
Tree Stratum (Use scientific names.) % Cover		Number of Dominant Sp	
1		That Are OBL, FACW,	or FAC: (A)
2		Total Number of Domin	ant
3		Species Across All Stra	ta: 0 (B)
4		Percent of Dominant Sp	
Total Cover: % Sapling/Shrub Stratum		That Are OBL, FACW,	or FAC: 0 % (A/B)
1.		Prevalence Index wor	ksheet:
2.	<u> </u>	Total % Cover of:	Multiply by:
3.		OBL species	x 1 = 0
4		FACW species	x 2 = 0
5		FAC species	x 3 = 0
Total Cover: % Herb Stratum		FACU species UPL species	x 4 = 0 x 5 = 0
1.		Column Totals:	0
2.	<u> </u>	Column Totals.	(A) 0 (B)
3.		Prevalence Index	
4.		Hydrophytic Vegetation	
5.		Dominance Test is	
6		Prevalence Index is	
7.			ptations ¹ (Provide supporting s or on a separate sheet)
8.		Problematic Hydro	phytic Vegetation¹ (Explain)
Woody Vine Stratum			
1.			il and wetland hydrology must
2.		be present.	
Total Cover: %	Ó	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum % % Cover of Biotic	Crust %		s O No 💿
Remarks:			

SOIL

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)
| Depth | Matrix | Redox Features

	cription: (Describe t	to the depth			r or confirm t	he absence of i	ndicators.)	
Depth	Matrix Color (moist)	<u></u> %		K Features	Loc ²	Texture ³	Dom	orko
(inches)	Color (moist)		Color (moist)	%Type ¹	LOC-	rexture	Rem	arks
				·				
¹ Type: C=C	oncentration, D=Depl	etion, RM=Re	educed Matrix.	² Location: PL=Po	re Lining, RC=	Root Channel, N	∕I=Matrix.	
³ Soil Texture	es: Clay, Silty Clay, S	andy Clay, Lo	oam, Sandy Clay	Loam, Sandy Loa	m, Clay Loam,	Silty Clay Loam	, Silt Loam, Silt, Loa	my Sand, Sand.
Hydric Soil I	ndicators: (Applicable	e to all LRRs,	unless otherwise	noted.)		Indicators for P	roblematic Hydric S	oils:
Histoso	I (A1)		Sandy Redo	x (S5)		1 cm Muck	(A9) (LRR C)	
Histic E	pipedon (A2)		Stripped Ma	atrix (S6)		2 cm Muck	(A10) (LRR B)	
	istic (A3)			ky Mineral (F1)		Reduced V		
	en Sulfide (A4)			ved Matrix (F2)			t Material (TF2)	
	d Layers (A5) (LRR C	;)	Depleted M			Other (Exp	lain in Remarks)	
	uck (A9) (LRR D)			Surface (F6)				
	d Below Dark Surface	e (A11)		ark Surface (F7)				
	ark Surface (A12)			ressions (F8)		⁴ Indicators of b	udranhutia vagatatia	n and
	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Pool	S (F9)			ydrophytic vegetatio rology must be pres	
						welland nyd	rology must be pres	CIII.
	Layer (if present):							
Type:								
Depth (in						-	sent? Yes 💿	No 🔘
	oils were not sampl	led because	the data station	is within open	water. Howe	ver, hydric soil	s are assumed giv	en the presence
0	f standing water.							
HYDROLO								
Wetland Hy	drology Indicators:					Secondary	y Indicators (2 or mo	re required)
Primary Indi	cators (any one indica	ator is sufficie	nt)			Water	Marks (B1) (Riveri	ne)
X Surface	Water (A1)		Salt Crust	(B11)		Sedin	nent Deposits (B2) (Riverine)
	ater Table (A2)		Biotic Crus	st (B12)		Drift D	Deposits (B3) (River	ine)
X Saturati				vertebrates (B13)		Drain	age Patterns (B10)	ŕ
	Marks (B1) (Nonriveri	ne)	Hydrogen	Sulfide Odor (C1)		Dry-S	eason Water Table	(C2)
	nt Deposits (B2) (Non	,		Rhizospheres alon			Muck Surface (C7)	
	posits (B3) (Nonriver			of Reduced Iron (0		, , Ш	sh Burrows (C8)	
	Soil Cracks (B6)	,		n Reduction in Plo	,		ation Visible on Aeri	al Imagery (C9)
	ion Visible on Aerial Ir	magery (B7)		olain in Remarks)	(· <u></u>	ow Aquitard (D3)	
لنت	Stained Leaves (B9)			,			Neutral Test (D5)	
Field Obser							1000.00. 1000 (20)	
Surface Wat		no 🕟 No	O Donth (in	ches): 0				
		es No		<i>'</i>				
Water Table		es 💿 No		,				
Saturation F		es 💿 No	O Depth (inc	ches): 0	Wetlan	d Hydrology Pr	esent? Yes 💿	No (
	pillary fringe) corded Data (stream	gauge, monit	oring well, aerial i	ohotos, previous ir				
	2010 (01100111	J		, p	- p /, ii (
Domertia								
Remarks:								

Project/Site: Pure Water Program			City/Co	ounty:San Dieg	go/San Diego	Sa	mpling Date:	39/27/2016
Applicant/Owner: City of San Diego					State:CA	Sa	mpling Point:	12b
Investigator(s): Danielle Mullen, Katie	Dayton		Section	n, Township, Ra	ange:		-	
Landform (hillslope, terrace, etc.):			Local	relief (concave,	convex, none): Non	e	Slo	ope (%):()
Subregion (LRR):C - Mediterranean C	alifornia	Lat:			Long:		 Dati	 um:
Soil Map Unit Name: Riverwast					_	assificatio	n: Freshwate	
Are climatic / hydrologic conditions on the	e site typical for	this time of ve	ar? Ye	es (•) No (P
	drology	significantly			"Normal Circumstan		,	No (
	drology	naturally pro			eeded, explain any a		~	,
				,			ŕ	
SUMMARY OF FINDINGS - Att	ach site mar	snowing	samp	oling point i	ocations, trans	ects, in	iportant fe	atures, et
Hydrophytic Vegetation Present?	Yes 🕟	No 🔘						
Hydric Soil Present?	Yes 🕡	No (Is the Sample	d Area			
Wetland Hydrology Present?	Yes	No 💮		within a Wetla	nd? Yes		No 💿	
Remarks:								
VEGETATION		Absolute		nant Indicator	Dominance Test	workshe	et:	
Tree Stratum (Use scientific names.) 1.		% Cover	Speci	es? Status	Number of Domin That Are OBL, FA			1 (A)
3.					Total Number of I Species Across A			1 (B)
4.					Percent of Domin	ant Sneci	es	
Capling/Chruh Ctratum	Total Co	ver: %			That Are OBL, FA			0.0 % (A/E
Sapling/Shrub Stratum 1. Typha domingensis		100	Yes	OBL	Prevalence Inde	y worksh	eet:	
2.			105	OBL	Total % Cove		Multip	olv bv:
3.				·	OBL species	100	x 1 =	100
4.					FACW species		x 2 =	0
5.					FAC species		x 3 =	0
	Total Cov	ver: 100%			FACU species		x 4 =	0
Herb Stratum					UPL species		x 5 =	0
1.					Column Totals:	100	(A)	100 (
2. 3.					Prevalence	Index = F	3/A =	1.00
4.					Hydrophytic Veg	getation I	ndicators:	1.00
5.					➤ Dominance T			
6.					× Prevalence II	ndex is ≤3	.0 ¹	
7.					Morphologica			
8.							on a separate	
	Total Cov	ver: %			Problematic I	Hydrophy	tic Vegetation	' (Explain)
Woody Vine Stratum		,0			1 Indicators of by	dria agil gu	ad watland by	udrala av mus
1					Indicators of hyden be present.	ilic soli ai	ia wellana n	arology mus
2	T-1-1-0				Hydrophytic			
	Total Cov				Vegetation			
% Bare Ground in Herb Stratum	% Co	ver of Biotic C	rust _	%	Present?	Yes 🤄	No ()
Remarks:					-			
1								

SOIL Sampling Point: 12b Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Loc² Color (moist) Texture³ (inches) Color (moist) Type¹ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. 3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils: Histosol (A1) 1 cm Muck (A9) (LRR C) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) ⁴Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type: Depth (inches): **Hydric Soil Present?** Yes (No (Remarks: Soils were not sampled due to access restrictions, including open water and dense vegetation. Hydric soil is assumed because the soil supports freshwater marsh and obligate species. **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water Marks (B1) (Riverine) X Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine) $|\mathbf{x}|$ High Water Table (A2) Biotic Crust (B12) Drift Deposits (B3) (Riverine) X Saturation (A3) Aquatic Invertebrates (B13) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Shallow Aquitard (D3) Water-Stained Leaves (B9) FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes (No (Depth (inches): 0 Water Table Present? Yes (No (Depth (inches): Saturation Present? Depth (inches): Yes (No (Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: US Army Corps of Engineers Arid West - Version 11-1-2006

Project/Site: Pure Water Program		City/County	San Dieg	o/San Diego	Sam	pling Date:	09/27/20	16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:	12c	
Investigator(s): Danielle Mullen, Katie Dayton		Section, To	wnship, Ra	inge:		-		
Landform (hillslope, terrace, etc.):		Local relie	f (concave,	convex, none):None		Slo	ope (%):()	
Subregion (LRR):C - Mediterranean California La	at:			Long:		Dati	um:	
Soil Map Unit Name: Riverwash				NWI class	ification	Freshwater f	orrested/shr	ub wetlar
Are climatic / hydrologic conditions on the site typical for this time	e of ye	ar? Yes 🕡	No ((If no, explain in	Remark	(S.)		
Are Vegetation Soil or Hydrology significant	icantly	disturbed?	Are	"Normal Circumstances	" presei	nt? Yes 🕡	No	0
Are Vegetation Soil or Hydrology natura	ally pro	blematic?	(If ne	eeded, explain any ansv	wers in I	Remarks.)		
SUMMARY OF FINDINGS - Attach site map show	wing	samplin	g point lo	ocations, transect	s, imp	ortant fe	atures,	etc.
Hydrophytic Vegetation Present? Yes No No								
Hydric Soil Present? Yes No		ls th	ne Sampleo	l Area				
Wetland Hydrology Present? Yes No No			in a Wetla			No 💿		
Remarks: The data station was taken in arundo-dominate	ed ripa	arian habit	at within t	the San Diego River	(see ma	ap 24).		
VEGETATION								
	olute	Dominant		Dominance Test wo	rkshee	t:		
Tree Stratum (Use scientific names.) % C	Cover	Species?	Status	Number of Dominant			1	(A)
2.				That Are OBL, FACV	V, OI FA	C .	1	(A)
3.				Total Number of Don Species Across All S			1	(B)
4.				-			1	
Total Cover:	%			 Percent of Dominant That Are OBL, FACV 		_	0.0 %	(A/B)
Sapling/Shrub Stratum					•	10	0.0 %	, , ,
	100	Yes	FACW	Prevalence Index w				
2				Total % Cover of	r:	Multip		
3				OBL species FACW species	100	x 1 = x 2 =	200	
4				FAC species	100	x 2 =	0	
	100%			FACU species		x 4 =	0	
Herb Stratum	100 /0			UPL species		x 5 =	0	
1.				Column Totals:	100	(A)	200	(B)
2.						, ,		, ,
3				Prevalence Ind			2.00	
4				Hydrophytic Vegeta Dominance Test				
5.				× Prevalence Inde				
6. 7.				Morphological A			e supportir	ng
8.				data in Rema	rks or o	n a separate	e sheet)	
Total Cover:	%			- Problematic Hyd	rophytic	Vegetation	¹ (Explain)
Woody Vine Stratum	%0			1				
1				¹ Indicators of hydric be present.	soil and	I wetland h	ydrology r	nust
2								
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum % Cover of B	Biotic C	rust	%		Yes 💿	No (
Remarks:								

SOIL Sampling Point: 12c Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) Loc² Texture³ (inches) Color (moist) Type¹ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. 3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils: Histosol (A1) 1 cm Muck (A9) (LRR C) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) ⁴Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type: Depth (inches): **Hydric Soil Present?** Yes 💿 No (Remarks: The data station is within an impenetrable stand of Arundo donax. There was no access to collect a soil sample, however hydric soils are assumed given the presence within San Diego River and adjacent freshwater marsh and open water and presence of facultative wetland species. **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water Marks (B1) (Riverine) Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine) High Water Table (A2) Biotic Crust (B12) Drift Deposits (B3) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) X Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Shallow Aquitard (D3)

Water-Stained Leaves (B9) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes (No (Depth (inches): Water Table Present? Yes (No (Depth (inches): Saturation Present? Depth (inches): Yes (No (Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: US Army Corps of Engineers

Project/Site: Pure Water Program		City/Count	y:San Diego	o/San Diego	Samp	ling Date:09	/28/20	16
Applicant/Owner: City of San Diego				State:CA	Samp	ling Point:13		
Investigator(s): Katie Dayton, Danielle Mullen		Section, To	ownship, Rar	nge: 30, 15S, 1W		_		
Landform (hillslope, terrace, etc.): Flat		Local relie	f (concave, o	convex, none): None	.	Slope	e (%):()	
Subregion (LRR):C - Mediterranean California	Lat:32.8	34		Long:-117.02		 Datum	n:	
Soil Map Unit Name: Riverwash				NWI cla	ssification:]	None		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes	No C	(If no, explain	n in Remark	s.)		
	_	disturbed?		Normal Circumstand	es" present	? Yes (•)	No	\circ
	aturally pro	oblematic?	(If ne	eded, explain any a	nswers in R	emarks.)		
SUMMARY OF FINDINGS - Attach site map si							tures,	etc.
Hydrophytic Vegetation Present? Yes (No								
	•	ls t	he Sampled	Area				
	•		hin a Wetlan		O N	lo 💿		
Remarks:		l						
VEGETATION								
	Absolute	Dominant		Dominance Test	worksheet:			
	% Cover 50	Species? Yes	Status	Number of Domina		. 0		, Λ \
1. Salix gooddingii 2. Populus fremontii	$\frac{30}{20}$	Yes	FACW Not Listed	That Are OBL, FA	CVV, OI FAC	2		(A)
3.		168	Not Listed	Total Number of D Species Across Al		2		(B)
4.				Opecies Across Ai	i Strata.	3	,	
Total Cover:	70 %			Percent of Domina That Are OBL, FA		66.7	7 % ((A/B)
Sapling/Shrub Stratum	20	Vac	E.C.	Prevalence Index	workshoot			
1.Baccharis salicifolia 2.Baccharis pilularis	<u>20</u> 5	Yes No	FAC	Total % Cove		 Multiply	hv.	
3.		110	Not Listed	OBL species	01.	x 1 =	0	
4.				FACW species	50	x 2 =	100	
5.				FAC species	20	x 3 =	60	
Total Cover:	25 %			FACU species		x 4 =	0	
Herb Stratum				UPL species	45	x 5 =	225	
1-Brassica nigra (dead)	20	No	Not Listed	Column Totals:	115	(A)	385	(B)
2-Helminthotheca echioides (dead)			FACU	Prevalence I	ndev = R/A	_	3.35	
3.				Hydrophytic Veg			3.33	
5.				➤ Dominance Te		0010101		
6.				Prevalence In				
7.				Morphological	Adaptation	s¹ (Provide s	upportir	ng
8.						a separate s	,	
Total Cover:	20 %			Problematic H	lydrophytic \	Vegetation¹ (Explain)
Woody Vine Stratum	20 /0			1				.
1				¹ Indicators of hydi be present.	ric soil and	wetland hyd	fology n	nust
2Total Cover:	%			Hydrophytic				
		Sm. a4		Vegetation	V 0	NI- O		
% Bare Ground in Herb Stratum 40 % % Cover	OI DIU(IC (ust	<u>%</u>	Present?	Yes	No 🔘		
Remarks:								

SOIL Sampling Point: 13

Depth (inches)	Color (moist)	%	Redo: Color (moist)	% Ty	pe ¹ Loc ²	Texture ³	Remarks
0-16	10 YR 4/2	100				Sand	
	-						
	-						
	-						
Type: C=C	 Concentration, D=Dep	letion PM=P	Peduced Matrix	² Location: DL=	-Doro Lining F	RC=Root Chann	and M-Matrix
					-		oam, Silt Loam, Silt, Loamy Sand, Sal
	Indicators: (Applicab						for Problematic Hydric Soils:
Histoso			Sandy Redo	-			Muck (A9) (LRR C)
Histic E	Epipedon (A2)		Stripped Ma	atrix (S6)			Muck (A10) (LRR B)
Black H	listic (A3)			ky Mineral (F1)		Reduc	ed Vertic (F18)
	en Sulfide (A4)			ed Matrix (F2)			arent Material (TF2)
	ed Layers (A5) (LRR	C)	Depleted M	` ,		Other	(Explain in Remarks)
	luck (A9) (LRR D)	- (011)		Surface (F6)	7)		
	ed Below Dark Surfac Dark Surface (A12)	e (A11)		ark Surface (F7 ressions (F8)	()		
	Mucky Mineral (S1)		Vernal Pool	` ,		⁴ Indicators	of hydrophytic vegetation and
	Gleyed Matrix (S4)		Verriai i oo	(i 0)			hydrology must be present.
	Layer (if present):						
Type:	, , ,						
. , , ,							
Depth (ii	nches):					Hydric Soil	Present? Yes No (
Depth (ii Remarks:	nches):					Hydric Soil	Present? Yes No No
Remarks:						Hydric Soil	Present? Yes No No
Remarks:							Present? Yes No ndary Indicators (2 or more required)
YDROLO Wetland H	DGY		ent)			Secon	
YDROLO Wetland Hy	OGY ydrology Indicators:		ent) Salt Crust	(B11)		Secon	ndary Indicators (2 or more required)
YDROLO Vetland Hy rimary Ind	OGY odrology Indicators: icators (any one indic			` ,		Secon W	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine)
YDROLO Vetland Hy Primary Ind Surface High W	OGY /drology Indicators: icators (any one indices water (A1)		Salt Crust Biotic Crus	` ,	13)	Secon W	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
YDROLO Wetland Hy Primary Ind Surface High W Saturat	ydrology Indicators: icators (any one indicators (A1) water (A2)	ator is sufficie	Salt Crust Biotic Crust Aquatic In	st (B12)	,	Secor Secor S D D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I	ody ydrology Indicators: icators (any one indicators) e Water (A1) ydter Table (A2) ion (A3)	ator is sufficie	Salt Crust Biotic Crust Aquatic In Hydrogen	st (B12) vertebrates (B1	C1)	Secor Secor S D D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) wrift Deposits (B3) (Riverine) erainage Patterns (B10)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ody ydrology Indicators: icators (any one indic e Water (A1) /ater Table (A2) ion (A3) Warks (B1) (Nonriver	ine) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F	st (B12) vertebrates (B1 Sulfide Odor (0	C1) llong Living Ro	Secon Secon S D D Doots (C3) C	indary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) orift Deposits (B3) (Riverine) originage Patterns (B10) ory-Season Water Table (C2) hin Muck Surface (C7) orayfish Burrows (C8)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ody odrology Indicators: icators (any one indicators) water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (No	ine) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a	C1) llong Living Ro n (C4)	Secon Secon S D D Doots (C3) C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) brift Deposits (B3) (Riverine) brainage Patterns (B10) bry-Season Water Table (C2) hin Muck Surface (C7)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	ydrology Indicators: icators (any one indicators); water (A1) dater Table (A2) dion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	ine) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro	C1) llong Living Ron (C4) Plowed Soils	Secor W S S D D D D C C C S C C S C C C	indary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) orift Deposits (B3) (Riverine) originage Patterns (B10) ory-Season Water Table (C2) hin Muck Surface (C7) orayfish Burrows (C8)
YDROLO Vetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De	drology Indicators: icators (any one indicators) water (A1) dater Table (A2) dion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (No eposits (B3) (Nonrive et Soil Cracks (B6)	ine) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in	C1) llong Living Ron (C4) Plowed Soils	Secor W S S D D D C C C S C S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) virit Deposits (B3) (Riverine) virainage Patterns (B10) viry-Season Water Table (C2) hin Muck Surface (C7) virayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
YDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Surface Inunda Water-	ydrology Indicators: icators (any one indicators) water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial (Stained Leaves (B9)	ine) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in	C1) llong Living Ron (C4) Plowed Soils	Secor W S S D D D C C C S C S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) virit Deposits (B3) (Riverine) virainage Patterns (B10) viry-Season Water Table (C2) hin Muck Surface (C7) virayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inunda Water	drology Indicators: icators (any one indicators (any one indicators) water (A1) dater Table (A2) dion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (No eposits (B3) (Nonrive) e Soil Cracks (B6) dion Visible on Aerial (Stained Leaves (B9)) rvations:	ine) nriverine) rine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in blain in Remark	C1) llong Living Ron (C4) Plowed Soils	Secor W S S D D D C C C S C S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) virit Deposits (B3) (Riverine) virainage Patterns (B10) viry-Season Water Table (C2) hin Muck Surface (C7) virayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inunda Water Field Obse	pdrology Indicators: icators (any one indicators (any one indicators) water (A1) vater Table (A2) vion (A3) warks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial (Stained Leaves (B9) rvations: viter Present?	ine) nriverine) rine) Imagery (B7)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates (B1 Sulfide Odor (CRhizospheres a of Reduced Iro on Reduction in blain in Remark	C1) llong Living Ron (C4) Plowed Soils	Secor W S S D D D C C C S C S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) virit Deposits (B3) (Riverine) virainage Patterns (B10) viry-Season Water Table (C2) hin Muck Surface (C7) virayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inunda Water Field Obse Surface Water Table	ydrology Indicators: icators (any one indicators (any one indicators) water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriver) ent Deposits (B2) (Nonriver) ent Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: ter Present? ye Present?	ine) nriverine) Imagery (B7) (es \ No.	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in blain in Remark ches): ches):	C1) Ilong Living Ro n (C4) Plowed Soils	Secon W S S D D D Oots (C3) T C (C6) S F	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Irrit Deposits (B3) (Riverine) Irrit Deposits (B10) Irry-Season Water Table (C2) Irrithin Muck Surface (C7) Irrayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3) AC-Neutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Sedime Surface Inunda Water- Field Obse Surface Water Table Saturation I	pdrology Indicators: icators (any one indicators) water (A1) vater Table (A2) vion (A3) warks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: vater Present? e Present? vapillary fringe)	ine) nriverine) Imagery (B7) (es	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in plain in Remark ches): ches):	C1) Ilong Living Ro n (C4) Plowed Soils ss) Wet	Secon Secon S S S S C C C C C C C C C	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) virit Deposits (B3) (Riverine) virainage Patterns (B10) viry-Season Water Table (C2) hin Muck Surface (C7) virayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
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YDROLO Wetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inunda Water- Field Obse Surface Wa Water Table Saturation If	pdrology Indicators: icators (any one indicators) water (A1) vater Table (A2) vion (A3) warks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: vater Present? e Present? vapillary fringe)	ine) nriverine) Imagery (B7) (es	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in plain in Remark ches): ches):	C1) Ilong Living Ro n (C4) Plowed Soils ss) Wet	Secon Secon S S S S C C C C C C C C C	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Irrit Deposits (B3) (Riverine) Irrit Deposits (B10) Irry-Season Water Table (C2) Irrithin Muck Surface (C7) Irrayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3) AC-Neutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inunda Water Field Obse Surface Wa Water Table Saturation I	pdrology Indicators: icators (any one indicators) water (A1) vater Table (A2) vion (A3) warks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: vater Present? e Present? vapillary fringe)	ine) nriverine) Imagery (B7) (es	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in plain in Remark ches): ches):	C1) Ilong Living Ro n (C4) Plowed Soils ss) Wet	Secon Secon S S S S C C C C C C C C C	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Irrit Deposits (B3) (Riverine) Irrit Deposits (B10) Irry-Season Water Table (C2) Irrithin Muck Surface (C7) Irrayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3) AC-Neutral Test (D5)
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YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I Surface Inunda Under- Water- Surface Water- Surface Water- Surface Water Table Saturation I Surface Water Table Secribe Research	pdrology Indicators: icators (any one indicators) water (A1) vater Table (A2) vion (A3) warks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: vater Present? e Present? vapillary fringe)	ine) nriverine) Imagery (B7) (es	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in plain in Remark ches): ches):	C1) Ilong Living Ro n (C4) Plowed Soils ss) Wet	Secon W S S D	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Irrit Deposits (B3) (Riverine) Irrit Deposits (B10) Irry-Season Water Table (C2) Irrithin Muck Surface (C7) Irrayfish Burrows (C8) aturation Visible on Aerial Imagery (C5) hallow Aquitard (D3) AC-Neutral Test (D5)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I Sedime Unift De Unift D	pdrology Indicators: icators (any one indicators) water (A1) vater Table (A2) vion (A3) warks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial I Stained Leaves (B9) rvations: vater Present? e Present? vapillary fringe)	ine) nriverine) Imagery (B7) (es	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	st (B12) vertebrates (B1 Sulfide Odor (C Rhizospheres a of Reduced Iro on Reduction in plain in Remark ches): ches):	C1) Ilong Living Ro n (C4) Plowed Soils ss) Wet	Secon W S S D	Indary Indicators (2 or more required) Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) Irrit Deposits (B3) (Riverine) Irrit Deposits (B10) Irry-Season Water Table (C2) Irry-Season Water Table (C2) Irry-Season Water (C7) Irrayfish Burrows (C8) aturation Visible on Aerial Imagery (C2) Irrit Hallow Aquitard (D3) AC-Neutral Test (D5)

Project/Site: Pure Water Program		City/Courit	y San Dieg	go/San Diego	Sa	mpling Date:	09/20/20	116
Applicant/Owner: City of San Diego				State:CA	Sa	mpling Point:	14a	
nvestigator(s):Danielle Mullen, Katie Dayton		Section, T	ownship, Ra	ange: 30, 15S, 1W				
andform (hillslope, terrace, etc.):		Local relie	ef (concave,	convex, none): Non	e	SI	ope (%):()	
Subregion (LRR):C - Mediterranean California	Lat:32.8	33		Long:-117.02		 Dat	um:	
coil Map Unit Name: Riverwash					assificatio	n: Freshwater i	forrested/sh	rub wetl
Are climatic / hydrologic conditions on the site typical for this	time of ve	ear? Yes	No (
	-	disturbed?		"Normal Circumstan		,) No	\circ
		oblematic?		eeded, explain any a		_	,	
SUMMARY OF FINDINGS - Attach site map s							anturae	oto
SOMMAN OF THE HADINGS - Attach site map s	niowing	Sampiiii	ig point i	ocations, trans	-cis, iii	portant is	zatures,	elc.
, , , ,	o ()							
) ()		he Sample					
Wetland Hydrology Present? Yes No Remarks:	P (wit	hin a Wetla	nd? Yes	•	No 🔘		
VEGETATION								
	Absolute	Dominant	Indicator	Dominance Test	workshe	et:		
Tree Stratum (Use scientific names.)	% Cover	Species?		Number of Domin				
1.Salix gooddingii	60	Yes	FACW	That Are OBL, FA			4	(A)
2.				Total Number of [Dominant			
3				Species Across A	II Strata:		4	(B)
4.				Percent of Domin				
Total Cover Sapling/Shrub Stratum	: 60 %			That Are OBL, FA	CW, or F.	AC: 10	00.0 %	(A/B)
1.Baccharis salicifolia	20	No	FAC	Prevalence Index	x worksh	eet:		
2.			-	Total % Cove	er of:	Multip	oly by:	_
3.				OBL species	30	x 1 =	30	
4.				FACW species	95	x 2 =	190	
5				FAC species	20	x 3 =	60	
Total Cover: Herb Stratum	20 %			FACU species		x 4 = x 5 =	0	
1-Nasturtium officinale	30	Yes	OBL	UPL species			0	(D)
2. Cyperus eragrostis	30	Yes	FACW	_ Column Totals:	145	(A)	280	(B)
3. Oenothera elata	5	Yes	FACW	Prevalence	Index = E	3/A =	1.93	
4.				Hydrophytic Veg	etation li	ndicators:		
5.			-	Dominance T	est is >50	1%		
6.		-	-	× Prevalence Ir				
7.				Morphologica		ons¹ (Provid on a separat		ng
8.				Problematic I		•		1)
Total Cover Woody Vine Stratum	65 %			Troblemation	туагорпус	io vegetation	(Explain	')
1.				¹ Indicators of hyd	ric soil ar	nd wetland h	vdrology i	must
2.		-		be present.			, , , , ,	
Total Cover.	: %			Hydrophytic				
Total Cover				Vegetation Present?				
	of Biotic C	runt	%		Yes (No (

SOIL Sampling Point: 14a

(inches)	Matrix Color (moist)	%	Color (moist)		ype ¹ Loc	Texture ³	3	Remarks
0-4	10 YR 3/2	100	()	· <u> </u>	77-	Sandy clay le		
				· — —				
4-12	7.5 YR 2.5/1			· —— —		Clay loam		
	_							
T O		-I-ti DM I	De division di Marketoni	- 21 · · · · · · · · · · · · · · · · · ·				
	Concentration, D=Dep					g, RC=Root Cha		m, Silt, Loamy Sand, Sar
	Indicators: (Applicab				Loain, Clay		rs for Problemat	
Histos		ne to an Liviv	Sandy Redo	-			n Muck (A9) (LR	•
	Epipedon (A2)		Stripped Ma	, ,			m Muck (A10) (L	
	Histic (A3)		Loamy Muc	ky Mineral (F	1)		duced Vertic (F1	
Hydrog	gen Sulfide (A4)		Loamy Gley	ed Matrix (F2	2)	Red	l Parent Materia	I (TF2)
	ed Layers (A5) (LRR	C)	Depleted M	` '		Oth	er (Explain in Re	emarks)
	/luck (A9) (LRR D)			Surface (F6)				
	ed Below Dark Surfac	e (A11)		ark Surface (F				
	Dark Surface (A12)			ressions (F8)		41		
	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Poo	IS (F9)			and hydrology m	c vegetation and
	Layer (if present):					Wetta	ina riyarology iir	ust be present.
Type:	Layer (ii present).							
Donth (i	nchos):					Hydric S	oil Procent?	Vos 🕟 No 🔿
Depth (i		soil indica	tors present how	over the lea	ention is ass	-		Yes No No No State of the State
Remarks: 7	There are no hydric					sumed ACOE v		Yes No No that it is within the S
Remarks: 7						sumed ACOE v		9 9
Remarks: 7	There are no hydric					sumed ACOE v		9 9
Remarks: 7	There are no hydric Diego River. The p					sumed ACOE v		9 9
Remarks: 1	There are no hydric Diego River. The pi	it was dug a				sumed ACOE values.	wetlands giver	n that it is within the S
YDROLO Wetland H	There are no hydric Diego River. The property OGY	it was dug a	about 2 feet from			sumed ACOE values.	wetlands giver	n that it is within the So
YDROLO Wetland H Primary Inc	There are no hydric Diego River. The property of the property	it was dug a	about 2 feet from	perennial n		sumed ACOE values.	wetlands giver condary Indicato Water Marks (I	ors (2 or more required) B1) (Riverine)
YDROLO Wetland H Primary Inc	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust	perennial n		sumed ACOE values.	wetlands giver condary Indicato Water Marks (I Sediment Depo	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine)
YDROLO Vetland H Primary Inc Surfac High W	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crus	(B11) st (B12)	on-wetland	sumed ACOE values.	condary Indicate Water Marks (I Sediment Depo	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine)
YDROLO Wetland H Primary Inc Surfac High W X Satura	OGY ydrology Indicators: dicators (any one indicators (A1) Vater Table (A2) tion (A3)	it was dug a	ient) Salt Crust Biotic Crust Aquatic In	(B11) st (B12) vertebrates (E	on-wetland	sumed ACOE values.	condary Indicate Water Marks (I Sediment Depo Drift Deposits (ors (2 or more required) B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10)
YDROLO Wetland H Primary Inc Surfac High W Satura Water	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen	(B11) st (B12) vertebrates (E) Sulfide Odor	on-wetland	Semed ACOE values.	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) dater Table (C2)
YDROLO Wetland H Primary Inc Surfac High W Satura Water Sedim	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres	on-wetland 313) (C1) along Living	Semed ACOE values.	condary Indicate Water Marks (I Sediment Depo Drift Deposits (I) Drainage Patte Dry-Season W	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) dater Table (C2) face (C7)
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedimo	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir	313) (C1) along Living	Sumed ACOE values and summed ACOE values. See See See See See See See See See Se	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) ater Table (C2) face (C7) ws (C8)
YDROLO Vetland H Primary Inc Surfac High W X Satura Water Sedim Drift Do	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir	313) (C1) along Living on (C4) in Plowed So	Sumed ACOE values and summed ACOE values. See See See See See See See See See Se	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro	ors (2 or more required) B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) later Table (C2) face (C7) ws (C8) ble on Aerial Imagery (C9)
YDROLO Vetland H Primary Inc Surfac High W X Satura Water Sedim Drift D Surfac Inunda	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir	313) (C1) along Living on (C4) in Plowed So	Sumed ACOE values and summed ACOE values. See See See See See See See See See Se	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi	ors (2 or more required) B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) cosits (B40) cosi
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedim Drift Do Surfac Inunda Water-	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir	313) (C1) along Living on (C4) in Plowed So	Sumed ACOE values and summed ACOE values. See See See See See See See See See Se	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro	ors (2 or more required) B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) cosits (B40) cosi
YDROLO Wetland H Primary Inc Surfac High W Satura Water Sedim Drift Do Surfac Inunda Water- Field Obse	There are no hydric Diego River. The property of the property	cator is sufficentiate) enriverine) erine) Imagery (B7)	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema	313) (C1) along Living ron (C4) in Plowed So	Sumed ACOE values and summed ACOE values. See See See See See See See See See Se	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi	ors (2 or more required) B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) cosits (B40) cosi
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedime Drift De Surfac Inunda Water- Field Obse	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema	313) (C1) along Living ron (C4) in Plowed So rks)	Sumed ACOE values and summed ACOE values. See See See See See See See See See Se	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi	ors (2 or more required) B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) cosits (B40) cosi
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedim Drift Do Surfac Inunda Water- Field Obse	There are no hydric Diego River. The property of the property	cator is sufficiently surviverine) Imagery (B7) (es	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Ex)	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i plain in Rema	on-wetland (C1) along Living on (C4) in Plowed Sorks)	Sumed ACOE values and summed ACOE values. See See See See See See See See See Se	condary Indicate Water Marks (I Sediment Depo Drift Deposits (Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi	ors (2 or more required) B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) cosits (B40) cosi
YDROLO Vetland H Primary Inc Surfac High W X Satura Water Sedim Drift D Surfac Inunda Water- Field Obse Surface Water Tabl Saturation	There are no hydric Diego River. The property of the property	cator is sufficiently surviverine) Imagery (B7) (es	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i plain in Rema	313) (C1) along Living ron (C4) in Plowed So rks)	Sumed ACOE value and according to the sum of	condary Indicate Water Marks (I Sediment Depolit Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (C8 ard (D3) est (D5)
YDROLO Vetland H Primary Inc Surfac High W X Satura Water Sedime Unift De Surfac Inunda Water- Field Obse Surface Wa Vater Tabl Saturation includes ca	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema ches): ches):	on-wetland (C1) along Living fon (C4) in Plowed So rks) 0 0 12	Roots (C3)	condary Indicate Water Marks (I Sediment Depole Drift Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (C8 ard (D3) est (D5)
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedime Unift De Surfac Inunda Water- Field Obse Surface Wa Water Tabl Saturation includes ca	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema ches): ches):	on-wetland (C1) along Living fon (C4) in Plowed So rks) 0 0 12	Roots (C3)	condary Indicate Water Marks (I Sediment Depole Drift Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (C9 ard (D3) est (D5)
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedim Drift Do Surfac Inunda Water- Field Obse Surface Wa Water Tabl Saturation includes co	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema ches): ches):	on-wetland (C1) along Living fon (C4) in Plowed So rks) 0 0 12	Roots (C3)	condary Indicate Water Marks (I Sediment Depole Drift Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (Cs ard (D3) est (D5)
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedim Drift Do Surfac Inunda Water- Field Obse Surface Wa Water Tabl Saturation includes co	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema ches): ches):	on-wetland (C1) along Living fon (C4) in Plowed So rks) 0 0 12	Roots (C3)	condary Indicate Water Marks (I Sediment Depole Drift Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (Cs ard (D3) est (D5)
YDROLO Wetland H Primary Inc Surfac High W X Satura Water Sedime Drift De Surfac Inunda Water- Field Obse Surface Wa Water Tabl Saturation includes ca	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema ches): ches):	on-wetland (C1) along Living fon (C4) in Plowed So rks) 0 0 12	Roots (C3)	condary Indicate Water Marks (I Sediment Depole Drift Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (Cs ard (D3) est (D5)
YDROLO Wetland H Primary Inc Surfac High W Satura Water Sedim Drift Do Surfac Inunda Water- Field Obse Surface Water Table Saturation includes co	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema ches): ches):	on-wetland (C1) along Living fon (C4) in Plowed So rks) 0 0 12	Roots (C3)	condary Indicate Water Marks (I Sediment Depole Drift Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (C8 ard (D3) est (D5)
YDROLO Vetland H Primary Inc Surfac High W Satura Water Sedim Unift Do Surfac Inunda Water- Gurface Water- Gurface Water Table Secribe R	There are no hydric Diego River. The property of the property	it was dug a	ient) Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir in Reduction i blain in Rema ches): ches):	on-wetland (C1) along Living fon (C4) in Plowed So rks) 0 0 12	Roots (C3)	condary Indicate Water Marks (I Sediment Depole Drift Deposits (I Drainage Patte Dry-Season W Thin Muck Sur Crayfish Burro Saturation Visi Shallow Aquita FAC-Neutral T	ors (2 or more required) B1) (Riverine) osits (B2) (Riverine) (B3) (Riverine) erns (B10) fater Table (C2) face (C7) ws (C8) ble on Aerial Imagery (C9 ard (D3) est (D5)

Project/Site: Pure Water Program	City/	County:San Dieg	o/San Diego	Sampling Date:	09/28/20	16
Applicant/Owner: City of San Diego			State:CA	Sampling Point:	14b	
Investigator(s): Danielle Mullen, Katie Dayto	on Sect	ion, Township, Ra	nge: 30, 15S, 1W			
Landform (hillslope, terrace, etc.):	Loca	al relief (concave,	convex, none):None	Slo	ope (%):0	
Subregion (LRR):C - Mediterranean Californ	ia Lat:32.83		Long:-117.02	Datı	um:	
Soil Map Unit Name: Riverwash			NWI classif	ication: Freshwater f	orrested/shi	rub wetlan
Are climatic / hydrologic conditions on the site ty	pical for this time of year?	Yes No ((If no, explain in F	Remarks.)		
Are Vegetation Soil or Hydrology	significantly distu	rbed? Are	"Normal Circumstances"	present? Yes) No	\circ
Are Vegetation Soil or Hydrology	naturally problem		eeded, explain any answ			
SUMMARY OF FINDINGS - Attach s		•		,	atures,	etc.
Hydrophytic Vegetation Present? Yes	No (•					
Hydric Soil Present? Yes	No	Is the Sampled	l Area			
Wetland Hydrology Present? Yes Remarks:	No No	within a Wetla	nd? Yes 🔿	No 💿		
VEGETATION	Absolute Don	ninant Indicator	Dominance Test wor	ksheet:		
Tree Stratum (Use scientific names.)		cies? Status	Number of Dominant S			
1			That Are OBL, FACW		0	(A)
2		<u>.</u>	Total Number of Domi	inant		
3			Species Across All Str	rata: (0	(B)
4	T-1-1 O		Percent of Dominant S			
Sapling/Shrub Stratum	Total Cover: %		That Are OBL, FACW	, or FAC: (0 %	(A/B)
1.			Prevalence Index wo	orksheet:		
2.			Total % Cover of:	Multip	ly by:	
3			OBL species	x 1 =	0	
4			FACW species	x 2 =	0	
5	Total Covers		FAC species FACU species	x 3 = x 4 =	0	
Herb Stratum	Total Cover: %		UPL species	x 5 =	0	
1.			Column Totals:	(A)	0	(B)
2.				. ,	U	(=)
3.		<u></u>	Prevalence Inde			
4.			Hydrophytic Vegetat			
5.			Dominance Test i Prevalence Index			
7.			Morphological Ad	aptations¹ (Provide		ng
8.	Total Cover:			ks or on a separate ophytic Vegetation	,)
Woody Vine Stratum	rotal Cover: %					
12.			¹ Indicators of hydric s be present.	soil and wetland hy	ydrology r	must
	Total Cover: %	·	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum%	% Cover of Biotic Crust	<u></u>		es No ()	
Remarks: There is no vegetation within the	e channel.					

SOIL Sampling Point: 14b

Soil Textures Hydric Soil Inc Histosol (Color (moist) % ncentration, D=Depletion, RM Clay, Silty Clay, Sandy Clay	Color (moist)		Loc ² T	Fexture ³	Remarks
Soil Textures Hydric Soil Inc Histosol (·	=Reduced Matrix				
Soil Textures Iydric Soil Ind Histosol (·	=Reduced Matrix				
Soil Textures ydric Soil Ind Histosol (·	=Reduced Matrix				
Soil Textures Soil Textures	·	=Reduced Matrix				
Soil Textures Soil Textures	·	=Reduced Matrix				
Soil Textures Iydric Soil Ind Histosol (·	=Reduced Matrix				
Soil Textures Hydric Soil Ind Histosol (·	=Reduced Matrix	·			
Soil Textures Hydric Soil Ind Histosol (·	=Reduced Matrix	· — — —			
Soil Textures Hydric Soil Inc Histosol (·	=Reduced Matrix				
Soil Textures Hydric Soil Inc Histosol (·	=Reduced Matrix				
Soil Textures Hydric Soil Inc Histosol (·	=Reduced Matrix				
Soil Textures Hydric Soil Inc Histosol (·		21 11			NA - 4 - 4 - 4 - 4
lydric Soil Ind Histosol (s: Clay, Slity Clay, Sandy Clay		² Location: PL=Pore	-		
Histosol (
	dicators: (Applicable to all LR	·	•	lr		oblematic Hydric Soils:
	'	Sandy Redo	` '	Ĺ	1 cm Muck (/	, \
	ipedon (A2)	Stripped Ma	` '	Ĺ	`	A10) (LRR B)
Black His			cky Mineral (F1)	Ĺ	Reduced Ver	
	n Sulfide (A4)		yed Matrix (F2)	Ļ		Material (TF2)
	Layers (A5) (LRR C)	Depleted M	` ,	L	Other (Expla	iin in Remarks)
	ck (A9) (LRR D)		Surface (F6)			
	Below Dark Surface (A11)		ark Surface (F7)			
	rk Surface (A12)		ressions (F8)	41	ladiaataa af bud	
	ucky Mineral (S1)	Vernal Poo	S (F9)	ı	•	drophytic vegetation and
	eyed Matrix (S4)				wettand nydro	plogy must be present.
	ayer (if present):					
Type:						
Depth (incl	hes):			Hy	ydric Soil Prese	ent? Yes No 💿
Remarks: No	soil data taken because th	e channel contains	water.			
YDROLOG	ЭΥ					
Vetland Hvd	rology Indicators:				Secondary I	Indicators (2 or more required)
•	ators (any one indicator is suff	iciont)				Marks (B1) (Riverine)
•	· •	,	(D44)			
	Vater (A1)	Salt Crust				ent Deposits (B2) (Riverine)
High Wat	er Table (A2)	Biotic Cru	st (B12)			eposits (B3) (Riverine)
Saturation	n (A3)	Aquatic In	vertebrates (B13)		Drainag	ge Patterns (B10)
Water Ma	arks (B1) (Nonriverine)	Hydrogen	Sulfide Odor (C1)		Dry-Sea	ason Water Table (C2)
Sediment	t Deposits (B2) (Nonriverine)	Oxidized F	Rhizospheres along L	Living Roots (C	ວ3) Thin Mເ	uck Surface (C7)
Drift Depo	osits (B3) (Nonriverine)	Presence	of Reduced Iron (C4	1)	Crayfish	h Burrows (C8)
Surface S	Soil Cracks (B6)	Recent Iro	n Reduction in Plow	ed Soils (C6)	Saturati	ion Visible on Aerial Imagery (C
Inundatio	n Visible on Aerial Imagery (B		plain in Remarks)	` ,		Aquitard (D3)
	ained Leaves (B9)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			eutral Test (D5)
Field Observ						
Telu Observ	_	N- O 5 " "	-h) :			
	<u> </u>	No Depth (in	,	_		
	Present? Yes	No Depth (in	ches):			
		No Depth (in	ches):	7		
Water Table F	esent? Yes			── Wetland I	Hydrology Pres	sent? Yes 💿 No 🔘
Water Table Faturation Preincludes capi	illary fringe)					
Nater Table F Saturation Pre includes capi	. 55 (photos, previous insp		ailable:	
Surface Wate Water Table F Saturation Pre (includes capi Describe Reco	illary fringe)		photos, previous insp		ailable:	
Water Table F Saturation Pre (includes capi	illary fringe)		photos, previous insp		ailable:	
Water Table F Saturation Pre (includes capi Describe Reco	illary fringe)		photos, previous insp		ailable:	
Nater Table F Saturation Pre includes capi Describe Reco	illary fringe)		photos, previous insp		ailable:	
Vater Table F Saturation Pre includes capi Describe Reco	illary fringe)		photos, previous insp		ailable:	
Vater Table Football Free Values Capiners (Values Capiners) Describe Records	illary fringe)		photos, previous insp		ailable:	

Project/Site: Pure Water Program	City/	County:Santee/Santee	an Diego	Sampling Date:0	9/28/2016
Applicant/Owner: City of San Diego			State:CA	Sampling Point:1	5a
Investigator(s): Danielle Mullen, Katie Dayt	on Sect	ion, Township, Ra	inge: 29, 15S, 1W		
Landform (hillslope, terrace, etc.):	Loc	al relief (concave,	convex, none):None	Slop	pe (%):()
Subregion (LRR):C - Mediterranean Californ	nia Lat:32.84		Long:-117.00	 Datu	m:
Soil Map Unit Name: Visalia gravelly sandy	loam		NWI classif	rication: Freshwater fo	rrested/shrub w
Are climatic / hydrologic conditions on the site t		Yes No ((If no, explain in I	Remarks.)	
Are Vegetation Soil or Hydrology	significantly distu	irbed? Are	"Normal Circumstances"	present? Yes	No 🔘
Are Vegetation Soil or Hydrology			eeded, explain any answ		
SUMMARY OF FINDINGS - Attach					atures, etc
Hydrophytic Vegetation Present? Yes	No (•)				
Hydric Soil Present? Yes	No	Is the Sample	l Area		
Wetland Hydrology Present? Yes Remarks:	No No	within a Wetla	nd? Yes C	No ●	
VEGETATION					
VEGETATION	Absolute Don	ninant Indicator	Dominance Test wor	rksheet:	
Tree Stratum (Use scientific names.)	% Cover Spe	cies? Status	Number of Dominant		
1.			That Are OBL, FACW	, or FAC: 0	(A)
2			Total Number of Dom		(D)
3.			Species Across All St	rata: 0	(B)
4	Total Cover: %		Percent of Dominant S That Are OBL, FACW		(A/D)
Sapling/Shrub Stratum	Total Cover. 70				% (A/B)
1			Prevalence Index wo		
2			Total % Cover of:		_
3.			OBL species FACW species	x 1 = x 2 =	0
5.			FAC species	x 3 =	0
	Total Cover: %		FACU species	x 4 =	0
Herb Stratum	70		UPL species	x 5 =	0
1			Column Totals:	(A)	0 (B
2.			Dravalance Inda	D/A =	
3.			Prevalence Inde		
4.			Hydrophytic Vegetat Dominance Test		
5.			Prevalence Index		
7			Morphological Ad	aptations ¹ (Provide ks or on a separate	
8	Total Cover: %			ophytic Vegetation ¹	•
Woody Vine Stratum 1.			¹ Indicators of hydric s be present.	soil and wetland hyd	drology must
2					
% Bare Ground in Herb Stratum %	Total Cover: % % Cover of Biotic Crust	%	Hydrophytic Vegetation Present? Y	es ○ No ●	`
	,, cover or brotto ordat		. 1000111:	JO NO (,
Remarks: No vegetation present.					

SOIL Sampling Point: 15a

Profile Des	cription: (Describe	to the depti	n needed to docur	nent the i	ndicator	or confirn	n the abser	nce of ir	dicators.)	
Depth	Matrix			(Features			- .	3		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	<u> </u>	Remarks	
0-2	10 YR 3/2	_100 _					Sandy clay			
2-8	10 YR 3/1	90 5	YR 2.5/1	_ 5			Clay		Dark redox feature	
2-8	10 YR 3/1	90 2	.5 YR 4/8	5			Clay		Red redox feature	
¹ Type: C=C	concentration, D=Dep	etion, RM=F	Reduced Matrix.	² Location:	: PL=Pore	Lining, R	C=Root Ch	annel, M	I=Matrix.	
1									Silt Loam, Silt, Loamy Sand,	Sand.
Hydric Soil I	ndicators: (Applicable	e to all LRR	s, unless otherwise	noted.)			Indicato	ors for P	roblematic Hydric Soils:	
Histoso	I (A1)		Sandy Redo	x (S5)			1 c	m Muck	(A9) (LRR C)	
	pipedon (A2)		Stripped Ma	, ,					(A10) (LRR B)	
	istic (A3)		Loamy Muc	-					ertic (F18)	
	en Sulfide (A4)	• \	Loamy Gley		(F2)				Material (TF2)	
	d Layers (A5) (LRR (uck (A9) (LRR D)	•)	➤ Depleted M Redox Dark		F6)			ner (Expi	ain in Remarks)	
	ed Below Dark Surface	e (A11)	Depleted Da	,	,					
I 🗀 '	ark Surface (A12)	, , , , ,	Redox Depi							
1 🗀	Mucky Mineral (S1)		Vernal Pool		,		⁴Indicat	tors of hy	drophytic vegetation and	
Sandy (Gleyed Matrix (S4)						wetla	and hydi	ology must be present.	
Restrictive	Layer (if present):									
Type:										
Depth (in	iches):						Hydric S	Soil Pres	sent? Yes No	
Remarks: D	ark and red redox	features ar	e present in soil a	t 2-8 incl	hes withi	in the cla	y inclusio	ns.		
HYDROLC	GY									
Wetland Hy	drology Indicators:						Se	econdary	Indicators (2 or more required	<u>(t</u>
Primary Indi	cators (any one indicate	ator is suffic	ient)					Water	Marks (B1) (Riverine)	
Surface	Water (A1)		Salt Crust	(B11)				Sedim	ent Deposits (B2) (Riverine)	
High W	ater Table (A2)		Biotic Crus	st (B12)				Drift D	eposits (B3) (Riverine)	
Saturati	on (A3)		Aquatic In	vertebrates	s (B13)			Draina	age Patterns (B10)	
Water N	Marks (B1) (Nonriver i	ne)	Hydrogen	Sulfide Od	lor (C1)			Dry-Se	eason Water Table (C2)	
L	nt Deposits (B2) (No.		X Oxidized F		_	_	ots (C3)		luck Surface (C7)	
	posits (B3) (Nonriver	ine)	Presence		`	,		_ ′	sh Burrows (C8)	
🗀	Soil Cracks (B6)		Recent Iro			ed Soils (C6)		tion Visible on Aerial Imagery	(C9)
	ion Visible on Aerial I	magery (B7)	Other (Exp	olain in Rei	marks)				w Aquitard (D3)	
	Stained Leaves (B9)							FAC-N	leutral Test (D5)	
Field Obser										
			o Depth (inc	· · · · · · · · · · · · · · · · · · ·						
Water Table	Present? Y	es O N	o Depth (inc	ches):						
Saturation F		es O N	o Depth (inc	ches):		Wet	and Hydro	logy Pro	seent? Vos 🙆 No	\circ
	pillary fringe) ecorded Data (stream	gauge mor	nitoring well aerial	ohotos pre	evious ine		-		esent? Yes No	0
2000 INC	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:										
nemarks.										
US Army Corp	s of Engineers									

Project/Site: Pure Water Program			City/Coun	ty:Santee/S	an Diego Sampling Date:0			09/28/20	9/28/2016	
Applicant/Owner: City of San Diego					State:CA	Sar	Sampling Point:15b			
Investigator(s): Danielle Mullen, Kati	e Dayton		Section, 7	Township, Ra	ange: 29, 15S, 1W					
Landform (hillslope, terrace, etc.):			Local reli	ef (concave,	convex, none): Non	e	SI	ope (%):()		
Subregion (LRR):C - Mediterranean (California	Lat:32.8	84		Long:-117.00		 Dat	um:		
Soil Map Unit Name: Visalia gravelly	sandy loam				NWI cla	assification	i: Freshwater	forrested/shr	ub wetlar	
Are climatic / hydrologic conditions on the	ne site typical for this	time of ye	ear? Yes (• No ((If no, explair	n in Remar	ks.)			
Are Vegetation Soil or H	ydrology sig	nificantly	disturbed	? Are	"Normal Circumstan	ces" prese	ent? Yes) No	\circ	
		turally pr	oblematic?		eeded, explain any a					
SUMMARY OF FINDINGS - At								eatures,	etc.	
Hydrophytic Vegetation Present?	Yes No									
Hydric Soil Present?	Yes No		Is	the Sample	d Area					
Wetland Hydrology Present? Remarks:	Yes No	0	wi	thin a Wetla	nd? Yes	•	No 🔘			
VEGETATION							_			
Tree Stratum (Use scientific names.		Absolute % Cover	Species?	t Indicator Status	Dominance Test Number of Domin					
1 Salix gooddingii	_	80	Yes	FACW	That Are OBL, FA			2	(A)	
2.					Total Number of [Oominant				
3.					Species Across A			2	(B)	
4					Percent of Domin	ant Specie	:S			
Sapling/Shrub Stratum	Total Cover:	80 %			That Are OBL, FA	CW, or FA	AC: 10	00.0%	(A/B)	
1.Arundo donax		10	No	FACW	Prevalence Index	x workshe	et:			
2.					Total % Cove	er of:	Multip	oly by:		
3.					OBL species		x 1 =	0		
4.					FACW species	95	x 2 =	190		
5					FAC species	62	x 3 =	186		
Herb Stratum	Total Cover:	10 %			FACU species		x 4 =	0		
1.Cyperus eragrostis		5	No	FACW	UPL species		x 5 =	0	(5)	
2.Rumex crispus		2.	No	FACW FAC	_ Column Totals:	157	(A)	376	(B)	
3.			-140	- TAC	Prevalence	Index = B	/A =	2.39		
4.					Hydrophytic Veg	etation In	dicators:			
5.					X Dominance T	est is >50	%			
6.					× Prevalence Ir	ndex is ≤3.	O ¹			
7.					Morphologica data in Re		ons¹ (Provid on a separat		ng	
8.	Total Cover:	-		-	Problematic I	Hydrophyti	c Vegetatior	n¹ (Explain))	
Woody Vine Stratum	Total Cover.	7 %								
1.Vitis girdiana 2.		60	Yes	FAC	¹ Indicators of hyd be present.	ric soil an	d wetland h	ydrology n	nust	
<u></u>	Total Cover:	60 %		-	Hydrophytic Vegetation					
% Bare Ground in Herb Stratum	% Cover of	of Biotic (Crust	%	Present?	Yes 💿	No (\supset		
Remarks:									$\overline{}$	

SOIL Sampling Point: 15b

Profile Des	cription: (Describe	to the depth r	needed to docu	ment the ir	ndicator	or confirn	n the absence of in	dicators.)		
Depth	Matrix			x Features						
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks		
0-1	10 YR 2/2	100					Loam			
2-8	10 YR 3/2	95 7.5	YR 5/8	5			Sand			
			110,0	- — -						
8-16	10 YR 4/2						Sand			
	-									
	-									
	-									
¹ Type: C=C	Concentration, D=Dep	letion, RM=Re	duced Matrix.	² Location:	PL=Pore	Linina. R	C=Root Channel, M	=Matrix.		
1 .	•					-		Silt Loam, Silt, Loamy Sand, Sand.		
	Indicators: (Applicab							oblematic Hydric Soils:		
Histoso		•	Sandy Redo	-				(A9) (LRR C)		
	pipedon (A2)		Stripped Ma	. ,			2 cm Muck ((A10) (LRR B)		
	listic (A3)		Loamy Muc	, ,	(F1)		Reduced Ve	ertic (F18)		
Hydrog	en Sulfide (A4)		Loamy Gle	yed Matrix ((F2)		Red Parent	Material (TF2)		
Stratifie	ed Layers (A5) (LRR (S)	Depleted M	atrix (F3)			Other (Expla	ain in Remarks)		
1 cm M	uck (A9) (LRR D)		Redox Dark	s Surface (F	- 6)					
Deplete	ed Below Dark Surfac	e (A11)	Depleted D	ark Surface	e (F7)					
Thick D	ark Surface (A12)		Redox Dep		(8)					
1 🗀 -	Mucky Mineral (S1)		Vernal Poo	ls (F9)				drophytic vegetation and		
Sandy	Gleyed Matrix (S4)						wetland hydro	ology must be present.		
Restrictive	Layer (if present):									
Type:										
Depth (ir	nches):						Hydric Soil Pres	ent? Yes No		
Remarks:										
HYDROLO	OGY									
Wetland Hy	drology Indicators:						Secondary	Indicators (2 or more required)		
1	icators (any one indic		nt)					Marks (B1) (Riverine)		
	e Water (A1)	ator to camero	Salt Crust	(R11)			— Ш	ent Deposits (B2) (Riverine)		
	ater Table (A2)		Biotic Crus					eposits (B3) (Riverine)		
1 🗀 -			=		(D12)					
	ion (A3)	· \	ш.	vertebrates	` '			ge Patterns (B10)		
	Marks (B1) (Nonriver	,		Sulfide Od	. ,			ason Water Table (C2)		
•••	ent Deposits (B2) (No	•		Rhizospher	_	_	· · · ·	uck Surface (C7)		
ا ت	eposits (B3) (Nonrive	rine)		of Reduced	`	,		h Burrows (C8)		
	e Soil Cracks (B6)			n Reductio		ed Soils (, L	tion Visible on Aerial Imagery (C9)		
	tion Visible on Aerial I	magery (B7)	Other (Ex	olain in Rer	narks)			v Aquitard (D3)		
Water-9	Stained Leaves (B9)						FAC-N	eutral Test (D5)		
Field Obse	rvations:									
Surface Wa	ter Present? Y	es No	Depth (in	ches):						
Water Table	e Present? Y	es No	Depth (in	ches):						
Saturation F	Present?	es No	Depth (in	ches):						
(includes ca	pillary fringe)		0				and Hydrology Pre	sent? Yes 💿 No 🔘		
Describe Re	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:										
110 1 0	CF :									
US Army Corp	os of Engineers									

Project/Site: Pure Water Program		City/Count	ty:Santee/Sa	n Diego	Sam	Sampling Date: 09/28/2016			
Applicant/Owner: City of San Diego				State:CA	Sam	Sampling Point:16a			
Investigator(s): Katie Dayton, Danielle Mullen		Section, T	ownship, Rai	nge: 18, 15S, 1E		-			
Landform (hillslope, terrace, etc.): flat/riverbed		Local relie	ef (concave, o	convex, none): None	e	Slo	ppe (%):()		
Subregion (LRR):C - Mediterranean California	Lat:32.8	37		Long:-116.92		——— Datı	ım:		
Soil Map Unit Name: Riverwash				NWI cla	assification:	Riverine			
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes	No ((If no, explain	n in Remar	ks.)			
	-	disturbed?		Normal Circumstan	ces" preser	nt? Yes 🕡	No	\circ	
	aturally pro	oblematic?		eded, explain any a					
SUMMARY OF FINDINGS - Attach site map si							atures,	etc.	
Hydrophytic Vegetation Present? Yes No									
	•	ls t	he Sampled	Area					
Wetland Hydrology Present? Yes No Remarks:		wit	hin a Wetlar	nd? Yes	•	No 🔘			
VEGETATION									
	Absolute		Indicator	Dominance Test	workshee	t:			
1.Salix gooddingii	% Cover 40	Species?	Status FACW	Number of Domin That Are OBL, FA			1	(A)	
2.		110				.	l	(^)	
3.				Total Number of E Species Across A			1	(B)	
4.							L	(-)	
Total Cover:	40 %			Percent of Domina That Are OBL, FA		_	0.0%	(A/B)	
1.Baccharis salicifolia	75	Yes	FAC	Prevalence Index	workshee	et:			
2. Cyperus eragrostis	$\frac{73}{2}$	No	FACW	Total % Cove	r of:	Multip	ly by:		
3. Ricinus communis	3	No	FACU	OBL species		x 1 =	0		
4.				FACW species	42	x 2 =	84		
5.				FAC species	75	x 3 =	225		
Total Cover:	80 %			FACU species	3	x 4 =	12		
Herb Stratum 1.				UPL species		x 5 =	0		
2.			-	Column Totals:	120	(A)	321	(B)	
3.				Prevalence	Index = B/	A =	2.67		
4.				Hydrophytic Veg	etation Inc	licators:			
5.		-		X Dominance T	est is >50%	0			
6.				× Prevalence In					
7.				Morphologica		ns¹ (Provide n a separate		ng	
8				Problematic H			,)	
Total Cover: Woody Vine Stratum	%					Ü	` .	<i>'</i>	
12.				¹ Indicators of hyd be present.	ric soil and	l wetland hy	/drology r	must	
Total Cover:				Hydrophytic Vegetation					
% Bare Ground in Herb Stratum % Cover	of Biotic C	Crust	%	Present?	Yes	No ()		
Remarks:									

SOIL Sampling Point: 16a

Profile Des	scription: (Describe Matrix	to the depth i		ment the indicator x Features	or contirn	n the absence of indic	ators.)
(inches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture ³	Remarks
0-4	7.5 YR 2.5/2	100	. ,			Sandy clay loam	
	111 2.5/2			· ——			
	-						
	-						
	Concentration, D=Dep				-	C=Root Channel, M=M	
					i, Clay Loa		Loam, Silt, Loamy Sand, Sand
	Indicators: (Applicab	le to all LRRs,		•			ematic Hydric Soils:
Histoso	` '		Sandy Redo Stripped Ma	` '		1 cm Muck (A9	, \ ,
	Epipedon (A2) Histic (A3)		ш	cky Mineral (F1)		2 cm Muck (A1 Reduced Vertice	, ,
	jen Sulfide (A4)			yed Matrix (F2)		Red Parent Ma	
	ed Layers (A5) (LRR (C)	Depleted M			Other (Explain	, ,
	luck (A9) (LRR D)	- ,	Redox Dark	Surface (F6)			,
Deplete	ed Below Dark Surfac	e (A11)	Depleted D	ark Surface (F7)			
Thick [Dark Surface (A12)			ressions (F8)			
	Mucky Mineral (S1)		Vernal Poo	ls (F9)		•	phytic vegetation and
	Gleyed Matrix (S4)					wetland hydrolog	gy must be present.
	Layer (if present):						
Type:Ro	ocks						
Depth (ii	nches):4					Hydric Soil Present	? Yes No 💿
Remarks:							
HYDROLO	OGY						
	ydrology Indicators:					Secondary Ind	icators (2 or more required)
	licators (any one indic		nt)				rks (B1) (Riverine)
	e Water (A1)	ator to camolo	Salt Crust	(B11)			Deposits (B2) (Riverine)
	/ater Table (A2)		Biotic Crus			Duift Dame	sits (B3) (Riverine)
	tion (A3)			vertebrates (B13)			Patterns (B10)
	Marks (B1) (Nonrive r	ine)	Ш .	Sulfide Odor (C1)			on Water Table (C2)
	ent Deposits (B2) (No	,		Rhizospheres along	Living Ro		Surface (C7)
	eposits (B3) (Nonrive			of Reduced Iron (C	_		Surrows (C8)
	e Soil Cracks (B6)			n Reduction in Plov	,		Visible on Aerial Imagery (C9)
	tion Visible on Aerial	magery (B7)		olain in Remarks)	(00.00		quitard (D3)
	Stained Leaves (B9)	magery (Br)		olali ili ikelilarkoj			ral Test (D5)
Field Obse						17.0 11000	100 (50)
		es No	Depth (in	chee).			
Water Table			· · ·	· —			
		es No		·			
Saturation I	Present? Y apillary fringe)	es No	Depth (in	cnes):	Wetl	and Hydrology Preser	nt? Yes No
	ecorded Data (stream	gauge, monito	oring well, aerial	photos, previous ins			
	,				. ,.		
Remarks:							
ricinarito.							
S Army Corp	os of Engineers						

Project/Site: Pure Water Program	City/County:Santee/San Diego Sampling D							16
Applicant/Owner: City of San Diego				State:CA	Sam	pling Point:16	бb	
Investigator(s): Katie Dayton, Danielle Mullen		Section, T	ownship, Ra	nge: 18, 15S, 1E		_		
Landform (hillslope, terrace, etc.):		Local reli	ef (concave,	convex, none): None	e	Slop	e (%):()	
Subregion (LRR):C - Mediterranean California	Lat:32.8	37		Long:-116.92		 Datun	n:	
Soil Map Unit Name: Riverwash				NWI cla	assification:	Riverine		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes (• No ((If no, explain	n in Remarl	ks.)		
	-	disturbed		'Normal Circumstan	ces" preser	nt? Yes	No	\circ
		oblematic?		eded, explain any a	·	\sim		
SUMMARY OF FINDINGS - Attach site map si							tures,	etc.
Hydrophytic Vegetation Present? Yes No	•							
Hydric Soil Present? Yes No	•	Is	the Sampled	Area				
		wit	thin a Wetlar	nd? Yes	0	No 💿		
Remarks:								
VEGETATION								
	Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test				
1.	70 00101		Ctatao	Number of Domin That Are OBL, FA			1	(A)
2.						0		()
3.		-	-	Total Number of E Species Across A		0		(B)
4.								()
Total Cover:	%		_	Percent of Domina That Are OBL, FA			% ((A/B)
Sapling/Shrub Stratum	2	N		Dunislana a Inda				
1. Tamarix ramosissima	2	No	Not Listed	Total % Cove		et: Multiply	by	
2-Arundo donax	2	No	FACW	OBL species	1 01.	x 1 =	0	-
3.Baccharis sarothroides 4.	6	No	FACU	FACW species	2.	x 2 =	4	
5.				FAC species	2	x 3 =	0	
Total Cover:	10 %			FACU species	6	x 4 =	24	
Herb Stratum				UPL species	27	x 5 =	135	
1.Salix tracyi	5	No	Not Listed	Column Totals:	35	(A)	163	(B)
2. Glebionis coronaria (dead)	10	No	Not Listed	Dravalance		^ -	1.66	
3. Brassica nigra (dead)	10	No	Not Listed	Prevalence Hydrophytic Veg			4.66	
4.				Dominance T				
5. 6.				Prevalence Ir				
7.		-	-	Morphologica			supportir	ng
8.						n a separate		J
Total Cover:	25 %			Problematic F	Hydrophytic	Vegetation ¹	Explain)
Woody Vine Stratum	23 %			4				
1				¹ Indicators of hyd be present.	ric soil and	wetland hyd	rology n	nust
2								
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum75 %	of Biotic C	Crust	%	Present?	Yes 🔘	No 💿		
Remarks:				<u> </u>				

SOIL Sampling Point: 16b

Depth (inches)	N A - 4 - 1 - 1		Daile.	v Footures			
1111011001	Matrix Color (moist)		color (moist)	x Features % Type ¹	Loc ²	Texture ³	Remarks
0-16	10 YR 3/2	100	(71		Sandy clay loam	
	10 1 K 3/2					Sandy Clay Ioani	
				· —— ——			
				- <u> </u>			
¹ Type: C=C	Concentration, D=Depl	etion RM=Red	luced Matrix	² Location: PL =Pore	Lining R	C=Root Channel, M=M	atriv
	•				-		t Loam, Silt, Loamy Sand, Sand
	Indicators: (Applicable				,,		ematic Hydric Soils:
Histoso		- 10 am <u>-</u> 11110, a	Sandy Redo	•		1 cm Muck (A9	-
	pipedon (A2)	[Stripped Ma	` '		2 cm Muck (A1	, \ ,
	listic (A3)	ĺ		ky Mineral (F1)		Reduced Vertice	, ,
Hydrog	en Sulfide (A4)	ĺ	Loamy Gley	yed Matrix (F2)		Red Parent Ma	aterial (TF2)
Stratifie	ed Layers (A5) (LRR C	;) [Depleted M	atrix (F3)		Other (Explain	in Remarks)
1 cm M	luck (A9) (LRR D)	ĺ	Redox Dark	Surface (F6)		_	
Deplete	ed Below Dark Surface	e (A11)	Depleted D	ark Surface (F7)			
	Park Surface (A12)	[ressions (F8)		4	
	Mucky Mineral (S1)		Vernal Poo	ls (F9)		•	phytic vegetation and
	Gleyed Matrix (S4)					wetland hydrolo	gy must be present.
Restrictive	Layer (if present):						
Type:			_				
Depth (ir	nches):					Hydric Soil Present	t? Yes No 💿
HYDROLO	OGY						
	OGY ydrology Indicators:					Secondary Inc	dicators (2 or more required)
Wetland Hy	drology Indicators:	ator is sufficient	t)				dicators (2 or more required) rks (B1) (Riverine)
Wetland Hy Primary Indi	drology Indicators:	ator is sufficient	•	(B11)		Water Ma	rks (B1) (Riverine)
Wetland Hy Primary Indi Surface	ydrology Indicators: icators (any one indicate Water (A1)	ator is sufficient	Salt Crust			Water Ma	rks (B1) (Riverine) Deposits (B2) (Riverine)
Wetland Hy Primary Indi Surface High W	ydrology Indicators: icators (any one indicate Water (A1) Vater Table (A2)	ator is sufficient	Salt Crust Biotic Crus	st (B12)		Water Ma Sediment Drift Depo	rks (B1) (Riverine) Deposits (B2) (Riverine) osits (B3) (Riverine)
Wetland Hy Primary Indi Surface High W Saturati	ydrology Indicators: icators (any one indicate Water (A1) vater Table (A2) ion (A3)		Salt Crust Biotic Crust Aquatic In	st (B12) vertebrates (B13)		Water Ma Sediment Drift Depo	rks (B1) (Riverine) Deposits (B2) (Riverine) sits (B3) (Riverine) Patterns (B10)
Wetland Hy Primary Indi Surface High W Saturat Water N	ydrology Indicators: icators (any one indicate water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri	ne)	Salt Crust Biotic Crust Aquatic In Hydrogen	st (B12) vertebrates (B13) Sulfide Odor (C1)	Living Roo	Water Ma Sediment Drift Depo Drainage Dry-Sease	rks (B1) (Riverine) Deposits (B2) (Riverine) Dists (B3) (Riverine) Patterns (B10) Den Water Table (C2)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime	ydrology Indicators: icators (any one indicate water (A1) fater Table (A2) ion (A3) Marks (B1) (Nonriverient Deposits (B2) (Nor	ne) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along		Water Ma Sediment Drift Depo Drainage Dry-Sease Dts (C3) Thin Mucl	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) Den Water Table (C2) K Surface (C7)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De	ydrology Indicators: icators (any one indicate water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Norriveri eposits (B3) (Nonriveri	ne) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4	1)	Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) Den Water Table (C2) K Surface (C7) Burrows (C8)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface	drology Indicators: icators (any one indicate Water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriverient Deposits (B2) (Norriveries Soil Cracks (B6)	ne) nriverine) ine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow	1)	Water Ma Sediment Drift Depo Drainage Dry-Seas Ots (C3) Thin Mucl Crayfish E C6) Saturation	rks (B1) (Riverine) Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat	drology Indicators: icators (any one indicate Water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriverie ant Deposits (B2) (Noriverie Soil Cracks (B6) tion Visible on Aerial In	ne) nriverine) ine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4	1)	Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E C6) Saturation Shallow A	rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) equitard (D3)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat Water-S	ydrology Indicators: icators (any one indicate Water (A1) later Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9)	ne) nriverine) ine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow	1)	Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E C6) Saturation Shallow A	rks (B1) (Riverine) Deposits (B2) (Riverine) osits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S	ydrology Indicators: icators (any one indicate Water (A1) Vater Table (A2) Varks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations:	ne) nriverine) ine) magery (B7)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks)	1)	Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E C6) Saturation Shallow A	rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) equitard (D3)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat Water-S Field Obset	drology Indicators: icators (any one indicate Water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriverie ent Deposits (B2) (Noriverie es Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: tter Present?	ne) nriverine) ine) magery (B7) es \(\) No (Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches):	1)	Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E C6) Saturation Shallow A	rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) equitard (D3)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S	drology Indicators: icators (any one indicate Water (A1) dater Table (A2) ion (A3) Marks (B1) (Nonriverie ent Deposits (B2) (Norriverie es Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: tter Present?	ne) nriverine) ine) magery (B7)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches):	1)	Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E C6) Saturation Shallow A	rks (B1) (Riverine) Deposits (B2) (Riverine) posits (B3) (Riverine) Patterns (B10) on Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) equitard (D3)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table Saturation F	ydrology Indicators: icators (any one indicate Water (A1) Vater Table (A2) ion (A3) Warks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) ition Visible on Aerial In Stained Leaves (B9) rvations: iter Present? Present? Ver	ne) nriverine) ine) magery (B7) es \(\) No (Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils ((Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) Aquitard (D3) tral Test (D5)
Wetland Hy Primary Indi Surface High W Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obset Surface Wa Water Table Saturation F (includes ca	rydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: ter Present?	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) Aquitard (D3) tral Test (D5)
Wetland Hy Primary Indi Surface High W Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obset Surface Wa Water Table Saturation F (includes ca	ydrology Indicators: icators (any one indicate Water (A1) Vater Table (A2) ion (A3) Warks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) ition Visible on Aerial In Stained Leaves (B9) rvations: iter Present? Present? Ver	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) Aquitard (D3) tral Test (D5)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table Saturation F (includes ca	rydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: ter Present?	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) Aquitard (D3) tral Test (D5)
Wetland Hy Primary Indi Surface High W Saturati Water N Sedime Drift De Surface Inundat Water-S Field Obset Surface Wa Water Table Saturation F (includes ca	rydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: ter Present?	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) Aquitard (D3) tral Test (D5)
Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table Saturation F (includes ca Describe Re	rydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: ter Present?	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) Aquitard (D3) tral Test (D5)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table Saturation F (includes ca	rydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: ter Present?	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9) Aquitard (D3) tral Test (D5)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table Saturation F (includes ca	rydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: ter Present?	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9 Equitard (D3) tral Test (D5)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Surface Inundat Water-S Field Obser Surface Wa Water Table Saturation F (includes ca	rydrology Indicators: icators (any one indicate Water (A1) rater Table (A2) ion (A3) Marks (B1) (Nonriveri ent Deposits (B2) (Nor eposits (B3) (Nonriveri e Soil Cracks (B6) tion Visible on Aerial In Stained Leaves (B9) rvations: ter Present?	ne) nriverine) ine) magery (B7) es \ No (es \ No	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Exp	st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Plow plain in Remarks) ches): ches):	4) ved Soils (Water Ma Sediment Drift Depo Drainage Dry-Sease Ots (C3) Thin Mucl Crayfish E Saturation Shallow A FAC-Neur	rks (B1) (Riverine) Deposits (B2) (Riverine) Desits (B3) (Riverine) Patterns (B10) On Water Table (C2) k Surface (C7) Burrows (C8) n Visible on Aerial Imagery (C9 Equitard (D3) tral Test (D5)

Project/Site: Pure Water Program	y:Miramar/	ar/San Diego Sampling Date: 10/05/2010				116		
Applicant/Owner: City of San Diego				State:CA	 Sam	Sampling Point:17a		
Investigator(s): Callie Ford, Patricia Schuyler		Section, T	ownship, Rai	nge: 16, 15S, 3W		_		
Landform (hillslope, terrace, etc.): Channel		Local relie	ef (concave, o	convex, none):Conca	ive	Slop	e (%):1	
Subregion (LRR):C - Mediterranean California	Lat:32.8	37		Long:117.18		 Datur	n:	
Soil Map Unit Name: Redding cobbly loam				NWI clas	sification:	None		
Are climatic / hydrologic conditions on the site typical for this	time of ye	ear? Yes (No ((If no, explain	in Remark	ks.)		
Are Vegetation Soil or Hydrology sig	gnificantly	disturbed?	Are "	Normal Circumstance	es" presen	nt? Yes	No	\circ
Are Vegetation Soil or Hydrology na	iturally pro	oblematic?	(If ne	eded, explain any an	swers in F	Remarks.)		
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point lo	ocations, transe	cts, imp	ortant fea	itures,	, etc.
Hydrophytic Vegetation Present? Yes (No								
, , , ,		ls t	he Sampled	Area				
			hin a Wetlan		I	No (
Remarks: This area has experienced drought and no re	ecent rain	nfall.						
VEGETATION								
VEGETATION								
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w				
1.	70 0010.			Number of Dominal That Are OBL, FAC				(A)
2.		-						` /
3.				Total Number of Do Species Across All		2		(B)
4.				Percent of Dominar	at Species	_		
Total Cover:	%			That Are OBL, FAC		^	0 %	(A/B)
Sapling/Shrub Stratum 1 Pagaharia saligifalia	10	No	FAC	Prevalence Index	workshee	2 †•		
1.Baccharis salicifolia 2.	10	NO	FAC	Total % Cover		Multiply	bv:	
3.				OBL species		x 1 =	0	
4.		-		FACW species	15	x 2 =	30	
5.				FAC species	60	x 3 =	180	
Total Cover:	10 %			FACU species	2	x 4 =	8	
Herb Stratum				UPL species	2	x 5 =	10	
1.Rumex crispus	50	Yes	FAC	Column Totals:	79	(A)	228	(B)
2-Ambrosia psilostachya	2	No	FACU	Prevalence In	idex = B//	Δ =	2.89	
3. Juncus dubius (dead)	15	No	FACW	Hydrophytic Vege			2.07	
4.Hirschfeldia incana	20	No Yes	Not Listed	Dominance Te				
5. Unidentifiable grasses 6.	20	168		× Prevalence Ind				
7.				Morphological			supporti	ng
8.						n a separate	,	
Total Cover:	89 %			Problematic Hy	'drophytic	Vegetation ¹	(Explain	1)
Woody Vine Stratum	07 /0			1				
1				¹ Indicators of hydri be present.	c soil and	wetland hyd	Irology i	must
2				,				
Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 10 %	of Biotic C	Crust	%	Present?	Yes	No 🔘		
Remarks:								

SOIL Sampling Point: 17a

	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)		Redo color (moist)	x Features %	Type ¹	Loc ²	Texture ³	Remarks		
			,	_						
0-4	10 YR 3/2	90 5 Y	R 4/6		<u>C</u>		Silty clay loam	Redox Loc is PL and M		
	<u> </u>									
	-									
								<u> </u>		
1	Concentration, D=Depl					-	C=Root Chann			
					indy Loam	, Clay Loa		oam, Silt Loam, Silt, Loamy Sand, Sand.		
-	Indicators: (Applicabl	e to all LRRs, u		-				for Problematic Hydric Soils:		
Histoso	` '		Sandy Redo	. ,				Muck (A9) (LRR C)		
	Epipedon (A2) Histic (A3)		Stripped M Loamy Mu	, ,	J (E1)			Muck (A10) (LRR B) ed Vertic (F18)		
	en Sulfide (A4)		Loamy Gle	-				arent Material (TF2)		
	ed Layers (A5) (LRR C	:)	Depleted N	-	(1 =)			(Explain in Remarks)		
	luck (A9) (LRR D)	,	Redox Dar		(F6)			,		
Deplete	ed Below Dark Surface	e (A11)	Depleted D	ark Surfac	ce (F7)					
	Oark Surface (A12)		Redox Dep		F8)					
	Mucky Mineral (S1)		Vernal Poo	ls (F9)				of hydrophytic vegetation and		
	Gleyed Matrix (S4)						wetland	hydrology must be present.		
	Layer (if present):									
_	ardpan/dry hard soil	S	_							
, ,	nches): <u>4"+</u>						Hydric Soil	Present? Yes No		
Remarks:										
HYDROLO	OGY									
Wetland Hy	ydrology Indicators:						Secon	ndary Indicators (2 or more required)		
1	icators (any one indica	ator is sufficient	1)					Vater Marks (B1) (Riverine)		
	e Water (A1)	ator io odinoiem	Salt Crus	t (R11)				ediment Deposits (B2) (Riverine)		
	ater Table (A2)		Biotic Cru					rift Deposits (B3) (Riverine)		
1 <u></u>	tion (A3)			vertebrate	es (B13)			rainage Patterns (B10)		
	Marks (B1) (Nonriveri	ne)		Sulfide O	` ,			ry-Season Water Table (C2)		
	ent Deposits (B2) (Nor	,			res along	Livina Roc		hin Muck Surface (C7)		
l —	eposits (B3) (Nonriver		لنت ا		ed Iron (C4	-		rayfish Burrows (C8)		
🗀	e Soil Cracks (B6)	,			on in Plow	,		aturation Visible on Aerial Imagery (C9)		
_	tion Visible on Aerial I	magery (B7)	Other (Ex	plain in Re	emarks)	•	s	hallow Aquitard (D3)		
	Stained Leaves (B9)				ŕ			AC-Neutral Test (D5)		
Field Obse	rvations:									
Surface Wa	iter Present? Ye	es No (Depth (ir	nches):						
Water Table		es No (_	· —						
Saturation F	- 40	es No (· —						
	apillary fringe)	23 () 140 (9) = 3 111 (Wetl	and Hydrolog	y Present? Yes No		
Describe Re	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:										
US Army Corr	os of Engineers									

Project/Site: Pure Water Program		City/County: Miramar/San Diego Sampling Date							16
Applicant/Owner: City of San Diego					State:CA	Sa	ampling Point:	17b	
Investigator(s): Callie Ford, Patricia So	huyler		Section	, Township, Ra	ange: 16, 15S, 3W				
Landform (hillslope, terrace, etc.): Chann	nel		Local re	elief (concave,	convex, none):Conca	ve	SI	ope (%):1	
Subregion (LRR):C - Mediterranean C	alifornia	Lat:32.8	87		Long:117.18		 Dat	um:	
Soil Map Unit Name: Redding cobbly le					NWI class	sification	n: None		
Are climatic / hydrologic conditions on the		time of ve	ear? Yes	No (
		gnificantly			"Normal Circumstance		,	No	\circ
		aturally pro			eeded, explain any ans		~		
·									212
SUMMARY OF FINDINGS - Att	ach site map s	nowing	Samp	iing point i		ts, iii	nportant ie	atures,	etc.
Hydrophytic Vegetation Present?	Yes No								
Hydric Soil Present?		0	I:	s the Sample	d Area				
Wetland Hydrology Present? Remarks: Drought conditions.	Yes No	0	v	vithin a Wetla	nd? Yes (<u> </u>	No 💿		
VEGETATION									
		Absolute		ant Indicator	Dominance Test w	orkshe	eet:		
Tree Stratum (Use scientific names.)	-	% Cover	Specie		Number of Dominan				
1.Salix lasiolepis			Yes	FACW	That Are OBL, FAC	N, or F	AC:	2	(A)
2. 3.					Total Number of Do			•	(D)
4.					Species Across All S	otrata:		2	(B)
T	Total Cover	20 %			Percent of Dominan That Are OBL, FAC			00.00	(A/B)
Sapling/Shrub Stratum	Total Covers	. 20 /0			That Are OBE, I AC	77, 01 1	Ασ. Ι(00.0 %	(A/D)
1.Baccharis salicifolia		50	Yes	FAC	Prevalence Index v				
2 Artemisia californica		1	No	Not Listed	Total % Cover of	of:		oly by:	-
3.Baccharis pilularis		1	No	Not Listed	OBL species FACW species	22	x 1 =	0	
4. 5.					FAC species	22 55	x 2 = x 3 =	44 165	
5	Total Cover:	52 %			FACU species	33	x 4 =	0	
Herb Stratum	rotal cover.	32 70			UPL species	2	x 5 =	10	
¹ ·Unidentifiable grasses					Column Totals:	79	(A)	219	(B)
2. Cyperus eragrostis		2	No	FACW		.,	. ,		
3. Rumex crispus		5	No	FAC	Prevalence Inc			2.77	
4.					Hydrophytic Veget Dominance Tes				
5.					× Prevalence Inde				
6.					Morphological A			e supporti	na
7. 8.							on a separat		9
<u> </u>	Total Cover:	7 %			Problematic Hye	drophy	tic Vegetation	າ¹ (Explain)
Woody Vine Stratum		1 %			4				
1					Indicators of hydric be present.	soil a	nd wetland h	ydrology r	nust
2									
	Total Cover:	%			Hydrophytic Vegetation				
% Bare Ground in Herb Stratum	% Cover	of Biotic C	Crust	%		Yes (No (\supset	
Remarks:									

SOIL Sampling Point: 17b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth (inches)	Matrix Color (moist)	——————————————————————————————————————	Redo Color (moist)	x Feature	es Type ¹	Loc ²	Texture ³		Remarks		
0-4	10 YR 5/3		R 4/6	10	C		Silty loam	Redov I	Loc is PL and M		
	10 1 K 3/3		K 4/ 0				Sifty Ioain	<u>Redox 1</u>	Loc is i L and ivi		
				-							
	-										
				_							
¹ Type: C=C	Concentration, D=Depl	etion, RM=Re	duced Matrix.	² Locatio	n: PL=Pore	Lining, R	C=Root Char	nnel, M=Matrix.			
³ Soil Textur	es: Clay, Silty Clay, S	andy Clay, Lo	am, Sandy Clay	Loam, S	andy Loam	, Clay Loa	am, Silty Clay	Loam, Silt Loar	m, Silt, Loamy Sand, Sand.		
	Indicators: (Applicabl	e to all LRRs,		-					ic Hydric Soils⁴:		
Histoso	, ,		Sandy Redo	' '				Muck (A9) (LR	,		
	Epipedon (A2) Histic (A3)		Stripped M Loamy Mu	, ,				Muck (A10) (L sced Vertic (F18	,		
1 📖	en Sulfide (A4)		Loamy Gle	-				Parent Material			
	ed Layers (A5) (LRR C	;)	Depleted N	-			Othe	r (Explain in Re	emarks)		
	luck (A9) (LRR D)		Redox Dar		` '						
I L .	ed Below Dark Surface	e (A11)	Depleted D								
	Oark Surface (A12) Mucky Mineral (S1)		Redox Dep		(F8)		⁴ Indicator	e of hydronhyti	c vegetation and		
	Gleyed Matrix (S4)		Vernairod	15 (1 9)				id hydrology mi	•		
	Layer (if present):							, 0,	<u> </u>		
	rd soil/hardpan										
	nches):4"+						Hydric So	il Present?	Yes No		
Remarks: F	Based on the surrour	nding soil sa	mples (see 17a	and at	oundant re	dox feati	ires, this is a	assumed to be	hydric soils.		
HYDROLO	nev										
	/drology Indicators:						Soci	ondary Indicato	rs (2 or more required)		
1	icators (any one indica	ator is sufficion	n+)				· · · · · · · · · · · · · · · · · · ·	Water Marks (E			
	e Water (A1)	ator is sufficien	Salt Crus	· /D11)					osits (B2) (Riverine)		
	ater Table (A2)		Biotic Cru					Drift Deposits (, , ,		
1 <u></u>	ion (A3)		Aquatic Ir		es (B13)			Drainage Patte			
	Marks (B1) (Nonriveri	ne)	Hydrogen		, ,			ŭ	ater Table (C2)		
	ent Deposits (B2) (Nor	,			eres along	Living Ro		Thin Muck Surf			
Drift De	eposits (B3) (Nonriver	ine)	Presence	of Reduc	ced Iron (C4	1)		Crayfish Burrov	ws (C8)		
X Surface	e Soil Cracks (B6)		Recent Ire	on Reduc	tion in Plow	ed Soils (C6)	Saturation Visil	ole on Aerial Imagery (C9)		
	tion Visible on Aerial In	magery (B7)	Other (Ex	plain in F	temarks)			Shallow Aquita			
	Stained Leaves (B9)							FAC-Neutral Te	est (D5)		
Field Obse											
		es No		· —							
Water Table		es O No		· —							
Saturation F	Present? Ye apillary fringe)	es O No	Depth (ir	iches):		Wetl	and Hvdrolo	gy Present?	Yes No		
	ecorded Data (stream	gauge, monito	oring well, aerial	photos, p	revious ins			3,			
Remarks:											
US Army Corr	os of Engineers										

Project/Site: Pure Water Program		City/Count	y:Miramar/	Samp	Sampling Date: 10/05/2016			
Applicant/Owner: City of San Diego				State:CA	 Samp	Sampling Point:17c		
Investigator(s): Callie Ford, Patricia Schuyler		Section, T	ownship, Ra	nge: 16, 15S, 3W		_		
Landform (hillslope, terrace, etc.):		Local relie	ef (concave, o	convex, none):None		Slo	pe (%):	
Subregion (LRR):C - Mediterranean California	Lat:32.8	87		Long:117.18		——— Datu	ım:	
Soil Map Unit Name: Redding cobbly loam					assification:	—— None		
Are climatic / hydrologic conditions on the site typical for this	time of ve	ear? Yes (No (-			
	-	disturbed?		Normal Circumstan		,	No	
		oblematic?		eded, explain any a				
SUMMARY OF FINDINGS - Attach site map s							atures,	etc.
Hydrophytic Vegetation Present? Yes No	• •							
		ls t	he Sampled	Area				
			hin a Wetlar		\bigcirc	lo 💿		
Remarks:			ini a rrotiai					
VEGETATION								
	Absolute	Dominant		Dominance Test	worksheet:			
	% Cover	Species?	Status	Number of Domin				, l
1				That Are OBL, FA	CW, or FAC): 1	L	(A)
2				Total Number of D				(D)
				Species Across A	ii Strata:	2	2	(B)
4Total Cover	: %			Percent of Domina		`. ~ 0		(A (D)
Sapling/Shrub Stratum	. %			That Are OBL, FA	Cvv, or FAC	50	0.0 %	(A/B)
1.Baccharis salicifolia	5	No	FAC	Prevalence Index	workshee	t:		
2-Baccharis pilularis	10	No	Not Listed	Total % Cove	r of:	Multipl	ly by:	-
3. Eriogonum fasciculatum	25	Yes	Not Listed	OBL species		x 1 =	0	
4.Isocoma menziesii	20	Yes	FAC	FACW species		x 2 =	0	
5.Acmispon glaber/Salix tracyi	1/5	No	Not Listed	FAC species	25	x 3 =	75	
Total Cover:	60 %			FACU species		x 4 =	0	
1.Grasses (dead)	10	No		UPL species	35	x 5 =	175	(D)
2.		-140		Column Totals:	60	(A)	250	(B)
3.				Prevalence	Index = B/A	. =	4.17	
4.				Hydrophytic Veg	etation Ind	cators:		
5.				Dominance T	est is >50%			
6.		-		Prevalence In	idex is ≤3.0¹			
7.				Morphologica				ng
8.				Problematic H	marks or on		,	,
Total Cover:	10 %			Floblematic	тушторпушс	vegetation	(Explail)	'
Woody Vine Stratum				¹ Indicators of hyd	ric soil and	wetland hy	rdrology i	muet
1				be present.	no son and	wettand my	drology r	iiust
2Total Cover:	6/			Hydrophytic				
				Vegetation	_	_	_	
% Bare Ground in Herb Stratum % Cover	of Biotic C	Crust	<u>%</u>	Present?	Yes 🔘	No 🧿	9)	
Remarks:								

SOIL Sampling Point: 17c

		to the depth n			or confir	m the absence of indi	icators.)
Depth (inches)	Matrix Color (moist)	<u></u> % C	Color (moist)	x Features % Type ¹	Loc ²	Texture ³	Remarks
0-4	N/A	50	,/			Gravel	
	-	· — —					
0-4	_ <u>10 YR 4/4</u>					Sandy loam	
	_						
¹ Type: C=0	Concentration, D=Dep	letion, RM=Red	duced Matrix.	² Location: PL=Pore	e Lining, R	RC=Root Channel, M=I	Matrix.
					, Clay Loa		ilt Loam, Silt, Loamy Sand, Sand
	Indicators: (Applicab	le to all LRRs, ι		•			blematic Hydric Soils [‡] :
Histos	` '		Sandy Redo	` '		1 cm Muck (A	, \
	Epipedon (A2)		Stripped M	` '		2 cm Muck (A	, ,
	Histic (A3) gen Sulfide (A4)			ky Mineral (F1) yed Matrix (F2)		Reduced Veri	
	ed Layers (A5) (LRR (*)	Depleted M	, ,			n in Remarks)
	/uck (A9) (LRR D)	•)	ш '	Surface (F6)		Otrici (Explain	ii ii Kemana)
	ed Below Dark Surfac	e (A11)		ark Surface (F7)			
	Dark Surface (A12)	,		ressions (F8)			
Sandy	Mucky Mineral (S1)		Vernal Poo	ls (F9)		⁴ Indicators of hydr	rophytic vegetation and
Sandy	Gleyed Matrix (S4)					wetland hydrol	ogy must be present.
Restrictive	Layer (if present):						
Type:Ha	ard soils, dry						
Depth (i	inches):4"+		_			Hydric Soil Prese	nt? Yes No 💿
Remarks:						_	
HYDROL	00V						
	ydrology Indicators:					Secondary Ir	ndicators (2 or more required)
		-4	4)				
	dicators (any one indic	ator is sufficien	•				larks (B1) (Riverine)
	e Water (A1)		Salt Crust				nt Deposits (B2) (Riverine)
	Vater Table (A2)		Biotic Cru	, ,			posits (B3) (Riverine)
	tion (A3)		Ш .	vertebrates (B13)			e Patterns (B10)
	Marks (B1) (Nonriver	,		Sulfide Odor (C1)			son Water Table (C2)
	ent Deposits (B2) (No	,		Rhizospheres along			ck Surface (C7)
	eposits (B3) (Nonrive	rine)		of Reduced Iron (Ca	,		Burrows (C8)
	e Soil Cracks (B6)			n Reduction in Plov	ved Soils (· · ·	on Visible on Aerial Imagery (C9)
	ation Visible on Aerial I	magery (B7)	Other (Ex	olain in Remarks)			Aquitard (D3)
Water-	-Stained Leaves (B9)					FAC-Ne	utral Test (D5)
Field Obse	ervations:						
Surface Wa	ater Present? Y	es O No (Depth (in	ches):			
Water Tabl	le Present? Y	es No (Depth (in	ches):			
Saturation	Present? Y	es No (Depth (in	ches):			
	apillary fringe)					land Hydrology Pres	ent? Yes O No 💿
Describe R	Recorded Data (stream	gauge, monito	ring well, aerial	photos, previous ins	pections),	, if available:	
Remarks:							
JS Army Cor	ps of Engineers						

Project/Site: Pure Water Program		City/Count	y:Miramar/	San Diego	Sam	pling Date: 1	0/05/20	16	
Applicant/Owner: City of San Diego				State:CA	Sam	Sampling Point:18			
Investigator(s):Callie Ford, Patricia Schuyler		Section, T	ownship, Rai	nge: 30, 14S, 1E		_			
Landform (hillslope, terrace, etc.): Channel		Local relie	ef (concave, o	convex, none):Con	cave	Slo	pe (%):1		
Subregion (LRR):C - Mediterranean California	Lat:32.9	91		Long:116.91		Datu	m:		
Soil Map Unit Name: Cieneba very rocky coarse sandy lo	– —— am			NWI cla	NWI classification: Lake/NA				
Are climatic / hydrologic conditions on the site typical for this		ar? Yes (No ((If no, explai	n in Remarl	ks.)			
	-	disturbed?		Normal Circumstan	ces" preser	nt? Yes	No	\circ	
		oblematic?		eded, explain any a					
SUMMARY OF FINDINGS - Attach site map sh							atures,	etc.	
Hydrophytic Vegetation Present? Yes No	•								
	•	ls t	he Sampled	Area					
Wetland Hydrology Present? Yes No		wit	hin a Wetlan	nd? Yes	\circ	No 💿			
Remarks:Drought conditions.		•							
VEGETATION									
	Absolute	Dominant	Indicator	Dominance Test	workshoo	·-			
	% Cover	Species?		Number of Domin					
1.Quercus agrifolia	20	Yes	UPL	That Are OBL, FA			((A)	
2.Populus fremontii	20	Yes	UPL	Total Number of D	Cominant				
3.				Species Across A		5		(B)	
4				Percent of Domin	ant Species	3			
Sapling/Shrub Stratum Total Cover:	40 %			That Are OBL, FA	CW, or FA	C: 20.	.0 %	(A/B)	
1.Baccharis salicifolia	20	Yes	FAC	Prevalence Index	x workshee	et:			
2.				Total % Cove	er of:	Multiply	y by:		
3.				OBL species		x 1 =	0		
4.				FACW species		x 2 =	0		
5				FAC species	20	x 3 =	60		
Total Cover: Herb Stratum	20 %			FACU species	30	x 4 =	120		
1.Ambrosia psilostachya	10	Yes	FACU	UPL species	40	x 5 =	200	(D)	
2.	10	105	- TACU	Column Totals:	90	(A)	380	(B)	
3.				Prevalence	Index = B/A	A =	4.22		
4.				Hydrophytic Veg	etation Inc	licators:			
5.				Dominance T					
6.				Prevalence Ir					
7				Morphologica		ns' (Provide n a separate		ng	
8				Problematic I		•	,)	
Total Cover: Woody Vine Stratum	10 %				, , ,	· ·	` .	,	
1.Rubus armeniacus	20	Yes	FACU	¹ Indicators of hyd	lric soil and	wetland hy	drology r	nust	
2.				be present.					
Total Cover:	20 %			Hydrophytic					
% Bare Ground in Herb Stratum % % Cover of	of Biotic C	rust	%	Vegetation Present?	Yes (No (•)		
Remarks:									

SOIL Sampling Point: 18 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Loc² Texture³ (inches) Color (moist) Color (moist) Type¹ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. 3Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils: Histosol (A1) 1 cm Muck (A9) (LRR C) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) ⁴Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type: **Hydric Soil Present?** No (Depth (inches): Yes (Remarks: A soil sample was not taken due to the lack of wetland vegetation and lots of poison oak in the area. **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water Marks (B1) (Riverine) Surface Water (A1) Salt Crust (B11) Sediment Deposits (B2) (Riverine) High Water Table (A2) Biotic Crust (B12) X Drift Deposits (B3) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drainage Patterns (B10) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Thin Muck Surface (C7) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Shallow Aquitard (D3) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes (No (Depth (inches):

Water Table Present? Yes (No (Depth (inches): Saturation Present? Depth (inches): Yes (No (Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The hydrology indicators are more apparent just upstream. US Army Corps of Engineers Arid West - Version 11-1-2006

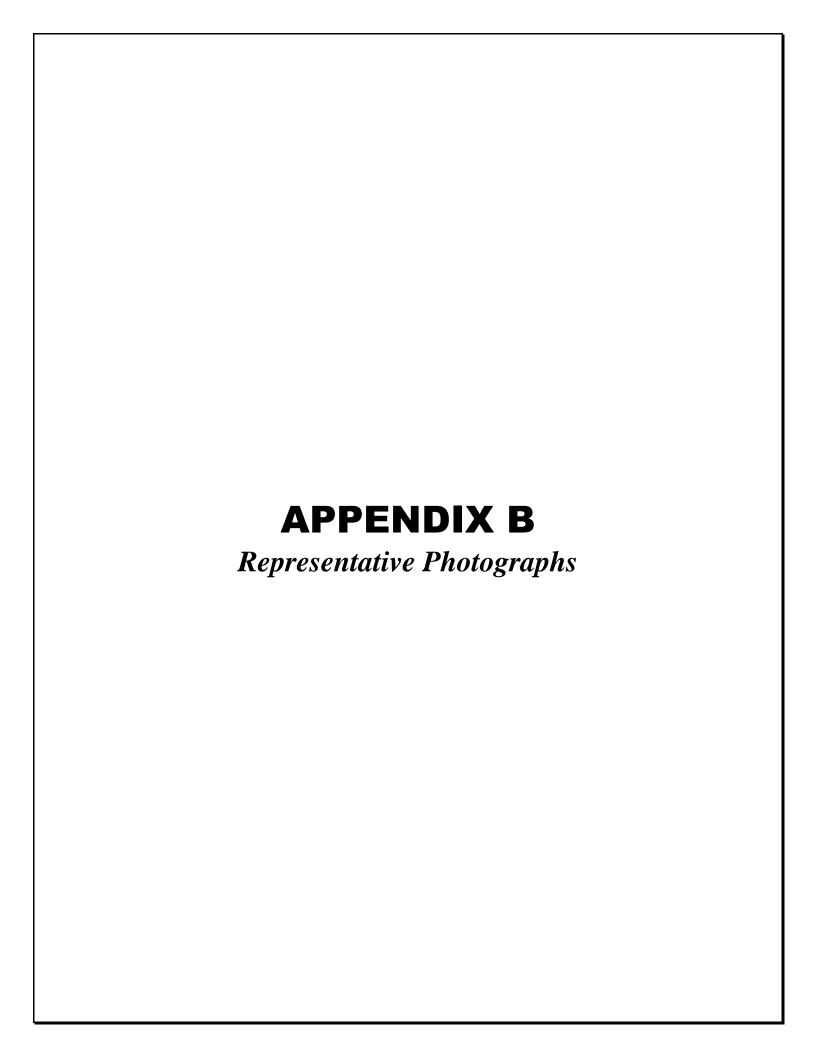
Project/Site: Pure Water Program		City/Cou	ınty:San Dieg	go	_ Sa	mpling Date:	10/26/2016
Applicant/Owner: City of San Diego				Sa	Sampling Point:19a		
Investigator(s): Kathleen Dayton		Section,	, Township, Ra	ange:21, 16S, 3W			
Landform (hillslope, terrace, etc.): Hillslope		Local re	elief (concave,	convex, none): Concav	re	SI	ope (%):10
Subregion (LRR):C - Mediterranean California	Lat:32.7	762479		Long:-117.200011 Datum:NAD			um:NAD83
Soil Map Unit Name: Urban land				NWI class	ificatio	n:NA	
Are climatic / hydrologic conditions on the site typical for t	his time of ye	ear? Yes	No ((If no, explain in	Rem	arks.)	
Are Vegetation Soil or Hydrology	significantly	disturbe	d? Are	"Normal Circumstances	" pres	ent? Yes	No O
Are Vegetation Soil or Hydrology	naturally pro			eeded, explain any ansv	vers ir	n Remarks.)	
SUMMARY OF FINDINGS - Attach site map			•	•		·	eatures, et
				•		<u>. </u>	
	No (No ()	14	s the Sample	d Aroa			
	No (s the Sample vithin a Wetla	_		No (•)	
Remarks:Station located on the slope above the Sa	\sim	I .			<i></i>	140	
VEGETATION Tree Stratum (Use scientific names.)	Absolute % Cover	Species		Dominance Test wo	Spec	ies	2 (4)
1.Eucalyptus sp.	$-\frac{10}{2}$	Yes No	UPL EAGW	That Are OBL, FACV	v, or F	AC:	0 (A)
2.Salix gooddingii 3.		NO	FACW	Total Number of Don Species Across All S			3 (B)
4				Percent of Dominant	Speci	es	
Total Co ^o Sapling/Shrub Stratum	ver: 12 %			That Are OBL, FACV	V, or F	AC: 0).0 % (A/B
1.Baccharis sarothroides	20	Yes	FACU	Prevalence Index w	orksh	eet:	
2.				Total % Cover of	f:	Multip	oly by:
3.				OBL species		x 1 =	0
4.				FACW species	2	x 2 =	4
5				FAC species		x 3 =	0
Total Cov Herb Stratum	ver: 20 %			FACU species	20	x 4 =	80
1.Pennisetum setaceum	40	Yes	Not Listed	UPL species	50	x 5 =	250
2.		105	- Not Listed	_ Column Totals:	72	(A)	334 (F
3.				Prevalence Ind	ex = I	B/A =	4.64
4.				Hydrophytic Vegeta	tion I	ndicators:	
5.			 .	Dominance Test			
6.				Prevalence Inde			
7				Morphological Addata in Rema			
8				Problematic Hyd		•	
Total Cov Woody Vine Stratum	ver: 40 %				-1-)	3	(1 /
1.				¹ Indicators of hydric	soil a	nd wetland h	ydrology mus
2.				be present.			
Total Cov				Hydrophytic Vegetation			
	er of Biotic C	Crust	%	Present?	Yes (No (•)
Remarks:							

Depth	Matrix	·		x Features				2	, _	
(inches)	Color (moist)		Color (moist)		Type ¹	_Loc ² _	Text	ure ³	Remai	ks
					-					
				- — —						
¹Type: C=Cc	ncentration, D=Depl	etion, RM=Re	duced Matrix.	² Location: I	PL=Pore	Lining, RC	C=Root (Channel, N	Л=Matrix.	
³ Soil Texture:	s: Clay, Silty Clay, S	andy Clay, Lo	am, Sandy Clay	Loam, Sand	dy Loam,	Clay Loan			, Silt Loam, Silt, Loam	·
	dicators: (Applicabl	e to all LRRs,	unless otherwise	noted.)					roblematic Hydric Soi	Is:
Histosol	` '		Sandy Redo	. ,					(A9) (LRR C)	
	ipedon (A2)		Stripped Ma	, ,	/E4\				(A10) (LRR B)	
Black His	n Sulfide (A4)			:ky Mineral (/ed Matrix (F					/ertic (F18) t Material (TF2)	
	Layers (A5) (LRR C	;)	Depleted M	•	2)				lain in Remarks)	
	ck (A9) (LRR D)	,		Surface (F	6)				,	
Depleted	Below Dark Surface	e (A11)	Depleted D	ark Surface	(F7)					
	rk Surface (A12)			ressions (F8	3)					
	ucky Mineral (S1)		Vernal Poo	s (F9)					ydrophytic vegetation	
	leyed Matrix (S4)						W	etland hyd	rology must be preser	1t.
	ayer (if present):									
Type:			_				l			
Depth (inc		1 1	1	<i>c</i> :	.1.1			c Soil Pre		No 💿
Remarks: A	soil sample was no	ot taken due	to the presence	e of riprap	on this	stope mai	king the	e ground	impenetrable.	
HYDROLO(ΒΥ									
Wetland Hyd	Irology Indicators:							Secondar	y Indicators (2 or more	required)
Primary Indic	ators (any one indica	ator is sufficie	nt)					☐ Water	Marks (B1) (Riverine	∍)
Surface	Water (A1)		Salt Crust	(B11)				Sedin	nent Deposits (B2) (Ri	verine)
High Wa	ter Table (A2)		Biotic Crus	st (B12)				Drift [Deposits (B3) (Riverin	ıe)
Saturation	n (A3)		Aquatic In	vertebrates	(B13)			Drain:	age Patterns (B10)	
Water M	arks (B1) (Nonriveri	ne)	Hydrogen	Sulfide Odo	or (C1)			Dry-S	eason Water Table (C	22)
Sedimen	t Deposits (B2) (Nor	riverine)	Oxidized F	Rhizosphere	s along L	_iving Root	ts (C3)	Thin I	Muck Surface (C7)	
Drift Dep	osits (B3) (Nonriver	ine)	Presence	of Reduced	Iron (C4)		Crayf	ish Burrows (C8)	
	Soil Cracks (B6)			n Reduction		ed Soils (C	26)		ation Visible on Aerial	Imagery (C9)
	on Visible on Aerial Ir	magery (B7)	Other (Exp	olain in Rem	arks)				ow Aquitard (D3)	
	ained Leaves (B9)							FAC-I	Neutral Test (D5)	
Field Observ		_	_							
Surface Water	er Present? Ye	es O No	Depth (in	ches):						
Water Table	Present? Ye	es O No	Depth (in	ches):						
Saturation Pr		es O No	Depth (in	ches):		Wetla	nd Hvd	Irology Pr	esent? Yes	No (•)
(includes cap	orded Data (stream	gauge monito	oring well aerial	photos prev	ious insr	1	-		esenti res	140
Doconido rec	orded Bata (etream	gaago, mome	orning won, donar	priotoo, prov	nouo mor	, 1	avanas	510.		
Remarks:										
ixemaiks.										

Project/Site: Pure Water Program		City/County	San Diego)	Sampling Date: 10/26/2016			16
Applicant/Owner:City of San Diego				 Sam _l	Sampling Point:19b			
Investigator(s): Kathleen Dayton		Section, To	ownship, Rar		_			
Landform (hillslope, terrace, etc.): Riverbottom		Local relie	f (concave, o	convex, none): None	;	Slop	e (%):()	
Subregion (LRR):C - Mediterranean California	Lat:32.762453 Lon			Long:-117.20005	6	Datur	n:NAD	83
Soil Map Unit Name: Urban land				NWI cla	ssification:	Near Freshwate	r Forested/	Shrub Wetl
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Yes	No (
Are Vegetation Soil or Hydrology sig	gnificantly	disturbed?	Are "	Normal Circumstand	es" presen	it? Yes 💿	No	0
Are Vegetation Soil or Hydrology na	turally pro	blematic?	(If ne	eded, explain any ar	nswers in F	Remarks.)		
SUMMARY OF FINDINGS - Attach site map sl	howing	samplin	g point lo	cations, transe	cts, imp	ortant fea	tures,	etc.
Hydrophytic Vegetation Present? Yes (No								
Hydric Soil Present? Yes No		ls tl	he Sampled	Area				
Wetland Hydrology Present? Yes No		with	nin a Wetlan	d? Yes	● I	No 🔘		
Remarks: Station located on the edge of the San Diego	River a	long Friar	s Road.					
VEGETATION								
	Absolute	Dominant	Indicator	Dominance Test	worksheet	:		
Tree Stratum (Use scientific names.)	% Cover	Species?	Status	Number of Domina	nt Species	3		
1. Salix gooddingii	60		FACW	That Are OBL, FAC	CW, or FAC	2: 2		(A)
2. Phoenix canariensis			Not Listed	Total Number of D	ominant			
3. Populus fremontii ssp. fremontii	5	<u>No</u>	Not Listed	Species Across All	Strata:	4		(B)
4				Percent of Domina				
Total Cover: Sapling/Shrub Stratum	75 %			That Are OBL, FA	CW, or FAC	50.0	0 %	A/B)
1.Baccharis salicifolia ssp. salicifolia	20	Yes	FAC	Prevalence Index	workshee	et:		
2.Baccharis sarothroides	2	No	FACU	Total % Cover	of:	Multiply	by:	
3.				OBL species		x 1 =	0	
4				FACW species	60	x 2 =	120	
5				FAC species	20	x 3 =	60	
Total Cover: Herb Stratum	22 %			FACU species UPL species	2	x 4 = x 5 =	8	
1-Ricinus communis	2	Yes	Not Listed		19		95	(B)
2.				Column Totals:	101	(A)	283	(B)
3.				Prevalence I			2.80	
4.				Hydrophytic Vege				
5.				Dominance Te				
6				× Prevalence Inc				
7				Morphological data in Rer		ns (Provide s		ig
8.				Problematic H		•	,)
Total Cover: Woody Vine Stratum	2 %			_ 				
1.Marah macrocarpa	2	Yes	Not Listed	¹ Indicators of hydr	ic soil and	wetland hyd	Irology r	nust
2				be present.				
Total Cover:	2 %			Hydrophytic				
% Bare Ground in Herb Stratum 15 % % Cover of	of Biotic C	rust	%	Vegetation Present?	Yes (•)	No (
Remarks:								

SOIL Sampling Point: 19b

Depth (inches)	Color (moist)	%	Redo Color (moist)		ype ¹ Loc ²	Texture ³	Remarks
0-16	7.5 Y/R 3/2	100				loam	
	-						
	-						
						_	
T C-C	·		Dealers and Madeire	21	L. Dana Linian		L NA BA-Addi
	Concentration, D=Dep				-	, RC=Root Channe	ı, เท=เทสเทx. am, Silt Loam, Silt, Loamy Sand, Sar
	Indicators: (Applicab				Loain, Clay i		r Problematic Hydric Soils:
Histoso		ne to an Lixix	Sandy Redo	-			uck (A9) (LRR C)
	pipedon (A2)		Stripped Ma	. ,			uck (A10) (LRR B)
	listic (A3)		Loamy Muc	ky Mineral (F	1)		d Vertic (F18)
Hydrog	en Sulfide (A4)		Loamy Gle	yed Matrix (F2	2)	Red Par	rent Material (TF2)
Stratifie	ed Layers (A5) (LRR (C)	Depleted M	atrix (F3)		Other (E	Explain in Remarks)
	uck (A9) (LRR D)			Surface (F6)	,		
	ed Below Dark Surfac	e (A11)		ark Surface (F			
	Park Surface (A12)			ressions (F8)		4Indicators o	f budraphytic vagatation and
	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Poo	IS (F9)			f hydrophytic vegetation and hydrology must be present.
	Layer (if present):						., a. e. e. g.,
Type:							
турс							
Denth (ir	oches).					Hydric Soil F	Present? Ves A No
Depth (ir		lindiaatama		inaa thia nai	ent is within	Hydric Soil F	<u> </u>
		il indicators	were not met, s	ince this poi	nt is within	-	Present? Yes No No ver, hydric soils are assumed.
		il indicators	were not met, s	ince this poi	nt is within	-	<u> </u>
		l indicators	were not met, s	ince this poi	nt is within	-	<u> </u>
Remarks: A	Although hydric soi	il indicators	were not met, s	ince this poi	int is within	-	<u> </u>
Remarks: A	Although hydric soi		were not met, s	ince this poi	int is within	the San Diego Ri	<u> </u>
YDROLO	Although hydric soi			ince this poi	int is within	the San Diego Ri	ver, hydric soils are assumed.
YDROLC Wetland Hy	Although hydric soi OGY /drology Indicators: icators (any one indic		ent)		int is within	the San Diego Ri	ver, hydric soils are assumed. lary Indicators (2 or more required) ater Marks (B1) (Riverine)
YDROLO Vetland Hy Primary Ind Surface	OGY /drology Indicators: icators (any one indicators with the water (A1)		ent) Salt Crust	(B11)	int is within	the San Diego Ri Second Wa	ver, hydric soils are assumed. lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine)
YDROLO Vetland Hy Primary Ind Surface High W	OGY /drology Indicators: icators (any one indicators (A1) e Water (A1) later Table (A2)		ent) Salt Crust Biotic Cru	(B11) st (B12)		Second We X Se X Dri	dary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine)
YDROLO Wetland Hy Primary Ind Surface High W Saturat	OGY /drology Indicators: icators (any one indicators (A1) atter Table (A2) ion (A3)	cator is suffici	ent) Salt Crust Biotic Cru	(B11) st (B12) vertebrates (B	313)	Second Second Second Second Dri Dri	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I	OGY /drology Indicators: icators (any one indicators (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver	cator is suffici	ent) Salt Crust Biotic Cru Aquatic In Hydrogen	(B11) st (B12) vertebrates (E Sulfide Odor	313) (C1)	Second Second Second Second Dra Dra Dra Dry	dary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY /drology Indicators: icators (any one indicators (A1) later Table (A2) ion (A3) Marks (B1) (Nonriverent Deposits (B2) (No	cator is suffici rine) nriverine)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized F	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres	313) (C1) along Living I	Second Second Second Second Dra Roots (C3)	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	OGY /drology Indicators: icators (any one indicators (A1) later Table (A2) ion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver eposits (B3) (Nonriver epo	cator is suffici rine) nriverine)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir	313) (C1) along Living I	Second Second Second Second Dra Roots (C3) Thi	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface	OGY /drology Indicators: icators (any one indicators (any one indicators) water (A1) icater Table (A2) ion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	cator is sufficient vine) nriverine) rine)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i	B13) (C1) along Living I ron (C4) in Plowed Soi	Second Wa Se Dri Dra Cra s (C6) Second Can Second Second Can Second Second	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inundat	olthough hydric soil old Y o	cator is sufficient vine) nriverine) rine)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir	B13) (C1) along Living I ron (C4) in Plowed Soi	Second Wa Se Dri Dra Cra S (C6) Sh	dary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS allow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inundat Water-S	olthough hydric soil old Y o	cator is sufficient vine) nriverine) rine)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i	B13) (C1) along Living I ron (C4) in Plowed Soi	Second Wa Se Dri Dra Cra S (C6) Sh	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inundar Water-S	Although hydric soin although hydric soin although hydric soin although hydric soin although later (any one indicated at the second (any one indicated (any one indic	cator is sufficient rine) nriverine) rine) Imagery (B7)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i	B13) (C1) along Living I ron (C4) in Plowed Soi	Second Wa Se Dri Dra Cra S (C6) Sh	dary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS allow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inundat Water-S	Although hydric soil Adrology Indicators: icators (any one indicators (any one indicators) Water (A1) icater Table (A2) ion (A3) Marks (B1) (Nonriver (A2)) ion (A3) Marks (B3) (Nonriver (A3)) ion (A3) Marks (B1) (Nonriver (A3)) ion (A3)	cator is sufficients. cine) nriverine) rine) Imagery (B7)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i blain in Rema	B13) (C1) along Living I ron (C4) in Plowed Soi	Second Wa Se Dri Dra Cra S (C6) Sh	dary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS allow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inundat Water-S Field Obse Surface Wa	Although hydric soin although later (A1) after Table (A2) after Table (A2) after Table (A2) after Deposits (B1) (Nonriver ent Deposits (B2) (Nonriver ent Deposits (B3) (Nonriver ent Deposits (B3) (Nonriver ent Deposits (B4) (N	cator is sufficients cine) nriverine) rine) Imagery (B7)	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized F Presence Recent Irc Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i plain in Rema	B13) (C1) along Living I ron (C4) in Plowed Soi	Second Wa Se Dri Dra Cra S (C6) Sh	dary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS allow Aquitard (D3)
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YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Surface Inundat Water-S Field Obse Surface Water Table Saturation Fincludes ca	Although hydric soil Adrology Indicators: icators (any one indicators) Water (A1) Pater Table (A2) Ion (A3) Marks (B1) (Nonriver Patent Deposits (B2) (No Paposits (B3) (Nonriver Patent Stained Leaves (B9) Ivations: Iter Present? Present? Present?	cator is sufficients cine) nriverine) Imagery (B7) Yes No. Yes No.	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i blain in Rema ches): ches):	B13) (C1) along Living I ron (C4) in Plowed Soi rks)	Second Wa Se Dri Dra Dry Roots (C3) Sh FA	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9 allow Aquitard (D3) C-Neutral Test (D5)
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YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F Sincludes ca	Although hydric soil Adrology Indicators: icators (any one indicators) Water (A1) Pater Table (A2) Ion (A3) Marks (B1) (Nonriver Patent Deposits (B2) (No Paposits (B3) (Nonriver Patent Stained Leaves (B9) Ivations: Iter Present? Present? Present?	cator is sufficients cine) nriverine) Imagery (B7) Yes No. Yes No.	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i blain in Rema ches): ches):	B13) (C1) along Living I ron (C4) in Plowed Soi rks)	Second Wa Se Dri Dra Dry Roots (C3) Sh FA	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS allow Aquitard (D3) C-Neutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Unift De Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	Although hydric soil Adrology Indicators: icators (any one indicators) Water (A1) Pater Table (A2) Ion (A3) Marks (B1) (Nonriver Patent Deposits (B2) (No Paposits (B3) (Nonriver Patent Stained Leaves (B9) Ivations: Iter Present? Present? Present?	cator is sufficients cine) nriverine) Imagery (B7) Yes No. Yes No.	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i blain in Rema ches): ches):	B13) (C1) along Living I ron (C4) in Plowed Soi rks)	Second Wa Se Dri Dra Dry Roots (C3) Sh FA	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (CS allow Aquitard (D3) C-Neutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Surface Inundar Water-S Field Obse Surface Wa Water Table Saturation F includes ca	Although hydric soil Adrology Indicators: icators (any one indicators) Water (A1) Pater Table (A2) Ion (A3) Marks (B1) (Nonriver Patent Deposits (B2) (No Paposits (B3) (Nonriver Patent Stained Leaves (B9) Ivations: Iter Present? Present? Present?	cator is sufficients cine) nriverine) Imagery (B7) Yes No. Yes No.	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i blain in Rema ches): ches):	B13) (C1) along Living I ron (C4) in Plowed Soi rks)	Second Wa Se Dri Dra Dry Roots (C3) Sh FA	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9 allow Aquitard (D3) C-Neutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Unundat Inundat Water-S Field Obse Surface Wa Water Table Saturation F includes ca	Although hydric soil Adrology Indicators: icators (any one indicators) Water (A1) Pater Table (A2) Ion (A3) Marks (B1) (Nonriver Patent Deposits (B2) (No Paposits (B3) (Nonriver Patent Stained Leaves (B9) Ivations: Iter Present? Present? Present?	cator is sufficients cine) nriverine) Imagery (B7) Yes No. Yes No.	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i blain in Rema ches): ches):	B13) (C1) along Living I ron (C4) in Plowed Soi rks)	Second Wa Se Dri Dra Dry Roots (C3) Sh FA	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9 allow Aquitard (D3) C-Neutral Test (D5)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Vater I Sedime Unift De Surface Inundar Water-S Field Obse Surface Wa Vater Table Saturation F Sincludes ca	Although hydric soil Adrology Indicators: icators (any one indicators) Water (A1) Pater Table (A2) Ion (A3) Marks (B1) (Nonriver Patent Deposits (B2) (No Paposits (B3) (Nonriver Patent Stained Leaves (B9) Ivations: Iter Present? Present? Present?	cator is sufficients cine) nriverine) Imagery (B7) Yes No. Yes No.	ent) Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized If Presence Recent Irc Other (Ex	(B11) st (B12) vertebrates (E Sulfide Odor Rhizospheres of Reduced Ir on Reduction i blain in Rema ches): ches):	B13) (C1) along Living I ron (C4) in Plowed Soi rks)	Second Wa Se Dri Dra Dry Roots (C3) Sh FA	lary Indicators (2 or more required) ater Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) y-Season Water Table (C2) in Muck Surface (C7) ayfish Burrows (C8) turation Visible on Aerial Imagery (Cs allow Aquitard (D3) C-Neutral Test (D5)



APPENDIX B Representative Photographs





Photo 1: Data Station 1a

Photo 2: Data Station 1b





Photo 3: Data Station 1c

Photo 4: Data Station 1d







Photo 6: Data Station 3a



Photo 7: Data Station 3b



Photo 8: Data Station 4a



Photo 9: Data Station 4b



Photo 10: Data Station 4c



Photo 11: Data Station 5a



Photo 12: Data Station 5b

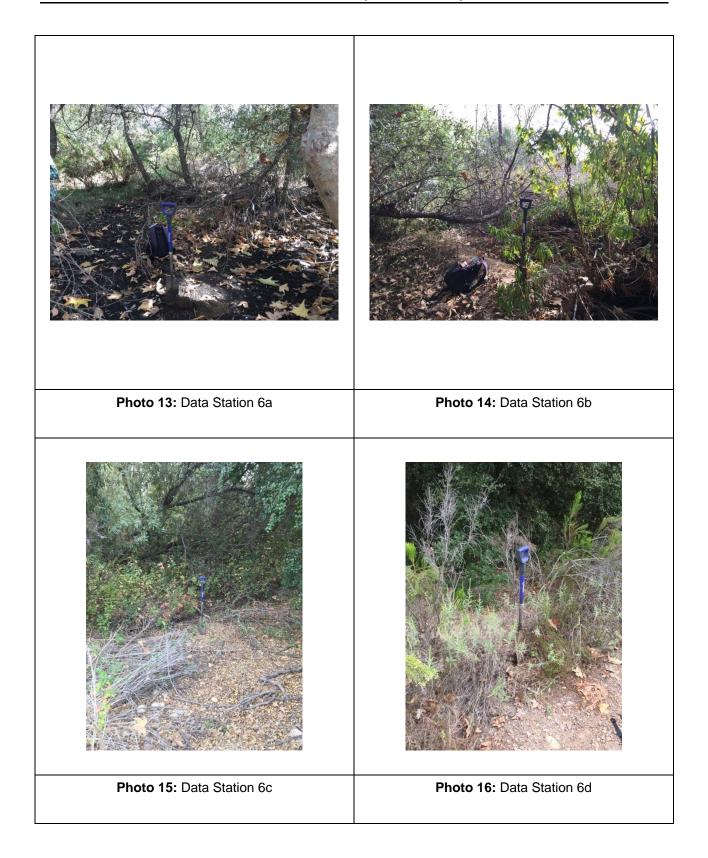






Photo 17: Data Station 7a

Photo 18: Data Station 7b







Photo 20: Data Station 9a





Photo 21: Data Station 9b

Photo 22: Data Station 9c







Photo 24: Data Station 11





Photo 25: Data Station 12a

Photo 26: Data Station 12b







Photo 28: Data Station 13

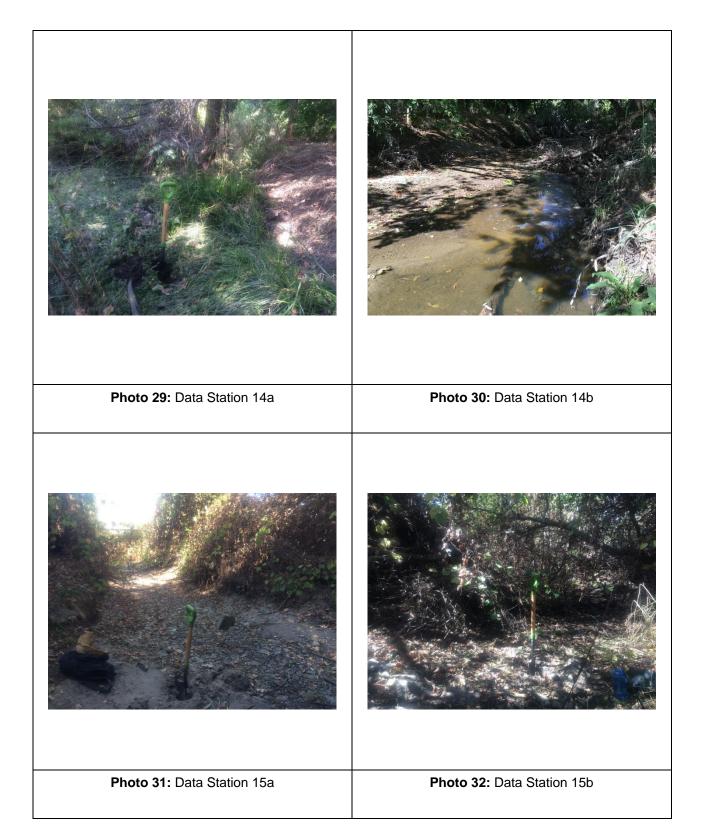






Photo 33: Data Station 16a

Photo 34: Data Station 16b





Photo 35: Data Station 17a

Photo 36: Data Station 17b





Photo 37: Data Station 17c

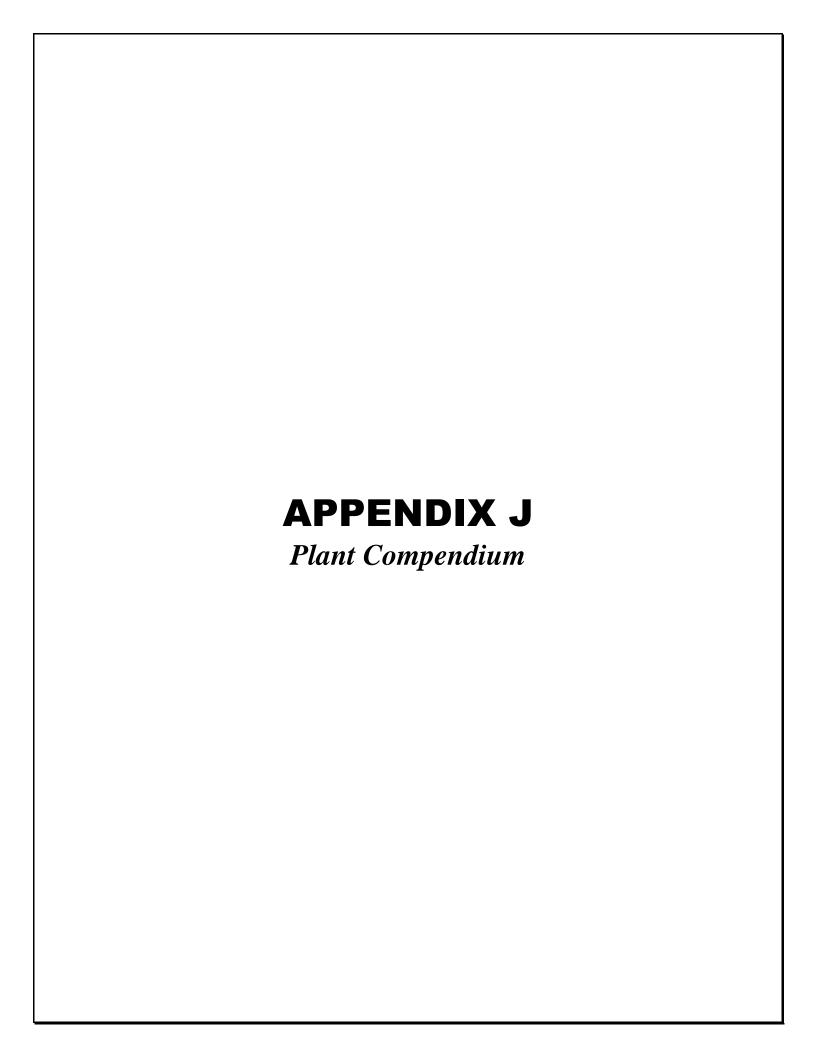
Photo 38: Data Station 18





Photo 39: Data Station 19a

Photo 40: Data Station 19b



APPENDIX J Plant Compendium

VASCULAR SPECIES

FERNS AND FERN ALLIES

AZOLLACEAE—MOSQUITO FERN FAMILY

Azolla filiculoides—Pacific mosquitofern

DRYOPTERIDACEAE—WOOD FERN FAMILY

Dryopteris arguta—coastal woodfern

PTERIDACEAE—BRAKE FAMILY

Aspidotis californica—California lacefern

Pellaea andromedifolia—coffee cliffbrake

Pellaea mucronata var. mucronata—birdfoot cliffbrake

Pentagramma triangularis ssp. triangularis—goldback fern

Pentagramma triangularis ssp. viscosa—silverback fern

Myriopteris newberryi—Newberry's lip fern

SELAGINELLACEAE—SPIKE-MOSS FAMILY

Selaginella bigelovii—bushy spikemoss Selaginella cinerascens—ashy spike-moss¹

GYMNOSPERMS AND GNETOPHYTES

PINACEAE—PINE FAMILY

Pinus torreyana ssp. torreyana—Torrey pine (planted)

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Hesperoyucca whipplei—chaparral yucca

Yucca schidigera—Mojave yucca

Chlorogalum sp.—wavyleaf soap plant

ASTERACEAE—SUNFLOWER FAMILY

Pseudognaphalium leucocephalum

ALISMATACEAE—WATER-PLANTAIN FAMILY

Alisma triviale—northern water plantain

ALLIACEAE—ONION FAMILY

<u>Allium haematochiton—redskin onion</u> Allium peninsulare var. peninsulare—penisula onion Allium praecox—early onion

ARECACEAE—PALM FAMILY

- * Phoenix canariensis—Canary Island date palm
- * Washingtonia robusta—Washington fan palm

ASPARAGACEAE—ASPARAGUS FAMILY

* Asparagus asparagoides—African asparagus fern

ASPHODELACEAE—ASPHODEL FAMILY

* Asphodelus fistulosus—onionweed

CYPERACEAE—SEDGE FAMILY

Carex praegracilis—clustered field sedge

Carex spissa—San Diego sedge

Cyperus eragrostis—tall flatsedge

* Cyperus involucratus—umbrella plant

Eleocharis montevidensis—sand spikerush

Eleocharis palustris—common spikerush

Schoenoplectus californicus—California bulrush

Schoenoplectus acutus—hardstem bulrush

Eleocharis macrostachya—pale spike rush

IRIDACEAE—IRIS FAMILY

Sisyrinchium bellum—western blue-eyed grass

JUNCACEAE—RUSH FAMILY

Juncus bufonius—toad rush

Juncus dubius—questionable rush

Juncus mexicanus—Mexican rush

Juncus rugulosus—wrinkled rush

Juncus acutus ssp. leopoldii—southwestern spiny rush¹

LILIACEAE—LILY FAMILY

Calochortus splendens—splendid mariposa lily

Calochortus weedii var. weedii—Weed's mariposa lily

Brodiaea orcuttii—Orcutt's brodiaea

Fritillaria biflora var. biflora—no common name

POACEAE—GRASS FAMILY

- Agrostis pallens—seashore bentgrass
- * Agrostis stolonifera—creeping bentgrass
- * Avena barbata—slender oat
 - Aristida adscensionis—sixweeks threeawn
 - Bothriochloa barbinodis—cane bluestem
 - Deschampsia danthonioides—annual hairgrass
- * Ehrharta erecta—panic veldtgrass
 - Leptochloa fusca ssp. uninervia—Mexican sprangletop
 - Melica imperfecta—smallflower melicgrass
 - Muhlenbergia microsperma—littleseed muhly
 - Setaria parviflora—marsh bristlegrass
 - Stipa coronata—giant ricegrass
 - Stipa hymenoides—Indian rice grass
- * Arundo donax—giant reed
- * Avena fatua—wild oat
- * Brachypodium distachyon—purple false brome
- * Briza minor—little quakinggrass
- * Bromus catharticus—rescuegrass
- * Bromus diandrus—ripgut brome
- * Bromus hordeaceus—soft brome
- * Bromus madritensis ssp. rubens—red brome
- * Bromus tectorum—cheatgrass
- * Cortaderia jubata—purple pampas grass
- * Cortaderia selloana—Uruguayan pampas grass
- * Crypsis schoenoides—swamp pricklegrass
- * Cynodon dactylon—Bermudagrass
- * Dactylis glomerata—orchardgrass
- * Phalaris minor—littleseed canarygrass
- * Ehrharta longiflora—longflowered veldtgrass
- * Ehrharta calycina—perennial veldtgrass
- * Festuca myuros—rat-tail fescue
- * Gastridium phleoides—nit grass
- * Hordeum marinum—seaside barley
- * Hordeum marinum ssp. gussoneanum—Mediterranean barley
- * Hordeum murinum ssp. leporinum—hare barley
- * Lamarckia aurea—goldentop grass
- * Melinis repens—rose Natal grass
- * Parapholis incurva—curved sicklegrass



- * Paspalum dilatatum—dallisgrass
- * Paspalum vaginatum—seashore paspalum
- * Poa annua—annual bluegrass
- * Polypogon monspeliensis—annual rabbitsfoot grass
- * Polypogon viridis—beardless rabbitsfoot grass
- * Sorghum halepense—Johnsongrass
- * Stenotaphrum secundatum—St. Augustine grass
- * Stipa miliacea—smilograss
- * Schismus barbatus—common Mediterranean grass
 Elymus triticoides—creeping rye grass
 Stipa lepida—foothill needle grass
- * Pennisetum setaceum—fountain grass swards
- * Pennisetum clandestinum—kikuyugrass

Elymus condensatus—giant wild rye

Stipa cernua—nodding needle grass

* Festuca perennis—perennial rye grass
Stipa pulchra—purple needle grass
Distichlis spicata—salt grass

THEMIDACEAE—BRODIAEA FAMILY

Bloomeria crocea var. crocea—common goldenstar Dichelostemma capitatum ssp. capitatum—bluedicks Dichelostemma capitatum—bluedicks Muilla maritima—sea muilla

TYPHACEAE—CATTAIL FAMILY

Typha domingensis—southern cattail

EUDICOTS

ADOXACEAE—MUSKROOT FAMILY

Sambucus nigra ssp. caerulea—blue elderberry

AIZOACEAE—FIG-MARIGOLD FAMILY

- * Carpobrotus chilensis—sea fig
- * Carpobrotus edulis—ice plant
- * Mesembryanthemum nodiflorum—slenderleaf iceplant

AMARANTHACEAE—AMARANTH FAMILY

* Amaranthus albus—prostrate pigweed Amaranthus blitoides—mat amaranth



ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Malosma laurina—laurel sumac

Rhus integrifolia—lemonade berry

Rhus ovata—sugarbush

- * Schinus molle—Peruvian peppertree
- * Schinus terebinthifolius—Brazilian peppertree
- * Searsia lancea—African sumac

Toxicodendron diversilobum—poison oak

APIACEAE—CARROT FAMILY

Apiastrum angustifolium—mock parsley

Daucus pusillus—American wild carrot

Sanicula arguta—sharptooth blacksnakeroot

Sanicula crassicaulis—Pacific blacksnakeroot

Tauschia arguta—southern umbrellawort

- * Apium graveolens—wild celery
- * Conium maculatum—poison hemlock
- * Torilis arvensis—spreading hedgeparsley
- * Foeniculum vulgare—fennel

APOCYNACEAE—DOGBANE FAMILY

Asclepias fascicularis—Mexican whorled milkweed

Funastrum cynanchoides var. hartwegii—Hartweg's twinevine

* Nerium oleander—oleander

ASTERACEAE—SUNFLOWER FAMILY

* Sonchus oleraceus—common sowthistle

Achillea millefolium—common yarrow

Acourtia microcephala—sacapellote

Agoseris grandiflora var. grandiflora—bigflower agoseris

Ambrosia confertiflora—weakleaf bur ragweed

Artemisia douglasiana—Douglas' sagewort

Artemisia ludoviciana ssp. albula—white sagebrush

Baccharis pilularis ssp. consanguinea—coyotebrush

Baccharis sarothroides—desertbroom

Brickellia californica—California brickellbush

Brickellia desertorum—desert brickellbush

Chaenactis artemisiifolia—white pincushion

Chaenactis glabriuscula—yellow pincushion

Cirsium occidentale var. californicum—cobwebby thistle

Cirsium occidentale var. occidentale—cobwebby thistle

Corethrogyne filaginifolia—common sandaster

Deinandra fasciculata—clustered tarweed

Erigeron canadensis—Canadian horseweed

Erigeron foliosus—leafy fleabane

Eriophyllum confertiflorum—golden-yarrow

Euthamia occidentalis—western goldentop

Gnaphalium palustre—western marsh cudweed

Hazardia squarrosa var. grindelioides—sawtooth bristleweed

Helianthus gracilentus—slender sunflower

Heterotheca grandiflora—telegraphweed

Isocoma menziesii var. menziesii—Menzies' goldenbush

Jaumea carnosa—marsh jaumea

Laennecia coulteri—Coulter's horseweed

Lasthenia coronaria—royal goldfields

Lasthenia gracilis—needle goldfields

Leptosyne gigantea—giant coreopsis

Logfia filaginoides—California cottonrose

Osmadenia tenella—false rosinweed

Pluchea sericea—arrow weed

Pluchea odorata var. odorata—sweetscent

Porophyllum gracile—slender poreleaf

Pseudognaphalium beneolens—Wright's cudweed

Pseudognaphalium biolettii—two-color rabbit-tobacco

Pseudognaphalium californicum—ladies' tobacco

Pseudognaphalium canescens—Wright's cudweed

Pseudognaphalium microcephalum—Wright's cudweed

Pseudognaphalium stramineum—cottonbatting plant

Psilocarphus brevissimus—short woollyheads

Psilocarphus tenellus—slender woollyheads

Rafinesquia californica—California plumeseed

Stephanomeria diegensis—San Diego wirelettuce

Stephanomeria exigua ssp. deanei—Deane's wirelettuce

Stylocline gnaphaloides—mountain neststraw

Uropappus lindleyi—Lindley's silverpuffs

Baccharis salicifolia ssp. salicifolia—mulefat

- * Bidens pilosa—hairy beggarticks
- * Carduus pycnocephalus—Italian plumeless thistle
- * Centaurea benedicta—blessed thistle



- * Centaurea melitensis—Maltese star-thistle
- * Cirsium vulgare—bull thistle
- * Cynara cardunculus ssp. cardunculus—globe artichoke
- * Dimorphotheca sinuata—glandular Cape marigold
- * Dittrichia graveolens—stinkwort
- * Erigeron bonariensis—asthmaweed
- * Erigeron sumatrensis—asthmaweed
- * Gazania linearis—treasureflower
- * Glebionis coronaria—crowndaisy
- * *Hedypnois rhagadioloides*—crete weed
- * Helichrysum petiolare—licorice-plant
- * Helminthotheca echioides—bristly oxtongue
- * Hypochaeris glabra—smooth cat's ear
- * Lactuca serriola—prickly lettuce
- * Logfia gallica—narrowleaf cottonrose
- * Matricaria discoidea—disc mayweed
- * Oncosiphon piluliferum—stinknet
- * Pseudognaphalium luteoalbum—Jersey cudweed
- * Senecio vulgaris—old-man-in-the-Spring
- * Sonchus asper—spiny sowthistle
- * Sonchus asper ssp. asper—spiny sowthistle
- * Tragopogon dubius—yellow salsify
- * Cotula coronopifolia—brass buttons

Encelia farinosa—brittle bush

Encelia californica—California brittle bush

Gutierrezia californica—California match weed

Artemisia californica—California sagebrush

Ambrosia psilostachya—western ragweed

Artemisia dracunculus—wild tarragon

Artemisia palmeri—San Diego sagewort¹

Viguiera laciniata—San Diego County viguiera¹

Holocarpha virgata ssp. elongata—graceful tarplant¹

Isocoma menziesii var. decumbens—decumbent goldenbush¹

Iva hayesiana—San Diego marsh-elder¹

Microseris douglasii ssp. platycarpha—small-flowered microseris¹

Pentachaeta aurea ssp. aurea—golden-rayed pentachaeta¹

Pseudognaphalium leucocephalum—white rabbit-tobacco^{1,2}

BIGNONIACEAE—BIGNONIA FAMILY

Tecoma capensis—Cape honeysuckle

BORAGINACEAE—BORAGE FAMILY

Amsinckia intermedia—common fiddleneck

Amsinckia menziesii—Menzies' fiddleneck

Amsinckia retrorsa—Menzies' fiddleneck

Cryptantha intermedia var. intermedia—Clearwater cryptantha

Cryptantha micrantha—redroot cryptantha

Cryptantha micromeres—pygmyflower cryptantha

Cryptantha microstachys—Tejon cryptantha

Cryptantha muricata var. denticulata—pointed cryptantha

Eriodictyon crassifolium var. crassifolium—thickleaf yerba santa

Eucrypta chrysanthemifolia var. chrysanthemifolia—spotted hideseed

Heliotropium curassavicum var. oculatum—seaside heliotrope

Nemophila menziesii var. integrifolia—baby blue eyes

Pectocarya linearis ssp. ferocula—sagebrush combseed

Pectocarya penicillata—sleeping combseed

Phacelia cicutaria var. hispida—caterpillar phacelia

Phacelia distans—distant phacelia

Phacelia parryi—Parry's phacelia

Phacelia ramosissima—branching phacelia

Pholistoma auritum var. auritum—blue fiestaflower

Pholistoma membranaceum—white fiestaflower

Plagiobothrys arizonicus—Arizona popcornflower

* Echium candicans—pride of Madeira

BRASSICACEAE—MUSTARD FAMILY

* Sisymbrium irio—London rocket

Caulanthus heterophyllus—San Diego wild cabbage

Lepidium lasiocarpum ssp. lasiocarpum—shaggyfruit pepperweed

Lepidium nitidum—shining pepperweed

Nasturtium officinale—watercress

Thysanocarpus laciniatus—mountain fringepod

- * Brassica nigra—black mustard
- * Brassica tournefortii—Asian mustard
- * Eruca vesicaria ssp. sativa—rocketsalad
- * Hirschfeldia incana—shortpod mustard
- * Lepidium didymum—lesser swinecress



- * Raphanus raphanistrum—wild radish
- * Raphanus sativus—cultivated radish
- * Sisymbrium officinale—hedgemustard
- * Sisymbrium orientale—Indian hedgemustard
- * Lepidium latifolium—perennial pepper weed

Lepidium nitidum—shining pepperweed

Lepidium virginicum var. robinsonii—Robinson's pepper-grass^{1,2}

CACTACEAE—CACTUS FAMILY

Opuntia ×vaseyi—Vasey's coastal pricklypear

* Opuntia ficus-indica—Barbary fig

Cylindropuntia californica var. californica—snake cholla

Opuntia littoralis—coast prickly pear

Ferocactus viridescens—San Diego barrel cactus 1,2

<u>CAMPANULACEAE—BELLFLOWER FAMILY</u>

Downingia cuspidata—toothed calicoflower

CAPRIFOLIACEAE—HONEYSUCKLE FAMILY

Lonicera subspicata var. denudata—Santa Barbara honeysuckle

* Lonicera japonica—Japanese honeysuckle

Symphoricarpos mollis—creeping snowberry

CARYOPHYLLACEAE—PINK FAMILY

Achyronychia cooperi—onyxflower

Cardionema ramosissimum—sandcarpet

Polycarpon depressum—California manyseed

Silene laciniata ssp. laciniata—cardinal catchfly

Stellaria nitens—shiny chickweed

- * Cerastium glomeratum—sticky chickweed
- * Polycarpon tetraphyllum var. tetraphyllum—fourleaf manyseed
- * Silene gallica—common catchfly
- * Spergularia villosa—hairy sandspurry
- * Stellaria media—common chickweed

CHENOPODIACEAE—GOOSEFOOT FAMILY

Atriplex canescens—fourwing saltbush

Chenopodium californicum—California goosefoot

- * Atriplex semibaccata—Australian saltbush
- * Atriplex suberecta—peregrine saltbush



- * Chenopodium album—lambsquarters
- * Chenopodium murale—nettleleaf goosefoot
- * Salsola tragus—prickly Russian thistle
- * Atriplex prostrata—fat hen

Atriplex lentiformis—quailbush

Arthrocnemum subterminale—Parish's glasswort

Salicornia pacifica—pickleweed

CISTACEAE—ROCK-ROSE FAMILY

Crocanthemum aldersonii—no common name

Crocanthemum scoparium var. scoparium—peak rush-rose

Crocanthemum scoparium var. vulgare—no common name

* Cistus incanus—hairy rockrose

CLEOMACEAE—CLEOME FAMILY

Peritoma arborea var. arborea—bladderpod spiderflower

CONVOLVULACEAE—MORNING-GLORY FAMILY

Calystegia macrostegia ssp. intermedia—island false bindweed

Calystegia macrostegia ssp. tenuifolia—island false bindweed

Cuscuta californica—chaparral dodder

Cuscuta subinclusa—canyon dodder

Dichondra occidentalis—western dichondra

CRASSULACEAE—STONECROP FAMILY

* Crassula ovata—jade plant

Crassula aquatica—water pygmyweed

Crassula connata—sand pygmyweed

Dudleya edulis—fingertips

Dudleya lanceolata—lanceleaf liveforever

Dudleya pulverulenta—chalk dudleya

CUCURBITACEAE—GOURD FAMILY

Cucurbita foetidissima—Missouri gourd

Marah macrocarpa—Cucamonga manroot

DIPSACACEAE—TEASEL FAMILY

* Dipsacus sativus—Indian teasel

<u>ELATINACEAE—WATERWORT FAMILY</u>

Elatine brachysperma—shortseed waterwort



ERICACEAE—HEATH FAMILY

Arctostaphylos glauca—bigberry manzanita

Xylococcus bicolor—mission manzanita

Comarostaphylis diversifolia ssp. diversifolia summer holly

EUPHORBIACEAE—SPURGE FAMILY

Acalypha californica—California copperleaf

Croton californicus—California croton

Euphorbia crenulata—Chinese caps

Euphorbia albomarginata—whitemargin sandmat

Euphorbia polycarpa—smallseed sandmat

Euphorbia serpyllifolia ssp. hirtula—thymeleaf sandmat

Croton setiger—dove weed

- * Euphorbia maculata—spotted sandmat
- * Euphorbia peplus—petty spurge
- * Ricinus communis—castorbean

FABACEAE—LEGUME FAMILY

Acmispon americanus var. americanus—American bird's-foot trefoil

Acmispon glaber var. glaber—common deerweed

Acmispon heermannii—Heermann's bird's-foot trefoil

Acmispon micranthus—San Diego bird's-foot trefoil

Acmispon strigosus—strigose bird's-foot trefoil

Astragalus trichopodus var. lonchus—Santa Barbara milkvetch

Lathyrus vestitus var. alefeldii—Alefeld's pea

Lupinus benthamii—spider lupine

Lupinus bicolor—miniature lupine

Lupinus concinnus—bajada lupine

Lupinus hirsutissimus—stinging annual lupine

Lupinus sparsiflorus—Coulter's lupine

Lupinus succulentus—hollowleaf annual lupine

Trifolium willdenovii—tomcat clover

Vicia ludoviciana—Louisiana vetch

- * Acacia cyclops—coastal wattle
- * Acacia longifolia—Sydney golden wattle
- * Acacia retinodes—water wattle
- * Lotus corniculatus—bird's-foot trefoil
- * *Medicago polymorpha*—burclover
- * Melilotus albus—yellow sweetclover
- * *Melilotus indicus*—annual yellow sweetclover



- * *Melilotus officinalis*—sweetclover
- * Parkinsonia aculeata—Jerusalem thorn
- * Spartium junceum—Spanish broom
- * Trifolium hirtum—rose clover
- * Vicia villosa ssp. villosa—winter vetch Acmispon americanus—Spanish clover

FAGACEAE—OAK FAMILY

Quercus acutidens—hybrid oak

Quercus agrifolia var. agrifolia—California live oak

Quercus berberidifolia—scrub oak

Quercus engelmannii—Engelmann oak (planted)

Quercus dumosa—Nuttall's scrub oak¹

FRANKENIA CEAE—FRANKENIA FAMILY

Frankenia salina—alkali heath

GENTIANACEAE—GENTIAN FAMILY

Zeltnera venusta—charming centaury

GERANIACEAE—GERANIUM FAMILY

- * Erodium cicutarium—redstem stork's bill Geranium carolinianum—Carolina geranium
- * Erodium botrys—longbeak stork's bill
- * Erodium moschatum—musky stork's bill
- * Geranium dissectum—cutleaf geranium
- * Geranium rotundifolium—roundleaf geranium
- * Pelargonium vitifolium—grapeleaf geranium

GROSSULARIACEAE—GOOSEBERRY FAMILY

Ribes indecorum—whiteflower currant Ribes speciosum—fuchsiaflower gooseberry

JUGLANDACEAE—WALNUT FAMILY

Juglans californica—Southern California black walnut^{1,2}

LAMIACEAE—MINT FAMILY

Salvia apiana—white sage Salvia columbariae—chia Salvia mellifera—black sage Salvia leucophylla—purple sage

Stachys rigida var. quercetorum—rough hedgenettle

Stachys rigida var. rigida—rough hedgenettle

- * Lamium amplexicaule—henbit deadnettle
- * Marrubium vulgare—horehound

LYTHRACEAE—LOOSESTRIFE FAMILY

- * Lythrum hyssopifolia—hyssop loosestrife
- * Punica granatum—pomegranate

MALVACEAE—MALLOW FAMILY

Malacothamnus densiflorus—yellowstem bushmallow

Sidalcea sparsifolia—dwarf checkerbloom

- * Malva parviflora—cheeseweed mallow
- * Malva pseudolavatera—Cornish mallow

Malacothamnus fasciculatus—bush mallow

MELIACEAE—MAHOGANY FAMILY

* *Melia azedarach*—Chinaberrytree

MOLLUGINACEAE—CARPET-WEED FAMILY

* Glinus lotoides—lotus sweetjuice

MONTIACEAE—MONTIA FAMILY

Claytonia parviflora ssp. parviflora—streambank springbeauty

Claytonia perfoliata ssp. mexicana—miner's lettuce

Claytonia perfoliata—miner's lettuce

Calandrinia menziesii—red maids

MYRSINACEAE—MYRSINE FAMILY

* Lysimachia monelli—flaxleaf pimpernel

Lysimachia minima—chaffweed

* Lysimachia arvensis—scarlet pimpernel

MYRTACEAE—MYRTLE FAMILY

- * Eucalyptus camaldulensis—river redgum
- * Eucalyptus globulus—Tasmanian bluegum
- * Eucalyptus polyanthemos—redbox
- * Eucalyptus sideroxylon—red ironbark
- * Melaleuca citrina—crimson bottlebrush
- * Leptospermum laevigatum—Australian teatree



NYCTAGINACEAE—FOUR O'CLOCK FAMILY

Mirabilis laevis var. crassifolia—California four o'clock Mirabilis laevis var. retrorsa—wishbone-bush

OLEACEAE—OLIVE FAMILY

* Olea europaea—olive

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissonia strigulosa—sandysoil suncup

Camissoniopsis bistorta—southern suncup

Camissoniopsis confusa—San Bernardino suncup

Camissoniopsis hirtella—Santa Cruz Island suncup

Camissoniopsis ignota—Jurupa Hills suncup

Clarkia epilobioides—canyon clarkia

Clarkia purpurea ssp. quadrivulnera—winecup clarkia

Clarkia purpurea ssp. viminea—winecup clarkia

Epilobium canum—hummingbird trumpet

Epilobium ciliatum—fringed willowherb

Eulobus californicus—California suncup

Oenothera elata—Hooker's evening primrose

Clarkia delicata—delicate clarkia^{1,2}

OROBANCHACEAE—BROOM-RAPE FAMILY

Castilleja affinis—coast Indian paintbrush

Castilleja exserta ssp. exserta—exserted Indian paintbrush

Castilleja foliolosa—Texas Indian paintbrush

Cordylanthus rigidus ssp. setiger—no common name

OXALIDACEAE—OXALIS FAMILY

Oxalis californica—California woodsorrel

* Oxalis pes-caprae—Bermuda buttercup

PAPAVERACEAE—POPPY FAMILY

Eschscholzia californica—California poppy

Romneya coulteri—Coulter's matilija poppy¹ (planted)

PHRYMACEAE—LOPSEED FAMILY

Mimulus aurantiacus var. puniceus—orange bush monkeyflower

Mimulus brevipes—widethroat yellow monkeyflower

Mimulus guttatus—common monkey flower



PLANTAGINACEAE—PLANTAIN FAMILY

Antirrhinum nuttallianum ssp. nuttallianum—violet snapdragon

Antirrhinum nuttallianum ssp. subsessile—lesser snapdragon

Keckiella cordifolia—heartleaf keckiella

Plantago elongata—prairie plantain

Plantago ovata—desert Indianwheat

Nuttallanthus texanus—Texas toadflax

- * Plantago arenaria—sand plantain
- * Plantago coronopus—buckhorn plantain
- * Plantago lanceolata—narrowleaf plantain
- * Plantago major—common plantain
- * Veronica anagallis-aquatica—water speedwell

Plantago erecta—dwarf plantain

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

Platanus racemosa—California sycamores

PLUMBAGINACEAE—LEADWORT FAMILY

* Limonium sinuatum—wavyleaf sea lavender

POLEMONIACEAE—PHLOX FAMILY

Eriastrum filifolium—lavender woollystar

Gilia angelensis—chaparral gilia

Linanthus dianthiflorus—fringed linanthus

Navarretia hamata ssp. hamata—hooked pincushionplant

POLYGONACEAE—BUCKWHEAT FAMILY

Chorizanthe fimbriata var. fimbriata—fringed spineflower

Chorizanthe fimbriata var. laciniata—fringed spineflower

Chorizanthe procumbens—prostrate spineflower

Chorizanthe staticoides—turkish rugging

Eriogonum fasciculatum var. foliolosum—Eastern Mojave buckwheat

Eriogonum gracile—slender woolly buckwheat

Lastarriaea coriacea—leather spineflower

Persicaria amphibia—longroot smartweed

Pterostegia drymarioides—woodland pterostegia

- * Polygonum argyrocoleon—silversheath knotweed
- * Polygonum aviculare ssp. depressum—prostrate knotweed
- * Rumex crispus—curly dock

Chorizanthe polygonoides var. longispina—long-spined spineflower¹



PORTULACACEAE—PURSLANE FAMILY

* Portulaca oleracea—little hogweed

PRIMULACEAE—PRIMROSE FAMILY

Primula clevelandii var. clevelandii—Padre's shooting star

PROTEACEAE—PROTEA FAMILY

* Grevillea robusta—silkoak

RANUNCULACEAE—BUTTERCUP FAMILY

Clematis lasiantha—pipestem clematis

Clematis ligusticifolia—western white clematis

Clematis pauciflora—ropevine clematis

Delphinium parryi ssp. parryi—San Bernardino larkspur

Thalictrum fendleri var. fendleri—Fendler's meadow-rue

RHAMNACEAE—BUCKTHORN FAMILY

Adolphia californica—California adolphia 1

Ceanothus tomentosus—woolyleaf ceanothus

Ceanothus verrucosus—wart-stemmed ceanothus¹

Rhamnus crocea—redberry buckthorn

Rhamnus ilicifolia—hollyleaf redberry

Ceanothus leucodermis—chaparral white thorn

Ceanothus oliganthus—hairy leaf ceanothus

Ceanothus crassifolius—hoary leaf ceanothus

Ceanothus verrucosus—wart-stemmed ceanothus¹

ROSACEAE—ROSE FAMILY

Adenostoma fasciculatum var. fasciculatum—chamise

Adenostoma fasciculatum var. obtusifolium—chamise

Cercocarpus betuloides var. betuloides—birchleaf mountain mahogany

Cercocarpus minutiflorus—smooth mountain mahogany

Heteromeles arbutifolia—toyon

Prunus ilicifolia ssp. ilicifolia—hollyleaf cherry

Rubus ursinus—California blackberry

* Rubus armeniacus—Himalayan black berry

RUBIACEAE—MADDER FAMILY

Galium angustifolium ssp. angustifolium—narrowleaf bedstraw

Galium aparine—stickywilly

Galium nuttallii—climbing bedstraw



RUTACEAE—RUE FAMILY

Cneoridium dumosum—bush rue

SALICACEAE—WILLOW FAMILY

Populus fremontii ssp. fremontii—Fremont cottonwood

Salix exigua var. hindsiana—narrowleaf willow

Salix laevigata—red willow

Salix lasiolepis—arroyo willow

Salix tracyi—Tracy's willow

Salix gooddingii—black willow

SAPINDACEAE—SOAPBERRY FAMILY

Acer negundo—box-elder

SAURURACEAE—LIZARD'S-TAIL FAMILY

Anemopsis californica—yerba mansa

SCROPHULARIACEAE—FIGWORT FAMILY

Scrophularia californica—California figwort

* Myoporum laetum—myoporum

SIMAROUBACEAE—OUASSIA OR SIMAROUBA FAMILY

* Ailanthus altissima—tree of heaven

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple

Physalis hederifolia var. fendleri—Fendler's groundcherry

Solanum douglasii—greenspot nightshade

Solanum parishii—Parish's nightshade

Solanum umbelliferum—bluewitch nightshade

Solanum xanti—chaparral nightshade

- * Nicotiana gauca—tree tobacco
- * Physalis philadelphica—Mexican groundcherry
- * Solanum nigrum—black nightshade

TAMARICACEAE—TAMARISK FAMILY

* Tamarix ramosissima—saltcedar

TROPAEOLACEAE—NASTURTIUM FAMILY

* Tropaeolum majus—nasturtium



URTICACEAE—NETTLE FAMILY

<u>Hesperocnide tenella—western stingingnettle</u> Parietaria hespera var. californica—California pellitory Urtica dioica ssp. gracilis—California nettle

* Urtica urens—dwarf nettle

VERBENACEAE—VERVAIN FAMILY

Verbena menthifolia—mint vervain

* Lantana camara—lantana

VIOLACEAE—VIOLET FAMILY

Viola pedunculata—Johnny-jump-up

VITACEAE—GRAPE FAMILY

Vitis girdiana—desert wild grape

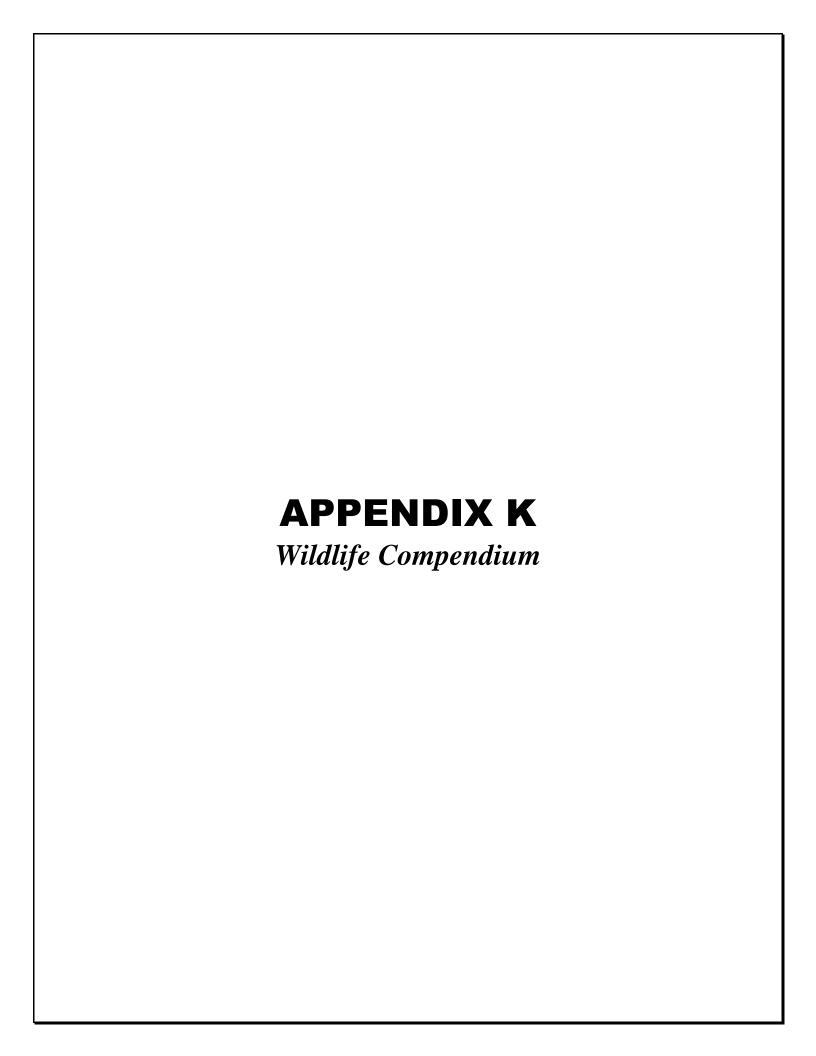
ZYGOPHYLLACEAE—CALTROP FAMILY

* Tribulus terrestris—puncturevine

- Special-Status Species
- ² Occurs in San Vicente Reservoir Alternative Only



^{*} signifies introduced (non-native) species



APPENDIX K Wildlife Compendium

AMPHIBIAN RANIDAE—TONGUELESS FROGS Lithobates catesbeianus American bullfrog X — — — — — — — — — — — — — — — — — —	Scientific Name	Common Name	San Vicente Reservoir Alternative ¹	Miramar Reservoir Alternative ²	Both Alternatives ³
American bullfrog		A	MPHIBIAN		•
BIRD ICTERIDAE—BLACKBIRDS Ted-winged blackbird X		RANIDAE—7	TONGUELESS FROGS		
ICTERIDAE—BLACKBIRDS	Lithobates catesbeianus	American bullfrog	Х	_	_
Agelaius phoeniceus red-winged blackbird X - X Euphagus cyanocephalus Brewer's blackbird X - X Icterus bullockii Bullock's oriole X - - - Icterus cucullatus hooded oriole X X X X Molothrus after brown-headed cowbird X - - - - Quiscalus mexicanus great-tailed grackle - X X X CARBINALIDAE—LONG-TAILED TITS AND BUSHTITS Valority and publishing X X X CARBINALIDAE—CARDINALS AND ALLIES Valority and publishing X - - - Passerina amoena Lazuli bunting X - - - CARDINALS AND ALLIES Passerina amoena Lazuli bunting X - - - - - - X X X X X X X X </td <td></td> <td></td> <td>BIRD</td> <td></td> <td></td>			BIRD		
Euphagus cyanocephalus Brewer's blackbird X - X Icterus bullockii Bullock's oriole X - <		ICTERID.	AE—BLACKBIRDS		
Euphagus cyanocephalus Brewer's blackbird X - X Icterus bullockii Bullock's oriole X - <	Agelaius phoeniceus	red-winged blackbird	Х	_	Х
Icterus cucultatus hooded oriole X X X Molothrus ater brown-headed cowbird X - - - Quiscalus mexicanus great-tailed grackle - X X X AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS Psastrina unimimus bustit X X X X CARDINALIDAE—CARDINALS AND ALLIES Passerina amoena Lazuli bunting X -		Brewer's blackbird	Х	_	Х
Molothrus ater brown-headed cowbird X -	Icterus bullockii	Bullock's oriole	Х	-	_
Quiscalus mexicanus	Icterus cucullatus	hooded oriole	Х	Χ	Х
AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS Psaltriparus minimus bushtit X X X CARDINALIDAE—CARDINALS AND ALLIES Passerina amoena Lazuli bunting X — — Passerina caerulea blue grosbeak X — — X Pheucticus melanocephalus black-headed grosbeak X	Molothrus ater	brown-headed cowbird	Х	_	-
AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS Psaltriparus minimus bushtit X X X CARDINALIDAE—CARDINALS AND ALLIES Passerina amoena Lazuli bunting X - - - Passerina amoena Lazuli bunting X - - - X Passerina amoena Lazuli bunting X - - - X Passerina amoena Lazuli bunting X - - - X Passerina amoena Lazuli bunting X - - X Pheucticus black-headed grosbeak X X X X ANDAILIAE Melancia amoena X X X X ANATIDAE—DUCKS, GEESE, AND SWANS Anas strepera gadwall - - X Anas strepera gadwall - - X Anas	Quiscalus mexicanus	great-tailed grackle	_	Χ	Х
CARDINALIDAE—CARDINALS AND ALLIES Passerina amoena Lazuli bunting X X Pheucticus black-headed grosbeak X X X X X X melanocephalus black-headed grosbeak X X X X X X melanocephalus western tanager X			IG-TAILED TITS AND BUSH	TITS	•
Passerina amoena Lazuli bunting X - - Passerina caerulea blue grosbeak X - X Pheucticus melanocephalus black-headed grosbeak X X X Piranga ludoviciana western tanager X - - ANATIDAE—DUCKS, GEESE, AND SWANS Anas platyrhynchos mallard X - X Anas platyrhynchos mallard X - X Anas platyrhynchos mallard X - X Anas platyrhynchos mallard X - - X Branta funt	Psaltriparus minimus	bushtit	Х	Χ	Х
Passerina caerulea blue grosbeak X - X Pheucticus melanocephalus black-headed grosbeak X X X ANATIDAE—DUCKS, GEESE, AND SWANS ANATIDAE—DUCKS, GEESE, AND SWANS ANAS platyrhynchos mallard X - X Anas platyrhynchos mallard X - X Anas strepera gadwall - - X Branta hutchinsii Cackling goose - - X Cackling goose - - - X Cackling goose - - - X Muscovy Duck - - - X Calina moschata Muscovy Duck - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps Cutfuere X - - - </td <td>•</td> <td>CARDINALIDAE-</td> <td>-CARDINALS AND ALLIES</td> <td></td> <td>1</td>	•	CARDINALIDAE-	-CARDINALS AND ALLIES		1
Passerina caerulea blue grosbeak X - X Pheucticus melanocephalus black-headed grosbeak X X X ANATIDAE—DUCKS, GEESE, AND SWANS ANATIDAE—DUCKS, GEESE, AND SWANS Anas platyrhynchos mallard X - X Anas strepera gadwall - - X Branta hutchinsii Cackling goose - - X Cairina moschata Muscovy Duck - - X Cairina moschata Muscovy Duck - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - Chondestes grammacus lark sparrow - - X Lincoln'is sparrow X - - -	Passerina amoena	Lazuli bunting	Х	_	_
Pheucticus melanocephalus black-headed grosbeak X X Piranga ludoviciana western tanager X - - ANATIDAE—DUCKS, GEESE, AND SWANS Anas platyrhynchos mallard X - X Anas strepera gadwall - - X Branta hutchinsii Cackling goose - - X Cairina moschata Muscovy Duck - - X Goose sp. - - X Lophodytes cucullatus hooded merganser - - X Lophodytes cucullatus hooded merganser - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow	Passerina caerulea	· · · · · · · · · · · · · · · · · · ·	Х	_	Х
Piranga ludoviciana western tanager X - - ANATIDAE—DUCKS, GEESE, AND SWANS Anas platyrhynchos mallard X - X Anas strepera gadwall - - X Branta hutchinsii Cackling goose - - X Cairina moschata Muscovy Duck - - X Cairina moschata Muscovy Duck - - X Lophodytes cucullatus hooded merganser - - X Lophodytes cucullatus hooded merganser - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps Culiforus crowned sparrow X - - - X Aimophila ruficeps Southern California rufous- crowned sparrow X - - - - - X Chondestes grammacus lark sparrow - - X -			Х	Х	Х
ANATIDAE—DUCKS, GEESE, AND SWANS Anas platyrhynchos mallard X - X Anas strepera gadwall - - X Branta hutchinsii Cackling goose - - X Cairina moschata Muscovy Duck - - X Goose sp. - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - - X Chondestes grammacus lark sparrow X -	•	western tanager	Х	_	_
Anas platyrhynchos mallard X - X Anas strepera gadwall - - X Branta hutchinsii Cackling goose - - X Cairina moschata Muscovy Duck - - X Lophodytes cucullatus hooded merganser - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - - - - Chondestes grammacus lark sparrow - - X - - - X Junco hyemalis dark-eyed junco X - - - X Melospizal incolnii Lincoln's sparr		•	CKS, GEESE, AND SWANS		1
Anas strepera gadwall - - X Branta hutchinsii Cackling goose - - X Cairina moschata Muscovy Duck - - X Lophodytes cucullatus hooded merganser - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X - - - Aimophila ruficeps Southern California rufous-crowned sparrow X -	Anas platyrhynchos			_	Х
Branta hutchinsii Cackling goose - - X Cairina moschata Muscovy Duck - - X Goose sp. - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps canescens rufous-crowned sparrow X - - Chondestes grammacus lark sparrow X - - Chondestes grammacus lark sparrow - - X Junco hyemalis dark-eyed junco X - - Melospiza lincolnii Lincoln's sparrow X - - Melospiza melodia song sparrow X X X Melozone crissalis California towhee X X X Pipilo maculatus spotted towhee X X X Spizella atrogularis black-chinned sparrow - - X Spizella breweri Brewer's sparrow - X X FALCONIDAE—CARACARAS AND FALCONS <td>, , ,</td> <td>gadwall</td> <td>_</td> <td>_</td> <td>Х</td>	, , ,	gadwall	_	_	Х
Cairina moschata Muscovy Duck - - X Goose sp. - - X Lophodytes cucullatus hooded merganser - - X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps Canimophila ruficeps canescens Southern California rufouscrowned sparrow X - - Chondestes grammacus lark sparrow - - X Junco hyemalis dark-eyed junco X - - Melospiza lincolnii Lincoln's sparrow X - - Melospiza melodia song sparrow X X X Spizella atrogularis black-chinned sparrow - - X Spizella atrogularis black-chinned sparrow - X <td></td> <td>+ •</td> <td>_</td> <td>_</td> <td>Х</td>		+ •	_	_	Х
Goose sp. — — X Lophodytes cucullatus hooded merganser — — X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X — — — — — — — — — — — — — — — — — —	Cairina moschata		_	_	Х
Lophodytes cucullatus hooded merganser – — X EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X — — — — — — — — — — — — — — — — — —		·	_	_	
EMBERIZIDAE—EMBERIZIDS Aimophila ruficeps rufous-crowned sparrow X - - Aimophila ruficeps Southern California rufous-crowned sparrow X - - Chondestes grammacus lark sparrow - - X Junco hyemalis dark-eyed junco X - - Melospiza lincolnii Lincoln's sparrow X - - Melospiza melodia song sparrow X X X Melozone crissalis California towhee X X X Pipilo maculatus spotted towhee X X X Spizella atrogularis black-chinned sparrow - - X Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X	Lophodytes cucullatus	·	_	_	Х
Aimophila ruficeps canescens Southern California rufous-crowned sparrow X - - Chondestes grammacus lark sparrow - - X Junco hyemalis dark-eyed junco X - - Melospiza lincolnii Lincoln's sparrow X - - Melospiza melodia song sparrow X X X Melozone crissalis California towhee X X X Pipilo maculatus spotted towhee X X X Spizella atrogularis black-chinned sparrow - X - Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X			DAE—EMBERIZIDS		
Aimophila ruficeps canescens Southern California rufous-crowned sparrow X - - Chondestes grammacus lark sparrow - - X Junco hyemalis dark-eyed junco X - - Melospiza lincolnii Lincoln's sparrow X - - Melospiza melodia song sparrow X X X Melozone crissalis California towhee X X X Pipilo maculatus spotted towhee X X X Spizella atrogularis black-chinned sparrow - X - Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X	Aimophila ruficeps	rufous-crowned sparrow	Х	_	_
Junco hyemalis dark-eyed junco X - - Melospiza lincolnii Lincoln's sparrow X - - Melospiza melodia song sparrow X X X Melozone crissalis California towhee X X X Pipilo maculatus spotted towhee X X X Spizella atrogularis black-chinned sparrow - - X Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X	Aimophila ruficeps	Southern California rufous-	Х	-	-
Melospiza lincolnii Lincoln's sparrow X — — Melospiza melodia song sparrow X X X Melozone crissalis California towhee X X X Pipilo maculatus spotted towhee X X X Spizella atrogularis black-chinned sparrow — — X Spizella breweri Brewer's sparrow — X — Zonotrichia leucophrys white-crowned sparrow X — X FALCONIDAE—CARACARAS AND FALCONS	Chondestes grammacus	lark sparrow	_	_	Х
Melospiza melodia song sparrow X X Melozone crissalis California towhee X X Pipilo maculatus spotted towhee X X Spizella atrogularis black-chinned sparrow - - Spizella breweri Brewer's sparrow - X Zonotrichia leucophrys white-crowned sparrow X - FALCONIDAE—CARACARAS AND FALCONS	Junco hyemalis	dark-eyed junco	Х	_	-
Melospiza melodia song sparrow X X Melozone crissalis California towhee X X Pipilo maculatus spotted towhee X X Spizella atrogularis black-chinned sparrow - - Spizella breweri Brewer's sparrow - X Zonotrichia leucophrys white-crowned sparrow X - FALCONIDAE—CARACARAS AND FALCONS		· · · · · · · · · · · · · · · · · · ·		_	-
Melozone crissalis California towhee X X X Pipilo maculatus spotted towhee X X X Spizella atrogularis black-chinned sparrow - - X Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X FALCONIDAE—CARACARAS AND FALCONS		· ·		Х	Х
Pipilo maculatus spotted towhee X X Spizella atrogularis black-chinned sparrow - - X Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X FALCONIDAE—CARACARAS AND FALCONS				Х	Х
Spizella atrogularis black-chinned sparrow - X Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X FALCONIDAE—CARACARAS AND FALCONS	Pipilo maculatus				
Spizella breweri Brewer's sparrow - X - Zonotrichia leucophrys white-crowned sparrow X - X FALCONIDAE—CARACARAS AND FALCONS	•	· ·	_	_	Х
Zonotrichia leucophrys white-crowned sparrow X – X FALCONIDAE—CARACARAS AND FALCONS		· '	_	Х	_
FALCONIDAE—CARACARAS AND FALCONS		<u>'</u>	Х	-	Х
	, ,	<u> </u>	ARACARAS AND FALCONS		
	Falco sparverius	American kestrel	X	_	Х



Scientific Name	Common Name	San Vicente Reservoir Alternative ¹	Miramar Reservoir Alternative ²	Both Alternatives ³	
FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES					
Haemorhous mexicanus	house finch	X	X	X	
Spinus psaltria	lesser goldfinch	X	X	X	
Spinus tristis	American goldfinch	_	-	X	
	TYRANNIDAE—	TYRANT FLYCATCHERS			
Contopus sordidulus	western wood-pewee	X	_	X	
Empidonax difficilis	Pacific-slope flycatcher	X	X	Х	
Empidonax traillii	willow flycatcher	X	-	_	
Myiarchus cinerascens	ash-throated flycatcher	X	X	X	
Sayornis nigricans	black phoebe	X	X	X	
Sayornis saya	Say's phoebe	Х	Х	X	
Tyrannus verticalis	western kingbird	Х	_	Х	
Tyrannus vociferans	Cassin's kingbird	Х	_	Х	
	CAPRIMULGI	DAE—GOATSUCKERS			
Chordeiles acutipennis	lesser nighthawk	_	_	Х	
		DIDAE—GREBES			
Aechmophorus clarkii	Clark's grebe	Х	_	_	
Aechmophorus occidentalis	western grebe	Х	-	-	
Podiceps nigricollis	eared grebe	Х	_	_	
Podilymbus podiceps	pied-billed grebe	_	_	Х	
	ACCIPITRIDAE—HAWK	S, KITES, EAGLES, AND A	LLIES		
Accipiter cooperii	Cooper's hawk	Х	Х	Х	
Buteo jamaicensis	red-tailed hawk	Х	Х	X	
Buteo lineatus	red-shouldered hawk	Х	_	Х	
Elanus leucurus	white-tailed kite	_	_	Х	
Pandion haliaetus	osprey	Х	_	_	
	ARDEIDAE—HERO	NS, BITTERNS, AND ALLIE	S		
Ardea alba	great egret	Х	_	Х	
Ardea herodias	great blue heron	Х	_	Х	
Butorides virescens	green heron	Х	_	Х	
Egretta thula	snowy egret	_	_	Х	
Nycticorax nycticorax	black-crowned night-heron	_	_	Х	
TROCHILIDAE—HUMMINGBIRDS					
Calypte anna	Anna's hummingbird	Х	Х	X	
Calypte costae	Costa's hummingbird	Х	Х	Х	
CORVIDAE—CROWS AND JAYS					
Aphelocoma californica	western scrub-jay	Х	Х	Х	
Corvus brachyrhynchos	American crow	Х	Х	Х	
Corvus corax	common raven	Х	Х	Х	
	L	DAE—KINGLETS		1	
Regulus calendula	ruby-crowned kinglet	_	_	Х	



Scientific Name	Common Name	San Vicente Reservoir Alternative ¹	Miramar Reservoir Alternative ²	Both Alternatives ³
	MIMIDAE—MOCKIN	NGBIRDS AND THRASHER	S	
Mimus polyglottos	northern mockingbird	X	Χ	X
Toxostoma redivivum	California thrasher	X	Х	Х
	ODONTOPHORIE	AE—NEW WORLD QUAIL		
Callipepla californica	California quail	Х	Х	Х
	CATHARTIDAE—	-CARDINALS AND ALLIES		
Cathartes aura	turkey vulture	Х	Х	Х
	PASSERIDAE—(OLD WORLD SPARROWS		
Passer domesticus	house sparrow	Х	Х	Х
	SYLVIIDAE—	-SYLVIID WARBLERS		
Polioptila caerulea	blue-gray gnatcatcher	Х	Χ	Х
Polioptila californica	coastal California	Х	Х	Х
californica	gnatcatcher			
	TYTONID	AE—BARN OWLS		
Tyto alba	barn owl	X	_	-
	PSITTAC	IDAE—PARROTS		
Amazona viridigenalis	Red-crowned parrot	_	_	Х
	COLUMBIDAE-	-PIGEONS AND DOVES		
Columba livia	rock pigeon (rock dove)	Х	Х	Х
Streptopelia decaocto	Eurasian collared-dove	_	_	Х
Zenaida macroura	mourning dove	Х	Χ	Х
	RALLIDAE—RAILS,	GALLINULES, AND COOT	S	
Fulica americana	American coot	Х	Χ	Х
	CUCULIDAE—CUCKO	OS, ROADRUNNERS, AND	ANIS	-
Geococcyx californianus	greater roadrunner	Х	Χ	-
	CHARADRIIDAE—	LAPWINGS AND PLOVERS	3	•
Charadrius vociferus	killdeer	Х	-	Х
	PTILOGONATIDA	E—SILKY-FLYCATCHERS		-
Phainopepla nitens	phainopepla	Х	Χ	Х
	STURNIE	DAE—STARLINGS		
Sturnus vulgaris	European starling	Х	Χ	Х
•	· · · · · · · · · · · · · · · · · · ·	IDAE—SWALLOWS		
Hirundo rustica	barn swallow	Х	_	Х
Petrochelidon pyrrhonota	cliff swallow	X	Х	X
Stelgidopteryx serripennis	northern rough-winged swallow	Х	-	X
		IDAE—SWIFTS		
Aeronautes saxatalis	white-throated swift	X	Х	Х
		S, TERNS, AND SKIMMERS		
Larus occidentalis	western gull	X	_	Х
Sterna hirundo	common tern	X	<u> </u>	_
C.C.Ma Milando	_ common tom	1		



Scientific Name	Common Name	San Vicente Reservoir Alternative ¹	Miramar Reservoir Alternative ²	Both Alternatives ³			
	TURDIDAE—THRUSHES						
Catharus guttatus	hermit thrush	Х	_	_			
Sialia mexicana	western bluebird	Х	_	_			
Turdus migratorius	American robin	Х	_	_			
	VIREO	VIDAE—VIREOS					
Vireo bellii pusillus	least Bell's vireo	Х	_	_			
Vireo gilvus	warbling vireo	Х	_	Х			
Vireo huttoni	Hutton's vireo	Х	_	-			
	ESTRILDIDAE—WAX	XBILLS, MUNIAS AND ALLI	ES				
Lonchura atricapilla	Chesnut munia	Х	_	_			
Lonchura punctulata	scaly-breasted munia	Х	_	Х			
	BOMBYCIL	LIDAE—WAXWINGS					
Bombycilla cedrorum	cedar waxwing	_	_	Х			
	PARULIDAE	WOOD-WARBLERS					
Cardellina pusilla	Wilson's warbler	Х	_	Х			
Geothlypis trichas	common yellowthroat	Х	_	Х			
Icteria virens	yellow-breasted chat	Х	_	_			
Oreothlypis celata	orange-crowned warbler	Х	Х	Х			
Setophaga coronata	yellow-rumped warbler	_	Х	_			
Setophaga petechia	yellow warbler	Х	_	Х			
Setophaga townsendi	Townsend's warbler	_	_	Х			
	PICIDAE—WOO	DPECKERS AND ALLIES					
Colaptes auratus	northern flicker	Х	_	Х			
Melanerpes formicivorus	Acorn woodpecker	Х	_	Х			
Picoides nuttallii	Nuttall's woodpecker	Х	Х	Х			
Picoides pubescens	downy woodpecker	Х	Х	Х			
	TROGLO	DYTIDAE—WRENS					
Catherpes mexicanus	canyon wren	Х	Х	Х			
Salpinctes obsoletus	rock wren	Х	Х	Х			
Thryomanes bewickii	Bewick's wren	Х	Х	Х			
Troglodytes aedon	house wren	Х	Х	Х			
	TIMALIIL	DAE—BABBLERS					
Chamaea fasciata	wrentit	Х	Х	Х			
	INV	ERTEBRATE					
	SCARABA	AEIDAE—BEETLES					
Cotinis mutabilis	Fig beetle	Х	_	_			
	HESPER	IIDAE—SKIPPERS		•			
Erynnis funeralis	funereal duskywing	X	_	Х			
Heliopetes ericetorum	northern white-skipper	Х	_	Х			
Hylephila phyleus	fiery skipper	X	_	Х			
Lerodea eufala	Eufala skipper	X	_	Х			
Pyrgus albescens	white checkered-skipper	Х	_	Х			



Scientific Name	Common Name	San Vicente Reservoir Alternative ¹	Miramar Reservoir Alternative ²	Both Alternatives ³
	LYCAENIDAE—BLUES,	HAIRSTREAKS, AND COP	PERS	
Brephidium exile	western pygmy-blue	_	_	Х
Callophrys augustinus	brown elfin	_	_	Х
Euphilotes battoides bernardino	Bernardino square-spotted blue	-	-	Х
Glaucopsyche lygdamus australis	southern blue	X	-	Х
Hemiargus ceraunus	Ceraunus blue	_	_	Х
Hemiargus ceraunus gyas	Edward's blue	_	_	Х
Leptotes marina	marine blue	Х	Х	Х
Plebejus acmon	Acmon blue	Х	Х	Х
Plebejus Iupini	lupine blue	Х	_	Х
Strymon melinus	gray hairstreak	Х	_	Х
•	NYMPHALIDAE—BR	USH-FOOTED BUTTERFLI	ES	
Adelpha bredowii	California sister	_	_	Х
Chlosyne californica	California patch	Х	_	_
Coenonympha tullia california	common california ringlet	Х	-	Х
Danaus gilippus	queen	Х	_	Х
Danaus plexippus	monarch	Х	_	Х
Junonia coenia	common buckeye	Х	Χ	Х
Limenitis Iorquini	Lorquin's admiral	_	_	Х
Nymphalis antiopa	mourning cloak	Х	_	Х
Vanessa annabella	west coast lady	Х	_	Х
Vanessa atalanta	red admiral	Х	_	Х
Vanessa cardui	painted lady	Х	Х	Х
Vanessa virginiensis	American lady	_	_	Х
	PAPILIONIDA	AE—SWALLOWTAILS		
Papilio eurymedon	pale swallowtail	X	Χ	Х
Papilio rutulus	western tiger swallowtail	Х	-	Х
Papilio zelicaon	anise swallowtail	X	_	X
	PIERIDAE—V	VHITES AND SULFURS		
Anthocharis cethura	desert orangetip	_	_	Х
Anthocharis sara sara	Pacific sara orangetip	Х	_	Х
Colias eurydice	California dogface	Х	_	_
Colias eurytheme	orange sulphur	_	_	Х
Colias harfordii	Harford's sulphur	-	_	Х
Eurema nicippe	sleepy orange	Х	_	Х
Nathalis iole	dainty sulphur	Х	_	Х
Phoebis sennae	cloudless sulphur	Х	_	Х
Pieris rapae	cabbage white	X	Х	Х
Pontia protodice	checkered white	Х	Х	Х
Pontia sisymbrii	spring white	Х	_	Х



Scientific Name	Common Name	San Vicente Reservoir Alternative ¹	Miramar Reservoir Alternative ²	Both Alternatives ³
	RIODINIDA	AE—METALMARKS		
Apodemia mormo	Mormon Metalmark	X	_	X
Apodemia mormo virgulti	Behr's metalmark	X	Χ	X
	PIERIDAE—W	HITES AND SULPHURS		
	Sulphur sp.	X	_	X
	BRANCHINEC	TIDAE—FAIRY SHRIMP		
Branchinecta sandiegonensis	San Diego fairy shrimp	X	X	X
		MAMMAL		
	CANIDAE—V	WOLVES AND FOXES		
Canis latrans	coyote	X	X	X
	FEL	IDAE—CATS		
Lynx rufus	bobcat	_	_	X
	CANIDAE—V	NOLVES AND FOXES		
Canis lupus familiaris	domestic dog	_	_	X
	LEPORIDAE—	-HARES AND RABBITS		
Sylvilagus audubonii	desert cottontail	X	_	-
Sylvilagus bachmani	brush rabbit	X	X	X
	MEPHIT	TIDAE—SKUNKS		
Mephitis mephitis	striped skunk	Х	_	_
	GEOMYIDAE:	POCKET GOPHERS		
Thomomys bottae	Botta's pocket gopher	Х	Х	Х
	PROCYONIDAE—R	ACCOONS AND RELATIVE	S	
Procyon lotor	raccoon	Х	_	Х
	MURIDAE	RATS AND MICE		
	Neotoma sp. (midden)	_	Х	Х
	SCIURID	AE—SQUIRRELS		
Spermophilus (Otospermophilus) beecheyi	California ground squirrel	Х	Х	Х
	CERV	/IDAE—DEERS		
Odocoileus hemionus	mule deer	Х	_	_
		REPTILE		
	ANGUIDAE—	-ALLIGATOR LIZARDS		
Elgaria multicarinata	southern alligator lizard	_	_	Х
	PHRYNOSOMAT	IDAE—IGUANID LIZARDS		
Sceloporus occidentalis	western fence lizard	X	Х	Х
Sceloporus orcutti	granite spiny lizard	_	Х	Х
Uta stanburiana	common side-blotched lizard	Х	Х	Х
	SCINO	CIDAE—SKINKS		•
Plestiodon skiltonianus	western skink	X	_	_
	•	•	•	•



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	TEIIDAE—	WHIPTAIL LIZARDS		
Aspidoscelis hyperythra beldingi	Belding's orange-throated whiptail	X	-	-
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	Х	-	-
	BOI	DAE—BOAS		
Lichanura trivirgata	rosy boa	Х	_	_
	COLUBRIDAE	—COLUBRID SNAKES		
Lampropeltis californiae	California kingsnake	-	Х	-
Pituophis catenifer	gophersnake	-	Х	Х
Thamnophis hammondii	two-striped gartersnake	X	_	_
	VIPER	IDAE—VIPERS		
Crotalus ruber	red diamondback rattlesnake	_	-	Х
	EMYDIDAE—BO	X AND WATER TURTLES		
Actinemys marmorata	western pond turtle	-	Χ	Х

Notes:

- 2
- Observed within 500-foot buffer of the components only occurring within the San Vicente Reservoir Alternative study area.

 Observed within 500-foot buffer of the components only occurring within the Miramar Reservoir Alternative study area.

 Observed within 500-foot buffer of components shared by both San Vicente Reservoir Alternative and Miramar Reservoir Alternative study areas.



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APPENDIX L Plant Species Potentially Occurring within Miramar Reservoir

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Abronia maritima	red sand- verbena	None/None/4.2/None	Coastal dunes/perennial herb/Feb–Nov/0–328	Х	X	X	X	X	X	Х	X	Х	X	Х	Not expected to occur. No suitable coastal dune vegetation present.
Acanthomintha ilicifolia	San Diego thorn-mint	FT/CE/1B.1/Covered, Narrow Endemic	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay, openings/annual herb/Apr–June/33–3150	X	L	L	L	L	L	X	X	X	L	L	Low potential to occur in project components with suitable vegetation and clay soils. However, focused surveys for this species were negative. Not expected to occur in project components lacking suitable vegetation and/or clay soils.
Acmispon prostratus	Nuttall's acmispon	None/None/1B.1/ Covered	Coastal dunes, coastal scrub (sandy)/annual herb/Mar–June (July)/0–33	X	L	X	X	X	X	X	X	X	X	X	Low potential to occur along the Morena Pipelines, which run closer to the coast and contains sandy soils. Not expected to occur along other project components farther from the coast.
Adolphia californica	California adolphia	None/None/2B.1/None	Chaparral, coastal scrub, valley and foothill grassland; clay/perennial deciduous shrub/Dec–May/148–2428	X	L	L	L	L	L	X	¥ <u>D</u>	Х	L	L	Observed along the Miramar Reservoir. Low potential to occur in project components with suitable vegetation and clay soils. This perennial shrub would likely have been observed during surveys if present. Not expected to occur in project components lacking suitable vegetation and/or clay soils.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Agave shawii var. shawii	Shaw's agave	None/None/2B.1/ Covered, Narrow Endemic	Coastal bluff scrub, coastal scrub/perennial leaf succulent/Sep–May/33–394	X	L	L	X	L	L	X	L	L	L	X	Low potential to occur within project components with suitable coastal scrub habitat. The project site has suitable vegetation and soils, but closest occurrences within San Diego County are only at two localities, Point Loma and Tijuana. Not expected to occur within project components lacking suitable coastal scrub habitat or outside of the species' known elevation range.
Ambrosia chenopodiifolia	San Diego bur-sage	None/None/2B.1/None	Coastal scrub/perennial shrub/Apr–June/180–509	X	L	L	X	L	L	X	L	L	L	X	Low potential to occur in project components with coastal scrub. However, this perennial shrub would have been observed during surveys if present. Not expected to occur in project components lacking coastal scrub habitat or Miramar Wastewater Treatment Plant Improvements, which is outside of the species' known elevation range.
Ambrosia monogyra	singlewhorl burrobrush	None/None/2B.2/None	Chaparral, Sonoran desert scrub; sandy/perennial shrub/Aug-Nov/33-1640	X	X	X	X	X	X	X	X	L	L	X	Low potential to occur in components with suitable sandy chaparral habitat; however, this perennial shrub would likely have been observed if present. Not expected to occur in project components lacking sandy chaparral.

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Ambrosia pumila	San Diego ambrosia	FE/None/ 1B.1/Covered, Narrow Endemic	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; sandy loam or clay, often in disturbed areas, sometimes alkaline/perennial rhizomatous herb/Apr—Oct/66–1362	X	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and sandy loam or clay soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable vegetation and/or sandy loam or clay soils.
Aphanisma blitoides	aphanisma	None/None/1B.2/ Covered	Coastal bluff scrub, coastal dunes, coastal scrub; sandy or gravelly/annual herb/Mar–June/3–1001	Х	L	X	Х	X	Х	Х	Х	X	Х	Х	Low potential to occur along the Morena Pipelines. Not expected to occur in other project components farther from the coast.
Arctostaphylos glandulosa ssp. crassifolia	Del Mar manzanita	FE/None/1B.1/Covered	Chaparral (maritime, sandy)/perennial evergreen shrub/Dec–June/0–1198	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No maritime chaparral present.
Arctostaphylos otayensis	Otay manzanita	None/None/1B.2/ Covered	Chaparral, cismontane woodland; metavolcanic/perennial evergreen shrub/Jan– Apr/902–5577	Х	Х	Х	Х	X	X	Х	X	X	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Artemisia palmeri	San Diego sagewort	None/None/4.2/None	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; sandy, mesic/perennial deciduous shrub/(Feb) May–Sep/49–3002	X	D	L	X	L	L	X	L	L	Đ <u>L</u>	L	Observed along the Morena Pipelines-and the LFG Pipeline. Low potential to occur within the other components; would have been observed during surveys if present. Not expected to occur within project components lacking suitable habitat.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Asplenium vespertinum	western spleenwort	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub; rocky/perennial rhizomatous herb/Feb–June/591–3281	X	X	X	X	X	L	X	L	X	X	L	Low potential to occur in project components with suitable vegetation within the known elevation range of the species. Focused surveys were negative for this species. Not expected to occur within project components lacking suitable habitat and/or outside the known elevation range of the species.
Astragalus deanei	Dean's milk- vetch	None/None/1B.1/None	Chaparral, cismontane woodland, coastal scrub, riparian forest/perennial herb/Feb–May/246–2280	X	L	L	X	L	L	X	L	L	L	L	Low potential to occur within project components with suitable habitat within the species' known elevation range. The most recent (since 1995) occurrences for this species occur with the Cleveland National Forest or Dehesa. Not expected to occur within project components lacking suitable habitat or outside of the species' known elevation range.
Astragalus oocarpus	San Diego milk-vetch	None/None/1B.2/None	Chaparral (openings), cismontane woodland/perennial herb/May–Aug/1001–5000	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Astragalus tener var. titi	coastal dunes milk-vetch	FE/CE/1B.1/Covered, Narrow Endemic	Coastal bluff scrub (sandy), coastal dunes, coastal prairie (mesic); often vernally mesic areas/annual herb/Mar– May/3–164	Х	X	Х	X	X	Х	X	X	X	Х	X	Not expected to occur. No suitable vegetation present and this species generally occurs along the coast.

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Atriplex coulteri	Coulter's saltbush	None/None/1B.2/None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/10–1509	Х	L	L	L	L	L	X	L	X	L	L	Low potential to occur in project components with suitable vegetation within the known elevation range of the species. Focused surveys were negative for this species. Not expected to occur within project components lacking suitable habitat and/or outside the known elevation range of the species.
Atriplex pacifica	South Coast saltscale	None/None/1B.2/None	Coastal bluff scrub, coastal dunes, coastal scrub, playas/ annual herb/Mar– Oct/0–459	X	L	L	X	L	L	X	L	L	L	X	Low potential to occur in project components with suitable vegetation within the known elevation range of the species. Focused surveys were negative for this species. Not expected to occur within project components lacking suitable habitat and/or outside the known elevation range of the species.
Atriplex parishii	Parish's brittlescale	None/None/1B.1/None	Chenopod scrub, playas, vernal pools; alkaline/ annual herb/June–Oct/82– 6234	Х	Х	Х	Х	L	X	X	X	X	L	X	Low potential to occur within project components with vernal pools. Not expected to occur in other project components due to lack of suitable vegetation.
Baccharis vanessae	Encinitas baccharis	FT/CE/1B.1/Covered	Chaparral (maritime), cismontane woodland; sandstone/perennial deciduous shrub/Aug– Nov/197–2362	Х	Х	Х	Х	Х	Х	X	Х	Х	Х	X	Not expected to occur. Perennial shrub would have been observed during surveys if present and all occurrences of this species are north of the project alignment (CDFW 2016).

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February 2018

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Berberis nevinii	Nevin's barberry	FE/CE/1B.1/Covered	Chaparral, cismontane woodland, coastal scrub, riparian scrub; sandy or gravelly/perennial evergreen shrub/ Mar– June/230–2707	X	L	L	X	L	L	X	L	_	L	L	Low potential to occur in areas with suitable vegetation and soils. Perennial shrub would have been observed during surveys if present.
Bergerocactus emoryi	golden-spined cereus	None/None/2B.2/None	Closed-cone coniferous forest, chaparral, coastal scrub; sandy/ perennial stem succulent/May– June/10–1296	X	L	L	X	L	L	X	L	L	L	L	Low potential to occur in areas with suitable vegetation and soils. Perennial shrub would have been observed during surveys if present.
Bloomeria clevelandii	San Diego goldenstar	None/None/1B.1/ Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial bulbiferous herb/Apr–May/164–1526	Х	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Brodiaea filifolia	thread-leaved brodiaea	FT/CE/1B.1/Covered	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; often clay/perennial bulbiferous herb/Mar–June/82–3675	X	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Brodiaea orcuttii	Orcutt's brodiaea	None/None/1B.1/ Covered	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentinite/perennial bulbiferous herb/May–July/98–5551	X	L	L	L	L	L	X	L	L	D	L	Observed along the LFG Pipeline. Low potential to occur in most other project components. Species would have been observed during surveys if present. Not expected to occur in project components lacking suitable habitat.

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Calamagrostis koelerioides	Fire reedgrass	None/None/ Covered	Chaparral, meadows and seeps; slopes, dry hills, ridges/perennial grass/June–Aug/0–7546	X	X	X	X	X	X	X	_	_	L	L	Low potential to occur in components with suitable chaparral habitat; however, this species was not observed during focused surveys. Not expected to occur in project components lacking chaparral.
Calandrinia breweri	Brewer's calandrinia	None/None/4.2/None	Chaparral, coastal scrub; sandy or loamy, disturbed sites and burns/annual herb/Mar–June/33–4003	Х	L	L	Х	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
California macrophylla	round-leaved filaree	None/None/1B.2/None	Cismontane woodland, valley and foothill grassland; clay/annual herb/Mar–May/49–3937	Х	L	L	L	L	L	Х	L	X	L	X	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Calochortus dunnii	Dunn's mariposa lily	None/CR/1B.2/Covered	Closed-cone coniferous forest, chaparral, valley and foothill grassland; gabbroic or metavolcanic, rocky/perennial bulbiferous herb/(Feb) Apr–June/607– 6004	X	X	X	X	X	X	X	L	X	X	L	Low potential to occur along the North City Pipeline and Miramar Wastewater Treatment Plant Improvements area; not observed during focused surveys. Not expected to occur in project components below the species' known elevation range.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Camissoniopsis lewisii	Lewis' evening- primrose	None/None/3/None	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/annual herb/Mar–May (June)/0–984	X	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable habitat. Species would have been observed during surveys if present.
Castilleja plagiotoma	Mojave paintbrush	None/None/4.3/None	Great Basin scrub (alluvial), Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland/perennial herb (hemiparasitic)/Apr– June/984–8202	Х	X	X	X	Х	X	X	Х	Х	Х	X	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Caulanthus heterophyllus	California mustard	None/None/None/Cove red	Coastal scrub, chaparral; dry, open, generally after fire, disturbance/annual herb/Mar–May/0–4593	Х	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable habitat. Species would have been observed during surveys if present.
Ceanothus cyaneus	Lakeside ceanothus	None/None/1B.2/ Covered	Closed-cone coniferous forest, chaparral/perennial evergreen shrub/Apr– June/771–2477	X	X	X	X	X	X	X	X	X	X	L	Low potential to occur in the Miramar Wastewater Treatment Plant Improvements project component. Not expected to occur to occur in other project components, which are outside of the species' known elevation range.
Ceanothus otayensis	Otay Mountain ceanothus	None/None/1B.2/None	Chaparral (metavolcanic or gabbroic)/perennial evergreen shrub/Jan– Apr/1969–3609	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Ceanothus verrucosus	wart-stemmed ceanothus	None/None/2B.2/ Covered	Chaparral/perennial evergreen shrub/Dec– May/3–1247	X	₽Ū	X	X	X	X	X	L	D	D	L	Observed within the buffer around the MBC. Morena Pipelines, and along the LFG Pipeline. Low potential to occur in all other components with chaparral habitat where focused surveys were negative. Not expected to occur in project components lacking chaparral.
Centromadia parryi ssp. australis	southern tarplant	None/None/1B.1/None	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/annual herb/May–Nov/0–1575	X	L	L	L	L	L	X	L	X	L	L	Low potential to occur due to limited suitable vernally mesic habitat and because it was not observed during 2016 rare plant surveys. In addition, all occurrences of southern tarplant are north of the project site (CDFW 2016). Not expected to occur in project components lacking suitable habitat.
Centromadia pungens ssp. laevis	smooth tarplant	None/None/1B.1/None	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/Apr– Sep/0–2100	Х	L	L	L	L	L	X	L	L	L	Х	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	None/None/1B.1/None	Coastal bluff scrub (sandy), coastal dunes/annual herb/Jan–Aug/0–328	Х	X	Х	Х	X	X	X	Х	Х	Х	X	Not expected to occur. No suitable vegetation present. This species generally occurs along the coast.
Chamaebatia australis	southern mountain misery	None/None/4.2/None	Chaparral (gabbroic or metavolcanic)/perennial evergreen shrub/Nov– May/984–3346	X	Х	X	X	Х	X	X	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

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Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	FE/CE/1B.2/Covered	Coastal dunes, marshes and swamps (coastal salt)/annual herb (hemiparasitic)/ May-Oct/0-98	Х	X	X	X	X	X	X	X	X	X	X	Not expected to occur. No suitable coastal dune or coastal salt marsh vegetation present.
Chorizanthe leptotheca	Peninsular spineflower	None/None/4.2/None	Chaparral, coastal scrub, lower montane coniferous forest; alluvial fan, granitic/annual herb/May– Aug/984–6234	X	Х	Х	Х	Х	X	X	Х	Х	X	Х	Not expected to occur. The site is outside of the species' known elevation range.
Chorizanthe orcuttiana	Orcutt's spineflower	FE/CE/1B.1/None	Closed-cone coniferous forest, chaparral (maritime), coastal scrub; sandy openings/annual herb/Mar– May/10–410	X	L	X	X	X	X	X	X	L	L	X	Low potential to occur within project components with chaparral and coastal sage scrub and sandy soils. However, focused surveys for this species were negative. Not expected to occur within project components lacking suitable sandy habitat.
Chorizanthe polygonoides var. longispina	long-spined spineflower	None/None/1B.2/None	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; often clay/annual herb/Apr–July/98–5020	X	L	L	L	L	L	X	L	D	D	L	Observed within the buffer around the MBC and along the LFG Pipeline. Low potential to occur in all other components that have chaparral, coastal scrub, grassland, or vernal pools with clay soils. Not expected to occur in project components that lack such suitable habitat.

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Cistanthe maritima	seaside cistanthe	None/None/4.2/None	Coastal bluff scrub, coastal scrub, valley and foothill grassland; sandy/annual herb/(Feb) Mar–June (Aug)/16–984	X	L	X	X	X	X	X	X	X	X	X	Low potential to occur along the Morena Pipelines, which as suitable sandy coastal scrub, but focused surveys were negative. Not expected to occur in other project components that are farther from the coast since this species is known to occur at locales with moist sea breezes (Reiser 2001).
Clarkia delicata	delicate clarkia	None/None/1B.2/None	Chaparral, cismontane woodland; often gabbroic/annual herb/Apr– June/771–3281	X	X	X	X	X	X	X	X	X	X		Low potential to occur within the Miramar Wastewater Treatment Plant Improvements; however, focused surveys for this species were negative. Not expected to occur in other project components because they are below the species' known elevation range.
Clinopodium chandleri	San Miguel savory	None/None/1B.2/ Covered	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; rocky, gabbroic, or metavolcanic/perennial shrub/Mar–July/394–3527	X	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components that contain suitable habitat within the correct elevation range due to negative focused surveys due to limited suitable habitat and not observed during 2016 rare plant surveys. Not expected to occur in project components that lack suitable habitat and/or that are outside the known elevation range for this species.

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Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Comarostaphylis diversifolia ssp. diversifolia	summer holly	None/None/1B.2/None	Chaparral, cismontane woodland/perennial evergreen shrub/Apr– June/98–2592	Х	L	X	X	X	X	X	L	L	L	L	Low potential to occur in most project components with chaparral or oak woodland because this shrub would have been observed during surveys if present. Not expected to occur in components without suitable chaparral or oak woodland habitat.
Convolvulus simulans	small- flowered morning-glory	None/None/4.2/None	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/98–2297	Х	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Corethrogyne filaginifolia var. incana	San Diego sand aster	None/None/1B.1/None	Coastal bluff scrub, chaparral, coastal scrub/perennial herb/June– Sep/10–377	X	L	L	X	L	L	X	L	L	L	X	Low potential to occur in project components with suitable vegetation and soils and within the elevation range of this species. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat and/or outside the known elevation range for this species.
Corethrogyne filaginifolia var. linifolia	Del Mar Mesa sand aster	None/None/1B.1/ Covered	Coastal bluff scrub, chaparral (maritime, openings), coastal scrub; sandy/perennial herb/May– Sep/49–492	X	L	Х	X	L	L	X	L	L	L	X	Low potential to occur. Coastal sage scrub present in many components, but Del Mar Mesa sand aster occurrences are all north of the proposed project and focused surveys were negative.

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Cryptantha wigginsii	Wiggins' cryptantha	None/None/1B.2/None	Coastal scrub; often clay/annual herb/Feb– June/66–902	Х	L	L	X	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Cylindropuntia californica var. californica	snake cholla	None/None/1B.1/Cover ed, Narrow Endemic	Chaparral, coastal scrub/perennial stem succulent/Apr–May/98–492	Х	L	L	Х	L	L	X	L	L	L	Х	Low potential to occur in project components with suitable chaparral and/or coastal scrub. Perennial succulent would have been observed during surveys if present.
Deinandra conjugens	Otay tarplant	FT/CE/1B.1/Covered, Narrow Endemic	Coastal scrub, valley and foothill grassland; clay/annual herb/May–June/82–984	X	L	L	L	L	L	Х	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Deinandra paniculata	paniculate tarplant	None/None/4.2/None	Coastal scrub, valley and foothill grassland, vernal pools; usually vernally mesic, sometimes sandy/annual herb/Apr–Nov/82–3084	X	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Dichondra occidentalis	western dichondra	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial rhizomatous herb/(Jan) Mar–July/164–1640	Х	L	L	L	L	L	Х	L	L	L	L	Low potential to occur in most project components due to negative focused surveys. Not expected to occur in project components lacking suitable habitat.

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Dicranostegia orcuttiana	Orcutt's bird's-beak	None/None/2B.1/ Covered	Coastal scrub/annual herb (hemiparasitic)/ (Mar) Apr–July (Sep)/33– 1148	Х	L	L	X	L	L	X	L	L	_	L	Low potential to occur in project components with suitable coastal scrub. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable coastal scrub.
Dudleya blochmaniae ssp. blochmaniae	Blochman's dudleya	None/None/1B.1/None	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland; rocky, often clay or serpentinite/perennial herb/Apr–June/16–1476	Х	L	L	L	L	L	X	Г	П	L	L	Low potential to occur within components with suitable habitat. Species would have been observed during surveys if present. Not expected to occur in project components with no suitable habitat.
Dudleya brevifolia	short-leaved dudleya	None/CE/1B.1/ Covered, Narrow Endemic	Chaparral (maritime, openings), coastal scrub; Torrey sandstone/perennial herb/Apr–May/98–820	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No Torrey sandstone soils within the proposed project.
Dudleya variegata	variegated dudleya	None/None/1B.2/Cover ed, Narrow Endemic	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial herb/ Apr–June/10–1903	Х	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Dudleya viscida	sticky dudleya	None/None/1B.2/ Covered	Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub; rocky/perennial herb/ May–June/33–1804	Х		L	X	L	L	X	L	L	L	L	Low potential to occur within components with suitable habitat. Species would have been observed during surveys if present. Not expected to occur in project components with no suitable habitat.

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Ericameria palmeri var. palmeri	Palmer's goldenbush	None/None/1B.1/ Covered	Chaparral, coastal scrub; mesic/perennial evergreen shrub/(July) Sep–Nov/ 98–1969	X	L	L	X	L	L	X	L	L	L	L	Low potential to occur within components with suitable habitat. Species would have been observed during surveys if present. Not expected to occur in project components with no suitable habitat.
Eryngium aristulatum var. parishii	San Diego button-celery	FE/CE/1B.1/Covered	Coastal scrub, valley and foothill grassland, vernal pools; mesic/annual / perennial herb/ Apr–June/66–2034	Х	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Erysimum ammophilum	sand-loving wallflower	None/None/1B.2/ Covered	Chaparral (maritime), coastal dunes, coastal scrub; sandy, openings/perennial herb/Feb–June/0–197	X	L	X	X	X	X	X	X	X	X	X	Low potential to occur along the Morena Pipelines due to suitable sandy chaparral and coastal scrub, but lack of observations during focused surveys. Not expected to occur at the Morena Pump Station due to lack of suitable habitat. Not expected to occur in the remaining project components because they are above the species' known elevation range.
Euphorbia misera	cliff spurge	None/None/2B.2/None	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/perennial shrub/Dec–Aug (Oct)/ 33–1640	X	L	L	X	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Perennial shrub would likely have been observed if present. Not expected to occur in project components lacking suitable habitat.

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Ferocactus viridescens	San Diego barrel cactus	None/None/2B.1/ Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/perennial stem succulent/May–June/ 10–1476	Х	L	L	L	L	L	Х	₽D	L	L	L	Observed along the Miramar Reservoir. Low potential to occur in most project components due to lack of observations during focused surveys or not expected to occur due to lack of suitable habitat.
Frankenia palmeri	Palmer's frankenia	None/None/2B.1/None	Coastal dunes, marshes and swamps (coastal salt), playas/ perennial herb/ May–July/0–33	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable vegetation present.
Fremontodendron mexicanum	Mexican flannelbush	FE/CR/1B.1/None	Closed-cone coniferous forest, chaparral, cismontane woodland; gabbroic, metavolcanic, or serpentinite/perennial evergreen shrub/Mar–June/33–2349	X	L	X	X	X	X	X	L	L	L	L	Low potential to occur within components that have chaparral vegetation. Not expected to occur in remaining project components. No suitable vegetation present.
Geothallus tuberosus	Campbell's liverwort	None/None/1B.1/None	Coastal scrub (mesic), vernal pools; soil/ephemeral liverwort/N.A./33–1969	Х	L	L	X	L	L	X	L	L	L	L	Low potential to occur in project components with suitable coastal scrub or vernal pools. Focused surveys were negative for this species. Not expected to occur in project components lacking suitable habitat.
Githopsis diffusa ssp. filicaulis	Mission Canyon bluecup	None/None/3.1/None	Chaparral (mesic, disturbed areas)/annual herb/ Apr–June/1476–2297	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

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Grindelia hallii	San Diego gumplant	None/None/1B.2/None	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/ perennial herb/May–Oct/607–5725	Х	X	X	X	X	X	X	L	X	Х	L	Low potential to occur along the North City Pipeline and within the Miramar Wastewater Treatment Plant Improvements where there is suitable chaparral or grassland habitat; however, focused surveys for this species were negative. Not expected to occur in the remaining project components because they are below the species' known elevation range.
Harpagonella palmeri	Palmer's grappling- hook	None/None/4.2/None	Chaparral, coastal scrub, valley and foothill grassland; clay/annual herb/Mar–May/66–3133	Х	L	L	L	L	L	Х	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Hazardia orcuttii	Orcutt's hazardia	FC/CT/1B.1/None	Chaparral (maritime), coastal scrub; often clay/perennial evergreen shrub/Aug-Oct/262-279	X	L	X	X	X	X	X	X	X	L	X	Low potential to occur along the Morena Pipelines and LFG Pipeline due to suitable sandy chaparral and coastal scrub, but lack of observations during focused surveys. Not expected to occur in the remaining project components because they are outside the species' known elevation range.

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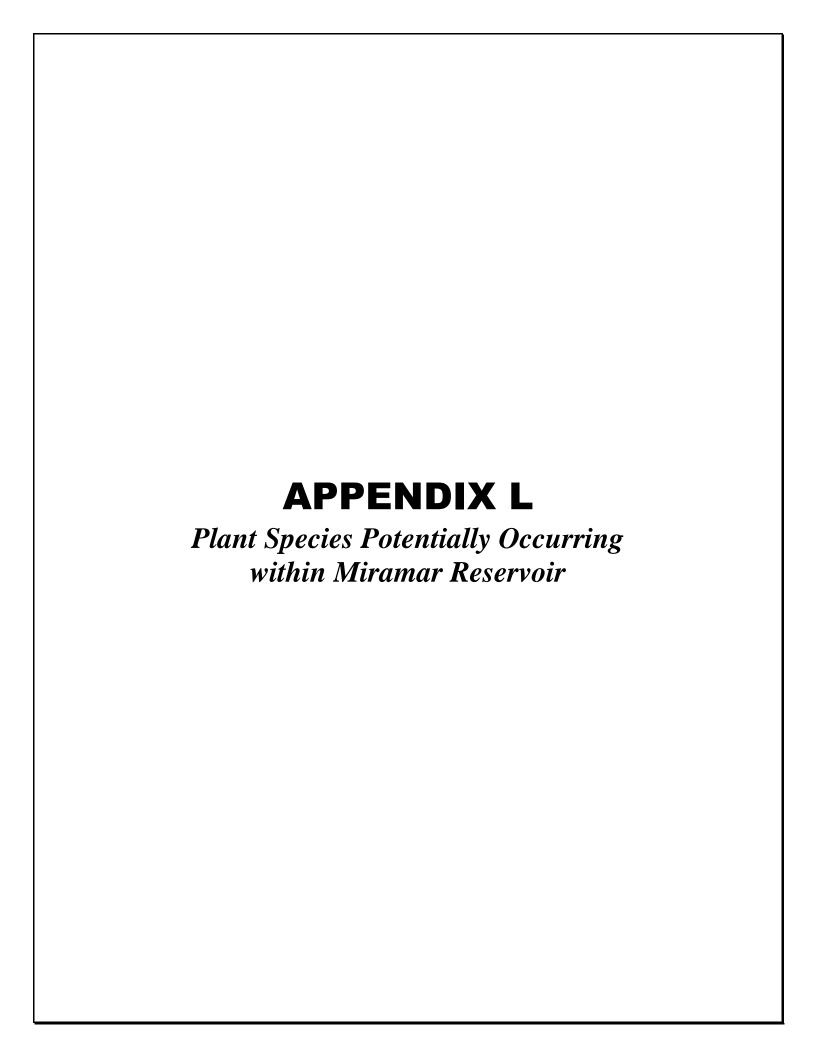
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Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Hesperocyparis forbesii	Tecate cypress	None/None/1B.1/ Covered	Closed-cone coniferous forest, chaparral; clay, gabbroic or metavolcanic/ perennial evergreen tree/N.A./262–4921	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. Perennial tree would have been observed during surveys if present.
Heterotheca sessiliflora ssp. sessiliflora	beach golden- aster	None/None/1B.1/None	Chaparral (coastal), coastal dunes, coastal scrub/perennial herb/Mar–Dec/0–4019	Х	L	X	X	Х	X	X	X	X	X	X	Low potential to occur along the Morena Pipelines due to lack of observations during focused surveys. Not expected to occur within project components farther from the coast.
Holocarpha virgata ssp. elongata	graceful tarplant	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/annual herb/May–Nov/197–3609	X	L	D	L	D	L	X	₽Ū	D	D	L	Observed within the buffer around the MBC, NCWRP, North City Pipeline, North City Pure Water Facility, and along the LFG Pipeline. Low potential to occur in other project components due to negative focused surveys. Not expected to occur in project components that lack suitable habitat.
Hordeum intercedens	vernal barley	None/None/3.2/None	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools/ annual herb/Mar–June/ 16–3281	Х	L	L	L	L	L	Х	L	L	L	L	Low potential to occur in project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur in project components lacking suitable habitat.
Horkelia truncata	Ramona horkelia	None/None/1B.3/None	Chaparral, cismontane woodland; clay, gabbroic/perennial herb/May–June/1312–4265	Х	Х	Х	Х	Х	Х	X	X	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Isocoma menziesii var. decumbens	decumbent goldenbush	None/None/1B.2/None	Chaparral, coastal scrub (sandy, often in disturbed areas)/perennial shrub/Apr–Nov/33–443	X	L	L	X	L		X	L	D	L	X	Observed within the buffer around the MBC. Low potential to occur in all other components. Perennial shrub would likely have been observed during surveys if present. Not expected to occur in project components lacking suitable habitat.
Iva hayesiana	San Diego marsh-elder	None/None/2B.2/None	Marshes and swamps, playas/ perennial herb/Apr–Oct/33–1640	X	₽D	X	X	X	X	X	₽D	X	L	L	Observed within the buffer around the Morena Pipelines and the North City Pipeline. Low potential to occur within project components with suitable freshwater marsh habitat where this perennial herb would likely have been observed during surveys if present. Although a portion of the North City Pipeline contains areas of freshwater marsh that were not surveyed, the area is surrounded by development. Not expected to occur with the other components.
Juglans californica	Southern California black walnut	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub; alluvial/ perennial deciduous tree/ Mar– Aug/164–2953	Х	L	Х	Х	X	Х	X	Х	X	X	X	Not expected to occur in other project components. Perennial tree would have been observed during surveys if present.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Juncus acutus ssp. leopoldii	South- western spiny rush	None/None/4.2/None	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar) May–June/ 10–2953	¥₫	X	X	Х	X	X	X	X	X	X	X	Observed within the San Diego River floodplain south of the Morena Pump Station. Not expected to occur. This conspicuous perennial species would have been observed during surveys if present.
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None/None/1B.1/None	Marshes and swamps (coastal salt), playas, vernal pools/annual herb/Feb–June/3–4003	X	Х	X	х	L	Х	X	X	X	L	X	Low potential to occur within vernal pools on site; focused surveys were negative. Not expected to occur in project components without vernal pools.
Lepechinia cardiophylla	heart-leaved pitcher sage	None/None/1B.2/ Covered	Closed-cone coniferous forest, chaparral, cismontane woodland/perennial shrub/Apr–July/1706–4495	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Lepechinia ganderi	Gander's pitcher sage	None/None/1B.3/ Covered	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland; gabbroic or metavolcanic/perennial shrub/June–July/ 1001–3297	X	X	X	Х	Х	Х	Х	Х	Х	X	Х	Not expected to occur. The site is outside of the species' known elevation range.
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None/None/4.3/None	Chaparral, coastal scrub/annual herb/ Jan–July/3–2904	Х	L	L	Х	L	L	X	L	D	D	L	Observed within the buffer around the MBC and along the LFG Pipeline. Low potential to occur in other project components due to lack of observations during focused surveys. Not expected to occur in project components lacking suitable habitat.



Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Leptosiphon grandiflorus	large-flowered leptosiphon	None/None/4.2/None	Coastal bluff scrub, closed- cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland; usually sandy/annual herb/ Apr-Aug/16-4003	Х	L	X	X	L	L	Х	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in project components lacking suitable vegetation and sandy soils.
Leptosyne maritima	sea dahlia	None/None/2B.2/None	Coastal bluff scrub, coastal scrub/perennial herb /Mar-May/16-492	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. Species prefers sandstone cliffs near the ocean, which do not occur within the project site and focused surveys were negative for this species.
Lycium californicum	California box-thorn	None/None/4.2/None	Coastal bluff scrub, coastal scrub/perennial shrub/(Dec) Mar–Aug/ 16–492	Х	L	L	Х	L	L	Х	L	L	L	Х	Low potential to occur. Perennial shrub would have been observed during surveys if present. Not expected to occur within project components lacking suitable habitat.
Microseris douglasii ssp. platycarpha	small- flowered microseris	None/None/4.2/None	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/annual herb/Mar–May/49–3510	Х	L	L	L	L	L	Х	L	L	₽Ū	L	Observed along the LFG Pipeline. Low potential to occur in project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in project components lacking suitable vegetation and sandy soils.

DUDEK

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Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Mimulus clevelandii	Cleveland's bush monkeyflower	None/None/4.2/ Covered	Chaparral, cismontane woodland, lower montane coniferous forest; gabbroic, often in disturbed areas, openings, rocky/perennial rhizomatous herb/ Apr–July/1476–6562	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Mimulus aurantiacus var. aridus	low bush monkey- flower	None/None/4.3/None	Chaparral (rocky), Sonoran desert scrub/perennial evergreen shrub/ Apr–July/2461–3937	X	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Mimulus diffusus	Palomar monkey- flower	None/None/4.3/None	Chaparral, lower montane coniferous forest; sandy or gravelly/ annual herb/ Apr–June/4003–6004	X	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Mobergia calculiformis	light gray lichen	None/None/3/None	Coastal scrub (?); on rocks/crustose lichen (saxicolous)/ N.A./33–33	X	L	X	X	X	X	X	X	X	X	X	Low potential to occur along the Morena Pipelines. There is only one historical occurrence within the City of San Diego immediately south of Balboa Park (Consortium of North American Lichen Herbaria). The project site is approximately 4 miles north of Balboa Park. Not expected to occur in other project components due to lack of suitable coastal scrub habitat and/or elevations above the species' known elevation range.
Monardella hypoleuca ssp. lanata	felt-leaved monardella	None/None/1B.2/Cover ed	Chaparral, cismontane woodland/perennial rhizomatous herb/June– Aug/984–5167	Х	Х	Х	X	Х	X	Х	Х	Х	Х	X	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name Monardella viminea	Common Name willowy monardella	Status (Federal/ State/CRPR/MSCP) FE/CE/1B.1/Covered	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) Chaparral, coastal scrub, riparian forest, riparian	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station) X	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion Not expected to occur. No suitable alluvial
			scrub, riparian woodland; alluvial ephemeral washes/perennial herb/June–Aug/164–738												ephemeral washes present.
Mucronea californica	California spineflower	None/None/4.2/None	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy/annual herb/Mar–July (Aug)/0–4593	Х	L	X	L	X	X	X	X	X	X	X	Low potential to occur along the Morena Pipelines due to suitable vegetation and sandy soils. However, this species was not observed during focused surveys. Not expected to occur in project components lacking suitable habitat, including sandy soils.
Myosurus minimus ssp. apus	little mousetail	None/None/3.1/None	Valley and foothill grassland, vernal pools (alkaline)/ annual herb/Mar–June/66–2100	X	X	L	L	L	L	X	L	L	L	X	Low potential to occur in the project site due to limited suitable habitat and not observed during 2016 rare plant surveys. Historical occurrences are known from three localities, San Onofre, Camp Pendleton, and Otay Mesa. Not expected to occur within project components lacking suitable vegetation.
Nama stenocarpa	mud nama	None/None/2B.2/None	Marshes and swamps (lake margins, riverbanks)/ annual/perennial herb/Jan–July/16–1640	Х	L	X	X	X	X	Х	L	Х	L	L	Low potential to occur in project components with marshes and/or riverbanks with suitable habitat. Not expected to occur in project components lacking suitable habitat.

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Navarretia fossalis	spreading navarretia	FT/None/1B.1/Covered, Narrow Endemic	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools/annual herb/Apr–June/98–2149	X	L	X	X	L	L	X	L	X	L	L	Low potential to occur in project components with suitable vegetation and clay soils. Closest occurrence is within the MCAS Miramar, east of the Miramar Landfill and north SR-52. Not expected to occur within project components lacking suitable habitat.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.1/None	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/ annual herb/Apr–July/10–3970	X	L	L	L	L	L	Х	L	L	L	L	Low potential to occur. Species would have been observed during surveys if present. Historical occurrences are known from Kearny Mesa off of Kearny Villa Road but not with the project site. Not expected to occur within project components lacking suitable vegetation.
Nemacaulis denudata var. denudata	coast woolly- heads	None/None/1B.2/None	Coastal dunes/annual herb/Apr–Sep/0–328	Х	X	X	X	X	Х	Х	Х	X	X	Х	Not expected to occur. No suitable coastal dune habitat present.
Nemacaulis denudata var. gracilis	slender cotton- heads	None/None/2B.2/None	Coastal dunes, desert dunes, Sonoran desert scrub/annual herb/(Mar) Apr–May/-164–1312	X	X	X	Х	Х	Х	Х	Х	X	Х	X	Not expected to occur. No suitable vegetation present.
Nolina interrata	Dehesa nolina	None/CE/1B.1/Covered	Chaparral (gabbroic, metavolcanic, or serpentinite)/perennial herb/June–July/607–2805	Х	X	X	X	X	X	X	Х	X	X	X	Not expected to occur. Limited suitable gabbroic, metavolcanic, or serpentinite chaparral present and this perennial herb would have been observed during surveys if present.

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Ophioglossum californicum	California adder's- tongue	None/None/4.2/None	Chaparral, valley and foothill grassland, vernal pools (margins); mesic/perennial rhizomatous herb/(Dec) Jan–June/197–1722	Х	X	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within project components lacking suitable habitat.
Orcuttia californica	California Orcutt grass	FE/CE/1B.1/Covered, Narrow Endemic	Vernal pools/annual herb/Apr–Aug/49–2165	X	X	X	X	L	X	X	X	X	L	X	Low potential to occur at the North City Pure Water Facility and along the LFG Pipeline where vernal pools are present, but the species was not observed during focused surveys. Not expected to occur within project components lacking suitable vernal pool habitat.
Orobanche parishii ssp. brachyloba	short-lobed broomrape	None/None/4.2/None	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/ perennial herb (parasitic)/Apr–Oct/10–1001	X	L	X	X	X	X	X	Х	X	X	X	Low potential to occur along the Morena Pipelines due to suitable vegetation and sandy soils. However, this species was not observed during focused surveys. Not expected to occur in project components lacking suitable habitat, including sandy soils.
Packera ganderi	Gander's ragwort	None/CR/1B.2/Covered	Chaparral (burns, gabbroic outcrops)/perennial herb/Apr–June/1312–3937	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

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Pentachaeta aurea ssp. aurea	golden-rayed pentachaeta	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland/annual herb/Mar–July/262–6070	Х	L	L	L	L	L	X	<u>₽D</u>	L	D	L	Observed along the LFG Pipeline and the Miramar Reservoir. Low potential to occur in all other components with negative survey results. Not expected to occur in project components lacking suitable habitat.
Phacelia ramosissima var. austrolitoralis	south coast branching phacelia	None/None/3.2/None	Chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/16–984	Х	L	L	Х	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within project components lacking suitable habitat.
Phacelia stellaris	Brand's star phacelia	FC/None/1B.1/None	Coastal dunes, coastal scrub/annual herb/ Mar–June/3–1312	Х	L	L	Х	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within project components lacking suitable habitat.
Pinus torreyana ssp. torreyana	Torrey pine	None/None/1B.2/ Covered	Closed-cone coniferous forest, chaparral; sandstone/perennial evergreen tree/N.A./ 246–525	Х	Х	X	Х	Х	Х	X	X	Х	X	X	Not expected to occur. Perennial tree would have been observed during surveys if present. Torrey pines were observed within the Miramar Reservoir study area; however, trees are planted and not native occurrences.

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Piperia cooperi	chaparral rein orchid	None/None/4.2/None	Chaparral, cismontane woodland, valley and foothill grassland/perennial herb/Mar–June/49–5200	X	L	L	L	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within project components lacking suitable habitat.
Pogogyne abramsii	San Diego mesa mint	FE/CE/1B.1/Covered, Narrow Endemic	Vernal pools/annual herb/Mar–July/295–656	X	X	X	X	L	X	X	Х	X	L	X	Low potential to occur at the North City Pure Water Facility and along the LFG Pipeline where vernal pools are present, but the species was not observed during focused surveys. Not expected to occur within project components lacking suitable vernal pool habitat.
Pogogyne nudiuscula	Otay Mesa mint	FE/CE/1B.1/Covered, Narrow Endemic	Vernal pools/annual herb/May–July/295–820	X	X	X	X	L	X	X	X	X	L	X	Low potential to occur at the North City Pure Water Facility and along the LFG Pipeline where vernal pools are present, but the species was not observed during focused surveys. Not expected to occur within project components lacking suitable vernal pool habitat.

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Polygala cornuta var. fishiae	Fish's milkwort	None/None/4.3/None	Chaparral, cismontane woodland, riparian woodland/perennial deciduous shrub/ May–Aug/328–3281	Х	L	X	X	X	X	X	L	L	L	L	Low potential to occur in project components with suitable habitat, but this perennial deciduous shrub would likely have been observed during surveys if present. Not expected to occur in project components lacking suitable habitat or outside the species' known elevation range.'
Pseudognaphalium leucocephalum	white rabbit- tobacco	None/None/2B.2/None	Chaparral, cismontane woodland, coastal scrub, riparian woodland; sandy, gravelly/perennial herb/(July) Aug–Nov (Dec)/0–6890	X	L	L	X	L	L	Х	L	L	L	L	Low potential to occur in project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within project components lacking suitable habitat.
Quercus cedrosensis	Cedros Island oak	None/None/2B.2/None	Closed-cone coniferous forest, chaparral, coastal scrub/perennial evergreen tree/Apr–May/837–3150	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1/None	Closed-cone coniferous forest, chaparral, coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr (Aug)/ 49–1312	X	L	₽Ū	X	L	L	X	<u>+D</u>	D	₽Ū	L	Observed within the buffer around the MBC, LFG Pipeline, and the Miramar Reservoir. Low potential to occur in all other components because this evergreen shrub would likely have been observed during surveys if present. Not expected to occur within project components lacking suitable habitat.
Quercus engelmannii	Engelmann oak	None/None/4.2/None	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/perennial deciduous tree/Mar– June/164–4265	Х	Х	Х	Х	X	Х	X	Х	X	X	X	Not expected to occur. Perennial tree would have been observed during surveys if present.

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Rosa minutifolia	small-leaved rose	None/CE/2B.1/Covered	Chaparral, coastal scrub/perennial deciduous shrub/Jan–June/492–525	X	X	Х	X	X	X	X	L	X	X	L	Low potential to occur in components at higher elevation with suitable chaparral or coastal scrub habitat. However, perennial shrub would likely have been observed during surveys if present. Not expected to occur in project components below the species' known elevation range.
Salvia munzii	Munz's sage	None/None/2B.2/None	Chaparral, coastal scrub/perennial evergreen shrub/Feb–Apr/377–3494	Х	L	L	Х	L	L	X	L	L	L	L	Low potential to occur in most project components because this shrub would likely have been observed during surveys if present. Not expected to occur within project components lacking suitable habitat.
Selaginella cinerascens	ashy spike- moss	None/None/4.1/None	Chaparral, coastal scrub/perennial rhizomatous herb/N.A./ 66–2100	X	L	D	X	<u>LD</u>	L	X	<u>†D</u>	D	D	L	Observed within the buffer around the MBC, and NCWRP, NCPWF, North City Pipeline, and the LFG Pipeline. Observed along the Miramar Reservoir. Low potential to occur in all other components due to lack of observations during focused surveys. Not expected to occur within project components lacking suitable vegetation.

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Senecio aphanactis	chaparral ragwort	None/None/2B.2/None	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/annual herb/Jan–Apr/49–2625	Х	L	L	X	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in project components lacking suitable vegetation and sandy soils.
Solanum xanti	Purple nightshade	None/None/ Covered	Coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest/perennial herb / perennial shrub/ June–July/0–8858	Х	L	L	Х	L	L	Х	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in project components lacking suitable vegetation and sandy soils.
Sphaerocarpos drewei	bottle liverwort	None/None/1B.1/None	Chaparral, coastal scrub; openings, soil/ephemeral liverwort/N.A./295–1969	Х	L	L	X	L	L	X	L	L	L	L	Low potential to occur in project components with suitable vegetation and soils within the elevation range of the species; focused surveys were negative. Not expected to occur in project components lacking suitable vegetation and sandy soils.
Stemodia durantifolia	purple stemodia	None/None/2B.1/None	Sonoran desert scrub (often mesic, sandy)/perennial herb/Jan– Dec/591–984	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable desert scrub habitat present.
Stipa diegoensis	San Diego County needle grass	None/None/4.2/None	Chaparral, coastal scrub; rocky, often mesic/perennial herb/Feb– June/33–2625	X	L	L	X	L	L	X	L	L	L	L	Low potential to occur. Species would have been observed during surveys if present. Not expected to occur in project components lacking suitable vegetation.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Streptanthus bernardinus	Laguna Mountains jewelflower	None/None/4.3/None	Chaparral, lower montane coniferous forest/perennial herb/May–Aug/2198–8202	Х	X	X	X	X	X	X	X	Х	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Stylocline citroleum	oil neststraw	None/None/1B.1/None	Chenopod scrub, coastal scrub, valley and foothill grassland; clay/annual herb/Mar–Apr/164–1312	Х	L	L	L	L	L	X	L	L	L	L	Low potential to occur. Species would have been observed during surveys if present. Not expected to occur in project components lacking suitable vegetation.
Suaeda esteroa	estuary seablite	None/None/1B.2/None	Marshes and swamps (coastal salt)/perennial herb/May–Oct (Jan)/0–16	Х	X	Х	X	Х	Х	X	Х	Х	Х	Х	Not expected to occur. No suitable coastal salt marsh present.
Suaeda taxifolia	woolly seablite	None/None/4.2/None	Coastal bluff scrub, coastal dunes, marshes and swamps (margins of coastal salt)/ perennial evergreen shrub/Jan–Dec/0–164	Х	X	Х	Х	X	X	Х	X	X	X	Х	Not expected to occur. No suitable coastal habitat present.
Tetracoccus dioicus	Parry's tetracoccus	None/None/1B.2/ Covered	Chaparral, coastal scrub/perennial deciduous shrub/Apr–May/541–3281	X	X	X	X	X	X	X	L	X	X	L	Low potential to occur in components at higher elevation with suitable chaparral or coastal scrub habitat. However, perennial shrub would likely have been observed during surveys if present. Not expected to occur in project components below the species' known elevation range.
Texosporium sancti-jacobi	woven-spored lichen	None/None/3/None	Chaparral (openings); on soil, small mammal pellets, dead twigs, and on Selaginella spp./crustose lichen (terricolous)/ N.A./951–2165	Х	X	Х	Х	X	Х	X	X	X	X	X	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/ State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	Pure Water Dechlorination Facility (Dechlorination Facility)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Wastewater Treatment Plant Improvements (Miramar WTP)	Potential to Occur Discussion
Triquetrella californica	coastal triquetrella	None/None/1B.2/None	Coastal bluff scrub, coastal scrub; soil/moss/ N.A./ 33–328	X	L	L	X	L	L	X	L	X	L	X	Low potential to occur along the Morena Pipelines. Not expected to occur in other project components farther from the coast. Known in California from fewer than ten small coastal occurrences.
Viguiera laciniata	San Diego County viguiera	None/None/4.2/None	Chaparral, coastal scrub/perennial shrub/Feb– June (Aug)/197–2461	X	L	D	X	L	L	Х	D	L	D	L	Observed within the buffer around the North City Pipeline and NCWRP and along the LFG Pipeline. Low potential to occur in all other components that have suitable habitat, but where focused surveys were negative. Not expected to occur within project components lacking suitable habitat.
Xanthisma junceum	rush-like bristleweed	None/None/4.3/None	Chaparral, coastal scrub/perennial herb/June– Jan/787–3281	X	X	X	X	X	X	X California and Fither	X	X	X	L	Low potential to occur within the Miramar Wastewater Treatment Plant Improvements; however, focused surveys for this species were negative. Not expected to occur in other project components because they are below the species' known elevation range.

Notes

X = not expected (no suitable habitat and/or outside elevation range)

D = detected within the component or 100-foot buffer

L = low potential (suitable habitat but surveys were negative)

Status Legend:

FE: Federally listed as endangered

FT: Federally listed as threatened

FC: Federal Candidate for listing

DL: Delisted

CE: State listed as endangered

CT: State listed as threatened

CR: State Rare

CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere

CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

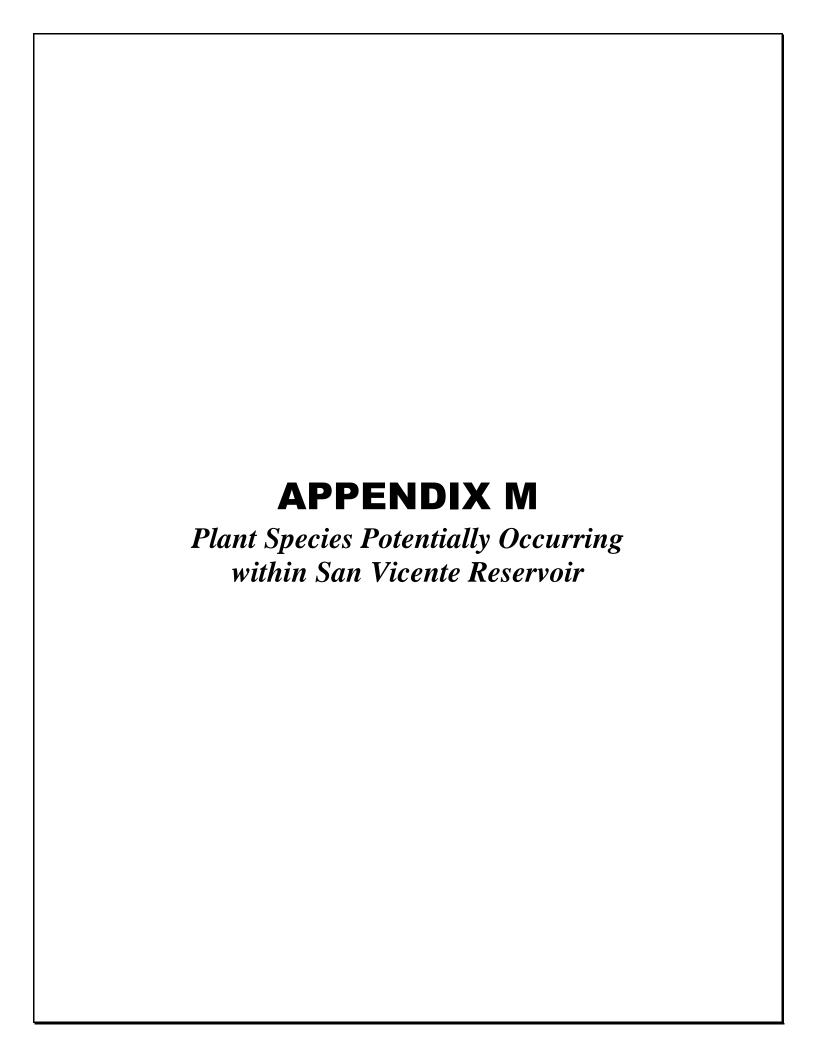
CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere

CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

CRPR 3: Plants About Which More Information is Needed - A Review List

CRPR 4: Plants of Limited Distribution - A Watch List

- .1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)



APPENDIX M Plant Species Potentially Occurring within San Vicente Reservoir

Scientific Name Abronia	Common Name red sand-	Status (Federal/State/ CRPR/MSCP) None/None/4.2/	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) Coastal dunes/perennial	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station) X	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station) X	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline -In- Reservoir Alternative Terminus (San Vicente Pipeline - IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT) X	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Not expected to
maritima	verbena	None	herb/Feb-Nov/0-328														occur. No suitable coastal dune vegetation present.
Acanthomintha ilicifolia	San Diego thorn-mint	FT/CE/1B.1/ Covered, Narrow Endemic	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay, openings/annual herb/Apr–June/33–3150	X	L	L	L	L	L	L	L	L	L	X	X	L	Low potential to occur in Project components with suitable vegetation and clay soils. However, focused surveys for this species were negative. Not expected to occur in Project components lacking suitable vegetation and/or clay soils.
Acmispon prostratus	Nuttall's acmispon	None/None/1B.1/ Covered	Coastal dunes, coastal scrub (sandy)/annual herb/Mar–June (July)/ 0–33	Х	L	X	X	X	X	L	L	L	L	X	X	X	Low potential to occur along the Morena Pipelines, which run closer to the coast and contains sandy soils. Not expected to occur along other Project components farther from the coast.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Adolphia californica	California adolphia	None/None/2B.1/ None	Chaparral, coastal scrub, valley and foothill grassland; clay/perennial deciduous shrub/ Dec-May/148-2428	Х	L	L	L	L	L	L	L	L	L	L	X	L	Low potential to occur in Project components with suitable vegetation and clay soils. This perennial shrub would likely have been observed during surveys if present. Not expected to occur in Project components lacking suitable vegetation and/or clay soils.
Agave shawii var. shawii	Shaw's agave	None/None/2B.1/ Covered, Narrow Endemic	Coastal bluff scrub, coastal scrub/perennial leaf succulent/Sep— May/33—394	X	L	L	X	L	L	Ļ	L	L	L	L	L	Ļ	Low potential to occur within Project components with suitable coastal scrub habitat. The project site has suitable vegetation and soils, but closest occurrences within San Diego County are only at two localities, Point Loma and Tijuana. Not expected to occur within Project components lacking suitable coastal scrub habitat or outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Ambrosia chenopodiifolia	San Diego bur-sage	None/None/2B.1/ None	Coastal scrub/perennial shrub/Apr–June/180–509	X	L	L	X		L	L	L	L	L	L	L	L	Low potential to occur in Project components with coastal scrub. However, this perennial shrub would have been observed during surveys if present. Not expected to occur in Project components lacking coastal scrub habitat or Miramar Wastewater Treatment Plant Improvements, which is outside of the species' known elevation range.
Ambrosia monogyra	singlewhorl burrobrush	None/None/2B.2/ None	Chaparral, Sonoran desert scrub; sandy/perennial shrub/Aug–Nov/33–1640	X	X	X	X	X	X	L	L	L	L	L	L	L	Low potential to occur in components with suitable sandy chaparral habitat; however, this perennial shrub would likely have been observed if present. Not expected to occur in Project components lacking sandy chaparral.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Ambrosia pumila	San Diego ambrosia	FE/None/1B.1/ Covered, Narrow Endemic	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; sandy loam or clay, often in disturbed areas, sometimes alkaline/perennial rhizomatous herb/Apr—Oct/66–1362	X	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and sandy loam or clay soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable vegetation and/or sandy loam or clay soils.
Aphanisma blitoides	aphanisma	None/None/1B.2/ Covered	Coastal bluff scrub, coastal dunes, coastal scrub; sandy or gravelly/annual herb/Mar–June/3–1001	X	L	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur along the Morena Pipelines. Not expected to occur in other Project components farther from the coast.
Arctostaphylos glandulosa ssp. crassifolia	Del Mar manzanita	FE/None/1B.1/ Covered	Chaparral (maritime, sandy)/perennial evergreen shrub/Dec– June/0–1198	Х	X	X	X	X	X	Ĺ	L	L	L	L	X	X	Not expected to occur. No maritime chaparral present.
Arctostaphylos otayensis	Otay manzanita	None/None/1B.2/ Covered	Chaparral, cismontane woodland; metavolcanic/perennial evergreen shrub/Jan– Apr/902–5577	Х	Х	X	Х	Х	Х	L	L	L	L	L	Х	X	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline -In- Reservoir Alternative Terminus (San Vicente Pipeline - IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Artemisia palmeri	San Diego sagewort	None/None/4.2/ None	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; sandy, mesic/perennial deciduous shrub/(Feb) May–Sep/49–3002	X	D	L	X	L	L	L	L	L	L	L	L	Đ <u>L</u>	Observed along the Morena Pipelines, In-Reservoir Alternative Terminus, Tunnel Alternative Terminus, and the LFG Pipeline. Low potential to occur within the other components; would have been observed during surveys if present. Not expected to occur within Project components lacking suitable habitat.
Asplenium vespertinum	western spleenwort	None/None/4.2/ None	Chaparral, cismontane woodland, coastal scrub; rocky/perennial rhizomatous herb/Feb–June/591–3281	X	X	X	X	X	L	L	L	L	L	L	X	X	Low potential to occur in Project components with suitable vegetation within the known elevation range of the species. Focused surveys were negative for this species. Not expected to occur within Project components lacking suitable habitat and/or outside the known elevation range of the species.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline -In- Reservoir Alternative Terminus (San Vicente Pipeline - IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Astragalus deanei	Dean's milk-vetch	None/None/1B.1/ None	Chaparral, cismontane woodland, coastal scrub, riparian forest/perennial herb/Feb–May/246–2280	X	L	L	X	L	L	L	L	L	L	L	L	Ĺ	Low potential to occur within Project components with suitable habitat within the species' known elevation range. The most recent (since 1995) occurrences for this species occur with the Cleveland National Forest or Dehesa. Not expected to occur within Project components lacking suitable habitat or outside of the species' known elevation range.
Astragalus oocarpus	San Diego milk-vetch	None/None/1B.2/ None	Chaparral (openings), cismontane woodland/perennial herb/May–Aug/1001– 5000	Х	Х	X	Х	Х	Х	L	L	L	L	L	Х	X	Not expected to occur. The site is outside of the species' known elevation range.
Astragalus tener var. titi	coastal dunes milk- vetch	FE/CE/1B.1/ Covered, Narrow Endemic	Coastal bluff scrub (sandy), coastal dunes, coastal prairie (mesic); often vernally mesic areas/annual herb/Mar– May/3–164	Х	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. No suitable vegetation present and this species generally occurs along the coast.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Atriplex coulteri	Coulter's saltbush	None/None/1B.2/ None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/10–1509	X	L	L	L	L	L	L	L	L	L	X	X	L	Low potential to occur in Project components with suitable vegetation within the known elevation range of the species. Focused surveys were negative for this species. Not expected to occur within Project components lacking suitable habitat and/or outside the known elevation range of the species.
Atriplex pacifica	South Coast saltscale	None/None/1B.2/ None	Coastal bluff scrub, coastal dunes, coastal scrub, playas/annual herb/Mar–Oct/0–459	X	L	L	X	L		L	L	L	L	X	L	L	Low potential to occur in Project components with suitable vegetation within the known elevation range of the species. Focused surveys were negative for this species. Not expected to occur within Project components lacking suitable habitat and/or outside the known elevation range of the species.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Atriplex parishii	Parish's brittlescale	None/None/1B.1/ None	Chenopod scrub, playas, vernal pools; alkaline/annual herb/June–Oct/82–6234	Х	X	Х	Х	L	X	Х	Х	Х	X	Х	X	L	Low potential to occur within Project components with vernal pools. Not expected to occur in other Project components due to lack of suitable vegetation.
Baccharis vanessae	Encinitas baccharis	FT/CE/1B.1/ Covered	Chaparral (maritime), cismontane woodland; sandstone/perennial deciduous shrub/Aug– Nov/197–2362	X	X	X	X	X	X	L	L	L	L	L	X	X	Not expected to occur. Perennial shrub would have been observed during surveys if present and all occurrences of this species are north of the project alignment (CDFW 2016).
Berberis nevinii	Nevin's barberry	FE/CE/1B.1/ Covered	Chaparral, cismontane woodland, coastal scrub, riparian scrub; sandy or gravelly/perennial evergreen shrub/Mar– June/230–2707	Х	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in areas with suitable vegetation and soils. Perennial shrub would have been observed during surveys if present.
Bergerocactus emoryi	golden- spined cereus	None/None/2B.2/ None	Closed-cone coniferous forest, chaparral, coastal scrub; sandy/perennial stem succulent/May– June/10–1296	Х	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in areas with suitable vegetation and soils. Perennial shrub would have been observed during surveys if present.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Bloomeria clevelandii	San Diego goldenstar	None/None/1B.1/ Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial bulbiferous herb/Apr–May/164–1526	Х	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Brodiaea filifolia	thread- leaved brodiaea	FT/CE/1B.1/ Covered	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; often clay/perennial bulbiferous herb/Mar–June/82–3675	X	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Brodiaea orcuttii	Orcutt's brodiaea	None/None/1B.1/ Covered	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentinite/perennial bulbiferous herb/May–July/98–5551	X	L	L	L	L	L	L	L	L	L	L	L	D	Observed along the LFG Pipeline. Low potential to occur in most other Project components. Species would have been observed during surveys if present. Not expected to occur in Project components lacking suitable habitat.

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M-9
February 2018

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Calamagrostis koelerioides	Fire reedgrass	None/None/ None/Covered	Chaparral, meadows and seeps; slopes, dry hills, ridges/perennial grass/June–Aug/0–7546	X	X	X	X	X	X	L	L	L	L	L	L	L	Low potential to occur in components with suitable chaparral habitat; however, this species was not observed during focused surveys. Not expected to occur in Project components lacking chaparral.
Calandrinia breweri	Brewer's calandrinia	None/None/4.2/ None	Chaparral, coastal scrub; sandy or loamy, disturbed sites and burns/annual herb/Mar–June/33–4003	Х	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
California macrophylla	round- leaved filaree	None/None/1B.2/ None	Cismontane woodland, valley and foothill grassland; clay/annual herb/Mar–May/49–3937	X	L	L	L	L	L	L	L	L	L	L	X	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Calochortus dunnii	Dunn's mariposa lily	None/CR/1B.2/ Covered	Closed-cone coniferous forest, chaparral, valley and foothill grassland; gabbroic or metavolcanic, rocky/perennial bulbiferous herb/(Feb) Apr–June/607–6004	X	X	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur along the NCPW Pipeline and Miramar Wastewater Treatment Plant Improvements area; not observed during focused surveys. Not expected to occur in Project components below the species' known elevation range.
Camissoniopsis lewisii	Lewis' evening- primrose	None/None/3/ None	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/annual herb/Mar— May (June)/0–984	Х	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable habitat. Species would have been observed during surveys if present.
Carex obispoensis	San Luis Obispo sedge	None/None/1B.2/ None	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland; often serpentinite seeps, sometimes gabbro; often on clay soils/perennial rhizomatous herb/Apr–June/33–2690	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. Only four locations known from San Diego County at two localities Sycuan Ecological Reserve and McGinty Mountain Ecological Reserve.

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Castilleja plagiotoma	Mojave paintbrush	None/None/4.3/ None	Great Basin scrub (alluvial), Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland/perennial herb (hemiparasitic)/Apr– June/984–8202	Х	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Caulanthus heterophyllus	California mustard	None/None/None/ Covered	Coastal scrub, chaparral; dry, open, generally after fire, disturbance/annual herb/Mar–May/0–4593	Х	L	L	L	L	L	Х	L	L	L	L	L	L	Low potential to occur in Project components with suitable habitat. Species would have been observed during surveys if present.
Caulanthus simulans	Payson's jewelflower	None/None/4.2/ None	Chaparral, coastal scrub; sandy, granitic/annual herb/(Feb) Mar–May (June)/295–7218	X	L	L	X	L	L	L	L	L	L	L	L	L'	Low potential to occur within Project components with suitable habitat; however, focused surveys were negative. Not expected to occur in Project components lacking suitable habitat or outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Ceanothus cyaneus	Lakeside ceanothus	None/None/1B.2/ Covered	Closed-cone coniferous forest, chaparral/perennial evergreen shrub/Apr–June/771–2477	X	X	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur in the Miramar Wastewater Treatment Plant Improvements project component. Not expected to occur to occur in other Project components, which are outside of the species' known elevation range.
Ceanothus otayensis	Otay Mountain ceanothus	None/None/1B.2/ None	Chaparral (metavolcanic or gabbroic)/perennial evergreen shrub/Jan– Apr/1969–3609	Х	X	Х	Х	X	Х	Х	Х	Х	Х	Х	X	Х	Not expected to occur. The site is outside of the species' known elevation range.
Ceanothus verrucosus	wart- stemmed ceanothus	None/None/2B.2/ Covered	Chaparral/perennial evergreen shrub/Dec– May/3–1247	X	₽Ū	X	X	X	X	L	L	L	L	L	D	D	Observed within the buffer around the MBC, Morena Pipelines, and along the LFG Pipeline. Low potential to occur in all other components with chaparral habitat where focused surveys were negative. Not expected to occur in Project components lacking chaparral.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Centromadia parryi ssp. australis	southern tarplant	None/None/1B.1/ None	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/annual herb/May–Nov/0–1575	X		L		L		L	L		L	L	X	L	Low potential to occur due to limited suitable vernally mesic habitat and because it was not observed during 2016 rare plant surveys. In addition, all occurrences of southern tarplant are north of the project site (CDFW 2016). Not expected to occur in Project components lacking suitable habitat.
Centromadia pungens ssp. laevis	smooth tarplant	None/None/1B.1/ None	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2100	Х	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	None/None/1B.1/ None	Coastal bluff scrub (sandy), coastal dunes/annual herb/Jan– Aug/0–328	Х	Х	Х	X	Х	X	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable vegetation present. This species generally occurs along the coast.

Scientific Name Chamaebatia	Common Name southern	Status (Federal/State/ CRPR/MSCP) None/None/4.2/	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) Chaparral (gabbroic or	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station) X	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station) X	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Not expected to
australis	mountain misery	None	metavolcanic)/perennial evergreen shrub/Nov– May/984–3346														occur. The site is outside of the species' known elevation range.
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	FE/CE/1B.2/ Covered	Coastal dunes, marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May– Oct/0–98	Х	X	X	X	Х	X	Х	Х	X	X	Х	Х	X	Not expected to occur. No suitable coastal dune or coastal salt marsh vegetation present.
Chorizanthe leptotheca	Peninsular spineflower	None/None/4.2/ None	Chaparral, coastal scrub, lower montane coniferous forest; alluvial fan, granitic/annual herb/May–Aug/984–6234	Х	X	X	X	X	X	L	L	L	L	L	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Chorizanthe orcuttiana	Orcutt's spineflower	FE/CE/1B.1/ None	Closed-cone coniferous forest, chaparral (maritime), coastal scrub; sandy openings/annual herb/Mar–May/10–410	X	L	X	X	X	X	L	L	L	L	L	L	L	Low potential to occur within Project components with chaparral and coastal sage scrub and sandy soils. However, focused surveys for this species were negative. Not expected to occur within Project components lacking suitable sandy habitat.

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Chorizanthe polygonoides var. longispina	long-spined spineflower	None/None/1B.2/ None	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; often clay/annual herb/Apr–July/98–5020	X	L	L	L	L	L	L	L	L	L	L	D	D	Observed within the buffer around the Metro Biosolids Center and along the LFG Pipeline. Low potential to occur in all other components that have chaparral, coastal scrub, grassland, or vernal pools with clay soils. Not expected to occur in Project components that lack such suitable habitat.
Cistanthe maritima	seaside cistanthe	None/None/4.2/ None	Coastal bluff scrub, coastal scrub, valley and foothill grassland; sandy/annual herb/(Feb) Mar–June (Aug)/16–984	X	L	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur along the Morena Pipelines, which as suitable sandy coastal scrub, but focused surveys were negative. Not expected to occur in other Project components that are farther from the coast since this species is known to occur at locales with moist sea breezes (Reiser 2001).

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Clarkia delicata	delicate clarkia	None/None/1B.2/ None	Chaparral, cismontane woodland; often gabbroic/annual herb/Apr–June/771–3281	X	X	X	X	X	X	L	L	D	D	L	X	X	Observed within the buffer of the In-Reservoir Alternative Terminus and Marina Alternative Terminus. Low potential to occur within other Project components with suitable habitat; however, focused surveys for this species were negative. Not expected to occur in remaining Project components below the species' known elevation range.
Clinopodium chandleri	San Miguel savory	None/None/1B.2/ Covered	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; rocky, gabbroic, or metavolcanic/perennial shrub/Mar–July/394–3527	X	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components that contain suitable habitat within the correct elevation range due to negative focused surveys due to limited suitable habitat and not observed during 2016 rare plant surveys. Not expected to occur in Project components that lack suitable habitat and/or that are outside the known elevation range for this species.

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Comarostaphyli s diversifolia ssp. diversifolia	summer holly	None/None/1B.2/ None	Chaparral, cismontane woodland/perennial evergreen shrub/Apr–June/98–2592	X	L	X	X	X	X	L	L	L	L	L		D	Observed along the LFG Pipeline. Low potential to occur in most Project components with chaparral or oak woodland because this shrub would have been observed during if present. Not expected to occur in components without suitable chaparral or oak woodland habitat.
Convolvulus simulans	small- flowered morning- glory	None/None/4.2/ None	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar– July/98–2297	Х	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Cordylanthus rigidus ssp. brevibracteatus	short- bracted bird's-beak	None/None/4.3/ None	Chaparral, lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest; openings, granitic/annual herb (hemiparasitic)/July–Aug (Oct)/2001–8497	X	X	X	X	X	X	X	Х	X	X	X	X	Х	Not expected to occur. The site is outside of the species' known elevation range.

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Corethrogyne filaginifolia var. incana	San Diego sand aster	None/None/1B.1/ None	Coastal bluff scrub, chaparral, coastal scrub/perennial herb/June–Sep/10–377	X		L	X	L	L	L	L	X		X	L	L	Low potential to occur in Project components with suitable vegetation and soils and within the elevation range of this species. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat and/or outside the known elevation range for this species.
Corethrogyne filaginifolia var. linifolia	Del Mar Mesa sand aster	None/None/1B.1/ Covered	Coastal bluff scrub, chaparral (maritime, openings), coastal scrub; sandy/perennial herb/May–Sep/49–492	X	L	X	X	L	L	L	L	L	L	L	L	L	Low potential to occur. Coastal sage scrub present in many components, but Del Mar Mesa sand aster occurrences are all north of the proposed project and focused surveys were negative.

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Cryptantha wigginsii	Wiggins' cryptantha	None/None/1B.2/ None	Coastal scrub; often clay/annual herb/Feb–June/66–902	X	L	L	X	L	L	L	L	L	L	L		L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Cylindropuntia californica var. californica	snake cholla	None/None/1B.1/ Covered, Narrow Endemic	Chaparral, coastal scrub/perennial stem succulent/Apr–May/98– 492	Х	L	L	X	L	L	L	L	L	L	L		L	Low potential to occur in Project components with suitable chaparral and/or coastal scrub. Perennial succulent would have been observed during surveys if present.
Deinandra conjugens	Otay tarplant	FT/CE/1B.1/ Covered, Narrow Endemic	Coastal scrub, valley and foothill grassland; clay/annual herb/May–June/82–984	X	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.

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Deinandra floribunda	Tecate tarplant	None/None/1B.2/ None	Chaparral, coastal scrub/annual herb/Aug- Oct/230-4003	Х	L	L	X	L	L	L	L	L	L	L	_	L	Low potential to occur within Project components with suitable habitat; however, focused surveys were negative. Not expected to occur in Project components lacking suitable habitat or outside of the species' known elevation range.
Deinandra paniculata	paniculate tarplant	None/None/4.2/ None	Coastal scrub, valley and foothill grassland, vernal pools; usually vernally mesic, sometimes sandy/annual herb/Apr–Nov/82–3084	X	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Dichondra occidentalis	western dichondra	None/None/4.2/ Narrow Endemic	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial rhizomatous herb/(Jan) Mar–July/164–1640	X	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in most Project components due to negative focused surveys. Not expected to occur in Project components lacking suitable habitat.

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Dicranostegia orcuttiana	Orcutt's bird's-beak	None/None/ 2B.1/Covered	Coastal scrub/annual herb (hemiparasitic)/(Mar) Apr–July (Sep)/33–1148	Х	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable coastal scrub. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable coastal scrub.
Dudleya blochmaniae ssp. blochmaniae	Blochman's dudleya	None/None/1B.1/ None	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland; rocky, often clay or serpentinite/perennial herb/Apr–June/16–1476	Х	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur within components with suitable habitat. Species would have been observed during surveys if present. Not expected to occur in Project components with no suitable habitat.
Dudleya brevifolia	short-leaved dudleya	None/CE/1B.1/ Covered, Narrow Endemic	Chaparral (maritime, openings), coastal scrub; Torrey sandstone/perennial herb/Apr–May/98–820	X	X	Х	X	X	X	L	L	L	L	L	X	X	Not expected to occur. No Torrey sandtone soils within the proposed project.
Dudleya variegata	variegated dudleya	None/None/1B.2/ Covered, Narrow Endemic	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial herb/Apr–June/10–1903	X	L	L	L	L	L	L	L	L	<u>L</u>	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline -In- Reservoir Alternative Terminus (San Vicente Pipeline - IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Dudleya viscida	sticky dudleya	None/None/1B.2/ Covered	Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub; rocky/perennial herb/May–June/33–1804	X	L	L	X	L		L	L	L	L	L	L	L	Low potential to occur within components with suitable habitat. Species would have been observed during surveys if present. Not expected to occur in Project components with no suitable habitat.
Ericameria palmeri var. palmeri	Palmer's goldenbush	None/None/1B.1/ Covered	Chaparral, coastal scrub; mesic/perennial evergreen shrub/(July) Sep-Nov/98-1969	X	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur within components with suitable habitat. Species would have been observed during surveys if present. Not expected to occur in Project components with no suitable habitat.
Eriogonum evanidum	vanishing wild buckwheat	None/None/1B.1/ None	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland; sandy or gravelly/annual herb/July–Oct/3609–7300	Х	Х	X	Х	Х	X	X	Х	X	Х	Х	X	X	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Eryngium aristulatum var. parishii	San Diego button-celery	FE/CE/1B.1/ Covered	Coastal scrub, valley and foothill grassland, vernal pools; mesic/annual / perennial herb/Apr– June/66–2034	X	L	L			L	L	X	X	X	X	L	L	Low potential to occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Erysimum ammophilum	sand-loving wallflower	None/None/1B.2/ Covered	Chaparral (maritime), coastal dunes, coastal scrub; sandy, openings/perennial herb/Feb–June/0–197	X	L	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur along the Morena Pipelines due to suitable sandy chaparral and coastal scrub, but lack of observations during focused surveys. Not expected to occur at the Morena Pump Station due to lack of suitable habitat. Not expected to occur in the remaining Project components because they are above the species' known elevation range.
Euphorbia abramsiana	Abrams' spurge	None/None/2B.2/ None	Mojavean desert scrub, Sonoran desert scrub; sandy/annual herb/Aug– Nov/-16–3002	X	Х	X	X	X	Х	Х	X	X	X	X	X	Х	Not expected to occur. No suitable desert scrub vegetation present.

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Euphorbia misera	cliff spurge	None/None/2B.2/ None	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/perennial shrub/Dec–Aug (Oct)/33–1640	Х	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils. Perennial shrub would likely have been observed if present. Not expected to occur in Project components lacking suitable habitat.
Ferocactus viridescens	San Diego barrel cactus	None/None/2B.1/ Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/perennial stem succulent/May–June/10–1476	X	L	L	L	L	L	L	D	L	L	L	L	L	Observed along the San Vicente Pipeline. Low potential to occur in all other components due to lack of observations during focused surveys or not expected to occur due to lack of suitable habitat.
Frankenia palmeri	Palmer's frankenia	None/None/2B.1/ None	Coastal dunes, marshes and swamps (coastal salt), playas/perennial herb/May–July/0–33	X	X	X	Х	X	Х	Х	Х	Х	Х	Х	Х	X	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Fraxinus parryi	chaparral ash	None/None/2B.2/ None	Chaparral/perennial shrub/Mar–May/699– 2034	X	L	L	X	L		L	L	L	L	L	L	L	Low potential to occur within Project components with suitable chaparral vegetation; however, focused surveys were negative. Not expected to occur in Project components lacking suitable habitat or outside of the species' known elevation range.
Fremontodendr on mexicanum	Mexican flannelbush	FE/CR/1B.1/ None	Closed-cone coniferous forest, chaparral, cismontane woodland; gabbroic, metavolcanic, or serpentinite/perennial evergreen shrub/Mar–June/33–2349	X	L	X	X	X	X	L	L	L	L	L	L	L	Low potential to occur within components that have chaparral vegetation. Not expected to occur in remaining Project components. No suitable vegetation present.
Galium proliferum	desert bedstraw	None/None/2B.2/ None	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; rocky, carbonate/annual herb/Mar–June/3904– 5348	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

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Geothallus tuberosus	Campbell's liverwort	None/None/1B.1/ None	Coastal scrub (mesic), vernal pools; soil/ephemeral liverwort/N.A./33–1969	X	L		X	L		L	L	L	L	L	L	L	Low potential to occur in Project components with suitable coastal scrub or vernal pools. Focused surveys were negative for this species. Not expected to occur in Project components lacking suitable habitat.
Githopsis diffusa ssp. filicaulis	Mission Canyon bluecup	None/None/3.1/ None	Chaparral (mesic, disturbed areas)/annual herb/Apr–June/1476– 2297	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Grindelia hallii	San Diego gumplant	None/None/1B.2/ None	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/perennial herb/May–Oct/607–5725	X	X	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur along the NCPW Pipeline and within the Miramar Wastewater Treatment Plant Improvements where there is suitable chaparral or grassland habitat; however, focused surveys for this species were negative. Not expected to occur in the remaining Project components because they are below the species' known elevation range.

Scientific Name Harpagonella	Common Name Palmer's	Status (Federal/State/ CRPR/MSCP) None/None/4.2/	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) Chaparral, coastal scrub,	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Low potential to
palmeri	grapplinghook	None	valley and foothill grassland; clay/annual herb/Mar–May/66–3133	·		_	_	_	_	-	_	-	_	-	_	_	occur in Project components with suitable vegetation and soils. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.
Hazardia orcuttii	Orcutt's hazardia	FC/CT/1B.1/ None	Chaparral (maritime), coastal scrub; often clay/perennial evergreen shrub/Aug-Oct/262-279	X	L	X	X	X	X	L	L	L	L	L	X	L	Low potential to occur along the Morena Pipelines and LFG Pipeline due to suitable sandy chaparral and coastal scrub, but lack of observations during focused surveys. Not expected to occur in the remaining Project components because they are outside the species' known elevation range.
Hesperocyparis forbesii	Tecate cypress	None/None/1B.1/ Covered	Closed-cone coniferous forest, chaparral; clay, gabbroic or metavolcanic/ perennial evergreen tree/N.A./262–4921	X	Х	Х	Х	X	X	L	L	L	L	L	X	Х	Not expected to occur. Perennial tree would have been observed during surveys if present.

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Heterotheca sessiliflora ssp. sessiliflora	beach goldenaster	None/None/1B.1/ None	Chaparral (coastal), coastal dunes, coastal scrub/perennial herb/Mar–Dec/0–4019	Х	L	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur along the Morena Pipelines due to lack of observations during focused surveys. Not expected to occur within Project components farther from the coast.
Holocarpha virgata ssp. elongata	graceful tarplant	None/None/4.2/ None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/annual herb/May–Nov/197–3609	X	L	D	L	D	L	L	L	L	L	L	D	D	Observed within the buffer around the NCWRP, North City Pure Water Facility, MBC, and the LFG Pipeline. Low potential to occur in other Project components due to negative focused surveys. Not expected to occur in Project components that lack suitable habitat.
Hordeum intercedens	vernal barley	None/None/3.2/ None	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools/annual herb/Mar–June/16–3281	Х	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur in Project components lacking suitable habitat.

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Horkelia truncata	Ramona horkelia	None/None/1B.3/ None	Chaparral, cismontane woodland; clay, gabbroic/perennial herb/May–June/1312– 4265	X	X	Х	X	X	X	X	X	X	Х	X	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Isocoma menziesii var. decumbens	decumbent goldenbush	None/None/1B.2/ None	Chaparral, coastal scrub (sandy, often in disturbed areas)/perennial shrub/Apr–Nov/33–443	X	L	L	X	L	L	L	L	L	L	L	D	L	Observed within the buffer around the MBC. Low potential to occur in all other components. Perennial shrub would likely have been observed during surveys if present. Not expected to occur in Project components lacking suitable habitat.
Iva hayesiana	San Diego marsh-elder	None/None/2B.2/ None	Marshes and swamps, playas/perennial herb/Apr–Oct/33–1640	X	<u>↓D</u>	X	X	X	X		L	L		L	X	L	Observed within the buffer around the Morena Pipelines. Low potential to occur within Project components with suitable freshwater marsh habitat where this perennial herb would likely have been observed during surveys if present. Although a portion of the NCPW Pipeline contains areas of freshwater marsh that were not surveyed, the area is

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																	development. Not expected to occur with the other components.
Juglans californica	Southern California black walnut	None/None/4.2/ None	Chaparral, cismontane woodland, coastal scrub; alluvial/perennial deciduous tree/Mar–Aug/164–2953	X	L	X	X	X	X	D	L	L	L	L	X	X	Observed within the San Vicente Pipeline 100-foot buffer, 6 individuals observed adjacent to West Hills Pkwy. Not expected to occur in other Project components except the Morena Pipelines where comprehensive surveys were done. Perennial tree would have been observed during surveys if present.
Juncus acutus ssp. leopoldii	southwester n spiny rush	None/None/4.2/ None	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar) May–June/10–2953	¥₫	X	X	X	X	X	X	X	X	X	X	X	X	Observed within the San Diego River floodplain south of the Morena Pump Station. Not expected to occur. This conspicuous perennial species would have been observed during surveys if present.

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Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None/None/1B.1/ None	Marshes and swamps (coastal salt), playas, vernal pools/annual herb/Feb–June/3–4003	X	X	X	X	L	X	L	L	L	L	L	X	L	Low potential to occur within vernal pools on site; focused surveys were negative. Not expected to occur in Project components without vernal pools.
Lathyrus splendens	pride-of- California	None/None/4.3/ None	Chaparral/perennial herb/Mar–June/656– 5003	X	X	X	X	X	X	L	L	L	L	L	L	L	Low potential to occur within Project components with suitable chaparral vegetation; however, focused surveys were negative. Not expected to occur in Project components lacking suitable habitat or outside of the species' known elevation range.
Lepechinia cardiophylla	heart-leaved pitcher sage	None/None/1B.2/ Covered	Closed-cone coniferous forest, chaparral, cismontane woodland/perennial shrub/Apr–July/1706– 4495	Х	Х	Х	X	X	Х	X	Х	X	X	X	Х	X	Not expected to occur. The site is outside of the species' known elevation range.
Lepechinia ganderi	Gander's pitcher sage	None/None/1B.3/ Covered	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland; gabbroic or metavolcanic/perennial shrub/June–July/1001–3297	X	X	X	X	Х	X	L	L	L	L	L	Х	X	Not expected to occur. The site is outside of the species' known elevation range.

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Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None/None/4.3/ None	Chaparral, coastal scrub/annual herb/Jan–July/3–2904	X	L	L	X	L	L	D	D	L	D	L	D	D	Observed within the buffer around the San Vicente Pipeline, Marina Alternative Terminus, Tunnel Alternative Terminus, MBC, and LFG Pipeline. Low potential to occur in other Project components due to lack of observations during focused surveys. Not expected to occur in Project components lacking suitable habitat.
Leptosiphon grandiflorus	large- flowered leptosiphon	None/None/4.2/ None	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland; usually sandy/annual herb/Apr–Aug/16–4003	X	L	X	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in Project components lacking suitable vegetation and sandy soils.

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Leptosyne maritima	sea dahlia	None/None/2B.2/ None	Coastal bluff scrub, coastal scrub/perennial herb/Mar-May/16-492	Х	Х	X	Х	X	X	L	L	L	L	L	X	Х	Not expected to occur. Species prefers sandstone cliffs near the ocean, which do not occur within the project site and focused surveys were negative for this species.
Lycium californicum	California box-thorn	None/None/4.2/ None	Coastal bluff scrub, coastal scrub/perennial shrub/(Dec) Mar– Aug/16–492	X	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur. Perennial shrub would have been observed during surveys if present. Not expected to occur within Project components lacking suitable habitat.
Microseris douglasii ssp. platycarpha	small- flowered microseris	None/None/4.2/ None	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/annual herb/Mar–May/49–3510	X	L	L	L	L	L	L	L	L	L	L	L	<u>FD</u>	Observed along the LFG Pipeline. Low potential to occur in Project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in Project components lacking suitable vegetation and sandy soils.
Mimulus aurantiacus var. aridus	low bush monkeyflower	None/None/4.3/ None	Chaparral (rocky), Sonoran desert scrub/perennial evergreen shrub/Apr– July/2461–3937	X	X	X	X	Х	X	Х	Х	X	X	Х	Х	X	Not expected to occur. The site is outside of the species' known elevation range.

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Mimulus clevelandii	Cleveland's bush monkeyflower	None/None/4.2/ Covered	Chaparral, cismontane woodland, lower montane coniferous forest; gabbroic, often in disturbed areas, openings, rocky/perennial rhizomatous herb/Apr–July/1476–6562	X	X	X	X	Х	X	Х	X	Х	X	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Mimulus diffusus	Palomar monkeyflower	None/None/4.3/ None	Chaparral, lower montane coniferous forest; sandy or gravelly/annual herb/Apr–June/4003– 6004	Х	Х	Х	Х	Х	X	X	Х	Х	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.
Mobergia calculiformis	light gray lichen	None/None/3/ None	Coastal scrub (?); on rocks/crustose lichen (saxicolous)/N.A./33–33	X	L	X	X	X	X		L				X	X	Low potential to occur along the Morena Pipelines. There is only one historical occurrence within the City of San Diego immediately south of Balboa Park (Consortium of North American Lichen Herbaria). The project site is approximately 4 miles north of Balboa Park. Not expected to occur in other Project components due to lack of suitable coastal scrub habitat and/or elevations above the species' known elevation range.

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Monardella hypoleuca ssp. lanata	felt-leaved monardella	None/None/1B.2/ Covered	Chaparral, cismontane woodland/perennial rhizomatous herb/June– Aug/984–5167	X	Х	X	Х	Х	Х	L	L	L	L	L	Х	X	Not expected to occur. The site is outside of the species' known elevation range.
Monardella viminea	willowy monardella	FE/CE/1B.1/ Covered	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; alluvial ephemeral washes/perennial herb/June–Aug/164–738	Х	X	X	X	X	X	L	L	L	L	L	X	X	Not expected to occur. No suitable alluvial ephemeral washes present.
Mucronea californica	California spineflower	None/None/4.2/ None	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy/annual herb/Mar–July (Aug)/0–4593	X	L	X	L	X	X	L	L	L	L	L	X	X	Low potential to occur along the Morena Pipelines due to suitable vegetation and sandy soils. However, this species was not observed during focused surveys. Not expected to occur in Project components lacking suitable habitat, including sandy soils.
Myosurus minimus ssp. apus	little mousetail	None/None/3.1/ None	Valley and foothill grassland, vernal pools (alkaline)/annual herb/Mar–June/66–2100	X	X	L	L	L	L	L	X	X	X	X	L	L	Low potential to occur in the project site due to limited suitable habitat and not observed during 2016 rare plant surveys. Historical occurrences are known from three localities, San Onofre, Camp Pendleton and Otay Mesa. Not expected to occur within Project

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Nama stenocarpa	mud nama	None/None/2B.2/ None	Marshes and swamps (lake margins, riverbanks)/annual / perennial herb/Jan– July/16–1640	X	L	X	X	X	X	L	L	L	L	L	X	L	lacking suitable vegetation. Low potential to occur in Project components with marshes and/or riverbanks with suitable habitat. Not expected to occur in Project components lacking suitable habitat.
Navarretia fossalis	spreading navarretia	FT/None/1B.1/ Covered, Narrow Endemic	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools/annual herb/Apr–June/98–2149	X	L	X	X	L	L	L	X	X	X	L	X	L	Low potential to occur in Project components with suitable vegetation and clay soils. Closest occurrence is within the MCAS Miramar, east of the Miramar Landfill and north SR-52. Not expected to occur within Project components lacking suitable habitat.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.1/ None	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/annual herb/Apr– July/10–3970	X	L	L	L	L	L	L	X	X	X	L	L	L	Low potential to occur. Species would have been observed during surveys if present. Historical occurrences are known from Kearny Mesa off of Kearny Villa Road but not with

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																	the project site. Not expected to occur within Project components lacking suitable vegetation.
Nemacaulis denudata var. denudata	coast woolly- heads	None/None/1B.2/ None	Coastal dunes/annual herb/Apr–Sep/0–328	X	X	Х	X	X	X	X	X	X	X	X	X	X	Not expected to occur. No suitable coastal dune habitat present.
Nemacaulis denudata var. gracilis	slender cottonheads	None/None/2B.2/ None	Coastal dunes, desert dunes, Sonoran desert scrub/annual herb/(Mar) Apr–May/-164–1312	X	X	X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable vegetation present.
Nolina interrata	Dehesa nolina	None/CE/1B.1/ Covered	Chaparral (gabbroic, metavolcanic, or serpentinite)/perennial herb/June–July/607–2805	X	X	X	X	X	X	L	L	L	L	L	X	X	Not expected to occur. Limited suitable gabbroic, metavolcanic, or serpentinite chaparral present and this perennial herb would have been observed during surveys if present.
Ophioglossum californicum	California adder's- tongue	None/None/4.2/ None	Chaparral, valley and foothill grassland, vernal pools (margins); mesic/perennial rhizomatous herb/(Dec) Jan–June/197–1722	X	X	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within Project components lacking suitable habitat.

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Orcuttia californica	California Orcutt grass	FE/CE/1B.1/ Covered, Narrow Endemic	Vernal pools/annual herb/Apr–Aug/49–2165	X	X	X	X	L	X	L	L	L	L	L	X	L	Low potential to occur at the North City Pure Water Facility and along the LFG Pipeline where vernal pools are present, but the species was not observed during focused surveys. Not expected to occur within Project components lacking suitable vernal pool habitat.
Orobanche parishii ssp. brachyloba	short-lobed broomrape	None/None/4.2/ None	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/perennial herb (parasitic)/Apr– Oct/10–1001	X	L	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur along the Morena Pipelines due to suitable vegetation and sandy soils. However, this species was not observed during focused surveys. Not expected to occur in Project components lacking suitable habitat, including sandy soils.
Packera ganderi	Gander's ragwort	None/CR/1B.2/ Covered	Chaparral (burns, gabbroic outcrops)/perennial herb/Apr–June/1312–3937	Х	X	Х	Х	X	Х	Х	Х	X	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

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Pentachaeta aurea ssp. aurea	golden- rayed pentachaeta	None/None/4.2/ None	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland/annual herb/Mar–July/262–6070	Х	L	L	L	L	L	L	L	L	L	L		D	Observed along the LFG Pipeline. Low potential to occur in all other components with negative survey results. Not expected to occur in Project components lacking suitable habitat.
Phacelia ramosissima var. austrolitoralis	south coast branching phacelia	None/None/3.2/ None	Chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/16–984	Х	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within Project components lacking suitable habitat.
Phacelia stellaris	Brand's star phacelia	FC/None/1B.1/ None	Coastal dunes, coastal scrub/annual herb/Mar– June/3–1312	X	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within Project components lacking suitable habitat.

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Pickeringia montana var. tomentosa	woolly chaparral- pea	None/None/4.3/ None	Chaparral; gabbroic, granitic, clay/evergreen shrub/May-Aug/0-5577	X	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur within Project components with suitable chaparral vegetation; however, focused surveys were negative. Not expected to occur in Project components lacking suitable habitat.
Pinus torreyana ssp. torreyana	Torrey pine	None/None/1B.2/ Covered	Closed-cone coniferous forest, chaparral; sandstone/perennial evergreen tree/N.A./246– 525	X	X	X	X	X	X	L	L	L	L	L	X	X	Not expected to occur. Perennial tree would have been observed during surveys if present. Torrey pines were observed within the San Vicente Reservoir study area; however, trees were planted and not native occurrences.
Piperia cooperi	chaparral rein orchid	None/None/4.2/ None	Chaparral, cismontane woodland, valley and foothill grassland/perennial herb/Mar–June/49–5200	X	L	L	L	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation. Focused surveys for this species were negative. Not expected to occur within Project components lacking suitable habitat.

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Pogogyne abramsii	San Diego mesa mint	FE/CE/1B.1/ Covered, Narrow Endemic	Vernal pools/annual herb/Mar–July/295–656	X	X	X	X	L	X	L	L	L	L	L	X	L	Low potential to occur at the North City Pure Water Facility and along the LFG Pipeline where vernal pools are present, but the species was not observed during focused surveys. Not expected to occur within Project components lacking suitable vernal pool habitat.
Pogogyne nudiuscula	Otay Mesa mint	FE/CE/1B.1/ Covered, Narrow Endemic	Vernal pools/annual herb/May–July/295–820	Х	X	X	X	L	X	L	X	X	X	X	X	L	Low potential to occur at the North City Pure Water Facility and along the LFG Pipeline where vernal pools are present, but the species was not observed during focused surveys. Not expected to occur within Project components lacking suitable vernal pool habitat.

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Polygala cornuta var. fishiae	Fish's milkwort	None/None/4.3/ None	Chaparral, cismontane woodland, riparian woodland/perennial deciduous shrub/May– Aug/328–3281	X	L	X	X	X	X	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable habitat, but this perennial deciduous shrub would likely have been observed during surveys if present. Not expected to occur in Project components lacking suitable habitat or outside the species' known elevation range.'
Pseudognaphal ium leucocephalum	white rabbit-tobacco	None/None/2B.2/ None	Chaparral, cismontane woodland, coastal scrub, riparian woodland; sandy, gravelly/perennial herb/(July) Aug–Nov (Dec)/0–6890	X	L	L	X	L	L	D	L	D	D	L	L	L	Observed within the 100-foot buffer around the San Vicente Pipeline, 1 individual was observed south of San Vicente Reservoir (within buffer of San Vicente Pipeline-In-Reservoir Alternative Terminus), and also within Marina Alternative Terminus buffer. Low potential to occur in Project components with suitable vegetation. Focused surveys for this species were negative. Not expected to

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																	occur within Project components lacking suitable habitat.
Quercus cedrosensis	Cedros Island oak	None/None/2B.2/ None	Closed-cone coniferous forest, chaparral, coastal scrub/perennial evergreen tree/Apr– May/837–3150	X	X	X	X	X	X	L	L	L	L	L	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1/ None	Closed-cone coniferous forest, chaparral, coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr (Aug)/49–1312	X	L	₽	X	L	L	L	L	L	L	L	D	₽Ū	Observed within the buffer around the MBC. NCWRP, and the LFG Pipeline. Low potential to occur in all other components because this evergreen shrub would likely have been observed during surveys if present. Not expected to occur within Project components lacking suitable habitat.
Quercus engelmannii	Engelmann oak	None/None/4.2/ None	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/perennial deciduous tree/Mar–June/164–4265	Х	X	X	X	X	Х	L	L	L	L	L	Х	X	Not expected to occur. Perennial tree would have been observed during surveys if present.
Ribes canthariforme	Moreno currant	None/None/1B.3/ None	Chaparral, riparian scrub/perennial deciduous shrub/Feb– Apr/1115–3937	Х	Х	Х	X	Х	Х	Х	Х	X	X	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

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Romneya coulteri	Coulter's matilija poppy	None/None/4.2/ None	Chaparral, coastal scrub; often in burns/perennial rhizomatous herb/Mar–July/66–3937	X		L	X	L	L	L	L	L	L		L	L	Low potential to occur within Project components with suitable habitat; however, focused surveys were negative. Not expected to occur in Project components lacking suitable habitat.
Rosa minutifolia	small-leaved rose	None/CE/2B.1/ Covered	Chaparral, coastal scrub/perennial deciduous shrub/Jan– June/492–525	X	X	X	X	X	X	L	L		L	L	X	X	Low potential to occur in components at higher elevation with suitable chaparral or coastal scrub habitat. However, perennial shrub would likely have been observed during surveys if present. Not expected to occur in Project components below the species' known elevation range.

DUDEK

M-45

M-45

Pebruary 2018

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Salvia munzii	Munz's sage	None/None/2B.2/ None	Chaparral, coastal scrub/perennial evergreen shrub/Feb–Apr/377–3494	X		L	X	L	L	L	L	L		L	L	L	Low potential to occur in most Project components because this shrub would likely have been observed during surveys if present. Not expected to occur within Project components lacking suitable habitat.
Selaginella cinerascens	ashy spike- moss	None/None/4.1/ Covered	Chaparral, coastal scrub/perennial rhizomatous herb/N.A./66–2100	X	L	D	X	<u>+D</u>	L	D	L	L	D	L	D	D	Observed within the buffer around the NCPWF, San Vicente Pipeline, Marina Alternative Terminus, MBC and NCWRP, and the LFG Pipeline. Low potential to occur in all other components due to lack of observations during focused surveys. Not expected to occur within Project components lacking suitable vegetation.

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Senecio aphanactis	chaparral ragwort	None/None/2B.2/ None	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/annual herb/Jan–Apr/49–2625	X	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in Project components lacking suitable vegetation and sandy soils.
Sibaropsis hammittii	Hammitt's clay-cress	None/None/1B.2/ None	Chaparral (openings), valley and foothill grassland; clay/annual herb/Mar–Apr/2362– 3494	Х	X	X	X	X	X	X	X	Х	X	X	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Solanum xanti	Purple nightshade	None/None/ None/Covered	Coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest/perennial herb / perennial shrub/June– July/0–8858	Х	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur in Project components with suitable vegetation and soils; focused surveys were negative. Not expected to occur in Project components lacking suitable vegetation and sandy soils.

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Sphaerocarpos drewei	bottle liverwort	None/None/1B.1/ None	Chaparral, coastal scrub; openings, soil/ephemeral liverwort/N.A./295–1969	X		L	X	L	L	X	X	X	X	X	L	L	Low potential to occur in Project components with suitable vegetation and soils within the elevation range of the species; focused surveys were negative. Not expected to occur in Project components lacking suitable vegetation and sandy soils.
Stemodia durantifolia	purple stemodia	None/None/2B.1/ None	Sonoran desert scrub (often mesic, sandy)/perennial herb/Jan–Dec/591–984	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable desert scrub habitat present.
Stipa diegoensis	San Diego County needle grass	None/None/4.2/ None	Chaparral, coastal scrub; rocky, often mesic/perennial herb/Feb–June/33–2625	X	L	L	X	L	L	L	L	L	L	L	L	L	Low potential to occur. Species would have been observed during surveys if present. Not expected to occur in Project components lacking suitable vegetation.
Streptanthus bernardinus	Laguna Mountains jewelflower	None/None/4.3/ None	Chaparral, lower montane coniferous forest/perennial herb/May–Aug/2198– 8202	Х	Х	Х	X	Х	Х	Х	Х	X	Х	Х	Х	Х	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline -In- Reservoir Alternative Terminus (San Vicente Pipeline - IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Stylocline citroleum	oil neststraw	None/None/1B.1/ None	Chenopod scrub, coastal scrub, valley and foothill grassland; clay/annual herb/Mar–Apr/164–1312	X	L	L	L	L	L	X	X	X	X	X		L	Low potential to occur. Species would have been observed during surveys if present. Not expected to occur in Project components lacking suitable vegetation.
Suaeda esteroa	estuary seablite	None/None/1B.2/ None	Marshes and swamps (coastal salt)/perennial herb/May–Oct (Jan)/0– 16	Х	X	Х	X	X	X	X	X	X	Х	X	Х	X	Not expected to occur. No suitable coastal salt marsh present.
Suaeda taxifolia	woolly seablite	None/None/4.2/ None	Coastal bluff scrub, coastal dunes, marshes and swamps (margins of coastal salt)/perennial evergreen shrub/Jan– Dec/0–164	Х	Х	Х	Х	Х	Х	X	Х	X	Х	Х	Х	X	Not expected to occur. No suitable coastal habitat present.
Tetracoccus dioicus	Parry's tetracoccus	None/None/1B.2/ Covered	Chaparral, coastal scrub/perennial deciduous shrub/Apr– May/541–3281	X	X	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur in components at higher elevation with suitable chaparral or coastal scrub habitat. However, perennial shrub would likely have been observed during surveys if present. Not expected to occur in Project components below the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline –In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Texosporium sancti-jacobi	woven- spored lichen	None/None/3/ None	Chaparral (openings); on soil, small mammal pellets, dead twigs, and on Selaginella spp./crustose lichen (terricolous)/N.A./951– 2165	Х	X	X	X	Х	X	L	L	L	L	L	X	X	Not expected to occur. The site is outside of the species' known elevation range.
Triquetrella californica	coastal triquetrella	None/None/1B.2/ None	Coastal bluff scrub, coastal scrub; soil/moss/N.A./33–328	X	L	L	X	L	L	L	L	L	L	L	X	L	Low potential to occur along the Morena Pipelines. Not expected to occur in other Project components farther from the coast. Known in California from fewer than ten small coastal occurrences.
Viguiera laciniata	San Diego County viguiera	None/None/4.2/ None	Chaparral, coastal scrub/perennial shrub/Feb–June (Aug)/197–2461	X	L	D	X	L	L	D	L	D	D	D	L	D	Observed within the buffer around the San Vicente Pipeline, In-Reservoir Alternative Terminus, Marina Alternative Terminus, MTBS, and NCWRP, and the LFG Pipeline. Low potential to occur in all other components that have suitable habitat, but where focused surveys were negative. Not expected to occur within Project components lacking suitable habitat.

Scientific Name	Common Name	Status (Federal/State/ CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Morena Pump Station	Morena Wastewater Forcemain and Brine/ Centrate Lines (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline -In- Reservoir Alternative Terminus (San Vicente Pipeline - IRAT)	San Vicente Pipeline- Marina Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Xanthisma junceum	rush-like bristleweed	None/None/4.3/ None	Chaparral, coastal scrub/perennial herb/June–Jan/787– 3281	X	X	X	X	X	X	L	L	L	L	L	X	X	Low potential to occur within the Miramar Wastewater Treatment Plant Improvements; however, focused surveys for this species were negative. Not expected to occur in other Project components because they are below the species' known elevation range.

Notes:

X = not expected (no suitable habitat and/or outside elevation range)

D = detected within the component or 100-foot buffer

L = low potential (suitable habitat but surveys were negative)

Status Legend:

FE: Federally listed as endangered FT: Federally listed as threatened FC: Federal Candidate for listing

DL: Delisted

CE: State listed as endangered

CT: State listed as threatened

CR: State Rare

CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere

CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere

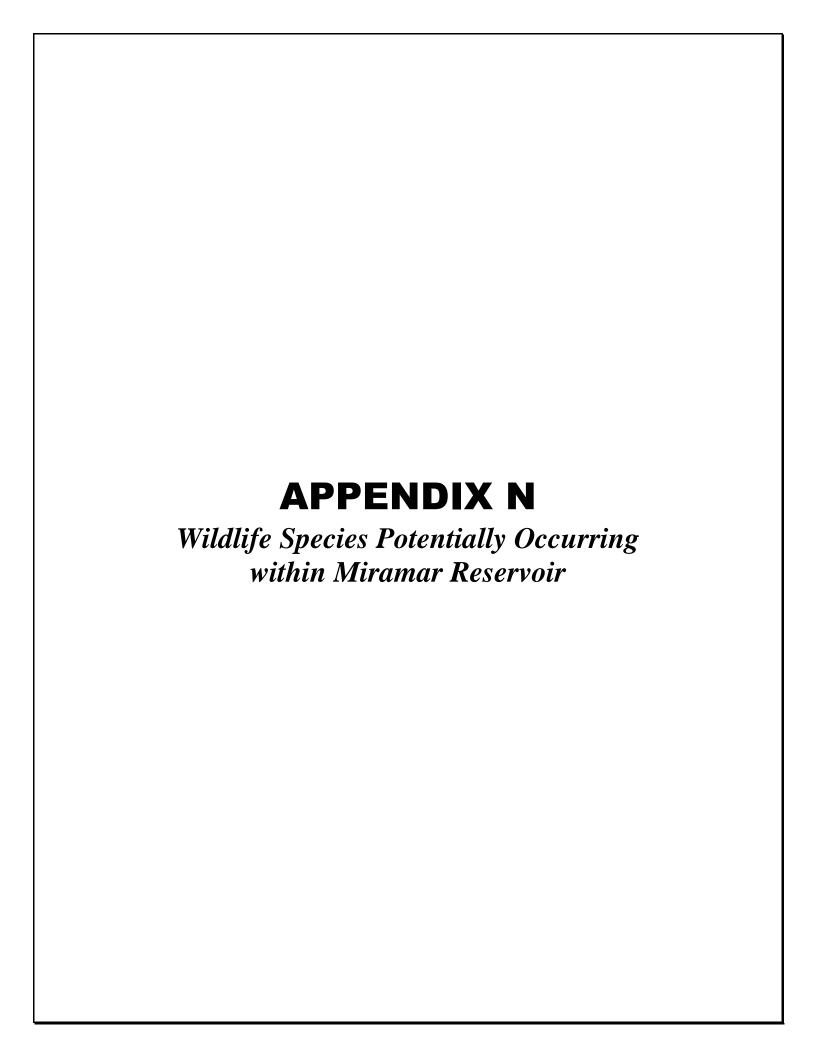
CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere CRPR 3: Plants About Which More Information is Needed - A Review List

CRPR 4: Plants of Limited Distribution - A Watch List

- .1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
 .2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

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APPENDIX N Wildlife Species Potentially Occurring within Miramar Reservoir

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
California red-	Rana draytonii	FT/SSC/None/	Lowland streams, wetlands,	Х	Х	X	Amphibians X	X	Х	X	Х	X	X	Х	Not expected to occur
legged frog	Kana draytoriii	Covered	riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	^	*	^	^	^	^	^	^	^	^	^	throughout due to being outside of accepted geographic range of species.
western spadefoot	Spea hammondii	None/SSC/None/ None	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	X	M	L	X	M	M	L	L	Н	X	X	High potential to occur within the 500-foot buffer of the LFG Pipeline due to the presence of vernal pools. Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, and North City Pump Station due to the presence of vernal pools. Low potential to occur within the 500-foot buffer of the NCWRP, North City Pipeline, and MBC. Not expected to occur in the areas that lack suitable habitat.
arroyo toad	Anaxyrus californicus	FE/SSC/None/ Covered	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	X	Х	Х	X	Х	Х	Х	X	Х	X	X	Not expected to occur throughout due to populations only occurring upstream of the reservoirs in San Diego.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station) Reptiles	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
western pond turtle	Actinemys marmorata	None/SSC/None/ Covered	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	X	<u>₩</u> <u>D</u>	X	X	X	X	H□	X	X	X	X	Observed within 500-foot buffer of Morena Pipelines south of State Route-52 (SR-52) and east of Genesee Ave in epen watersouthern riparian forest. Observed within 500-foot buffer of the North City Pipeline in Evan's Pond south of Scripps Lake Drive and north, northeast, and east banks of the Miramar Reservoir in open water habitat. Not expected to occur in areas that lack suitable habitat or the impact footprint.
coast patch- nosed snake	Salvadora hexalepis virgultea	None/SSC/None/ None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Х	L	Х	Х	Х	Х	L	Х	L	Х	X	Low potential to occur in the 500-foot buffer of the Morena Pipelines, North City Pipeline, and LFG Pipeline due to limited habitat. Not expected to occur in areas that lack suitable habitat or in the impact footprint.
orangethroat whiptail	Aspidoscelis hyperythra	None/WL/None/ Covered	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	L	M	L	X	M	M	M	M	Н	L	X	High potential to occur within 500-foot buffer of the LFG Pipeline. Moderate potential to occur within the 500-foot buffer of Morena Pipelines, NCPWF, North City Pump Station, North City Pipeline, and MBC. Low potential to occur in the 500-foot buffer of the Morena Pump Station, NCWRP, and Miramar WTP due to limited habitat. Not expected to occur in areas that lack suitable habitat.

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Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
Coronado Island skink	Plestiodon skiltonianus interparietalis	None/WL/None/ None	Woodlands, grasslands, pine forests, and chaparral; rocky areas near water	X	L	X	X	X	X	L	L	L	L	X	Low potential to occur in the 500-foot buffer of the Morena Pipelines, LFG Pipeline, and Miramar WTP due to limited habitat. Not expected to occur in areas that lack suitable habitat or in the impact footprint.
rosy boa	Lichanura trivirgata	None/None/ None/None	Desert and chaparral habitats with rocky soils in coastal canyons and hillsides, desert canyons, washes, and mountains	X	L	X	X	L	X	X	X	M	X	X	Moderate potential to occur within 500-foot buffer of the LFG Pipeline. Low potential to occur within the 500-foot buffer of the Morena Pipelines, and NCPWF. Not expected to occur in areas that lack suitable habitatwithin the remaining components, which are outside the species' known geographic range. The site is outside of the species' known geographic range.
green turtle	Chelonia mydas	FT/None/None/ None	Shallow waters of lagoons, bays, estuaries, mangroves, eelgrass, and seaweed beds	X	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Not expected to occur in 500-foot survey buffer or impact footprints. No suitable habitat present.
San Diego ringneck snake	Diadophis punctatus similis	None/None/ None/None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland habitats	X	M	X	X	L	X	L	L	L	X	X	Moderate potential to occur in the 500-foot buffer of the Morena Pipelines. Low potential to occur in the 500-foot buffer of the NCWRP, North City Pipeline, and LFG Pipeline due to limited habitat. Not expected to occur in areas that lack suitable habitat.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
silvery legless lizard	Anniella pulchra pulchra	None/SSC/None/ None	Stabilized dunes, beaches, dry washes, chaparral, scrubs, and pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	L	М	L	X	L	L	L	L	L	L	X	Moderate potential to occur in the 500-foot buffer of the Morena Pipelines. Low potential to occur in the 500-foot buffer of the Morena Pump Station, NCPWF, North City Pump Station, NCWRP, North City Pipeline, MBC, LFG Pipeline, and Miramar WTP due to limited habitat. Not expected to occur in areas that lack suitable habitat.
Blainville's horned lizard	Phrynosoma blainvillii	None/SSC/None/ Covered	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine-cypress, juniper, and annual grassland habitats	X	М	X	Х	L	L	L	L	M	L	X	Moderate potential to occur in the 500-foot buffer of the Morena Pipelines and LFG Pipeline. Low potential to occur within the 500-foot buffer of the NCPWF, North City Pipeline, MBC, and Miramar WTP due to limited habitat. Not expected to occur in areas that lack suitable habitat.
red diamondback rattlesnake	Crotalus ruber	None/SSC/None/ None	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Х	M	L	X	M	Х	M	L	M	L	X	Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, North City Pipeline, and LFG Pipeline. Low potential to occur within the 500-foot buffer of the NCWRP, MBC, and Miramar WTP due to limited habitat. Not expected to occur in areas that lack suitable habitat.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
San Diegan tiger whiptail	Aspidoscelis tigris stejnegeri	None/SSC/None/ None	Open areas in semiarid grasslands, scrublands, and woodlands	L	Н	M	X	H	М	M	M	Н	L	X	High potential to occur within 500-foot buffer of the Morena Pipelines, NCPWF, and LFG Pipeline. Moderate potential to occur within the 500-foot buffer of the NCWRP, North City Pipeline, North City Pipeline, and MBC. Low potential to occur within the 500-foot buffer of the Morena Pump Station and Miramar WTP due to limited habitat. Not expected to occur in areas that lack suitable habitat
two-striped gartersnake	Thamnophis hammondii	None/SSC/None/ None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	X	М	X	X	X	X	М	X	Х	L	X	Moderate potential to occur near termination point within the 500-foot buffer of the North City Pipeline at Miramar Reservoir, and Morena Pipelines. Low potential to occur within the 500-foot buffer of the Miramar WTP. Not expected to occur in areas that lack suitable habitat.
							Birds								
burrowing owl	Athene cunicularia (burrow sites & some wintering sites)	BCC/SSC/ None/Covered	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	X	L	L	X	L	Х	L	L	L	X	X	Low potential to occur in the 500-foot buffer of the Morena Pipelines, NCWRP, NCPWF, North City Pipeline, MBC, and LFG Pipeline due to limited habitat. No BUOW or sign observed during 2016 focused surveys.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
California black rail	Laterallus jamaicensis coturniculus	BCC/ST, FP/None/ None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Х	X	X	X	Х	Х	Х	X	Х	X	X	Not expected to occur in the 500-foot buffer or impact footprints.
ferruginous hawk	Buteo regalis (wintering)	BCC/WL/ None/Covered	Winters and forages in open, dry country, grasslands, open fields, agriculture	Χ	X	X	Х	Х	X	X	X	Х	X	X	Not expected to winter within 500-foot buffer throughout study area.
grasshopper sparrow	Ammodramus savannarum (nesting)	None/SSC/None/ None	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Х	X	X	X	L	X	L	L	M	X	X	Moderate potential to occur within 500-foot buffer of the LFG Pipeline. Low potential to nest within the 500-foot buffer of the NCPWF, North City Pipeline, and MBC. Species may use surrounding suitable habitat to forage. Not expected to nest in areas that lack suitable habitat or impact footprints.
northern harrier	Circus cyaneus (nesting)	None/SSC/None/ Covered	Nests in open wetlands including marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes, but also in drier habitats such as grassland and grain fields; forages in variety of habitats, including grassland, scrubs, rangelands, emergent wetlands, and other open habitats	L	L	X	X	L	X	L	L	L	X	X	Low potential to nest within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, NCPWF, North City Pipeline, MBC, and LFG Pipeline. Not expected to nest in areas that lack suitable habitat or impact footprints.
Swainson's hawk	Buteo swainsoni (nesting)	BCC/ST/ None/Covered	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agriculturals areas such as wheat and alfalfa fields and pasture	Х	Х	Х	Х	Х	Х	X	X	Х	X	X	Not expected to nest within 500-foot buffer of the study area.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
tricolored blackbird	Agelaius tricolor (nesting colony)	BCC/SSC/ None/Covered	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	X	Not expected to occur in 500-foot survey buffer or impact footprints due to lack of suitable habitat.
yellow warbler	Setophaga petechia (nesting)	BCC/SSC/ None/None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	M	<u>₩</u>	X	X	X	X	L	X	Н	X	X	Observed within 500-foot buffer of Morena Pipelines, outside the impact footprint. High potential to occur within the 500-foot buffer of the LFG Pipeline, but outside the impact footprint. Moderate potential to nest or forage within the 500-foot buffer of the Morena Pump Station adjacent to the San Diego River. Low potential to nest or forage within the 500-foot buffer of the North City Pipeline due to limited suitable habitat. Not expected to nest or forage in areas that lack suitable habitat or impact footprints.
American peregrine falcon	Falco peregrinus anatum (nesting)	FDL, BCC/SDL, FP/None/ Covered	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Х	Ļ	Х	Х	X	Х	Х	Х	Х	Х	X	Low potential to nest within the 500-foot buffer of the Morena Pipelines. Not expected to nest or forage in areas that lack suitable habitat or impact footprints.
bald eagle	Haliaeetus leucocephalus (nesting & wintering)	FDL, BCC/SE, FP/None/ Covered	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	X	X	Х	Х	X	Х	Х	X	Х	X	X	Not expected to nest or winter in the 500-foot buffer or component impact footprints. No suitable habitat present.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
Cooper's hawk	Accipiter cooperii (nesting)	None/WL/ None/Covered	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	L	<u>₩</u> <u>D</u>	X	X	X	X	M	X	M	X	L	Observed within the 500- foot buffer of Morena Pipelines, outside the impact footprint. Moderate potential to nest or forage within the 500-foot buffer of North City Pipeline. Moderate potential to occur within the 500-foot buffer of theand the LFG Pipeline. Low potential to nest within the 500-foot buffer of the Morena Pump Station and Dechlorination Facility. Not expected to nest or forage in areas that lack suitable habitat or impact footprints.
coastal cactus wren	Campylorhynchus brunneicapillus sandiegensis (San Diego & Orange Counties only)	BCC/SSC/ None/Covered	Southern cactus scrub patches	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur in the 500-foot buffer or component impact footprints.
coastal California gnatcatcher	Polioptila californica californica	FT/SSC/None/ Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	X	<u>₩</u>	HD	L	M	М	M	H <u>D</u>	<u>HD</u>	L	X	Observed within the 500- foot buffer of Morena Pipelines, NCWRP, MBC, and LFG Pipeline. High Moderate potential to occur within the 500-foot buffer of Morena Pipelines, NCPWF, North City Pump Station, and North City Pipeline. Low potential to occur within the 500-foot buffer of the NCPWF Influent Pump Station and Miramar WTP. Not likely to occur in areas lacking suitable habitat.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
least Bell's vireo	Vireo bellii pusillus (nesting)	FE/SE/None/ Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	М	М	X	X	X	X	L	M	M	X	X	Moderate potential to nest or forage in suitable habitat within the 500-foot buffer of the Morena Pipelines and Morena Pump Station adjacent to the San Diego River and within the 500-foot buffer of the MBC in San Clemente Canyon and LFG Pipeline within Rose Creek. Low potential to nest within the 500-foot buffer of North City Pipeline. Not expected to nest or forage within the impact footprint due to lack of suitable riparian habitat.
southwestern willow flycatcher	Empidonax traillii extimus (nesting)	FE/SE/None/ Covered	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	M	M	X	X	X	X	L	M	M	X	X	Moderate potential to nest or forage in suitable habitat within the 500-foot buffer of the Morena Pipelines and the Morena Pump Station adjacent to the San Diego River and within the 500-foot buffer of the MBC in San Clemente Canyon and LFG Pipeline within Rose Creek. Low potential to nest or forage in suitable habitat within the 500-foot buffer of the North City Pipeline. Not expected to nest or forage within the impact footprint due to lack of suitable riparian habitat.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
white-tailed kite	Elanus leucurus (nesting)	None/FP/None/ None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	L	M	L	X	HD	X	L	M	M	X	X	Observed within the 500- foot buffer of the North City Pure Water Facility. Moderate potential to nest within 500-foot buffer of the Morena Pipelines, MBC, and LFG Pipeline. Low potential to nest within the 500-foot buffer of the Morena Pump Station, NCWRP, NCPWF, and North City Pipeline. Not expected to nest or forage in areas that lack suitable habitat or impact footprint.
yellow- breasted chat	Icteria virens (nesting)	None/SSC/None/ None	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	M	M	X	X	X	X	L	M	Н	X	X	High potential to occur within the 500-foot buffer of the LFG Pipeline. Moderate potential to nest within 500-foot buffer of the Morena Pipelines, MBC, and Morena Pump Station adjacent to the San Diego River. Low potential to nest within the 500-foot buffer of the North City Pipeline. Not expected to nest or forage in areas that lack suitable habitat.
golden eagle	Aquila chrysaetos (nesting & wintering)	BCC/FP, WL/None/ Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	X	X	X	X	X	X	L	X	L	X	X	Low potential to nest and winter within the 500-foot buffer of the North City Pipeline and LFG Pipeline. Not expected to areas lacking suitable habitat or the impact footprints.
prairie falcon	Falco mexicanus (nesting)	BCC/WL/None/ None	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Not expected to nest or forage in the 500-foot survey buffer or impact footprint. No suitable nesting habitat present.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
southern California rufous- crowned sparrow	Aimophila ruficeps canescens	None/WL/None/ Covered	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	X	M	L	X	M	L	M	M	M	L	X	Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, North City Pipeline, MBC, and LFG Pipeline. Low potential to occur within 500-foot buffer of the NCWRP, North City Pump Station, and Miramar WTP. Not expected to occur in areas that lack suitable habitat.
Belding's savannah sparrow	Passerculus sandwichensis beldingi	None/SE/None/ Covered	Nests and forages in coastal saltmarsh dominated by pickleweed (<i>Salicornia</i> spp.)	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur in the 500-foot buffer or component impact footprint. No suitable nesting habitat present.
Bell's sage sparrow	Artemisiospiza belli belli	BCC/WL/None/ None	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Х	L	Х	Х	L	Х	L	L	L	X	X	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, North City Pipeline, and LFG Pipeline. Not expected to occur in areas lacking suitable habitat.
California brown pelican	Pelecanus occidentalis californicus (nesting colonies & communal roosts)	FDL/SDL, FP/None/ Covered	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	Not expected to occur in the 500-foot buffer or component impact footprint. No suitable nesting habitat present.
California horned lark	Eremophila alpestris actia	None/WL/None/ None	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	X	X	L	X	L	X	L	L	M	X	X	Moderate potential to forage within 500-foot buffer of the LFG Pipeline. Low potential to forage within the 500-foot buffer of the NCWRP, NCPWF, North City Pipeline, and MBC. Not expected to occur in areas lacking suitable habitat.

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California least tern	Sternula antillarum browni (nesting colony)	FE/SE, FP/None/ Covered	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
double- crested cormorant	Phalacrocorax auritus (nesting colony)	None/WL/None/ None	Nests in riparian trees near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines; winter habitat includes lakes, rivers, and coastal areas	Х	X	X	X	X	Х	Х	Х	Х	X	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
elegant tern	Thalasseus elegans (nesting colony)	None/WL/None/ Covered	Inshore coastal waters, bays, estuaries, and harbors; forages over open water	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
large-billed savannah sparrow	Passerculus sandwichensis rostratus (wintering)	None/SSC/None/ Covered	Nests and forages in open, low saltmarsh vegetation, including low halophytic scrub	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
least bittern	Ixobrychus exilis (nesting)	BCC/SSC/None/ None	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation	Х	L	Х	Х	Х	Х	L	Х	Х	Х	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
long-billed curlew	Numenius americanus (nesting)	BCC/WL/None/ Covered	Nests in grazed, mixed grass, and short-grass prairies; localized nesting along the California coast; winters and forages in coastal estuaries, mudflats, open grassland, and cropland	X	Х	Х	Х	X	Х	Х	X	Х	X	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
mountain plover	Charadrius montanus (wintering)	BCC/SSC/None/ Covered	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts	Х	X	Х	X	Х	Х	Х	X	Х	X	X	Not expected to winter in the 500-foot buffer or component impact footprints due to poor habitat quality.

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osprey	Pandion haliaetus (nesting)	None/WL/None/ None	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	Х	X	X	Х	Х	Х	М	X	Х	M	X	Moderate potential to roost and forage at Miramar Reservoir within 500-foot buffer of the North City Pipeline and Miramar WTP. Not expected to nest in the 500-foot buffer or component impact footprints.
western snowy plover	Charadrius alexandrinus nivosus (nesting)	FT, BCC/SSC/ None/Covered	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
western yellow-billed cuckoo	Coccyzus americanus occidentalis (nesting)	FT, BCC/SE/ None/None	Nests in dense, wide riparian woodlands and forest with well-developed understories	X	X	Х	X	X	X	X	X	X	X	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
white-faced ibis	Plegadis chihi (nesting colony)	None/WL/None/ Covered	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	X	Х	Х	X	X	Х	Х	X	Х	Х	Х	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.
Canada goose	Branta canadensis	None/None/ Covered	Lakes, rivers, ponds, and other bodies of water; yards, park lawns, and agricultural fields	X	Х	Х	Х	X	Х	L	Х	L	Н	Х	Low potential to occur in the 500-foot buffer or component impact footprints near the Miramar Reservoir. No suitable habitat present.
reddish egret	Egretta rufescens	None/None/None/ Covered	Freshwater marsh with emergent vegetation; in the Central Valley primarily nests and forages in rice fields and other flooded agricultural fields with weeds and other residual aquatic vegetation	Х	X	Х	X	X	Х	Х	X	X	X	X	Not expected to nest in the 500-foot buffer or component impact footprints. No suitable nesting habitat present.

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western bluebird	Sialia mexicana	None/None/ Covered	Nests in old-growth red fir, mixed-conifer, and lodegpole pine habitats near wet meadows used for foraging	L	M	L	X	L	L	L	L	M	L	X	Moderate potential to occur within 500-foot buffer of the Morena Pipelines and LFG Pipeline. Low potential to occur within 500-foot buffer of the Morena Pump Station, NCWRP, NCPWF, North City Pump Station, North City Pipeline, MBC, and Miramar WTP. Not expected to nest or forage in areas that lack suitable nesting habitat present.
Ridgway's rail	Rallus obsoletus levipes	FE/SE, FP/None/ Covered	Coastal wetlands, brackish areas, coastal saline emergent wetlands	L	Х	X	Х	Х	Х	X	Х	Х	X	X	Low potential to occur within 500-foot buffer of the Morena Pump Station. Not expected to nest or forage in areas that lack suitable nesting habitat present.
							Mammals								
Pacific pocket mouse	Perognathus longimembris pacificus	FE/SSC/None/ None	Fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium	Х	Х	X	Х	Х	Х	Х	Х	Х	X	X	Not expected to occur in the 500-foot buffer or component impact footprints due to lack of suitable habitat.
San Diego desert woodrat	Neotoma lepida intermedia	None/SSC/None/ None	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Not expected to occur in the 500-foot buffer or component impact footprints due to lack of suitable habitat.
big free-tailed bat	Nyctinomops macrotis	None/SSC/ WBWG:MH/ None	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Х	Х	X	Х	X	Х	Х	X	Х	X	X	Not expected to roost or forage within the 500-foot buffer or component impact footprints due to limited suitable habitat present.

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long-eared myotis	Myotis evotis	None/None/ WBWG:M/ None	Nearly all brush, woodland, and forest habitats from sea level to 9,000 feet above mean sea level, but prefers coniferous habitats; forages along habitat edges, in open habitats, and over water; roosts in buildings, crevices, under bark, and snags; uses caves as night roosts	X	L	X	X	X	X	L	X	X	X	X	Low potential to occur within the 500-foot buffer of the Morena Pipelines, and North City Pipeline due to limited habitat. Not expected to occur in areas that lack suitable habitat or in the impact footprint.
pallid bat	Antrozous pallidus	None/SSC/ WBWG:H/None	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	X	М	Х	Х	М	X	М	X	M	Х	X	Moderate potential to forage within in the 500-foot buffer of the Morena Pipelines, NCPWF, and LFG Pipeline. Not expected to occur in areas lacking suitable habitat and impact footprints.
western small- footed myotis	Myotis ciliolabrum	None/None/ WBWG:M/None	Arid woodlands and shrublands, but near water; roosts in caves, crevices, mines, abandoned buildings	Х	L	Х	Х	Х	Х	L	Х	Х	Х	Х	Low potential to forage within the 500-foot buffer of the Morena Pipelines, and NCPWF. Not expected to occur in areas lacking suitable habitat and component impact footprints.
Yuma myotis	Myotis yumanensis	None/None/ WBWG:LM/ None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	M	М	X	X	Х	Х	М	X	X	X	X	Moderate potential to forage within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, and NCPWF. Not expected to occur in areas lacking suitable habitat and component impact footprints.
American badger	Taxidea taxus	None/SSC/None/ Covered	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Х	Х	Х	X	Х	Х	Х	L	L	X	X	Low potential to forage within the 500-foot buffer of the LFG Pipeline. Not expected to occur in areas lacking suitable habitat and component impact footprints.

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Dulzura pocket mouse	Chaetodipus californicus femoralis	None/SSC/None/ None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	X	L	L	X	L	L	L	L	L	L	X	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCWRP, NCPWF, North City Pump Station, North City Pipeline, MBC, LFG Pipeline, and Miramar WTP. Not expected to occur in areas lacking suitable habitat.
hoary bat	Lasiurus cinereus	None/None/ WBWG:M/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	L	L	Х	Х	Х	Х	L	Х	Х	Х	X	Low potential to occur within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, and North City Pipeline. There is limited suitable habitat present.
Mexican long- tongued bat	Choeronycteris mexicana	None/SSC/ WBWG:H/None	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Х	Х	Х	Х	Х	Х	X	Х	X	Х	Х	Not expected to occur within the 500-foot buffer or component impact footprints due to lack of suitable habitat. No suitable habitat present.
northwestern San Diego pocket mouse	Chaetodipus fallax fallax	None/SSC/None/ None	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon—juniper, and annual grassland	X	L	X	X	L	L	L	L	L	L	X	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, North City Pump Station, North City Pipeline, MBC, LFG Pipeline, and Miramar WTP. Not expected to occur in areas lacking suitable habitat.
pocketed free- tailed bat	Nyctinomops femorosaccus	None/SSC/ WBWG:M/None	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with dropoffs, caverns, and buildings	X	X	X	X	X	Х	X	X	Х	X	X	Not expected to occur within the 500-foot buffer or component impact footprints due to lack of suitable habitat. No suitable habitat present.

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San Diego black-tailed jackrabbit	Lepus californicus bennettii	None/SSC/None/ None	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	X	L	L	X	L	L	L	L	M	X	X	Moderate potential to occur within 500-foot buffer of the LFG Pipeline. Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCWRP, NCPWF, North City Pump Station, North City Pipeline, and MBC. Not expected to occur in areas lacking suitable habitat.
silver-haired bat	Lasionycteris noctivagans	None/None/ WBWG:M/None	Old-growth forest, maternity roosts in trees (primarily woodpecker hollows), large-diameter snags 50 feet aboveground; hibernates in hollow trees, under sloughing bark, in rock crevices, and occasionally in buildings, mines, and caves; forages in or near coniferous or mixed deciduous forest, often following stream or river drainages	X	X	X	Х	X	X	Х	X	Х	X	Х	Not expected to occur due to lack of suitable habitat.
spotted bat	Euderma maculatum	None/SSC/ WBWG:H/None	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Not expected to occur due to lack of suitable habitat.
Stephens' kangaroo rat	Dipodomys stephensi	FE/ST/ None/None	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Х	Х	X	Х	Х	Х	X	Х	Х	Х	Х	Not expected to occur. This study area is outside of this species' geographic range.
Townsend's big-eared bat	Corynorhinus townsendii	None/SC, SSC/WBWG:H/ None	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	L	L	X	X	Х	X	L	X	X	X	X	Low potential to occur within the 500 foot buffer of the Morena Pump Station, Morena Pipelines, and North City Pipeline. Not expected to occur in areas lacking suitable habitat.

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western mastiff bat	Eumops perotis californicus	None/SSC/ WBWG:H/None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Х	L	X	X	L	X	L	L	L	L	X	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, North City Pipeline, LFG Pipeline, and Miramar WTP. Not expected to occur in areas lacking suitable habitat.
western red bat	Lasiurus blossevillii	None/SSC/ WBWG:H/None	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	L	L	X	X	Х	X	L	X	X	X	X	Low potential to occur within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, and North City Pipeline. There is limited suitable habitat present.
western yellow bat	Lasiurus xanthinus	None/SSC/ WBWG:H/None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	X	Х	Х	Х	Х	Х	X	Х	X	Х	Х	Not expected to occur in the 500-foot buffer or component impact footprints due to lack of suitable habitat.
cougar	Puma concolor	None/None/ Covered	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts	Х	X	X	X	Х	X	X	L	L	X	X	Low potential to occur within the 500-foot area buffer of the MBC, and LFG Pipeline. Not expected to occur in areas lacking suitable habitat.
mule deer	Odocoileus hemionus	None/None/ Covered	Coastal sage scrub, chaparral, riparian, woodlands, and forest; often browses in open area adjacent to cover throughout California, except deserts and intensely farmed areas	L	L	L	X	L	X	M	M	M	L	X	Moderate potential to occur within the 500-foot buffer for the North City Pipeline, MBC, and LFG Pipeline. Low potential to occur within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, NCWRP, NCPWF, and Miramar WTP. Not expected to occur in areas with lack of suitable habitat or in component impact footprints.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
							Invertebrates								
Riverside fairy shrimp	Streptocephalus woottoni	FE/None/ None/Covered	Vernal pools, non-vegetated ephemeral pools	X	X	L	X	L	L	X	X	X	X	X	Low potential to occur in vernal pools observed within 500-foot buffer of the NCWRP, NCPWF, and North City Pump Station. Not expected to occur within 500-foot buffer or component impact areas. This species would have been observed during focused survey.
San Diego fairy shrimp	Branchinecta sandiegonensis	FE/None/None/ Covered	Vernal pools, non-vegetated ephemeral pools	X	X	L	X	X	L	D	X	D	X	X	Observed within the 500- foot buffer of or adjacent to two project components containing vernal pools: the North City Pipeline, and LFG Pipeline. Focused surveys for this species at the NCPWF in 2015/2016 and 2017 were negative. Low potential to occur in vernal pools observed within 500-foot buffer of the NCWRP, and North City Pump Station. Not expected to occur within 500-foot buffer or component impact areas. This species would have been observed during focused survey.
obscure bumble bee	Bombus caliginosus	None/None/SS/ None	Relatively humid or foggy areas of the Pacific coast south to central California. Food plants include Baccharis, Cirsium, Grindelia, Phacelia, Arctostaphylos, Eriodictyon, Ceanothus, Adenostoma, and Mimulus	X	X	X	X	X	Х	X	X	Х	X	X	Not expected to occur within 500-foot buffer or component impact areas due to lack of suitable habitat.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
Crotch bumble bee	Bombus crotchii	None/None/SS/ None	Open scrub habitats and grassland in coastal California east to the Sierra-Cascade crest and south into Mexico. Food plants include Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia	X	L	L	X	L	X	L	L	L	L	X	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, North City Pipeline, LFG Pipeline, and Miramar WTP. Not expected to occur in areas lacking suitable habitat and component impact footprints.
globose dune beetle	Coelus globosus	None/None/SS/ None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
mesa shoulderband	Helminthoglypta coelata	None/None/SS/ None	Known only from a few locations in coastal San Diego County	X	X	X	X	X	Х	X	X	X	X	X	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
mimic tryonia (=California brackishwater snail)	Tryonia imitator	None/None/SS/ None	Inhabits coastal lagoons, estuaries, and saltmarshes, from Sonoma County south to San Diego County	X	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
sandy beach tiger beetle	Cicindela hirticollis gravida	None/None/SS/ None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico	Х	Х	X	Х	Х	X	Х	Х	Х	Х	Х	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
senile tiger beetle	Cicindela senilis frosti	None/None/SS/ None	Inhabits marine shoreline, from Central California coast south to saltmarshes of San Diego; also found at Lake Elsinore	Х	Х	X	Х	Х	X	Х	Х	Х	Х	Х	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
Thorne's hairstreak	Callophrys thornei	None/None/SS/ Covered	Interior cypress woodland dominated by host plant Hesperocyparis forbesii (Tecate cypress)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
western beach tiger beetle	Cicindela latesignata latesignata	None/None/SS/ None	Mudflats and beaches in coastal Southern California	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
western tidal- flat tiger beetle	Cicindela gabbii	None/None/SS/ None	Inhabits estuaries and mudflats along the coast of Southern California	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
California mellitid bee	Melitta californica	None/None/SS/ None	Desert regions of southwestern Arizona, southeastern California, and Baja California, Mexico; also collected from Torrey Pines, San Diego County	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur within the 500-foot buffer or component impact areas due to lack of suitable habitat.
Hermes copper	Lycaena hermes	FC/None/None/ None	Mixed woodlands, chaparral, and coastal scrub	Х	X	X	X	Х	X	X	X	L	X	X	Low potential to occur in suitable habitat with host plants (<i>Rhamnus crocea</i> and <i>Eriogonum fasciculatum</i>) within the 500-foot buffer LFG Pipeline. Not expected to occur in areas lacking suitable habitat. Not observed during 2016 focused surveys.
monarch	Danaus plexippus	None/None/SS/ None	Wind-protected tree groves with nectar sources and nearby water sources	L	M	L	X	L	L	M	X	X	X	X	Observed during QCB surveys, however low potential to overwinter on site due to limited suitable habitat. Moderate potential to occur within the 500-foot buffer and component impact footprint at the Morena Pipelines, and North City Pipeline. Low potential to occur within the 500-foot buffer and component impact footprint at the Morena Pump Station, and NCWRP.

Common Names	Scientific Name	Status (Federal/ State/Other/ MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	North City Pure Water Pipeline (North City Pipeline)	Metro Biosolids Center Improvements (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Miramar Water Treatment Plant Improvements (Miramar WTP)	Pure Water Dechlorination Facility (Dechlorination Facility)	Potential to Occur
quino checkerspot	Euphydryas editha quino	FE/None/None/ None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and finetextured clay; host plants include <i>Plantago erecta</i> (dwarf plantain), <i>Antimhinum coulterianum</i> (white snapdragon), and <i>Plantago patagonica</i> (woolly plantain)	X	X	L	X	X	X	X	L	L	X	X	Low potential to occur within the 500-foot buffer of the NCWRP, MBC, and LFG Pipeline. Not expected to occur in areas that lack suitable habitat and outside of USFWS survey area. Not observed during 2016 focused surveys.
wandering skipper	Panoquina errans	None/None/SS/ Covered	Saltmarsh	Х	Х	Х	X	Х	Х	Х	X	Х	X	X	Not expected to occur within 500-foot buffer or component impact areas due to lack of suitable habitat.

Notes:

D = detected within the component or 500-foot buffer
M = moderate potential (suitable habitat and species observed elsewhere within the project)

L = low potential (suitable habitat but surveys were negative)

X = not expected (no suitable habitat and/or outside elevation range)

Status Notes:

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

FC: Federal Candidate
FDL: Federally Delisted
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State Endangered
ST: State Threatened
SDI: State Delicted

SDL: State Delisted

SS: List Special Animals List, but no other status

WBWG: Western Bat Working Group

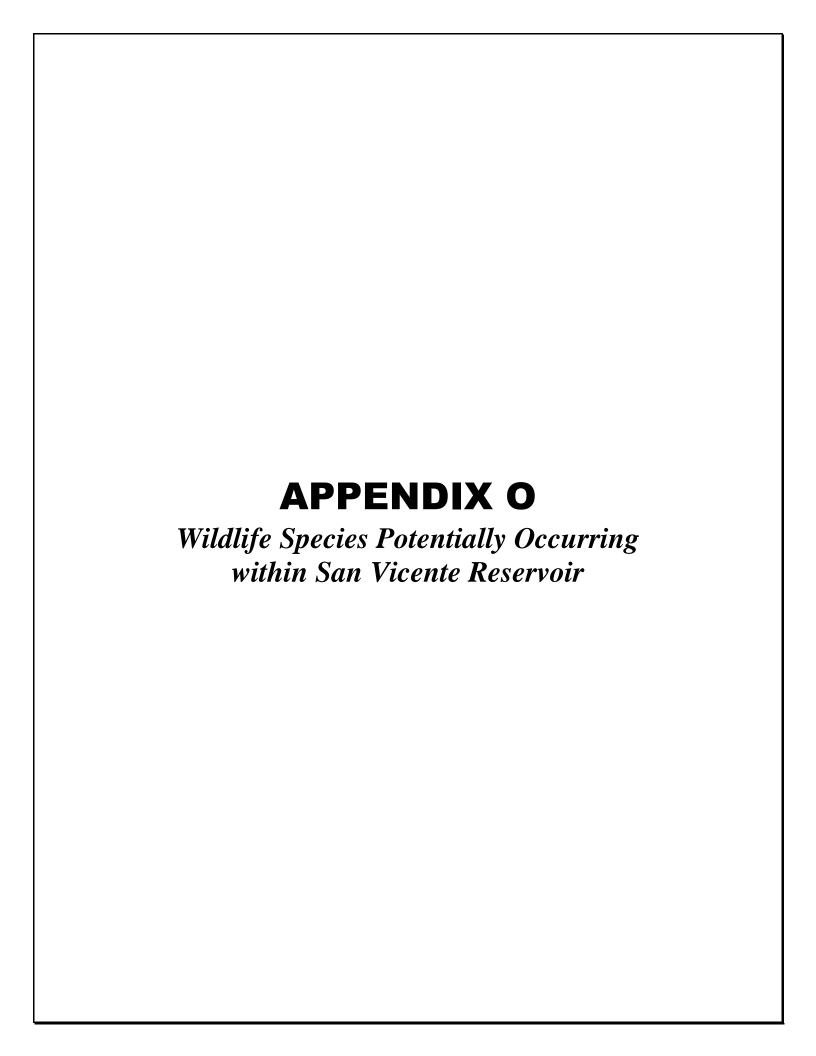
H: High HM: High-Medium

M: Medium

LM: Low-Medium

L: Low

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APPENDIX O Wildlife Species Potentially Occurring within San Vicente Reservoir

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
California red-legged frog	Rana draytonii	FT/SSC/None/ Covered	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby	Х	L	X	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Low potential to occur within the 500-foot buffer of the Morena Pipelines. There is limited suitable
			or emergent vegetation associated with deep, still or slow- moving water; uses adjacent uplands														habitat. Not expected to occur in areas that lack suitable habitat.
western spadefoot	Spea hammondii	None/SSC/None/ None	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	X	M	L	X	M	M	L	X	L		X	L	Н	High potential to occur within 500-foot buffer of the LFG Pipeline. Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, and North City Pump Station. Low potential to occur within 500-foot buffer of the NCWRP, San Vicente Pipeline, San Vicente Pipeline – IRAT and – MAT, and MBC. There is limited suitable habitat. Not expected to occur in areas that lack suitable habitat.

Common Names arroyo toad	Scientific Name Anaxyrus californicus	Status (Federal/State/ Other/MSCP) FE/SSC/None/ Covered	Habitat Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order);	Morena Pump Station X	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines) X	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station) X	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT) X	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT) X	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT) X	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Low potential to occur within the 500-foot buffer of the Morena Pipelines. There is limited suitable habitat. Not expected to occur outside of its geographic range and in areas that lack
			adjacent stream terraces and uplands for foraging and wintering														suitable habitat.
			_				F	Reptiles									
western pond turtle	Actinemys marmorata	None/SSC/None/ Covered	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	X	₩ <u>D</u>	X	X	X	X	L	L	M	L	X	X	X	Observed within 500- foot buffer of Morena Pipelines in southern riparian forest South of State Route-52 (SR-52) and east of Genesee Ave. Moderate potential to occur within the 500- foot buffer of the San Vicente Pipeline – IRAT in open water habitat. Lot potential to occur within 500- foot buffer of the San Vicente Pipeline, and San Vicente Pipeline, and San Vicente Pipeline – TAT and – MAT. Not expected to occur in areas that lack suitable habitat.

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Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
coast patch- nosed snake	Salvadora hexalepis virgultea	None/SSC/None/ None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	X	L	X	X	X	X	L	L	L	L	X	X	L	Low potential to occur in areas of coastal sage scrub and southern mixed chaparral within the 500-foot buffer of the Morena Pipelines, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. However, the suitable dense vegetation is limited and unlikely to inhabitat species. Not expected to occur in areas that lack suitable habitat.
orangethroat whiptail	Aspidoscelis hyperythra	None/WL/None/ Covered	Low-elevation coastal scrub, chaparral, and valley—foothill hardwood	L	M	L	X	M	M	H <u>D</u>	<u>HD</u>	±	Н	L	M	H	Observed within 500- foot buffer of San Vicente Pipeline in coastal sage scrub north of Mission Gorge Road within Mission Trails Regional Park. Observed within 500- foot buffer of San Vicente Pipeline – TAT and – IRAT, within coastal sage scrub southeast of San Vicente Reservoir. High potential to occur within 500-foot buffer of the LFG Pipeline and San Vicente Pipeline – MAT. Moderate potential to occur within the 500-

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility - Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur foot buffer of the Morena Pipelines, NCPWF, North City Pump Station, and MBC. Low potential to occur within the 500- foot buffer of the Morena Pump Station, NCWRP, and MTBS. Not expected to occur in areas that lack suitable habitat.
Coronado Island skink	Plestiodon skiltonianus interparietalis	None/WL/None/ None	Woodlands, grasslands, pine forests, and chaparral; rocky areas near water	X	L	X	X	X	X	L	X	L	X	X	L	L	Low potential to occur in non-native grassland, coastal sage scrub, and woodlands within the 500-foot buffer of the within the 500-foot buffer of the Morena Pipelines, San Vicente Pipeline, San Vicente Pipeline – IRAT, MBC, and LFG Pipeline. However, there is lack of suitable rocky areas near water.
rosy boa	Lichanura trivirgata	None/None/None/ None	Desert and chaparral habitats with rocky soils in coastal canyons and hillsides, desert canyons, washes, and mountains	Х	L	X	X	L	X	HD	M	L	L	X	X	M	Observed within 500- foot buffer of San Vicente Pipeline east of Golfcrest Drive along Mission Gorge Road in coastal sage scrub. Moderate potential to occur within 500-foot buffer of the San Vicente Pipeline – TAT and LFG Pipeline. Low potential to occur within 500-foot buffer

Common Names	Scientific Name Chelonia mydas	Status (Federal/State/ Other/MSCP)	Habitat Shallow waters of	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur of the Morena Pipelines, NCPWF, San Vicente Pipeline – IRAT and – MAT. Not expected to occur within the remaining components, which are outside theThe site is outside of the species' known geographic range. Not expected to occur
		None	lagoons, bays, estuaries, mangroves, eelgrass, and seaweed beds	^	٨	٨	χ	٨	۸	٨	۸	χ	χ	٨	٨	۸	in areas that lack suitable habitat
San Diego ringneck snake	Diadophis punctatus similis	None/None/None/ None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland habitats	X	M	X	X	L	X	X	M	L	L	X	L	L	Moderate potential to occur within 500-foot buffer of the Morena Pipelines, San Vicente Pipeline – TAT. Low potential to occur in the 500-foot buffer of the NCPWF, San Vicente Pipeline – IRAT and – MAT, MBC, and LFG Pipeline. Not expected to occur. No suitable vegetation present.
silvery legless lizard	Anniella pulchra pulchra	None/SSC/None/ None	Stabilized dunes, beaches, dry washes, chaparral, scrubs, and pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	L	M	L	X	L	L	L	L	L	L	X	L	L	Moderate potential to occur within 500-foot buffer of the Morena Pipelines. Low potential to occur in coastal sage scrub, coast live oak woodland, and southern mixed chaparral within the 500-foot buffer of the

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Blainville's	Dhawaaana	None/SSC/None/			M	V	V						M			M	Morena Pump Station, NCWRP, NCPWF, North City Pump Station, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, MBC, and LFG Pipeline. However, there is a lack of suitable habitat available. Observed outside
horned lizard	Phrynosoma blainvillii	Covered	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine—cypress, juniper, and annual grassland habitats	X	M	X	X	L	L	H	H	H	M	X	L	M	500-foot buffer of San Vicente Pipeline in southern mixed chaparral south of San Vicente Reservoir. Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, San Vicente Pipeline – MAT, and LFG Pipeline. Low potential to occur in open areas of coastal sage scrub within the 500-foot buffer of the NCPWF, North City Pump Station, and MBC. However, there is a lack of suitable habitat available.

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Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
red diamondback rattlesnake	Crotalus ruber	None/SSC/None/ None	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	X	M	X	X	L	L	M	M	M	M	X	L	M	Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. Low potential to occur in coastal sage scrub and coast live oak woodland within the 500-foot buffer of the NCPWF, North City Pump Station, and MBC. However, there is a lack of suitable habitat available.
San Diegan tiger whiptail	Aspidoscelis tigris stejnegeri	None/SSC/None/ None	Open areas in semiarid grasslands, scrublands, and woodlands	L	H	M	X	Н	М	Н	<u>‡D</u>	型	Н	L	M	Н	Observed within 500- foot buffer of San Vicente Pipeline – TAT and – IRAT in coastal sage scrub southeast of San Vicente Reservoir. High potential to occur within the 500- foot buffer of the Morena Pipelines, San Vicente Pipeline and San Vicente Pipeline – MAT, and LFG Pipeline. Moderate potential to occur in coastal sage scrub within the 500- foot buffer of the NCWRP, North City Pump Station, and MBC. Low potential to occur within the 500-

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur foot buffer of the Morena Pump Station, NCPWF, North City Pump Station, and MTBS. However, suitable habitat is limited. Low potential to occur in disturbed coastal sage
two-striped gartersnake	Thamnophis hammondii	None/SSC/None/ None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	X	M	X	X	X	X	₩D	M	L	L	X	X	X	scrub and non-native grassland. Not expected to occur in areas that lack suitable habitat. Observed within 500-foot buffer of San Vicente Pipeline in coastal sage scrub north of the intersection of Mission Gorge Road and Golfcrest Drive. Moderate potential to occur within 500-foot buffer of the Morena Pipelines, and San Vicente Pipeline – TAT. Low potential to occur within 500-foot buffer of the San Vicente Pipeline – IRAT. However, there is no suitable streams with rocky beds. Not expected to occur in areas that lack suitable habitat.

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Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
burrowing owl	Athene cunicularia (burrow sites &	BCC/SSC/None/ Covered	Nests and forages in grassland, open scrub, and	X	L	L	X	Birds L	X	L	X	L	X	X	L	L	Low potential to occur in open areas of coastal sage scrub and
	some wintering sites)		agriculture, particularly with ground squirrel burrows														non-native grassland within the 500-foot buffer of the Morena Pipelines, NCWRP, NCPWF, San Vicente Pipeline, San Vicente Pipeline – IRAT, MBC, and LFG Pipeline. This species' burrows would have been observed during surveys.
California black rail	Laterallus jamaicensis coturniculus	BCC/ST, FP/ None/None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	X	X	X	X	X	X	L	X	X	X	X	X	X	Low potential to occur near freshwater within the 500-foot buffer of the San Vicente Pipeline. However, there is limited suitable habitat and is unlikely to occur.
ferruginous hawk	Buteo regalis (wintering)	BCC/WL/None/ Covered	Winters and forages in open, dry country, grasslands, open fields, agriculture	Х	X	Х	X	X	X	X	X	X	X	Х	X	X	Not expected to winter in the 500-foot buffer or component impact footprints due to poor habitat quality.

Common Names	Scientific Name Ammodramus	Status (Federal/State/ Other/MSCP) None/SSC/None/	Habitat Nests and forages in	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT) X	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Moderate potential to
grasshopper sparrow	savannarum (nesting)	None None	moderately open grassland with tall forbs or scattered shrubs used for perches	^	*	^	۸	L	^		^	^	*	^	Ĺ	IVI	occur within the 500- foot buffer of the LFG Pipeline. Low potential to occur within the 500-foot buffer of the NCPWF, San Vicente Pipeline, and MBC. There are limited open grasslands and fields, and therefore this species is unlikely to occur.
northern harrier	Circus cyaneus (nesting)	None/SSC/None/ Covered	Nests in open wetlands including marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes, but also in drier habitats such as grassland and grain fields; forages in variety of habitats, including grassland, scrubs, rangelands, emergent wetlands, and other open habitats	L	L	X	X	L	X	L	X	L	X	X	L	L	Low potential to occur within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, NCPWF, San Vicente Pipeline, San Vicente Pipeline – IRAT and – MAT, MBC, and LFG Pipeline. Suitable wetland habitat for nesting is limited and therefore this species is unlikely to occur.
Swainson's hawk	Buteo swainsoni (nesting)	BCC/ST/None/ Covered	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agriculturals areas such as wheat and alfalfa fields and pasture	X	X	X	Х	X	Х	Х	Х	Х	Х	Х	X	X	Not expected to nest due to lack of suitable habitat.

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tricolored blackbird	Agelaius tricolor (nesting colony)	BCC/SSC/None/ Covered	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	X	X	X	X	X	X	L	L	L	L	X	X	X	Low potential to nest within the 500-foot buffer of the San Vicente Pipeline, and San Vicente Pipeline – TAT, – IRAT, and – MAT. There are limited areas of freshwater and disturbed wetland for nesting.
yellow warbler	Setophaga petechia (nesting)	BCC/SSC/None/ None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	M	HD	X	X	X	X	₩D	M	L	L	X	X	Н	Observed in several locations within 500-ft buffer of San Vicente Pipeline in southern cottonwood-willow riparian forest and SWS east and west of State Route-67 (SR-67) north of Mapleview St. Observed within 500-foot buffer of Morena Pipelines in southern arroyo willow riparian forest east of Genesee Ave and south of Noble Drive. High potential to occur within the 500-foot buffer of the LFG Pipeline. Moderate potential to occur within 500-foot buffer of the San Vicente Pipeline – TAT and Morena Pump Station adjacent to the San Diego River. Low potential to occur in southern mixed chaparral within 500-

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American peregrine falcon	Falco peregrinus anatum (nesting)	FDL, BCC/SDL, FP/None/ Covered	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	X	L	X	X	X	X	L	X	X	X	X	X	X	lack suitable habitat. Low potential to nest within the 500-foot buffer of the Morena Pipelines and San Vicente Pipeline. Possibly nesting locations on buildings, however it is unlikely to nest in urban area.
bald eagle	Haliaeetus leucocephalus (nesting & wintering)	FDL, BCC/SE, FP/None/ Covered	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	X	X	X	X	X	Х	Х	L	L	L	Х	X	X	Low potential to occur within 500-foot buffer of the San Vicente Pipeline – TAT, – IRAT, and – MAT. Not expected to occur. No suitable vegetation present.
Cooper's hawk	Accipiter cooperii (nesting)	None/WL/None/ Covered	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	L	H <u>D</u>	X	X	X	X	H <u>D</u>	HD	<u>₩</u> <u>D</u>	<u>₩</u> <u>D</u>	X	X	M	Observed in several locations. Observed within 500-foot buffer of Morena Pipelines at the corner of Towne Centre Drive and Renaissance Ave within southern coast live oak riparian forest. Observed within 500-foot buffer of San Vicente Pipeline, primarily in southern cottonwood-willow riparian forest

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Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur east of Channel Road and west of SR-67. Observed within the vicinity of San Vicente Pipeline – IRAT and –
																	MAT, near San Vicente Pipeline – TAT, within southern mixed chaparral southeast of the San Vicente Reservoir. Moderate potential to occur within the 500- foot buffer of the LFG Pipeline. Low potential to occur within 500-foot buffer of the Morena Pump Station. Not expected to occur in areas that lack suitable habitat.
coastal cactus wren	Campylorhynch us brunneicapillus sandiegensis (San Diego & Orange Counties only)	BCC/SSC/None/ Covered	Southern cactus scrub patches	Х	X	X	X	X	X	Х	Х	Х	X	X	X	X	Not expected to occur. No suitable vegetation present.
coastal California gnatcatcher	Polioptila californica californica	FT/SSC/None/ Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Х	<u> </u>	₽	L	M	M	₩D	<u>₩</u> D	₩D	Н	L	₩ <u>D</u>	<u>₩</u> D	Observed in several locations. Observed within 500-foot buffer of Morena Pipelines south of SR-52 and west of Genesee Ave within disturbed coastal sage scrub. Observed within the vicinity of the NCWRP, however there is unsuitable habitat for coastal California gnatcatcher

nmon imes	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
																	within the developed land. Observed within the vicinity of NCPWF Influent Pump Station, and North City Pump Station, however there is unsuitable habitat within the proposed development, including disturbed coastal sage scrub, non native grassland, urban/developed, and disturbed habitat. Observed within the 500-foot buffer of San Vicente Pipeline, primarily in the coastal sage scrub along Mission Gorge Road east of Golfcrest Drive. Observed within the vicinity of San Vicente Pipeline – TAT and – IRAT, within coastal sage scrub southwest of San Vicente Reservoir. Observed within the vicinity of the Mission Trails Booster StationMTBS, however there is unsuitable habitat for coastal California gnateatcher including urban/developed and
																	disturbed coastal sage scrubthis species is unlikely to use the MTBS site due to

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Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
																	proximity of surrounding development and lack of quality habitat. Observed within the 500-foot buffer of the MBC within coastal sage scrub. Observed within the 500-foot buffer of the LFG Pipeline south of Miramar Road and east of Interstate-805 (I-805) within coastal sage scrub. High potential to occur within the 500-foot buffer of the San Vicente Pipeline – MAT. Not expected to occur within the vicinity of the Morena Pump Station due to lack of suitable habitat.
least Bell's vireo	Vireo bellii pusillus (nesting)	FE/SE/None/ Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	M	M	X	X	X	X	HD	L	L	L	Х	M	M	Observed in several location along San Vicente Pipeline, including southern arroyo willow riparian forest north of Mission Gorge Road west of SR-52 and southern willow scrub north and south of Carlton Oaks Drive east of SR-52. Moderate potential to occur within 500-foot buffer of the Morena Pipelines and Morena Pump Station adjacent to the San Diego River

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Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
																	and within the 500-foot buffer of the MBC in San Clemente Canyon and LFG Pipeline within Rose Creek. Low potential to occur within the 500-foot buffer of the San Vicente Pipeline – TAT, – IRAT, and – MAT within proximity to San Vicente Reservoir, however due to limited suitable riparian habitat. Not expected to occur within or nearby other components due to lack of suitable habitat.
southwestern willow flycatcher	Empidonax traillii extimus (nesting)	FE/SE/None/ Covered	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	M	<u>+M</u>	X	X	X	X	L	L	L	X	X	M	M	Observed within 500- foot buffer of San Vicente Pipeline in southern riparian forest south of SR-52 and east of I-805. Moderate potential to nest within the 500- foot buffer of the Morena Pump Station and Morena Pipelines adjacent to the San Diego River and within the 500-foot buffer of the MBC in San Clemente Canyon and LFG Pipeline within Rose Creek. Low potential to occur in coast live oak woodland near the San Vicente Reservoir within the

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur 500-foot buffer of the
																	San Vicente Pipeline - TAT and - IRAT. Not expected to occur in areas that lack suitable habitat.
white-tailed kite	Elanus leucurus (nesting)	None/FP/None/ None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	L	M	L	X	HD	X	M	M	L	X	X	M	M	Observed within the 500-foot buffer of the NCPWF. Moderate potential to nest within 500-foot buffer of the Morena Pipelines, San Vicente Pipeline, San Vicente Pipeline – TAT, MBC, and LFG Pipeline. Low potential to nest in woodland or riparian trees within the 500-foot buffer of the Morena Pump Station, NCWRP, San Vicente Pipeline – IRAT, MBC, and LFG Pipeline. There is limited suitable habitat, and therefore this species is unlikely to nest.
yellow- breasted chat	Icteria virens (nesting)	None/SSC/None/ None	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	M	M	X	X	X	X	H <u>D</u>	L	L	X	Х	M	H	Observed in several locations along San Vicente Pipeline, including in SWS north and south of Calton Oaks Drive east of SR-67. High potential to occur within the 500-foot buffer of the LFG Pipeline. Moderate potential to occur

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur within the 500-foot buffer of the Morena Pipelines, MBC, and Morena Pump Station adjacent to the San Diego River. Low potential to occur within 500-foot buffer of the San Vicente Pipeline – TAT and – IRAT. However, suitable riparian habitat is limited. Not expected to occur in areas that lack suitable habitat.
golden eagle	Aquila chrysaetos (nesting & wintering)	BCC/FP, WL/ None/Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	X	X	X	X	X	X	L	L	L	L	Х	X	L	Low potential to nest and winter within the 500-foot buffer of the San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. There are limited open shrublands and grasslands, and therefore this species is unlikely to nest and winter.
prairie falcon	Falco mexicanus (nesting)	BCC/WL/None/ None	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to nest. There is no suitable vegetation for nesting.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
southern California rufous- crowned sparrow	Aimophila ruficeps canescens Passerculus	None/WL/None/ Covered	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	X	M X	L	X	X	L	HD	H	<u>₩</u> D	H	L	X	X	Observed in several locations within 500-foot buffer of San Vicente Pipeline in coastal sage scrub along Mission Gorge Road in Mission Trails Regional Park. Observed within 500-foot buffer of San Vicente Pipeline – IRAT within coastal sage scrub southeast of San Vicente Reservoir. Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, MBC, and LFG Pipeline in open coastal sage scrub. Low potential to occur within the 500-foot buffer of the NCWRP, North City Pump Station, and MTBS due to limited suitable habitat. However, suitable habitat is limited. Low potential to occur in areas of disturbed coastal sage scrub. Not expected to occur in areas that lack suitable habitat. Not expected to
Belding's savannah sparrow	Passerculus sandwichensis beldingi	None/SE/None/ Covered	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	X	X	Х	X	X	X	X	X	X	X	X	X	X	Not expected to occur. No suitable vegetation present.

Common Names Bell's sage	Scientific Name Artemisiospiza	Status (Federal/State/ Other/MSCP) BCC/WL/None/	Habitat Nests and forages in	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Low potential to occur
sparrow	belli belli	None	coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter														within the 500-foot buffer of the Morena Pipelines, NCPWF, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. There is limited coastal sage scrub and chamise chaparral, and therefore this species is unlikely to occur.
California brown pelican	Pelecanus occidentalis californicus (nesting colonies & communal roosts)	FDL/SDL, FP/ None/Covered	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable vegetation present.
California horned lark	Eremophila alpestris actia	None/WL/None/ None	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	X	X	L	X	L	X	M	L	L	L	X	L	M	Moderate potential to occur within 500-foot buffer of the San Vicente Pipeline and LFG Pipeline. Low potential to occur within the 500-foot buffer of the NCWRP, NCPWF, San Vicente Pipeline – TAT, – IRAT, and – MAT, and MBC. There is limited non-native grassland and disturbed habitat, and therefore it is unlikely to occur.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
California least tern	Sternula antillarum browni (nesting colony)	FE/SE, FP/None/ Covered	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to nest. No suitable nesting vegetation present.
double- crested cormorant	Phalacrocorax auritus (nesting colony)	None/WL/None/ None	Nests in riparian trees near ponds, lakes, artificial impoundments, slow- moving rivers, lagoons, estuaries, and open coastlines; winter habitat includes lakes, rivers, and coastal areas	Х	X	Х	X	X	X	Х	L	L	L	X	X	Х	Low potential to nest within the 500-foot buffer of the San Vicente Pipeline – TAT, – IRAT, and – MAT. There is limited nesting vegetation near the San Vicente Reservoir, however it is unlikely to nest.
elegant tern	Thalasseus elegans (nesting colony)	None/WL/None/ Covered	Inshore coastal waters, bays, estuaries, and harbors; forages over open water	Х	Х	Х	Х	Х	Х	Х	X	X	Х	Х	X	Х	Not expected to occur. No suitable vegetation present.
large-billed savannah sparrow	Passerculus sandwichensis rostratus (wintering)	None/SSC/None/ Covered	Nests and forages in open, low saltmarsh vegetation, including low halophytic scrub	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable vegetation present.
least bittern	Ixobrychus exilis (nesting)	BCC/SSC/None/ None	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation	Х	L	X	X	Х	X	Х	L	L	L	X	X	X	Low potential to nest within the 500-foot buffer of the Morena Pipelines, San Vicente Pipeline, and San Vicente Pipeline - TAT, - IRAT, and - MAT. There are limited freshwater habitats, however there is no suitable dense aquatic vegetation for nesting.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
long-billed curlew	Numenius americanus (nesting)	BCC/WL/None/ Covered	Nests in grazed, mixed grass, and short-grass prairies; localized nesting along the California coast; winters and forages in coastal estuaries, mudflats, open grassland, and cropland	Х	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. No suitable vegetation present.
mountain plover	Charadrius montanus (wintering)	BCC/SSC/None/ Covered	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to winter in the 500-foot buffer or component impact footprints due to poor habitat quality.
osprey	Pandion haliaetus (nesting)	None/WL/None/ None	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	X	X	X	X	X	X	X	X	L	M	X	X	Х	Moderate potential to nest within 500-foot buffer of the San Vicente Pipeline – MAT. Low potential to nest within the 500-foot buffer of the San Vicente Pipeline – IRAT. There is limited forested areas near San Vicente Reservoir, and therefore it is unlikely for this species to nest.
western snowy plover	Charadrius alexandrinus nivosus (nesting)	FT, BCC/SSC/ None/Covered	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	X	X	Х	X	X	Х	X	X	Х	X	X	X	X	Not expected to nest. No suitable nesting vegetation present.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat Needs in deeps with	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
western yellow-billed cuckoo	Coccyzus americanus occidentalis (nesting)	FT, BCC/SE/ None/None	Nests in dense, wide riparian woodlands and forest with well- developed understories	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to nest. No suitable nesting vegetation present.
white-faced ibis	Plegadis chihi (nesting colony)	None/WL/None/ Covered	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	X	X	X	X	X	X	X	X	L	L	X	X	X	Low potential to nest within the 500-foot buffer of the San Vicente Pipeline – IRAT and – MAT. There is limited suitable habitat, and therefore it is unlikely for this species to nest.
Canada goose	Branta canadensis	None/None/ Covered	Lakes, rivers, ponds, and other bodies of water; yards, park lawns, and agricultural fields	X	X	X	X	X	X	X	L	L	L	X	X	L	Low potential to occur within the 500-foot buffer of the San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. There is limited suitable habitat near the San Vicente Reservoir, however it is unlikely for this species to occur.
reddish egret	Egretta rufescens	None/None/None/ Covered	Freshwater marsh with emergent vegetation; in the Central Valley primarily nests and forages in rice fields and other flooded agricultural fields with weeds and other residual aquatic vegetation	X	X	X	X	X	X	L	X	X	X	X	X	X	Low potential to nest in coastal and valley freshwater marsh within the 500-foot buffer of the San Vicente Pipeline. There is limited suitable habitat, and therefore it is unlikely for this species to nest.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
western bluebird	Sialia mexicana	None/None/Covered	Nests in old-growth red fir, mixed-conifer, and lodgepole pine habitats near wet meadows used for foraging	L	M	L	X		L	<u>₩D</u>	L	L		X	L	M	Observed within 500- foot buffer of San Vicente Pipeline in SWS near open water in east of SR-67 and south of Willow Road near San Vicente Creek. Moderate potential to occur within 500-foot buffer of the Morena Pipelines and LFG Pipeline. Low potential to occur within 500-foot buffer of the Morena Pump Station, NCWRP, NCPWF, North City Pump Station, San Vicente Pipeline – TAT, – IRAT, and – MAT, and MBC. Not expected to occur in areas that lack suitable habitat.
Ridgway's rail	Rallus obsoletus levipes	FE/SE, FP/None/ Covered	Coastal wetlands, brackish areas, coastal saline emergent wetlands	L	X	X	X	X	X	X	X	X	X	X	X	X	Low potential to occur within the 500-foot buffer of the Morena Pump Station. However, there is limited suitable habitat available, and therefore it is unlikely for this species to occur.
Pacific	Perognathus	FE/SSC/None/	Fine-grained sandy	Х	Х	Х	X Ma	ammals X	Х	X	Х	Х	Х	Х	Х	Х	Not expected to
pocket mouse	longimembris pacificus	None	substrates in open coastal strand, coastal dunes, and river alluvium														occur. No suitable vegetation present.

Common Names San Diego	Scientific Name Neotoma lepida	Status (Federal/State/ Other/MSCP) None/SSC/None/	Habitat Coastal scrub, desert	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Low potential to occur
desert woodrat	intermedia	None	scrub, chaparral, cacti, rocky areas				E .				_		,	,	,		in coastal sage scrub within the 500-foot buffer of the San Vicente Pipeline – TAT. There is limited suitable vegetation.
big free- tailed bat	Nyctinomops macrotis	None/SSC/ WBWG:MH/ None	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Х	X	X	X	Х	X	Х	X	X	X	X	X	X	Not expected to occur. No suitable vegetation present.
long-eared myotis	Myotis evotis	None/None/ WBWG:M/None	Nearly all brush, woodland, and forest habitats from sea level to 9,000 feet above mean sea level, but prefers coniferous habitats; forages along habitat edges, in open habitats, and over water; roosts in buildings, crevices, under bark, and snags; uses caves as night roosts	X	L	X	X	X	X	X	X	X	X	X	X	X	Low potential to occur within 500-foot buffer of the Morena Pipelines. Not expected to occur in areas that lack suitable habitat.
pallid bat	Antrozous pallidus	None/SSC/ WBWG:H/None	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Х	M	Х	X	M	X	M	X	X	X	Х	X	М	Moderate potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, San Vicente Pipeline, and LFG Pipeline. There is limited suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
western small-footed myotis	Myotis ciliolabrum	None/None/ WBWG:M/None	Arid woodlands and shrublands, but near water; roosts in caves, crevices, mines, abandoned buildings	Х	L	Х	X	X	Х	X	X	X	X	X	X	X	Low potential to occur within 500-foot buffer of the Morena Pipelines. Not expected to occur in areas that lack suitable habitat.
Yuma myotis	Myotis yumanensis	None/None/ WBWG:LM/ None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	M	M	X	X	X	X	M	X	X	X	X	X	X	Moderate potential to occur within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, and San Vicente Pipeline. There is limited suitable vegetation present.
American badger	Taxidea taxus	None/SSC/None/ Covered	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Х	X	Х	Х	X	Х	L	L	L	L	X	L	L	Low potential to occur within the 500-foot buffer of the San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. There is limited suitable vegetation present.
Dulzura pocket mouse	Chaetodipus californicus femoralis	None/SSC/None/ None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Х	L	L	X	L	L	L	L	L	L	Х	L	L	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCWRP, NCPWF, North City Pump Station, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. There is limited suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
hoary bat	Lasiurus cinereus	None/None/ WBWG:M/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	L	L	Х	X	X	X	L	X	X	X	X	X	X	Low potential to occur within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, and San Vicente Pipeline. There is limited suitable vegetation present.
Mexican long-tongued bat	Choeronycteris mexicana	None/SSC/ WBWG:H/None	Desert and montane riparian, desert scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Х	X	Х	X	Х	Х	Х	Х	Х	Х	Х	X	Х	Not expected to occur. No suitable vegetation present.
northwestern San Diego pocket mouse	Chaetodipus fallax fallax	None/SSC/None/ None	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon—juniper, and annual grassland	X	L	Х	X	L	L	L	L	L	L	X	L	L	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, North City Pump Station, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and LFG Pipeline. There is limited suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
pocketed free-tailed bat	Nyctinomops femorosaccus	None/SSC/ WBWG:M/None	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with dropoffs, caverns, and buildings	X	X	X	X	X	X	X	X	X	X	X	X	X	Not expected to occur. No suitable vegetation present.
San Diego black-tailed jackrabbit	Lepus californicus bennettii	None/SSC/None/ None	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	X	L	L	X	L	L	M	L	L	L	X	L	M	Moderate potential to occur within 500-foot buffer of the San Vicente Pipeline, and LFG Pipeline. Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCWRP, NCPWF, North City Pump Station, San Vicente Pipeline – TAT, – IRAT, and – MAT, and MBC. There is limited suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
silver-haired bat	Lasionycteris noctivagans	None/None/ WBWG:M/None	Old-growth forest, maternity roosts in trees (primarily woodpecker hollows), large-diameter snags 50 feet aboveground; hibernates in hollow trees, under sloughing bark, in rock crevices, and occasionally in buildings, mines, and caves; forages in or near coniferous or mixed deciduous forest, often following stream or river drainages	X	X	X	X	X	X	Х	X	X	X	X	X	X	Not expected to occur. No suitable vegetation present.
spotted bat	Euderma maculatum	None/SSC/ WBWG:H/None	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	X	X	X	Х	X	X	X	Х	X	X	X	X	X	Not expected to occur. No suitable vegetation present.
Stephens' kangaroo rat	Dipodomys stephensi	FE/ST/None/ None	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Х	Х	Х	Х	X	X	X	Х	Х	X	Х	X	Х	Not expected to occur. This study area is outside of this species' geographic range.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Townsend's big-eared bat	Corynorhinus townsendii	None/SC, SSC/WBWG:H/ None	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	L	L	X	X	X	X	L	X	X	X	X	X	X	Low potential to occur within 500-foot buffer of the Morena Pump Station, Morena Pipelines, and San Vicente Pipeline. There is limited suitable vegetation present.
western mastiff bat	Eumops perotis californicus	None/SSC/ WBWG:H/None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	X	L	X	X	L	X	L	L	L	L	X	L	L	Low potential to occur within the 500-foot buffer of the Morena Pipelines, NCPWF, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, MBC, and LFG Pipeline. There is limited suitable vegetation present.
western red bat	Lasiurus blossevillii	None/SSC/ WBWG:H/None	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	L	L	X	X	Х	X	L	L	L	L	X	X	Х	Low potential to occur within the 500-foot buffer of the Morena Pump Station, Morena Pipelines, San Vicente Pipeline, and San Vicente Pipeline – TAT, – IRAT, and – MAT. There is limited suitable vegetation present.
western yellow bat	Lasiurus xanthinus	None/SSC/ WBWG:H/None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Х	X	Х	X	Х	X	X	X	X	Х	X	X	Х	Not expected to occur. No suitable vegetation present.

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Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
cougar	Puma concolor	None/None/ Covered	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts	X	X	X	X	X	X	M	M	M	M	X	L	L	Moderate potential to occur within 500-foot buffer of the San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT. Low potential to occur within the 500-foot buffer of the MBC, and LFG Pipeline. There is limited suitable vegetation present.
mule deer	Odocoileus hemionus	None/None/ Covered	Coastal sage scrub, chaparral, riparian, woodlands, and forest; often browses in open area adjacent to cover throughout California, except deserts and intensely farmed areas	L	L	L	X	L	X	₩ <u>D</u>	Н	H	Н	L	M	M	Observed within 500- foot buffer of San Vicente Pipeline in coastal sage scrub north of Mission Gorge Road within Mission Trails Regional Park. Moderate potential to occur within 500-foot buffer of the MBC, and LFG Pipeline. Low potential to occur within 500-foot buffer of the Morena Pump Station, Morena Pipelines, NCPWF, and NCWRP. Not expected to occur in areas with lack of suitable habitat.
Riverside fairy shrimp	Streptocephalus woottoni	FE/None/None/ Covered	Vernal pools, non- vegetated ephemeral pools	Х	Х	L	Х	L	L	L	Х	Х	Х	Х	X	Х	Low potential in areas with vernal pools within the 500-foot
																	buffer of the NCWRP, NCPWF, North City Pump Station, and San Vicente Pipeline.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur Would have been observed during focused survey. Not observed during focused surveys.
San Diego fairy shrimp	Branchinecta sandiegonensis	FE/None/None/ Covered	Vernal pools, non- vegetated ephemeral pools	X	X	L	X	X	L	D	X	X	X	X	X	D	Observed within the 500-foot buffer of or adjacent to two project component containing vernal pools: the LFG Pipeline, and San Vicente – Repurposed Pipeline. Focused surveys for this species at the NCPWF in 2015/2016 and 2017 were negative. Low potential in areas with vernal pools within the 500-foot buffer of the NCWRP, North City Pump Station, and San Vicente Pipeline. Would have been observed during 2015/16 focused surveys.
obscure bumble bee	Bombus caliginosus	None/None/SS/ None	Relatively humid or foggy areas of the Pacific coast south to central California. Food plants include Baccharis, Cirsium, Grindelia, Phacelia, Arctostaphylos, Eriodictyon, Ceanothus, Adenostoma, and Mimulus	X	X	Х	X	X	X	L	L	L	L	X	X	X	Low potential to occur within the 500-foot buffer of the San Vicente Pipeline, and San Vicente Pipeline – TAT, – IRAT, and – MAT. There is limited suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Crotch bumble bee	Bombus crotchii	None/None/SS/ None	Open scrub habitats and grassland in coastal California east to the Sierra- Cascade crest and south into Mexico. Food plants include Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia	X	X	X	X	X	X	L	L	L	L	X	L	L	Low potential to occur within the 500-foot buffer of the San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, MBC, and LFG Pipeline. There is limited suitable vegetation present.
globose dune beetle	Coelus globosus	None/None/SS/ None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico	X	X	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Not expected to occur. No suitable vegetation present.
mesa shoulderband	Helminthoglypta coelata	None/None/SS/ None	Known only from a few locations in coastal San Diego County	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable vegetation present.
mimic tryonia (=California brackishwater snail)	Tryonia imitator	None/None/SS/ None	Inhabits coastal lagoons, estuaries, and saltmarshes, from Sonoma County south to San Diego County	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х	Not expected to occur. No suitable vegetation present.
sandy beach tiger beetle	Cicindela hirticollis gravida	None/None/SS/ None	Inhabits areas adjacent to non- brackish water along the coast of California from San Francisco Bay to northern Mexico	X	X	Х	X	X	Х	X	X	X	X	X	X	Х	Not expected to occur. No suitable vegetation present.
senile tiger beetle	Cicindela senilis frosti	None/None/SS/ None	Inhabits marine shoreline, from Central California coast south to saltmarshes of San Diego; also found at Lake Elsinore	X	X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Not expected to occur. No suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
Thorne's hairstreak	Callophrys thornei	None/None/SS/ Covered	Interior cypress woodland dominated by host plant Hesperocyparis forbesii (Tecate cypress)	X	X	X	Х	X	X	X	X	X	X	X	X	Х	Not expected to occur. Tecate cypress was not observed during surveys.
western beach tiger beetle	Cicindela latesignata latesignata	None/None/SS/ None	Mudflats and beaches in coastal Southern California	X	X	X	Х	Х	Х	X	X	Х	Х	X	Х	X	Not expected to occur. No suitable vegetation present.
western tidal-flat tiger beetle	Cicindela gabbii	None/None/SS/ None	Inhabits estuaries and mudflats along the coast of Southern California	X	X	X	X	X	Х	X	X	X	X	X	X	X	Not expected to occur. No suitable vegetation present.
California mellitid bee	Melitta californica	None/None/SS/ None	Desert regions of southwestern Arizona, southeastern California, and Baja California, Mexico; also collected from Torrey Pines, San Diego County	X	X	X	X	X	X	X	X	X	X	Х	X	X	Not expected to occur. No suitable vegetation present.
Hermes copper	Lycaena hermes	FC/None/None/ None	Mixed woodlands, chaparral, and coastal scrub	X	X	X	X	X	X	L	X	X	X	X	X	L	Low potential to occur in suitable habitat with host plants (<i>Rhamnus crocea</i> and <i>Eriogonum fasciculatum</i>) within the 500-foot buffer San Vicente Pipeline, and LFG Pipeline. Would have been observed during focused surveys. Not expected to occur in areas lacking suitable habitat.

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monarch	Danaus plexippus	None/None/SS/ None	Wind-protected tree groves with nectar sources and nearby water sources	L	M	L	X	L	L	M	M	M	M	X	X	M	Observed during QCB surveys, however low potential to overwinter on site due to limited suitable habitat and outside of known geographic range. Moderate potential to occur within 500-foot buffer of the Morena Pipelines, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, and LFG Pipeline. Low potential to occur within 500-foot buffer of the Morena Pump Station, NCWRP, NCPWF, and North City Pump Station.
quino checkerspot	Euphydryas editha quino	FE/None/None/ None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and finetextured clay; host plants include Plantago erecta (dwarf plantain), Antirrhinum coulterianum (white snapdragon), and Plantago patagonica (woolly plantain)	X	X	L	X	X	X	L	L	L	L	Х	L	L	Low potential to occur within the 500-foot buffer of the NCWRP, San Vicente Pipeline, San Vicente Pipeline – TAT, – IRAT, and – MAT, MBC, and LFG Pipeline. Although suitable habitat (adult nectar plants and larvae host plants) occurs within the alignment, focused surveys conducted in 2016 were negative.

Common Names	Scientific Name	Status (Federal/State/ Other/MSCP)	Habitat	Morena Pump Station	Morena Wastewater Forcemain and Brine/Centrate Line (Morena Pipelines)	North City Water Reclamation Plant Expansion (NCWRP)	North City Pure Water Facility – Influent Pump Station (NCPWF Influent Pump Station)	North City Pure Water Facility (NCPWF)	North City Pure Water Pump Station (North City Pump Station)	San Vicente Pure Water Pipeline (San Vicente Pipeline)	San Vicente Pipeline – Tunnel Alternative Terminus (San Vicente Pipeline – TAT)	San Vicente Pipeline – In- Reservoir Alternative Terminus (San Vicente Pipeline – IRAT)	San Vicente Pipeline – Marine Alternative Terminus (San Vicente Pipeline – MAT)	Mission Trails Booster Station (MTBS)	Metro Biosolids Center (MBC)	Landfill Gas Pipeline (LFG Pipeline)	Potential to Occur
wandering skipper	Panoquina errans	None/None/SS/ Covered	Saltmarsh	X	X	X	X	X	Х	Х	X	Х	Х	X	X	Х	Not expected to occur. No suitable vegetation present.

Notes:

Notes:

D = detected within the component or 500-foot buffer

M = moderate potential (suitable habitat and species observed elsewhere within the project)

L = low potential (suitable habitat but surveys were negative)

X = not expected (no suitable habitat and/or outside elevation range)

Status Notes:

FE: Federally Endangered

FT: Federally Threatened

FC: Federal Candidate

FDI: Federally Delicted

FC: Federal Candidate
FDL: Federally Delisted
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State Endangered
ST: State Threatened

SDL: State Delisted

SS: List Special Animals List, but no other status WBWG: Western Bat Working Group

H: High HM: High-Medium

M: Medium

LM: Low-Medium L: Low

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